

**SIXTY PLUS: THE ELDERLY BRAZILIANS
AND THEIR NEW SOCIAL ROLES**

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Ana Amélia Camarano

Organizer

**SIXTY PLUS: THE ELDERLY BRAZILIANS
AND THEIR NEW SOCIAL ROLES**

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FOREWORD



IPEA is honoured to present the book *Muito além dos 60: os novos idosos brasileiros*, by Ana Amélia Camarano, whose English title would be *Beyond the sixties: the ageing experience of the Brazilians*. This book is part of IPEA's continuous and permanent commitment to tackle the greatest social issues, prevailing in Brazilian society, by producing consistent and updated analysis. In this particular case, that of our population ageing.

Over the last five years, great changes have taken place in most parts of the world, and especially in Brazil, with regard to how population ageing is being perceived and how it relates to the economy, to the labour market and to the availability of public and familial resources.

Nevertheless, due to the fact that one of the most important social transformations observed in the country since the latter half of the last century has been the lengthening of life—the continual increase in life expectancy—, this scenario has brought about adjustments in the course of both public and private spheres. Thus, instead of simply updating a previous study, edited in 1999, this book has taken on further dimensions. It encompassed a great deal of work, requiring a substantial amount of data collection in a way to reflect the elderly Brazilian society within a longer life framework, occurring in a differentiated manner among the various social, racial and regional groups.

This present edition goes even further: it offers an analysis of the dynamics of a population that is ageing rapidly and differentially within the context of profound social and familial transformations. It highlights the opportunities, the problems and challenges towards effective social protection for this group that include both public policies and familial support.

One's attention is drawn to the interdisciplinary focus of the book that examines issues such as the possibilities of continual expansion of life expectancy and the perspectives in terms of physical and mental autonomy for elderly people, intergenerational support and conflict within the scope of the family and of public policies, living conditions of elderly people and of their families and, even, the perspectives for elderly people in the future.



The interdisciplinary nature was assured thanks to the participation of specialists from other institutions that have greatly collaborated to complement and enrich the view of Ipea researchers. We express our gratitude to them for their promptness and competence in responding to the invitation of participating in yet another contribution for specialists from various fields of knowledge and from the society as a whole.

Glauco Arbix
President of IPEA

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INTRODUCTION*

Ana Amélia Camarano
Instituto de Pesquisa Econômica Aplicada (IPEA)

Maria Tereza Pasinato
Instituto de Pesquisa Econômica Aplicada (IPEA)

The idea for this book was born out of the need to update the previous one *Muito além dos 60: os novos idosos brasileiros* (Beyond the sixties: the ageing experience of the Brazilians), published in 1999 as part of the celebrations of the International Year of Older Persons. Although only five years have elapsed since then, important changes have occurred throughout the world in relation to population ageing and the understanding of this phenomenon.

A United Nations Global Assembly on Ageing, held in Madrid in 2002, resulted in a second Ageing Action Plan. This brought about greater room for the question on the public policy agenda in developing countries and helped to change the perception of population and also the role of elderly people in society. Life expectancy at birth has grown almost everywhere in the world exceeding the majority of the projections made in relation to its growth. One of the results is the increase of the very old population, including centenarians. In addition, profound transformations in the economic, social, and political spheres, in values systems, and family arrangements are underway almost everywhere in the world.

To understand the role (or the roles) of elderly Brazilians in today's society, something more than just an updating of the information in the previous book was needed. A re-reading of the previous studied questions was required and other new questions had to be addressed, which was done in eight new chapters. Given the relevance of the questions raised in some chapters in the previous book, these were maintained and updated. The result was a new book, *Sixty plus: the elderly Brazilians and their new social roles*. built on top of *Muito além dos 60: os novos idosos brasileiros*.

The central question of the first book was a critical evaluation of the relationship between ageing and dependency. Now, this book focuses on the complexity and heterogeneity of the elderly people and their demands for social

* This chapter was translated from Portuguese to English by Eoin O'Neill and reviewed by Ana Amélia Camarano.

protection policies. Part of the heterogeneity of this subgroup comes from the fact that they have experienced gains in the length of their lives—which is forecast to continue to increase. One of the chapters in the book shows that if certain causes of death were avoided, the life expectancy of Brazilians would exceed that of Japan. It is asked in what sort of conditions these long-lived people will live. If greater survival is not accompanied by a dignified life, with autonomy, what can be expected? The right to die is another question discussed in this book.

What is being talked about here is a subgroup of the Brazilian population who are in their last stage of life, made up of people with total autonomy, able to contribute to economic and social development, who play important roles in their families and, at the same time, made up of others who are not able to deal with the basic activities of daily life and have no personal income. In other words, it is a group with differentiated needs. For example, Chapter 1 shows that 87.1% of elderly males are heads of families, 72.6% work 40 or more hours a week and only 12.7% have monthly earnings of less than one minimum wage. On the other hand almost 20% of elderly women live in relatives' houses, 18.5% have no income, 17.1% are not able to carry out daily activities and 8.3% do not see well. Among men, the proportion of those who do not manage to carry out daily activities is 13.3%, while 7.4% do not see well.

It is assumed that age brings about vulnerabilities, the loss of social roles through withdrawal from economic activity, the appearance of new roles (such as grandparents), the worsening of chronic and degenerative diseases, the loss of relatives and friends, etc. It is also assumed that this process is differentiated by sex, social group, colour/race, geographic location, etc., and can be reduced by public policies. Living conditions will depend on basic capacities (those people are born with), acquired capacities and the interrelation between the two types and the difficulties/facilities created by the environment and public policies, etc. [Lloyd-Sherlock (2002)]. In addition, economic development, population ageing and the living conditions of the elderly population should be recognised as inter-related processes.

Elderly people considered here are those aged 60 and over, as legally defined in the National Policy for Elderly People and the Elderly People's Statute. Although an age group approach has been adopted here it is recognised that the population is not formed by sharply divided subgroups: adults of an economically active and/or productive age and children, youth and elderly people, inactive or dependents. It is also acknowledged that the studied age group has a span of more than 30 years, consisting of people with very different trajectories of life. The limitations of the approach of age group will be looked at in the next section.

Although the heterogeneity of the group being studied is recognised, what differentiates this group from other age groups, such as the young, and what makes them a specific object of academic and policy studies, etc., is also examined. As it has already been mentioned, there is no exact cut off that separates adult life from the last phase of life. It can be said that the main characteristic of this group is the increase in the proportion of persons with physical and mental vulnerability and the proximity of death. Although this can justify policy and academic interest in the question, it does not justify the existence of concepts and stereotypes in relation to the age group and much less the defence of their interests to the detriment of others. Elderly people do not live in isolation and their living conditions are intimately linked to that of society as a whole [Lloyd-Sherlock (2002)].

One of the articles of the book (Goldani) examines the ongoing debate in Brazil about the generational bias of policies and public expenditure, which, in the last instance, addresses the idea of the existence of a conflict between generations in public policies. A basic premise is that a policy for elderly people must be part of a sustainable national development policy that aims to increase the welfare of the population as a whole. Only in this way can a “society for all ages” be built, as advocated by the United Nations.

The aim of this book is to analyse the dynamics of a rapidly ageing and differentiated population in the context of profound social transformations and fiscal adjustment. The opportunities, problems and challenges of an effective social protection for the elderly population are looked at, including both public policies and family support. Some of the chapters examine the policy responses to population ageing and their impact on family arrangements.

The organisation of the book is outlined in the third section of this chapter. Beforehand, the concept of elderly people will be discussed in the first section. Even though the elderly population is defined by age, it was also sought to emphasise the limitations of the classification of elderly people just by chronological age, as in the previous book. The second section aims to discuss the prejudices that permeate the question of ageing in society, in other words, their myths and stereotypes.

1 THE CONCEPT OF ELDERLY PEOPLE¹

The existence of a vast array of criteria that determine what is an “elderly person” needs to be acknowledged. The most limited criteria are based on age, such as, for

1. This section is strongly based on the second section of Chapter 1 of the previous book [see Camarano and Medeiros (1999)].

example, the definition of the National Policy for Elderly Person.² The Elderly Person's Statute³ endorses this definition. The World Health Organisation (WHO) considers elderly people as those aged 60 or over, if they live in developing countries, and 65, if they live in developed countries.

This is based on the principle that the ageing of an individual is associated with a biological process involving the decline of physical capacities related to new behavioural and psychological capacities. Thus, well-being is no longer related to just chronological age. Instead of, it is being seen as the ability of an organism to respond (or not) to the needs of daily life, the physical and psychological capacity and motivation to continue to look for objectives and new personal and family conquests.

The increase in life expectancy and the changes in the roles of elderly people in society have led to the questioning of the actual concept of "elderly person". There are two problems in this debate. The first is related to the classification criteria used to separate elderly and non-elderly persons. The second is related to the classification of an individual as an elderly person.

Classification criteria are the rules that permit the grouping of individuals based on one or more common characteristics. To establish a rule, it is enough to define the content of a population group in terms of dimensions other than those used for classification. These dimensions are often inferred and not observed. In other words, the social group "elderly people", even when defined only in terms of age, does not involve references solely to a group of people with the same age, but to persons with determined social and biological characteristics.

The question in this case is related to the content of the concept of "elderly people", whose immediate reference is usually biological characteristics. The age limit is taken as the moment at which individuals can be considered "old", in other words when they begin to show signs of senility and physical or mental incapacity. However, it is also believed that the concept of "elderly people" identifies not only individuals at a certain point in the organic life cycle, but also at a determined point in social life, since the classification of "elderly people" situates individuals in various spheres of social life, such as work, family, etc.

The concept of elderly people, therefore, involves more than the simple determination of biological age limits and has at least three limitations. The first is related to heterogeneity between individuals in space, social groups, race/colour

2. Law 8842, 4 January 1994, chapter 1, art. 2.

3. Law 10741, 1 October 2003.

and in time. The second is associated with the supposition that the biological characteristics exist regardless of cultural ones and the third refers to the social objective of the concept of elderly people.

Elderly people, in strict terms, are those who are “very” old. The definition of “very” is evaluative. The values to which this judgement refers depend on the specific characteristics of the environment where individuals live. Therefore, the definition of elderly person is not related to an isolated individual, but to society as a whole. Assuming that chronological age is a universal classification criteria for the elderly people category may imply to state that individuals in different places and from different times are homogeneous.

The assumption that the impact of similar biological characteristics has the same implications on the social lives of individuals from different cultures is not relevant from the perspective of some studies. Geertz (1989), for example, states that it does not make sense to distinguish between strictly cultural and strictly biological aspects in anthropological studies, since in humans both are profoundly interrelated. Thus, the analogies with other animals, especially in relation to ageing in “natural” selection processes that refer to a nature existing outside of culture, are of no relevance for humans. If there is no “nature” independent from “culture” and vice-versa, it is to be expected that not only are the results of biological processes of senility potentially different among cultures, but ageing is also the fruit of social conditions that determine the trajectory of the individual throughout the life cycle.

From an instrumental point of view, the concept of elderly people is a definition that also has social objectives. The classification of individuals as elderly persons by policy formulators involves objectives related to their condition at a certain point in organic life and at a certain point on the social life cycle. According to Geertz’s argument, these two cycles cannot be considered separately. Persons are classified as elderly people, for example, in order to estimate demands for health services and social security benefits and also as a way of distinguishing the situation of individuals in the labour market, the family and/or in other spheres of social life.

One of the consequences of the use of age in the definition of elderly people is the prescriptive power of this definition. Society creates expectations in relation to the social roles of those who have the status of elderly people and exercises various forms of coercion to ensure that these roles are fulfilled, irrespective of the particular characteristics of individuals [Laslett (1996)]. The status of elderly people can be attributed to individuals of a certain age, even if they do not have the

dependent or senile characteristics associated with old age and, more importantly, even if they refuse this status. A clear example of this coercion is the compulsory retirement that exists in Social Security schemes in many countries, including the developed world.

For the formulation of public policies, the demarcation of population groups is extremely important. This makes possible to identify social policy's beneficiaries, to focus resources on and to concede rights, which requires some degree of pragmatism in the concepts used. Like all classifications, that of "elderly people" simplifies the heterogeneity of this segment and can include individuals who do not need these policies or exclude those who do. There are ways of reducing this type of error. The first is to improve criteria in order to make definitions more precise. One or more features have to be found that can better identify individuals with certain characteristics. The second way consists of modifying the content of definitions for certain criteria. It is assumed that the features adopted are appropriate references just for some of the characteristics looked for. Both demand a better understanding of the peculiarities of the population in question.

The age criteria in the definition of elderly people for public policies can be easily verified. This is its great advantage. As it has already been mentioned, in this book elderly people are taken to be individuals aged 60 or over. Due to the heterogeneity mentioned, it is sought when possible in almost all the chapters to adapt the age criteria to the diversification that exists between individuals. This was done by desegregating this segment according to certain characteristics such as gender, age subgroups, marital status, degree of disability, income, insertion in the family and in the labour market, social security condition and educational level. This heterogeneity is a result, on the one hand, of the differentiation in demographic dynamics and, on the other, of the various socioeconomic conditions to which today's elderly people were exposed in their life trajectory, as well as their basic characteristics.

2 POPULATION AGEING: MYTHS AND STEREOTYPES

A large part of the literature about population ageing and the political debate that accompanies it is based on a generalised vision that sees the elderly population as a homogeneous group with common experiences and needs. The decisions of which kind of policies should be designed to the subgroup of elderly people essentially depend on the vision of this subgroup. Two polarised visions of the experience of ageing can be identified [Lloyd-Sherlock (2002)].

The first and dominant view carried a negative perception of elderly people. They are seen as dependent and vulnerable, both from the economic point of view and in relation to their health and autonomy. They are seen as not playing social roles and experiencing only losses. The view of elderly people as fragile and dependent individuals has resulted in policies that reinforce their dependency [Walker (1990)]. For example, as emphasised by Slater (1930),⁴ until the end of the nineteenth century measures aimed at the protection of elderly people were not differentiated from those aimed at the sick, all being understood as being unable to work.

The traditional view of the dependency of elderly people was expanded, extrapolating the purely biological aspects of the increase in physical debilities. It came to be seen, in addition, as a phenomenon arising out of the labour division and the social structure. It can contain a socially constructed component through negative paradigms of elderly people, discrimination in the labour market, etc. [Walker (1990)]. Although this is a pessimistic vision, it was important for the legitimisation of some social rights, such as the universalization of the Social Security [Debert (1999)].

The view of elderly people as being intrinsically unproductive leads to the belief that even though ageing is desirable from the point of view of the individual, the growth of the elderly population can result in a burden on the young population and the cost of sustaining it can create a threat to the future of states.⁵ This gave rise to the concern with the “crisis of ageing”, since elderly people are considered to be consumers of public resources, especially social security benefits and health services.

The universal expansion of social security in various countries, including Brazil, which is very well discussed in the chapters of Beltrão and Pinheiro, Delgado and Simões and Saboia, has caused Brazilian elderly people to be seen as individuals privileged by social protection systems (vis-à-vis other vulnerable groups, such as children, for example) and responsible for the increasing social expenditure that puts pressure on public finances.

The lengthening of life associated with better health conditions as well as the expansion of social security coverage throughout most of the world has led to a change in the meaning of the last phase of life. The vision that ageing is a process of losses is being replaced by the understanding that the last phase of life is a

4. Apud Philipson (1998).

5. For an alarmist vision of the question of population ageing, see World Bank (1994) and Petersen, apud Lloyd-Sherlock (2002).

moment for new achievements and for the pursuit of personal satisfaction. It is the age of “fulfilment” according to Laslett (1996).

Some elements such as a culture of health supported by technological development in preventative and curative medicine and in life styles, the assistance mechanisms of the welfare state and the modification of production processes have created the conditions for the development and expansion of a *group of elderly individuals* who are not characterised by debilitated health, by poverty nor by exclusion from the various spheres in social life.

Although this may be more easily observed in developed countries, there is evidence of its occurrence in Latin America. Debert (1999), for example, shows that Brazilian elderly people, especially from the 1980s onwards, became increasingly visible political actors in society, occupied space in the media and attracted the attention of the consumption, leisure and tourist industries. This does not correspond to the idea that the final phase of life is as a phase where individuals are excluded from public life. In Brazil, 13% of electors are over 60.⁶

Irrespective of social class, elderly people are seen as those with the greatest availability for consumption. In the consumption options offered to this group, the self-preservation of the body has enormous importance. According to Debert (1999), individuals are encouraged to exercise constant vigilance over their bodies and are also held responsible for their own health, through self-inflicted diseases, resulting from corporal abuse from drink, smoking, lack of physical exercise, etc. This vision is encouraged by health policies as a way of reducing costs.

Taking into account the Debert’s perspective, youth loses its identity as a specific age group and is transformed into a value and a good to be conquered through the adoption of specific lifestyles and of suitable consumer goods. It does not consider the differences between individuals in favour of the pursuit of an active ageing, opposing to the pessimistic vision of ageing. It covers over the specific problems of the last stage of life.

On the other hand, it acknowledges that population ageing is a social achievement, as well as the contribution of elderly people to the family, society and economic development [HelpAge International (1999)]. This vision can be found in article 6 of the political declaration of the Madrid Plan [United Nations (2002)].

6. The proportion of elderly population is about 9%. Nonetheless, this does not mean that they participate in the political process or elections, since voting is optional above 70.

“When ageing is embraced as an achievement, the reliance on human skills, experiences and resources of the higher age groups is naturally, recognized as an asset in the growth of mature, fully integrated, humane societies”.

One of the conclusions of the previous book is that family intergenerational transfers in Brazil are increasingly becoming bi-directional. The pernicious consequences of the cyclic periods of economic crisis confronted by the Brazilian population—concentration of income, increase in unemployment, expansion of poverty, widespread use of drugs, instability of affective relations, violence—has led an increasing number of adult children to become, to some extent, dependant on resources from their own elderly parents. In these cases, elderly people’s homes, or even their income from work, social security benefit or from other source becomes an important source of family support. Sometimes, this occurs despite of a situation of physical dependency of elderly person in relation to the family.

Once the perspective that elderly people make an important contribution to society is accepted, policies need to seek to reinforce their capacities to increase their opportunity to contribute to society [Troisi (1995)]. Population ageing, in this way, comes to be seen both as an active part in and a result of the process of the development and transformation of societies [Lloyd-Sherlock (2002)].

While the first vision is static and ignores the large technological advances, especially in medicine and the expansion of the coverage of health and social security services, the second vision does not provide instruments capable of helping to understand the decline of cognitive abilities and physical and emotional controls that are part of the natural cycle of life. According to Medeiros and Diniz, in this book, “disability is not an experience limited to a reduced minority, but an ordinary fact that is predictable during the course of people’s lives, as the ageing”. In short, the innovative and successful experiences of some elderly persons leave few room for the consideration of the situations of abandonment and dependency of others [Debert (1999)]. On the other hand, the imposition of youth as a value to be pursued increases the heterogeneity of this age group still further.

The danger of any generalisations about what it means to be an elderly person must be emphasised. It is recognised here that elderly persons play ever more important roles in their families and society, while, on the other hand, a significant proportion experience a high degree of dependency and vulnerability. A large number of elderly people, as emphasised by Lloyd-Sherlock (2002), are both: at the same time they are dependent and provide care for others.

Stereotypes associated with ageing are being revised. New terminology and new concepts are emerging trying to classify individuals in their final phase of life,

who until recently had been classified as being in old age. The increase in longevity and in the quality of life have resulted in the consideration, especially in Europe and the United States, of a fourth age. The distinction between the third age and the fourth age is an attempt to adjust classification schemes to the particular social, cultural, psychological and biological circumstances of Western societies. Nonetheless, what is new is the third age, rather the fourth age [Laslett (1996)]. This category aims to classify individuals who are no longer in the working (or second age), since they present few signs of senility and decrepitude. The existence of a third age depends, according to Laslett (1996), on the existence of a “community of retired people” with sufficient weight in society. In summary, this is a classification that has the same problem with setting criteria—i.e., when and how does each of these ages begin?—But it is an advance towards recognising the heterogeneity of the elderly population.

It is assumed in this book that the elderly population in Brazil consists of a heterogeneous and complex group, made up of people whose interval of ages surpasses 30 years and who have experienced differentiated life trajectories. They have experienced important transformations, such as the fall in maternal mortality and are now experiencing the decline of mortality at advanced ages. They are the beneficiaries of the heart bypass. They are the survivors of high infant mortality due to infectious and contagious diseases and from malign neoplasias and cardiovascular illnesses in middle age. All this process has differentiated benefited Brazilian social and racial groups, etc.

Public policies should both respond to the demands of individuals looking for an active ageing, as well as meeting the needs of those in vulnerable situations brought about by advanced age.

3 ORGANISATION OF THE BOOK

This book is subdivided into five parts and 17 chapters, in addition to this introduction. All seek to show that the heterogeneity of the elderly population group extrapolates that of age composition. Due to the different trajectories of life experienced by elderly people, they have different family insertions, as well as in the economic and social life of the country.

In the first part, in Chapter 1, a sociodemographic profile of the elderly population is given by Camarano, Kanso and Mello. The increase in life expectancy associated to improvements in health conditions caused by more advanced technological medicine, as well as the expansion of social security leads to substantial differences in “being an elderly person” now from the recent past. To trace the

profile of elderly people, population growth by gender, age subgroups, marital status, race/colour, education, as well as the spatial distribution were looked at. In addition to these characteristics, the evolution of mortality patterns according to gender and cause of death, health conditions, physical and financial autonomy and elderly persons living arrangements were also analysed. Participation in labour market was also examined, taking on account whether elderly people were retired or not, their income and the source of this income.

The main conclusions extracted from the sociodemographic analysis of the elderly population in Brazil were:

- The length of time lived by the Brazilian population has lengthened, measured in terms of life expectancy at birth, at 60 years and by the average age of death. The patterns of causes of death did not change in the 20 years studied. Cardiovascular diseases continue to be the main cause of death, but this is occurring later in the life cycle.

- A not insignificant part of the elderly population has difficulties in hearing, seeing, climbing stairs and dealing with basic daily activities. These difficulties appear to have been postponed to later ages, similar to what is happening with mortality. This is the segment that requires the most care, which, in general, is given by the family. A large part of these elderly people live in relatives' homes (children, in-laws, nephews and nieces, etc.), specially women.

- Elderly people on average have better economic conditions than non-elderly people. This is a result of their timing in the life cycle, their life trajectory, public policies, especially the universal expansion of social security. They experienced a large proportion of their adult life during a period of rapid economic growth. This has allowed them to accumulate assets, as their own houses and to be entitled to Social Security.

- Elderly people stay in the labour market until advanced ages, even when retired. The participation of retired people in the labour market is a particularity of the Brazilian labour market that allows them to return to economic activity without any loss. It is also associated with the concession of retirement benefits for working time or contribution time. This means that the Brazilian social security does not retire only elderly people. Income from labour is an important component in the earnings of elderly people.

The four points summarised above led to the need to go deep in the knowledge of this population segment stressing its heterogeneity. Therefore, the second part of the book seeks to answer the question: how far beyond the 60s?

This means how are the possibilities of the continued increase of life expectancy and which physical and mental conditions the survivors will live. Three chapters deal with this question.

Chapter 2, written by Camarano, Kanso and Mello, measures the actual possibilities for an increase in Brazilian life expectancy at birth and at 60. This measurement was carried out taking into account the elimination of deaths due to certain causes considered as avoidable for the elderly population and also mortality due to external causes (violence). The conclusion emphasises that there is still room for an increase in life expectancy in Brazil. If all these avoidable causes are eliminated, the authors estimate that life expectancy at birth will increase 12.9 for men and 11.6 for women. This is equivalent to a life expectancy higher than currently observed in Japan. The differences between the sexes will remain high.

One area of concern pointed out in this chapter is that currently approximately 40% of the time lived by elderly Brazilians is without good health. This raises the important question of the possibility of longer life be associated with better quality for the survivors. The projected increase in life expectancy at 60 leads to the ageing of the elderly people. In other words, the very old persons (over 80) will experience larger growth rates. This is the age group where the largest proportion of disabled, people suffering from chronic and degenerative diseases, people with difficulties in dealing with daily activities, etc., can be found. The expectation is that the timing on the life cycle when these problems will begin will continue to be postponed and will concentrate near to death.

In Chapter 3, Medeiros and Diniz look at the question of disability as an object of public policy. The highest proportion of disabled Brazilians is concentrated among elderly people. While 8.6% of the Brazilian population were elderly in 2000, approximately 24% of disabled Brazilians were elderly persons.

They take as a theoretical framework, the social model of disability. This looks at disability as an experience resulting from the interaction of individuals' corporal characteristics and the social conditions in which they live. This theoretical perspective opposes to the traditional medical model that understands disabilities solely in terms of physical limitations. It should be understood that there is not necessarily exists a straightforward relationship between the experience of injury and disability. "Injury was seen as a corporal characteristic, such as sex or skin colour, while disability was the result of oppression or discrimination suffered by people as the result of a society that organised itself in such a way that they could not be included in daily life."

The argumentation that injury is not the only determinant of disability finds a paradigmatic case in elderly people: “a hostile environment can result in the accumulation of light limitations on corporal functionality becoming the cause of serious disabilities among elderly people”. Furthermore, “much disability is the result of a social and economic context that is reproduced in time, since disability in ageing is in part the result of inequalities that emerged in the past and that are still kept”.

Chapter 1 shows that women are slightly less affected by disabilities than men. On the other hand, it also shows that the type of disability is differentiated by gender. For example, women suffer more from mental disabilities than men, who in turn have a higher probability of contracting hemiplegia than women.

The growing number of very old people is not just a very important public health question, it also a policy question in a broader aspect. It raises classical ethical questions, such as euthanasia or the right to die. The possibility of intervening in the life cycle and accelerating or postponing the moment of death is, perhaps, one of the most central ethical questions in the health area. The advance in medical technology, especially palliative techniques and extraordinary treatments that can indefinitely extend life, effectively preventing people from dying, introduces a new question to the debate: is there (or not) a right to choose one’s moment of death? Diniz and Costa, in Chapter 4, brings about this question, which is still little discussed in Brazil.

The third part of this book aims to get a better understanding of the relations of interchange and help among family members. It is assumed that the dependency of elderly people comes from their lack of income or autonomy to deal with daily activities. One of the conclusions of Chapter 1 is that the demand for care from the “dependent” population, in general, falls on the family. In addition, poverty and unemployment, as well as other demographic shocks such as the HIV/AIDS epidemic, the instabilities of affective relations among young people associated with the unexpected results of policies have contributed to the “growth” of families. Co-residence between elderly people and adult children is a generalised practice in their living arrangements. Sometimes the beneficiaries are elderly people while at other times they are their children and grandchildren. Two of the three chapters that make up the third part of this book focus on this question.

In Chapter 5, Camarano et al discuss the complexity of family arrangements involving elderly people. While 8.6% of the Brazilian population were elderly in 2000, elderly people were found in almost one quarter of Brazilian families. The most common arrangement is that constituted by elderly persons and children. In

addition, in 86% of the families where elderly people reside, they are heads of households or spouses. The increase in the proportion of elderly people being heads of households, as well as the reduction in that of elderly people living in relatives' homes may suggest a reduction in the "dependency" of elderly persons on the family.

Moreover, a significant and increasing proportion of children living in these families, including grandchildren, was found. These families have a higher per capita household income and a lower proportion of poor persons. The large majority of elderly people live in their own households. The contribution of their income in the budgets of these families is significant, stressing the importance of income from social benefits. In this case, one can think of an inversion of the traditional relationship of dependency and of an association between family arrangements and living conditions where social security policy has played an important role.

A much smaller proportion of elderly people live in relatives' homes. These are older, poorer, work less and report worse health conditions and lower functional autonomy. There is some indication that they, to some extent, depend on the help of children. This "dependency" is associated with the advance of age, the appearance of chronic and degenerative diseases, physical incapacities and poverty. In summary, co-residence in Brazil appears to be associated with better living conditions of family heads. It offers benefits for elderly people and their children, but there are indications that the younger generations benefit the most. It was not possible to conclude whether co-residence reflected preferences or needs. This is an important question to be investigated, since domestic violence can result from imposed co-residence.

Chapter 6, written by Saad, portrays the frequency with which transfer of intergenerational support occurs in Brazil, making comparisons with other Latin American countries. Some of the main determining factors are identified. The first part of the chapter was published in the earlier edition of this book. It analyses data from specific research carried out in São Paulo and Fortaleza. The second part of the article compares the situations of some Latin American large cities, using data from the Research on Health, Welfare and Ageing [Pesquisa de Saúde, Bem-estar e Envelhecimento (SABE)].

The study shows that elderly people in Brazil and in Latin America in general not only receive, but also provide intense support through goods, services, money and other means. This makes clear that the transfer of informal support between elderly people and the family is a process of reciprocal exchange between

generations. This exchange is more intense in the Brazilian cities researched in comparison with the Latin American ones. The substantial flow of support from elderly parents to adult children in Fortaleza stands out the most, indicating that children, generally speaking, continue to receive help from their parents even at advanced stages of their adult lives.

It concludes by pointing to important differences among the studied areas in terms of the intensity at which certain types of intergenerational transfers occur. In the Brazilian context, for example, the interchange of support was found to be much more intense and generalised in Fortaleza than in São Paulo. In comparison with the elderly people in other Latin-American cities, elderly people resident in São Paulo report more frequently difficulties in carrying out instrumental activities in daily life. They also report to receive more frequently help for the daily activities but financial help. Even though they tend to receive less financial help, elderly people living in São Paulo tend to provide more financial help to their children than elderly people in Buenos Aires and Mexico. The elderly people from Montevideo provide the greatest financial help and with the greatest frequency compared to other capitals.

Chapter 7, written by Goldani, has a different approach from the other chapters in this section. It discusses intergenerational relationships and the reconstruction of the welfare state in Brazil. It discusses two basic points of the current debate. The first is related to the existence of an emerging “inter-generational conflict”, marked by the dispute for resources between age groups, especially between children and elderly people, in which elderly people are better placed. The second is related to the dichotomisation in the social world between the macro and micro sphere, where macro is associated with the public sphere (male), which is more valued. The micro sphere is related to families and women.

It criticises the fact that policies take by granted solidarity between family members in an idealised model of the family where gender relations are not taken into account. Also, the chapter criticizes public policies for their role in strengthening family as the “carer” of elderly people, re-enforcing individualisation with implications on gender equity. Conventional economic analyses consider the public social expenditure on elderly people to be high, but never concern themselves with comparing these costs with those incurred by families. This is mainly due to the implicit assumption that families, especially women, provide free social services.

One question that is raised is how to allocate the responsibilities for the care of elderly people among the market, the family and the state. These are called the

“pillars of welfare”. If one of the pillars does not correspond to expectations, there is always the possibility that the other two can take on the responsibility or, alternatively, that unsolved problems will increase. Policies at the macro level that establish the joint responsibility of families and the state for the care of elderly people are important to relieve the pressure imposed on families, especially on women. These policies have to be able to respond to the fundamental changes in the concept of family and relationship arising out of sociodemographic and technological changes.

Public policies, therefore, are one of the important pillars for the well-being of the elderly population. Elderly people’s incomes, for which social security benefits are responsible for a significant part, have increasingly become an important component of family income in Brazil. This is mainly due to the universal expansion of social security, the expansion of the coverage of health services and advances in medical technology. The improvement in health conditions has allowed elderly people to work until advanced ages and income from work has constituted an important part of their and their family budget.

The fourth part composed of six chapters, analyses public policies for elderly Brazilians. It starts in Chapter 8 with an analysis of the impact of the process of population ageing on the public policy agenda both at the national and international levels. The authors consider that there have been advances in both agendas in the last two decades, but without guaranteeing the implementation of policies that have been drafted.

Brazilian legislation has incorporated a large part of the suggestions of the international assemblies of Vienna and Madrid. The 1994 National Policy for Elderly People and the 2003 Elderly People’s Statute constitute two advanced legal landmarks in relation to the social protection of elderly people, which is analysed in Chapter 8. In addition, this chapter describes some specific Brazilian policies such as: social security, health, long-term care and social integration. This chapter returns to a discussion raised in the previous chapter about whether Brazilian public policies are aimed at the construction of a society for all ages, as stated in the Madrid Plan.

The importance of the development of the Brazilian social security for the well-being of individuals in the last stage of life is acknowledged. The following four chapters highlight the importance of the universal expansion of social security set in the 1988 Constitution. Income from social benefits, as well as guaranteeing the basic subsistence of elderly people, has increased their status within the family. From being dependent on the resources of the family, elderly people have become

one of its main supporters, especially among the poor families. Social Security has mostly benefited people in small municipalities, regions or poorer states and females. The main impacts were the result of changes in rural social security legislation. The next two chapters deal with this question.

Chapter 9, written by Delgado and Cardoso Júnior, analyses the specific repercussions of rural social security on the living conditions of elderly people and their families. The authors carried out a fieldwork based on a sample composed by rural households of the South and the Northeast Brazilian regions. The beneficiaries are basically composed of the elderly population, disabled and their legal dependents (widows) from the family rural economic system or informal rural economic work. Rural benefits correspond currently to around one third of total benefits paid by Brazilian social security.

The results reveal that universal rural social security for elderly people has played a modern social protection function. It increases the status of elderly people in private family space. The income from their benefits works as a kind of safeguard for family subsistence. This brings about an inversion on the social role of the elderly persons from dependent to supporter in the context of the survival strategy of poor families. In addition, rural benefits have also contributed to the revitalization of rural family economy playing the role of an “agrarian policy” and of “agricultural income insurance” function. These are the unexpected results of a strict social security system.

The authors emphasise, nonetheless, that these benefits are fiscally expensive and affect social security budget, since the benefits are not funded by specific contributions. It is estimated that the need for the funding the rural subsystem corresponds to 90% of expenditure on total rural benefits. In short, the funding of rural social security is a question that is not sorted out yet.

Beltrão et al, in Chapter 10, also analyses the impact of the expansion of constitutional changes on the living conditions of rural elderly Brazilians, emphasising differences due to gender. The participation of the Brazilian rural population in labour market is also looked at. They conclude stressing the undeniable social role that rural social security has played in increasing income in the countryside and helping to reduce poverty.

As mentioned in Chapter 8, another important constitutional change that benefits the elderly population was brought about by the social assistance legislation. This guarantees a monthly income of one minimum wage to elderly people without income and who are not entitled to social security. Saboia in Chapter 11 presents the results of a fieldwork that analyses the impact both of rural social security and social assistance benefits in reducing rural poverty. Both are understood as non-

contributory benefits in the broadest sense. The author also stresses the greater status of elderly people who receive benefits. These come to be seen as an asset for the families, instead of a burden, as occurred in the past. Most of the interviewed elderly people reported that the family is one of the good things in life. This can suggest a further policy externality, the reduction of intergenerational conflict, especially in relation to the distribution of available resources.

As it was mentioned above, one of the main concerns of policymakers in relation to ageing is the “pressure on social security” and the increase in health expenditure. The current situation of Brazilian social security from the point of view of its financial budget is looked at by Oliveira et al, in Chapter 12.

This consists of an updating of the article with the same name published in the first edition of this book. It shows that many of the dysfunctions of the Brazilian social security system, pointed out and empirically verified in 1999 still exist, in spite of the two reforms that the system has undergone in the last six years. Some of the problems of the system were minimised with the reforms, but the principal problem has not been totally sorted out.

The main problem is that the social security system does not retire only elderly people. In 1998, by the time of the first reform, 91% of men receiving benefits due to contribution time had begun to receive benefits when they were younger than 60. In 2002, this proportion had fallen to 84%. The comparable proportions for women were 98% in 1998 and 97% in 2002. The reforms did manage to halt very early retirement, those awarded to individuals younger than 55 years. In 1998 these corresponded to 75% of males who had retired due to contribution time and 83% of women. In 2002, these figures had fallen to 55% and 76% for men and women respectively. Brazil is among the few countries in the world that still allows retirement due to contribution time or worked time without setting a minimum age limit.

Another concern of policymakers is health expenditure. The common view is that the morbidity profile of elderly people results in more expensive treatment than that for other age groups. This is due to at least three reasons: the prevalent morbidity for these age groups requires more expensive treatment (chronic and degenerative diseases); hospitalisation rates for more advanced age groups are higher and average hospitalisation costs for elderly people are higher than those observed in younger age groups.

These three hypotheses are investigated in Chapter 13 by Nunes who works with data of hospitalisation costs of elderly persons in the public health system [Sistema Único de Saúde (SUS)] as a proxy for the health expenditure of elderly

people in Brazil. The results show that, at least in relation to the procedures carried out by SUS, the hypothesis that the average cost of procedures carried out on elderly people are more expensive than those carried out on younger people is not proven. To the contrary, it was shown that costs start to fall from the 60-64 age group onwards for males and from the 65 to 69 age group for females. However, the rate of use of health services by elderly people is higher in comparison to the rest of the population.

The fifth and final part of this book analyses the living conditions of the Brazilian population in their final phase of life. It is assumed that these conditions are strongly affected by public policies. This section consists of four chapters. It starts, in Chapter 14, with the analysis of the participation of elderly people in the labour market from 1977 to 2002, done by Wajnman, Oliveira and Oliveira.

This analysis takes a different approach from conventional labour market analyses. The central concern is not with the pressure that elderly people can put on the labour market, but in obtaining some insights into their situation of vulnerability, through their participation in economic activities. An important feature of the participation of elderly people in the labour market is the presence of retired people. This is because the Brazilian social security system does not require retired people to withdraw from economic activity. Thus, to the contrary of the expected based on international experience, the participation of elderly people in the labour market was not affected by the expansion of the coverage of the social security system during the period analysed.

It also shows that there is a great heterogeneity in the participation of elderly people, indicated by important differences related to age, gender, region of residence, race, education and types of occupation. The highest participation occurs in agricultural activities and services, either self-employment or receiving no payment and in the non-skilled occupations. However, as elderly people get older, manual occupations give way to better educated ones, while full time jobs gives way to shorter working journeys.

The elderly people most available to work are those dependent on earnings from economic activity: men, blacks, heads of families, those with lowest family income, the non retired ones and the unskilled workers. Nonetheless, workers with the highest level of education have the highest probability of being occupied at advanced ages.

Neri, Carvalho and Corsi describe the process of the accumulation and loss of wealth during the life cycle in Chapter 15. The analysis of access to resources was based on three groups: physical capital (durable goods, housing and public

services), human capital (education) and social capital (trade unions and associations, political participation and family structure). It is assumed that physical assets ease possible fluctuations in income. A higher proportion of elderly people have their own homes in comparison to other age groups. In addition, the proportion of the former who use public services grew over the studied period.

Access to human capital is very important in the initial and intermediate stages of the life cycle. It allows a greater accumulation of physical and financial capital, thereby guaranteeing greater well-being at the end of the life cycle. In this way, education level is an important variable in the explanation of inequalities in the distribution of income between different generations. In relation to social capital, it was observed that elderly people have lower rate of adhesion to trade unions and non-community associations, even when controlled for the fact of being economically occupied. On the other hand, they also participate in a more effective way in community associations, especially religious ones.

Chapter 16, also written by Neri et al, investigated the process of the accumulation and the loss of financial resources during the life cycle, giving special emphasis to the demand for assets, credit and security by elderly people. The study present a brief review of the literature focusing on the reasons that lead to the demand for long-term assets by families and an empirical evaluation with qualitative character of these reasons.

The most popular financial asset owned by the elderly Brazilians is the savings account. Among the Brazilian population, they are the group that most use these accounts, have the highest number of them and the greatest balances. The main reason given for investing in savings accounts is the precaution. Almost half of elderly savers do this to be prepared for possible emergencies. This demystifies the idea that elderly people do not save and only consume. Nonetheless, the highest volume of withdrawals is also found among elderly people.

Generally speaking, the comparison of labour income versus other alternative incomes shows that the latter play an important cushioning role at more advanced ages for all educational levels, as stated in life cycle theory. It confirms again the importance of the social security income on elderly income as seen in other chapters.

Elderly people also have on average better income than the rest of the population. The following chapter, also written by Neri et al, tries to measure whether the cost of the basic consumption basket of the elderly population is higher than that for the rest of the population. They also measured how it has evolved over time. It uses a methodology developed to calculate the specific price

index for families in which at least 50% of members are elderly people and with income between one and 33 minimum wages.

As expected, the differences observed in the composition of the consumption structure of families are significant. It was noted that families with elderly people consume more on health, personal care and other expenditure. In terms of the impact of these differences in consumption on acquisitive power, it was shown that inflation measured by the specific consumer price index for elderly families [Índice de Preços ao Consumidor (IPC-31)] between 1994-2004 was 15.5% higher than that of total families measured by the general consumer price index (IPC-Br) published by the Getulio Vargas Foundation. In summary, the data suggests that parts of the monetary gains obtained by the elderly population are not translated into real earnings due to the higher inflation they experience. In short, being an elderly person is more expensive.

Lately, final comments, written by Camarano, speculates, bearing in mind the scenario painted in the 17 chapters, on the prospects for the new elderly Brazilians, or for the elderly people of the future. Beyond 60: how?

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PART 1

**SOCIODEMOGRAPHIC CHARACTERISTICS OF THE BRAZILIAN
POPULATION IN LATER LIFE**



CHAPTER 1

WELL-BEING OF THE BRAZILIAN POPULATION IN THE LAST STAGE OF LIFE*

Ana Amélia Camarano

Instituto de Pesquisa Econômica Aplicada (IPEA)

Solange Kanso

Instituto de Pesquisa Econômica Aplicada (IPEA)

Juliana Leitão e Mello

Instituto de Pesquisa Econômica Aplicada (IPEA)

1 INTRODUCTION: THE AGEING OF THE BRAZILIAN POPULATION

Population ageing is currently an important phenomenon worldwide. In the Brazilian situation, this can be seen by the increase of the proportion of the population of the group aged 60 and over: it rose from 4% of the population as a whole in 1940 to 8.6% in 2000.¹ In the last 60 years the absolute number of people aged 60 or over has increased nine-fold. In 1940 they numbered 1.7 million, compared to 14.5 million in 2000. It is foreseen that by 2020 there will be approximately 30.9 million people over 60 [Beltrão, Camarano and Kanso (2004)].

In addition, the proportion of the oldest elderly people, i.e., those aged 80 or over, is also increasing, altering the age composition within the elderly age group itself. This also means that the population considered elderly is also ageing [Camarano et al (1999)]. In 2000 this segment accounted for 12.6% of elderly people. These changes have resulted in that the elderly population can't be seen as a homogeneous age group. In fact, it is a very heterogeneous group composed by people whose age interval covers a range of approximately 30 years. It includes person in their 60 who, due

* This chapter was translated from Portuguese to English by Eoin O'Neill and reviewed by Ana Amélia Camarano. The authors would like to thank Bruno Negreiros for his work with the bibliography and the data tabulations.

1. Elderly people defined here are those aged 60 or over, as stipulated in the National Policy for Elderly People.

to medical advances, can be in full mental and physical health, as well as people in their 90, in more vulnerable situations.

The heterogeneity of the studied age group extrapolates that by age. Due to the different trajectories in life experienced by elderly people, they have distinct insertions in the social and economic life of the country. The heterogeneity of elderly people as a group, whether in age, in health or in the socioeconomic conditions, also results in differentiated demands for public policies.

According to Camarano (2002), the growth of the elderly population is the result of two processes: fertility decline as well as a reduction in the mortality of the elderly population. Also, fertility rates were very high in the past which had result in a great number of births that are now being part of the elderly age group. On the one hand, the fall in fertility modified the distribution of the Brazilian population, resulting in an increase in the proportion of the population aged 60 and over in the total population. On the other hand, the reduction in mortality caused an increase in the time lived by elderly people, in other words, it expanded the top of the pyramid.

Population ageing is accompanied by the ageing of the individuals and of other population groups, such as the Economically Active Population (EAP) [População Economicamente Ativa (PEA)], and of families (growth in the number of families in which there is at least one elderly person), etc. This process alters individuals' lives, family structures and society.

This chapter is divided into seven sections. This introduction is the first one. The second section presents the sociodemographic characteristics of the elderly population in Brazil, investigating their composition by sex, age, region of residence, race and marital status, as well as their education. Mortality rates and patterns as well as health conditions of this population age group are considered in the third section. The insertion of elderly people in the family and in the labour market is described in the fourth and fifth sections, respectively. The sixth section looks at the income of the elderly population, considering their composition and their participation in the family budget. The last section discusses the main results.

The data used is essentially obtained from demographic censuses. In the third section, these are complemented with those from the Health Supplement of the 1998 National Household Sample Survey [Pesquisa Nacional por Amostra de Domicílios (PNAD)], and with those obtained

from the Ministry of Health's Mortality System [Sistema de Mortalidade do Ministério da Saúde (SIM/Datasus)].

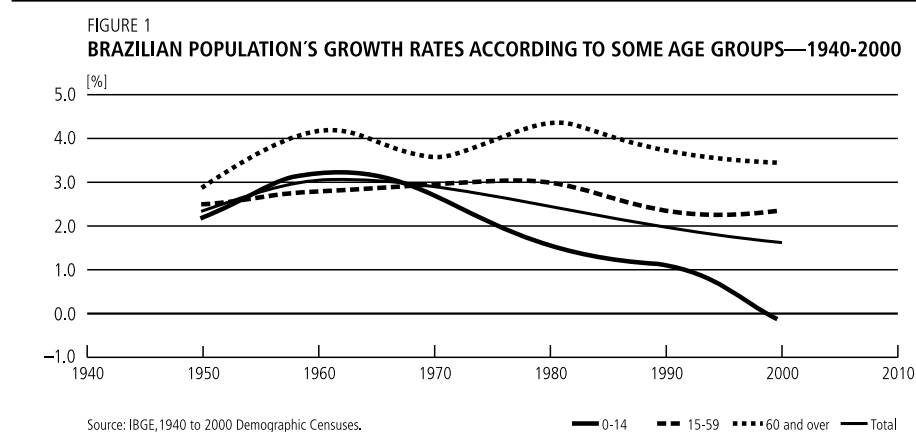
2 SOCIODEMOGRAPHIC CHARACTERISTICS

2.1 Demographic Dynamics

Since the 1960s, the Brazilian population growth rate has been declining. The highest rate was observed during the 1950s, when an annual growth rate of 3.1% was recorded. Since then, this rate has slowed, falling to 1.6% a year in the 1990s. Figure 1 shows the growth rates of the Brazilian population between 1940 and 2000 for certain large age groups: children (0 to 14), the population in economically active age group (15 to 59) and elderly people (60 or over).

Since the 1940s, elderly people have had the highest population growth rates. In the 1950s this rate was already over 3% a year [Camarano et al (1999)]. Between 1991 and 2000, it reached 3.4%. These higher rates suggest that the Brazilian process of population ageing, if measured by the higher rate of growth of elderly people, is not new.

According to Beltrão, Camarano and Kanso (2004), "It is expected that this age group will number approximately 30.9 million people in 2020, making up 14% of the Brazilian population. This is the result of its high rate of growth, partially the consequence of the demographic inertia. In other words, an important proportion of the elderly population growth is determined by the current age structure; the elderly people of the near



future have already been born”. Changes in mortality rates will be also responsible for this population growth rate as well as its composition by sex.

It can also be noted in Figure 1 that the growth rates of the other two population age groups, children and that in economically active age group declined throughout the period. This is clearest for the younger group. In the 1990s this age group experienced negative rates of 0.16% a year.

2.2 Age, Gender, Race and Marital Status Composition of the Elderly Brazilians

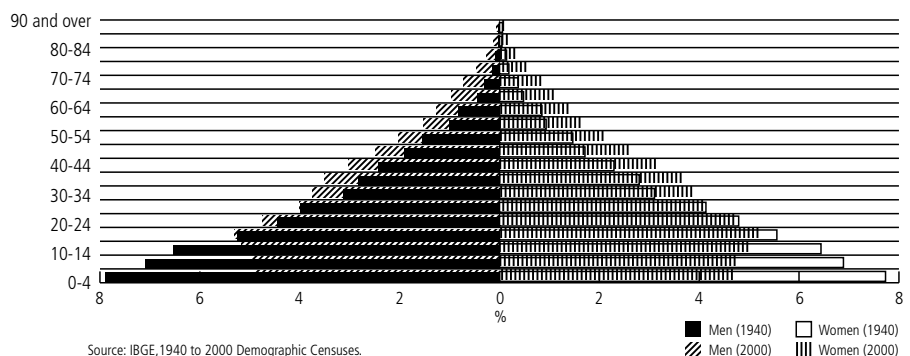
2.2.1 Age composition

One of the commonest ways of visualising the ageing of a population is through the population pyramid, seen in Figure 2. This shows the age profile by sex of the Brazilian population in 1940 and 2000. The ageing movement can be seen by the narrowing of the bottom and the expansion at the top of the pyramid. The latter was most marked among women. One of the results of this is a higher proportion of women among the elderly age group.

As it has been previously mentioned, the age bracket that defines the elderly population is quite broad, resulting in a very heterogeneous population. For this reason, this age group was analysed according to age distribution, sex composition, race and marital status and the aspects that differentiate them were observed.

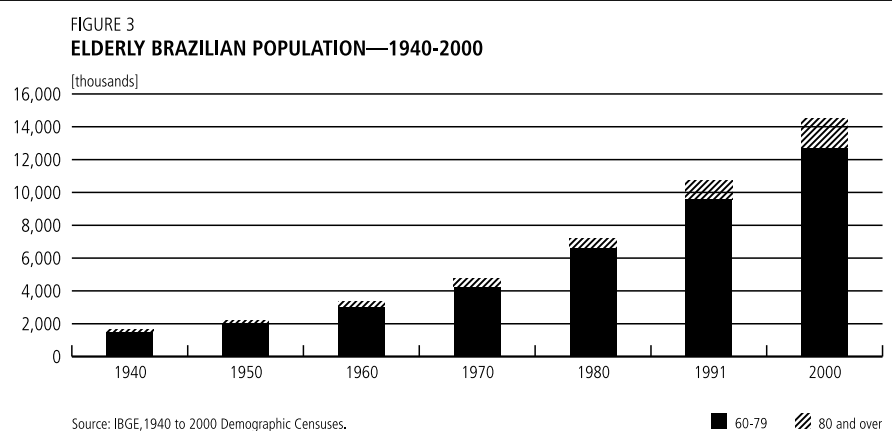
The elderly population is commonly broken down into two age sub-groups: from 60 to 79 years and 80 years and over. Advances in medicine

FIGURE 2
BRAZIL: AGE DISTRIBUTION BY SEX—1940-2000



and technology have resulted in an increase in the life span of individuals. As a result, the population aged 80 and over, called the “very old people”, have increased among elderly people.

Figure 3 shows the trends in absolute numbers of the elderly Brazilians between 1940 and 2000. The very old population is also represented. It is noted that this grew at a relatively higher rate than the elderly population as a whole. In 1940 it accounted for around 10% of the elderly population, while in 2000 it accounted for 13%.



2.2.2 The feminisation of the old age

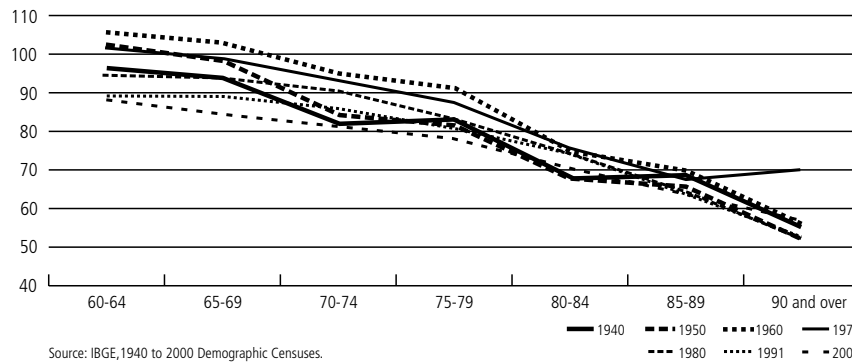
Ageing is also a gender question. Looking at the elderly population as a whole, it can be seen that in 2000, 55% are women. When broken down by age subgroups, the difference between these proportions increases, especially among the oldest elderly people. Figure 4 shows the sex ratio² of the elderly population by age subgroups.

The older the population is, the higher the proportion of females, a fact explained by the differentiated sex mortality. This leads to the statement that “the world of the very old people is a world of women” [Carstensen and Pasupathi, apud Goldani (1999)]. The higher proportion of women among the elderly population has also become more significant over time. Although the Brazilian elderly sex ratio increased between 1940 and 1960, its trend since then has been towards a sharp decline.

Female predominance among elderly people is an urban phenomenon. In rural areas, men predominate. The higher participation of women in

2. This is the ratio between the number of men and women in a given population.

FIGURE 4
SEX RATIO OF ELDERLY BRAZILIANS BY AGE GROUPS—1940-2000



the rural—urban migratory flow explains this difference [Camarano (2003) and Bercovich (1993)]. This implies distinct care needs for the elderly population. For example, it is widely recognised that male predominance in rural areas can result in isolation and abandonment of elderly persons [Camarano et al (1999) and Saad (1999)].

According to Lloyd-Sherlock (2002), even if old age were not universally female, it still has a strong gender aspect. For example, elderly women have a greater chance of being widowed and of living in an unfavourable socioeconomic situation. The majority of Brazilian elderly women did not have paid work during their adult lives. In addition, although they live longer than men, they spent through a greater period of physical debility before their death than men do [Nogales (1998)]. On the other hand, they take part in activities outside the home more than men, such as women's movements and organisations, taking courses, travelling and on unpaid temporary work. Different from during their adult life, they progressively assume the role of head of family and provider [Camarano (2003)]. Older men have greater difficulty in adapting to leaving the labour market [Goldani (1999) and Simões (2004)].

2.2.3 Colour or race composition

The distribution of the elderly population by colour/race in 2000 was not different from the distribution of the population as a whole. The white elderly population predominated, followed by the mixed race ones. Out of the 14.5 million elderly people, 8.8 million were white, around 1.0 million were black and 4.4 were mixed, corresponding to 60.7%, 7.0% and 30.7%

of the elderly population, respectively. Asian and indigenous population only accounted for a very small proportion of the elderly population, 1.2% (see Figure 5).

Compared to men, elderly women contain a higher proportion of white population and lesser black and mixed race one (see Figure 5). This may be explained by differences in mortality among the different groups. In addition, Camarano (2003) raised the possibility of a misreporting problem in these data, since Brazilian information about colour/race is self-reported.

Table 1 presents the proportions of elderly people by colour/race between 1980 and 2000. As expected, the aforementioned proportions increased in all the racial groups looked at, but at differentiated rates. The

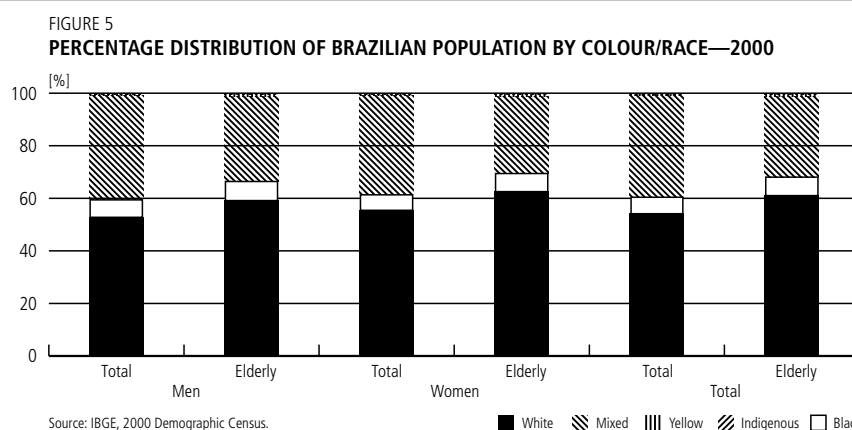


TABLE 1
PROPORTION OF ELDERLY BRAZILIAN POPULATION BY COLOUR/RACE

Colour/Race	1980	1991	2000
White	6.7	8.3	9.7
Black	7.2	8.8	9.6
Mixed ^a	5.0	5.8	6.8
Yellow	8.8	12.6	16.6
Indigenous		6.6	8.4

Source: IBGE, 1980, 1991 and 2000 Demographic Censuses.

^a In 1980 the colour/race "mixed" included: mulatto, Indians and *mestiça*, *cabocla*, *mameluca*, *cafuzo*, etc. (terms for various degrees of mixed race).

highest proportions of elderly people are observed among Asians (16.6%), followed by blacks and whites (9.6%). The lowest was amongst mixed race. In relation to the high proportion of black elderly people observed in 1991, Bercovich (1993) emphasised that since 1980, the black population pyramid had a narrow base compatible with a recent fall in fertility.

2.2.4 Marital status composition

Table 2 shows the distribution of the elderly population by marital status and sex in 1940, 1970, 1991 and 2000. An increase in the proportion of separated and divorced can be noted over the period analysed. In 1940, only 0.5% of elderly men and 0.3% of elderly women declared themselves to be separated. In 2000, this figure among men was 6.2% and among women 11.8%.

Widowhood is the predominant marital status of elderly women, although this proportion decreased during the time period studied. In 1940, the proportion of elderly widows was 3.4 the proportion of elderly widowers, while in 2000 there were 3.3 times as many widows. This is due to two factors: the higher longevity of women and remarriage—more frequently observed among elderly men [Camarano (2003)]. The proportion of widowers declined as well.

The proportion of married elderly people³ increased among both sexes, especially among women. In 1940, approximately 29% of elderly women were married, a figure that had increased to 40.8% in 2000. Among men it was also observed a rising trend between 1940 and 1991. Between 1991

TABLE 2
PROPORTION OF ELDERLY BRAZILIANS ACCORDING TO MARITAL STATUS AND SEX

Marital Status	1940		1970		1991		2000	
	Men	Women	Men	Women	Men	Women	Men	Women
Married	68.8	28.9	77.5	36.5	80.1	41.5	77.3	40.8
Separated/Divorced	0.5	0.3	2.3	3.1	3.8	6.1	6.2	11.8
Widowed	20.7	56.2	14.6	51.1	10.9	43.3	12.4	40.8
Single	10.0	14.4	5.4	9.2	5.2	9.2	4.0	6.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: IBGE, 1940, 1970, 1991 and 2000 Demographic Censuses.

3. Civil and/or religious marriages are included, as well as cohabitations. Part of this increase may reflect changes in the way information is collected by the demographic censuses.

and 2000, there was a slight reduction in the aforementioned figure from 80% to 77%. The reduction in mortality at adult ages may have contributed to a reduction in widowhood and an increase in the proportion of married people. In addition, the proportion of single people declined during the studied period, most especially among men.

2.3 Spatial Distribution of the Elderly Brazilians

In 2000, the Brazilian population was concentrated in the Northeast and Southeast regions (70.8%) and in urban areas (81.3%). Between 1940 and 2000, the urban population grew by 4.0% a year and the rural by 0.2%. This is mainly due to the still significant rural exodus, and also to the definition of urban and rural areas used by the Brazilian Institute of Geography and Statistic [Instituto Brasileiro de Geografia e Estatística (IBGE)], which is affected by the establishment of new municipalities.

Figure 6 compares the regional distribution of the total and elderly populations in selected years. The elderly population is also concentrated in the two regions mentioned above—in an even more striking manner. In 2000, 28% of elderly people lived in the Northeast and 46% in the Southeast. In comparison with 1940, the proportion of elderly people residing in the Northeast declined by 10%, while it increased in the other regions. In comparison with 1970, it can be seen that the proportion of elderly Brazilian only increased in the North and Mid-west regions.

A concentration of the elderly population in urban areas can also be noted, which has occurred slightly more intensely than in the rest of the population, as shown in Table 3. Since the 1970s, women have been

FIGURE 6
PROPORTION OF BRAZILIAN POPULATION BY REGIONS—1940, 1970 AND 2000

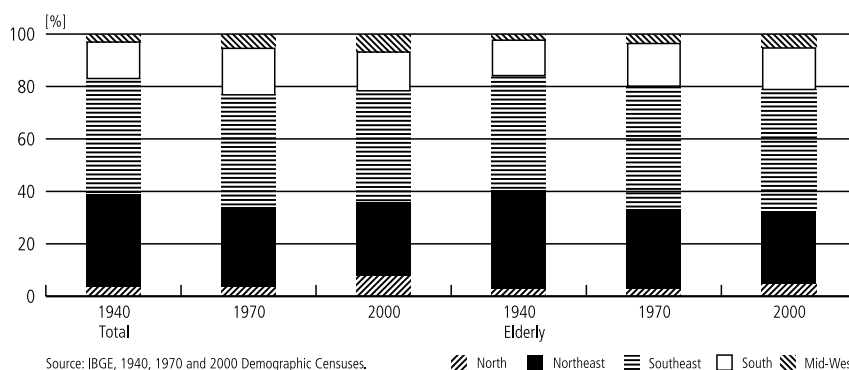


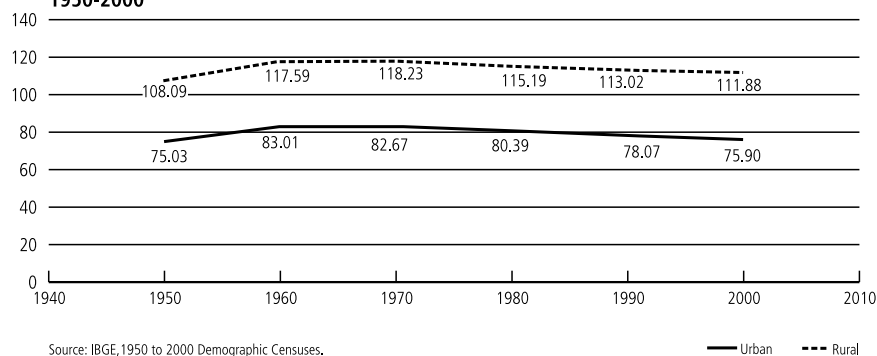
TABLE 3
PROPORTION OF BRAZILIAN POPULATION RESIDING IN URBAN AREAS—1950-2000

	Total		Men		Women	
	All Ages	Elderly People	All Ages	Elderly People	All Ages	Elderly People
1950	36.2	43.8	34.7	39.2	37.7	48.1
1960	44.9	51.5	43.3	47.2	46.5	55.8
1970	55.9	61.6	54.5	57.2	57.4	65.7
1980	67.6	69.4	66.4	65.4	68.8	73.0
1991	75.6	76.7	74.3	73.1	76.9	79.7
2000	81.2	81.4	80.0	78.1	77.6	84.0

Source: IBGE, 1950 to 2000 Demographic Censuses.

responsible for the increased concentration of elderly Brazilians in urban areas. In 2000, the sex ratio of the elderly population varied between 75.9% in urban areas to 111.9% in rural ones. In the latter, the sex ratio has declined slightly (see Figure 7). Although the differences between rural/urban mortality are not very sharp, the higher levels in the rural environment cannot be ruled out as being one of the responsible factors for the higher numbers of surviving elderly people in cities. Nevertheless, rural-urban migration, with a predominance of females, explains the greatest part of this process [see Camarano and Abramovay (1998)].

FIGURE 7
SEX RATIO OF THE ELDERLY BRAZILIANS ACCORDING TO RURAL-URBAN RESIDENCE—1950-2000



2.4 Education

Important advances in the educational level of the Brazilian population can be observed between 1940 and 2000: the proportion of literate people

and the average number of schooling years have increased. None the less, despite the absolute and relative increases in these indicators, there are still significant differences between age groups and regions.

The proportion of literate elderly Brazilians increased most significantly among women (see Table 4). Among them, the increase was 146%, compared to 59% for men. In 1940, 74.2% of elderly women were illiterate, while in 2000 this figure had fallen to approximately one third. Although the gains during the period have been most significant among

TABLE 4
PROPORTION OF LITERATE ELDERLY BRAZILIANS AND MEAN NUMBER OF SCHOOLING YEARS BRAZIL—1940 TO 2000

Year	Literate (Know How to Read and Write)	Mean Number of Schooling Years	Literate (Know How to Read and Write)	Mean Number of Schooling Years
	Men		Women	
Non-Elderly People (15 to 60 Years of Age)				
1940 ^a	60.4	-	48.2	-
1950	55.3	-	45.3	-
1960 ^b	67.7	4.1	59.2	4.0
1970	70.4	4.8	65.1	4.7
1980	78.4	5.2	76.1	5.2
1991	83.2	6.4	84.0	6.5
2000	89.4	7.1	90.7	7.4
Elderly People				
1940	43.2	-	25.8	-
1950	45.8	-	28.9	-
1960	54.6	4.0	37.0	4.0
1970	54.4	4.3	39.0	4.2
1980	55.7	4.4	43.7	4.3
1991	60.7	4.5	53.0	4.3
2000	68.8	5.0	63.4	4.8

Source: IBGE, 1940 to 2000 Demographic Censuses.

^a The proportion of literates includes the group aged 10 to 15.

^b The proportion of literates includes the population aged 60-64.

women, elderly men still have higher literacy rates in 2000, 68.9%, while the comparable proportion for women is 63.4%.

The average number of schooling years of the elderly Brazilians has also increased. Table 4 shows the improvement that took place between 1960 and 2000 by sex and for the two population age groups: 15-59 year of age and elderly people. Two movements were observed during this decade: among the 15-59 year of age, education has grown most among women, while, among elderly people, men have made the highest gains in education. This reflects a cohort effect, in other words, greater school attendance by males in the more distant past and by women more recently.

3 HEALTH: MORTALITY AND PHYSICAL AUTONOMY OF THE ELDERLY BRAZILIANS

This section looks at the health of elderly people through their mortality rates, the pattern of causes of death and the conditions of physical autonomy measured by the kind and degree of impairment reported. The data is obtained from the 2000 Demographic Census, the 1998 PNAD and the SIM/Datasus.

3.1 Mortality Rates

The dramatic decline in general mortality associated to the fall in fertility resulted in an alteration in the pattern of mortality during the twentieth century, known as the epidemiological transition.⁴ Generally speaking, the epidemiological transition initially begins with a sharp reduction in childhood mortality from infectious and contagious diseases. Following this, mortality rates gradually start to decline on ever more advanced age groups and the pattern of causes of death changes. The analysis undertaken here focus on the time period 1980-2000, due to the availability of data.

The life expectancy of Brazilian males increased from 58.5 years to 67.5 between 1980 and 2000. Females experienced a sharper rise, around 11 years, with their life expectancy now being close to 76 years, as can be seen in Table 5. The increases in life expectancy were mainly the result of the reduction of childhood mortality and point to the fact that more people survive to a certain age. This reduction was followed by a significant fall in the mortality of adults, which has affected the elderly population most

4. For a discussion of this matter, see Omram (1977), Frenk et al (1989), Caselli and Lopez (1996).

TABLE 5
BRAZIL: LIFE EXPECTANCY AT BIRTH (e_0), AT 60 (e_{60}) AND MEAN AGE AT DEATH

	1980	1991	2000
Male			
e_0	58.51	62.18	67.52
e_{60}	15.64	16.54	19.72
Mean Age at Death	61.41	65.02	65.67
Female			
e_0	64.61	70.76	75.89
e_{60}	17.48	19.77	23.11
Mean Age at Death	63.86	67.34	68.57

Sources: IBGE, 1980, 1991 and 2000 Demographic Censuses; Ministry of Health Database (SIM).

intensely since the 1990s. The result of all this process is a marked increase in life expectancy at birth and at 60 years.

Women have greater life expectancy than men, a difference that has been increasing over time. In 1980, the difference was 6.1 years, which had increased to 8.4 years in 2000. From a relative point of view, the largest gains in life expectancy at birth for women took place during the 1980s and during the 1990s for men (see Table 5). These increases are due, according to Sawyer (1991), to technical progress in medicine and socioeconomic, political and sanitary changes. It is also recognized the importance of several policies undertaken, at the national and international spheres, aiming to reduce childhood mortality, especially during the 1980s and 1990s.

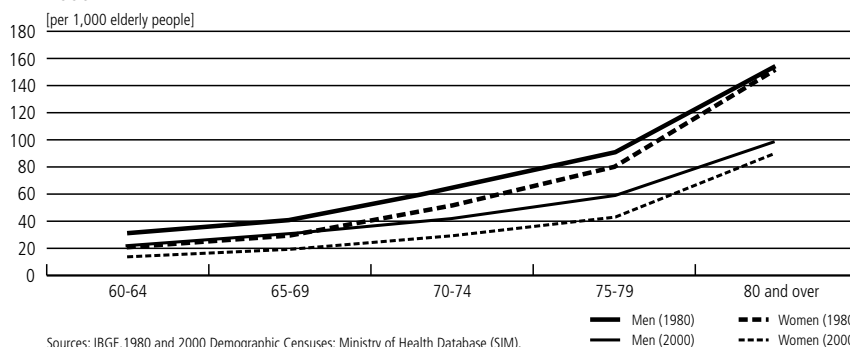
Increases in life expectancy at birth can occur independently of the postponement of the average age of death. In the Brazilian case, as well as increases in life expectancy, there has also been an increase in the average age of death (Table 5).⁵ The latter were lower than those observed for life expectancy at birth. In both cases, it was more significant in the 1980s and was higher for women than men. In 2000, the average age of death for men was 65.7 years, 4.2 years later than in 1980 and for women 4.7 years later than in 1980, 68.6 years.

5. This indicator is also affected by the age distribution of the studied population.

In the 1990s, the reduction of mortality of the elderly population has been accelerated, especially for men. Figure 8 shows the age specific mortality rates for the elderly population. It can be seen that in the two considered time periods and for both sexes the sharpest fall was experienced by the 70-79 age group. In the 1980s, mortality decline was more intense among women, while in the 1990s no important differences between the sexes in this decline can be found.

As a result of the mortality reduction of the elderly Brazilians, male life expectancy at 60 years rose from 15.6 years to 19.7 and female one from 17.5 to 23.1 years between 1980 and 2000 (see Table 5). In both cases, the largest increase occurred during the 1990s. Marked differences between male and life expectancy at 60 can also be observed. These increased during the period in both absolute and relative terms.

FIGURE 8
AGE SPECIFIC MORTALITY RATES OF ELDERLY BRAZILIANS ACCORDING TO SEX—1980 AND 2000



3.2 Causes of Death among the Elderly Population

As well as the reduction in mortality rates during the period in consideration, the causes of death profile was also altered. The proportion of typical deaths of an aged population increased. These include cardiovascular diseases, neoplasias and respiratory diseases. Also noted was an increase in mortality rates due to external causes, which affects the young population most. On the other hand, there was a decline in the amount of deaths due to infectious diseases. In 1980, these accounted for 9.2% of total deaths and were the fourth cause of death in the country. In 2000, they were responsible for 4.5% of total deaths, and were the eighth most important cause of death for Brazilians [Beltrão, Camarano and Kanso (2004)].

Circulatory diseases have remained as the main cause of deaths in Brazil since 1980. In 2000, they were responsible for 26.5% of total deaths registered that year. The proportion of deaths resulting from neoplasms grew from 8.8% to 12.3% of the total deaths, rising from the fifth to the third cause of death in the country. This is related to the ageing process of the Brazilian population [Beltrão, Camarano and Kanso (2004)].

The profile of the causes of death among elderly people did not undergo any significant changes in the studied time period. There was an increase in the proportion of deaths due to neoplasms and respiratory diseases among both sexes (see Table 6), but they remained as the third and fourth causes of death for the elderly Brazilians. In 1980, 12.3% of male deaths were provoked by neoplasms, a proportion that increased to 15.7% in 2000. Among women, the incidence of neoplasms is relatively lower. This was responsible for 10.5% of female deaths in 1980 and 13.2% in 2000. Both proportions that of deaths resulting from “circulatory diseases” and “symptoms, marks and abnormal findings of clinical and laboratory exams, not classified elsewhere” fell for both sexes.

Due to the variations listed above, the main causes of death of the elderly Brazilians observed in 2000 were: circulatory diseases, (35.5% of male deaths and 38.2% of female); symptoms, marks and abnormal findings of clinical and laboratory exams, not classified elsewhere (16.8% for both sexes); neoplasms; respiratory diseases and endocrine, nutritional and metabolic diseases (6.4%) (see Table 6). Altogether, these causes of death were responsible for 85.5% of elderly male deaths and 87.6% of elderly females. This leads to one concludes that there are no marked differences in the pattern of elderly causes of deaths between the sexes. This is also true when the same analysis is done disaggregated by age groups. The proportion of deaths due to “endocrine, nutritional and metabolic diseases” increased during the considered time period. Nevertheless, they are responsible for a small proportion of total deaths.

TABLE 6
PROPORTION OF DEATH OF THE ELDERLY BRAZILIANS ACCORDING TO THE MAIN CAUSES OF DEATH^a 1980, 1991 and 2000^b

	Male				Female			
	1980	1991	2000	Variation ^d	1980	1991	2000	Variation ^d
60 or over								
Circulatory Diseases	42.6	38.1	35.5	-16.7	46.8	41.8	38.2	-18.4
Symptoms, Marks and Abnormal Findings of Clinical and Laboratory Exams, not Classified Elsewhere ^c	22.4	21.2	16.8	-25.2	22.6	21.4	16.8	-25.6
Neoplasms (Tumors)	12.3	13.7	15.7	27.6	10.5	11.9	13.2	25.7
Respiratory Diseases	7.6	10.2	12.6	65.4	6.5	8.8	11.5	75.4
Endocrine, Nutritional and Metabolic Diseases	2.5	3.3	5.0	102.9	4.1	5.5	7.9	93.3
60 to 79								
Circulatory Diseases	42.2	38.7	36.1	-14.5	45.4	41.3	37.7	-17.1
Symptoms, Marks and Abnormal Findings of Clinical and Laboratory Exams, not Classified Elsewhere ^c	20.9	18.5	17.6	-15.7	22.6	18.2	14.0	-38.1
Neoplasms (Tumors)	13.5	15.5	14.3	6.0	12.6	15.0	17.0	34.5
Respiratory Diseases	7.2	9.4	11.2	56.8	6.0	7.7	9.7	63.1
Endocrine, Nutritional and Metabolic Diseases	2.6	3.5	5.2	103.6	4.6	6.3	8.9	96.2
80 and over								

(continue)

(continuation)

	Male				Female			
	1980	1991	2000	Variation ^d	1980	1991	2000	Variation ^d
Circulatory Diseases	44.0	36.8	34.0	-22.7	49.8	42.5	38.9	-21.8
Symptoms, Marks and Abnormal Findings of Clinical and Laboratory Exams, not Classified Elsewhere ^c	28.0	28.5	22.6	-19.5	26.2	26.5	20.8	-20.5
Neoplasms (Tumors)	7.8	8.7	11.1	42.9	5.9	6.7	7.9	33.3
Respiratory Diseases	9.2	12.5	15.8	71.4	7.8	10.6	14.0	78.9
Endocrine, Nutritional and Metabolic Diseases	2.1	2.9	4.5	112.7	3.0	4.2	6.4	110.2

Source: Ministry of Health Database (SIM).

^a The causes of death were classified according to their frequency for total elderly people in 2000.

^b The 1980 and 1991 data refer to CID 9 and 2000 data to CID 10. Therefore, the comparison between the different years is not direct, since there were clear changes between the 9th and 10th revisions.

^c Information related to 1980 and 1991 are from CID 9 where the equivalent heading is: "symptoms, marks and badly defined afflictions".

^d The variation was calculated according to the following form: (2000/1980)-1.

3.2.1 Elderly mortality by circulatory diseases

Circulatory diseases have been the main cause of death among the elderly population almost everywhere in the world. Also, deaths caused these diseases have experienced the largest decline [Caselli and Lopez (1996)]. Their relative participation in total elderly Brazilian deaths has declined over the period. In 1980, they were responsible for 46.8% of total deaths among the elderly population and for 36.8% in 2000. The same trend is observed in Table 6 when the information is disaggregated by age groups (60 to 79 years and 80 and older).

The reduction in the proportion of deaths due to circulatory diseases is also a result of the reduction of mortality rates due to this cause. The mortality rate for circulatory diseases for both sexes fell from 17.9 deaths per 1,000 in 1980 to 13.3 deaths per 1,000 in 2000. Nevertheless, this trend is not homogeneous within the elderly population itself. Analysing the proportion of deaths according to this cause by age groups between 1980 and 2000, it can be seen that it has fallen in the under 80 age group and increased in the 80 and over age group. This has occurred especially among women, as shown in Figure 9. As a result, the average age of death due to this cause increased from 73.6 years in 1980 to 74.7 in 2000 among elderly males and from 76.0 years to 77.4 for elderly females. The median age of death also increased by 0.9 year among the male elderly and by 1.5 year among the female (see Table 7).

This appears to be related to the improvement of medical care involving more efficient diagnoses and treatment for people with a propensity to cardiovascular disease. In other words, to the extent that elderly people are

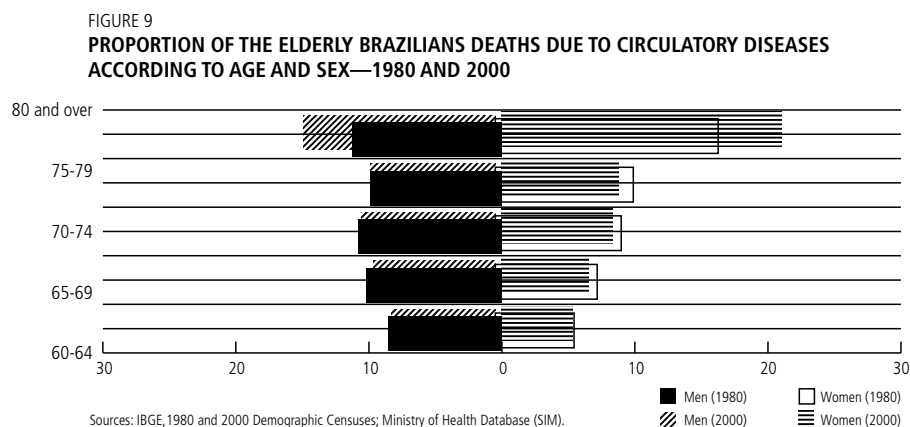


TABLE 7
**MEAN AGE AND MEDIAN AGE OF DEATH ACCORDING TO CAUSE OF DEATH AND SEX
 ELDERLY BRAZILIAN POPULATION**

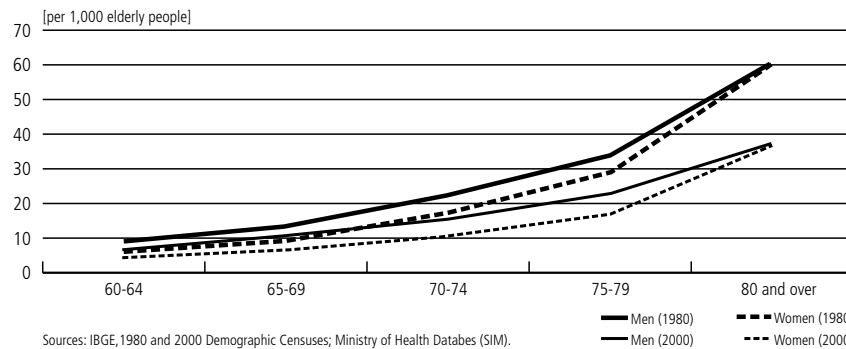
	Average Age		Median Age	
	Male	Female	Male	Female
1980				
Neoplasms	71.5	72.3	70.5	71.1
Circulatory	73.6	76.0	72.5	74.9
1991				
Neoplasms	72.0	72.9	70.9	71.7
Circulatory	74.0	76.7	72.8	75.9
2000				
Neoplasms	73.1	73.8	71.9	72.4
Circulatory	74.7	77.4	73.4	76.3

Source: Ministry of Health Database (SIM).

better cared by health services, with regular medical visits, and these services favour illness prevention, focusing their efforts on more precise diagnosis and treatment, life expectancy increases. Life style is also an important condition for the reduction of mortality due to cardiovascular diseases. This suggests that there is still room for the mortality decline of the elderly Brazilians to continue. This is analysed in another chapter in this book by Camarano, Kanso and Mello.

The difference in cardiovascular disease mortality rates between men and women is especially high at younger ages (see Figure 10). In the time period under analysis, the mortality rates for this cause of death fell in all age groups. The most significant fall was among women between 60 and 79 years (42.3%). For them, the mortality rate for this cause of death was 12.3 deaths per 1,000 in 1980, dropping to 7.1 deaths per 1,000 in 2000. Among the male elderly of this age group, the mortality rate declined from 16 deaths per 1,000 to 10.7 deaths per 1,000 during the same time period (36.6%). The mortality rate of elderly women over 80 years of age fell from 60.4 deaths per 1,000 to 36.8 deaths per 1,000 in the studied time period. This trend is very similar to those observed for the men of this age group. Their mortality rate declined from 60.5 deaths per 1,000 in 1980 to 37.4 deaths per 1,000 in 2000.

FIGURE 10
AGE SPECIFIC MORTALITY RATES OF THE ELDERLY BRAZILIANS DUE TO CIRCULATORY DISEASES ACCORDING TO AGE AND SEX—1980 AND 2000



3.2.2 Mortality by external causes

Although external causes are not among the five principal causes of death of the elderly Brazilians, a more detailed analysis of their impact on the mortality of this segment was carried out. This believes that mortality due to this type of cause would allow some conclusions to be drawn about the daily life of elderly people in Brazil.

Mortality by external causes includes deaths resulting from public transport accidents, traffic accidents, falls, murder, drowning and poisoning. Several of these causes are directly related to the circulation of elderly Brazilians in public spaces. In spite of the existing laws aimed to regulate them, they are still inadequate. To the extent that elderly people use the space of the road more in their daily life, they become more susceptible and vulnerable to accidents. In the same way, they are more exposed to the risks of urban violence.

Part of the accidents and traumas suffered by elderly people in public and private spaces can result from their low status in Brazilian society. This results in the lack of actions that could reduce the various types of violence to which elderly people are subject in the public space [Minayo (2003)]. Other causes of death of this age group are concerned to the domestic space. While carrying out their daily tasks, many elderly people in fragile physical conditions can experience domestic accidents. Another kind of trauma that may occur in the domestic area is related to the fact that many elderly people are sometimes badly treated by relatives and/or employees. Minayo (2003) also mentions the lack of inspection and control of asylums and, in the domestic space, the inter-generational conflicts as reasons for domestic violence.

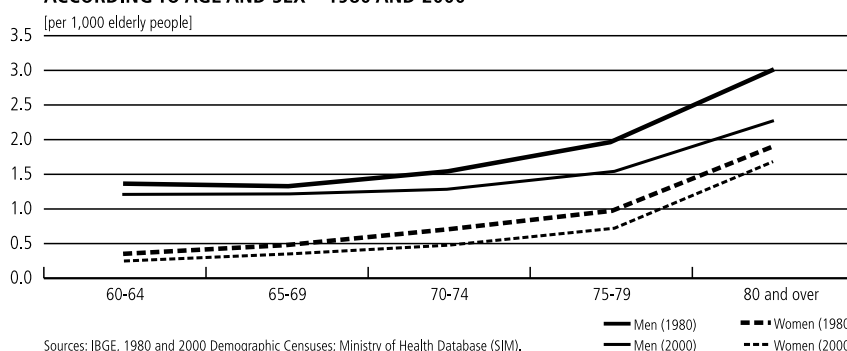
Deaths due to external causes among elderly people in Brazil accounted for 2.6% of deaths registered in 2000. This proportion has not undergone any significant changes in the last twenty years. In 1980 and 1991 it was 2.7%. The prevalence of this kind of death is differentiated by sex. Men are more affected than women. Among elderly men in 2000, deaths due to external causes were responsible for 3.3% of their total deaths, while among elderly women they accounted for 1.8%.

Those proportions also did not vary between 1980 and 2000. On the other hand, within the elderly group important differences can be seen. Deaths due to external causes are more common among the younger elderly people, in other words, those aged between 60 and 80. They account for approximately 3% of the causes of death of this age group and for 1.9% of those aged over 80. This pattern has remained unaltered since 1980.

Mortality rates for external causes dropped in all age groups and both sexes between 1980 and 2000, as shown in Figure 11. For men, they fell from 1.5 death per 1,000 in 1980 to 1.4 death per 1,000 in 2000. The sharpest decline was observed for those aged over 80. This rate fell from 3 deaths per 1,000 in 1980 to 2.3 deaths per 1,000 in 2000, a fall of 24.6%. Among women, the decline was slightly more intense, but on a smaller base to begin with. In 1980, the mortality rate was 0.67 death per 1,000, which had dropped to 0.57 death in 2000. The most intense decline took place among elderly females in the 60-79 age group, whose mortality rate fell from 0.55 deaths to 0.35 deaths per 1,000 in the same period.

When external causes are disaggregated according to more detailed causes, it is observed that traffic and transport accidents are responsible for

FIGURE 11
AGE SPECIFIC MORTALITY RATES OF THE ELDERLY BRAZILIANS DUE TO EXTERNAL CAUSES
ACCORDING TO AGE AND SEX—1980 AND 2000



the majority of deaths of elderly people, although their weight has been decreasing since 1980. These are probably deaths caused by persons knocked down by vehicles. In 1980, traffic and transport accidents were responsible for 33.1% of the total of deaths in the elderly population due to external causes, which dropped to 27.2% in 2000 (see Table 8).

The proportion of deaths resulting from the fall in the total of deaths due to external causes increased slightly during the period, rising from 13.6% in 1980 to 14.9% in 2000. However, the highest proportional growth was in deaths caused by murders, which accounted for 7.2% of total deaths due to external causes of elderly people in 1980 and rose to 10% in 2000. Suicides were also relatively high, especially since this cause of death tends to be under-reported. In 1980, 6.7% of deaths due to external causes were the result of suicides, a figure that increased to 7.3% in 2000.

Deaths due to “events (facts) whose intentions cannot be determined” were also high. This subgroup includes deaths that are the result of the fact that neither doctors nor the legal authorities can determine whether or not they were intentional.⁶ The results of the analysis of this subgroup of causes

TABLE 8
PERCENTAGE OF ELDERLY BRAZILIANS DEATHS DUE TO EXTERNAL CAUSES ACCORDING TO SUBGROUPS OF CAUSES

Causes of Death	1980	2000
Traffic and Transport Accidents	33.1	27.2
Falls	13.6	14.9
Events with Unknown Reasons ^a	14.5	14.4
Murders	7.2	10.4
Suicides	6.7	7.3
Other External Causes	19.6	21.3
Total among Elderly Population	2.7	2.6
Total among Elderly Males	3.5	3.3
Total among Elderly Females	1.9	1.8

Source: Ministry of Health Database (SIM).

^a This refers to causes badly defined in the external causes group, in which the available information is insufficient to group them as intentional or accidental.

6. The most recent International Classification of Diseases (CID-10) disaggregated this subgroup, creating new items and moving death causes to other existing subgroups. This is the case, for example, of “drowning and accidental submersions”— which previously had been part of the badly defined and undetermined subgroup and now is part of a new subgroup along with deaths from electrical currents. Now, they constitute the “other external causes” subgroup. This subgroup includes all forms of natural accidents inside and outside the house.

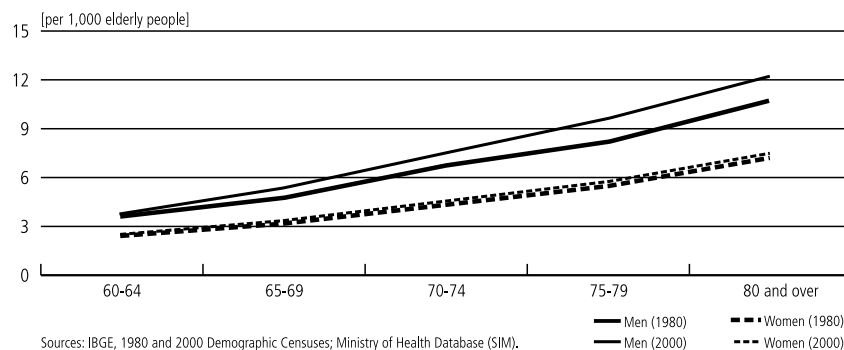
suggest that the reporting of deaths due to external causes for the elderly population is problematic.

3.2.3 Mortality by neoplasms

It is stressed here that more important than the observed increase in the proportion of deaths due to neoplasms among elderly people, is the high value of the rate of mortality due to this cause, especially among men (see Figure 12). Furthermore, this rate rose from 5.5 deaths per 1,000 in 1980 to 6.5 deaths per 1,000 in 2000, an increase of 18.2% during the period. This increase was mainly the result of the increase in the mortality rate of men aged over 80, whose mortality rate grew from 10.7 deaths per 1,000 to 12.2 deaths per 1,000. Among men aged between 60 and 79, the mortality rate has oscillated around 5.1 deaths per 1,000. Among women aged between 60 and 79, it was observed a slight fall in the mortality rate due to neoplasms from 3.4 deaths per 1,000 in 1980 to 3.2 deaths per 1,000 in 2000. The mortality rate for those over 80 experienced a small increase from 7.2 to 7.5 deaths per 1,000.

In summary, it seems that the change that took place in the studied time period was an increase in the age at which this population age group dies from neoplasms. The average age of death for elderly males increased from 71.5 years in 1980 to 73.1 in 2000. Among elderly females, the change was from 72.3 to 73.8 years. Similar variations are found when median age of death is also looked at (see Table 6).

FIGURE 12
AGE SPECIFIC MORTALITY RATES OF THE ELDERLY BRAZILIANS DUE TO NEOPLASMS
ACCORDING TO AGE AND SEX—1980 AND 2000



3.3 Autonomy of the Elderly Brazilians to Manage their Daily Activities

It was mentioned in the introduction to this book that it is assumed here that old age brings vulnerabilities that can result in the loss of work capacity and the loss of autonomy. The timing in life at which these vulnerabilities emerge is strongly influenced by social conditions, colour/race, gender, spatial location, etc. It is believed that this timing measured by age has been postponed due to improvements in health conditions and advances in medical technology. In addition, it is assumed that these vulnerabilities can be reduced by social policies.

In Brazil, data gathering about physical and mental impairments began with the 1872 Census. According to Medeiros and Diniz in this book, the questions referring to this theme remained present in the Demographic Censuses until 1940. The following censuses did not include questions about this matter. They were only returned to in 1981, in the population Health Supplement of PNAD⁷ and in the 1991 Demographic Census. During this period, the method of collecting this kind of information was changed. Recently, the recommendations of the World Health Organization (WHO) have been followed.⁸ In comparison to existing data from the end of the nineteenth and the beginning of the twentieth centuries, the contemporary surveys and censuses include much more information about disabilities.

The question has been gaining more room on the public policy agenda and part of the debate is concerned with the concept of impairment. This question is inherent to elderly people, due to the physical and psychic alterations brought about by age. This may make difficult their adaptation to the environment in which they live. This chapter aims to quantify the proportion of elderly Brazilians who have lost autonomy to deal with daily life, according to certain characteristics, based on information collected in the 1991 and 2000 Census and the 1998 PNAD.⁹

The 1991 Census include only one question to investigate disability. The individuals could report whether they had physical or mental disabilities. The possibilities of answers were: blindness; deafness; paralysis

7. The supplements to the PNADs investigate specific themes according to the users needs. In each survey two types of questionnaires are used, one is permanent, the other is variable. In 1981, the main aim of the health supplement was to investigate maternal-infant attention, physical disabilities or incapacities, child immunization and health expenditure. The matter of population health resumed to the PNAD supplement in 1998.

8. For more detailed information, see Neri and Soares (2003) and Cunha (2004).

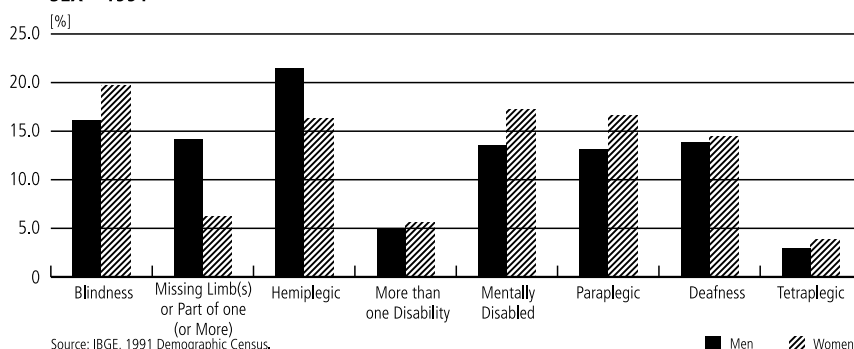
9. For a discussion about the concept of disability, see Medeiros and Diniz in this book.

of one side; paralysis of the legs; total paralysis; lack of a limb or part of it or more than one kind of impairments. In the 2000 Census, disabled people were given the following options of responses: permanent mental disability; physical disability (tetraplegic, paraplegic, hemiplegic and lack of a limb or part of it); visual disability; hearing disability and motor disability. In relation to the last three, it was also attempted to have some measure of the degree of incapacity. Four options of answers were provided: totally impaired, permanent serious difficulty, some permanent difficulty and no difficulty [IBGE (2000)].

In 1991 there were found approximately 395,000 elderly disabled persons, accounting for around 24% of the total of disabled persons and approximately 4% of the elderly Brazilians. This data shows that although the proportion of elderly people considered to be disabled is low, they are over represented among the disabled as a whole, since in the same year, elderly people made up 7.3 % of the total population.

Of the elderly disabled people counted in the 1991 Census, 51.1% were male and 48.9% female. The distribution of elderly disabled people by type of disability can be seen in Figure 13. Among men, hemiplegics—those with paralysis on one side of the body—are most common (21.5%). Blindness was the second most important type of disability found among the elderly Brazilians, 16%. This was the most important kind of disability among women, affecting 20% of elderly disabled women. Mental disorder, hemiplegia and paraplegia are also important types of disabilities found among elderly disabled women. These affected approximately 17% of them. The proportion of elderly people with one or more disabilities is low, being around 5%.

FIGURE 13
PROPORTION OF DISABLED ELDERLY BRAZILIANS ACCORDING TO KIND OF DISABILITY AND SEX—1991



The number of disabled elderly people found in the 2000 Census (1,044,000) was much higher than that found in the 1991 Census. However, comparison is made difficult by changes in the form of investigation. The proportion of disabled elderly people also increased, rising to 7.5% of the elderly Brazilians. None the less, the proportion of disabled elderly people in the total of disabled people as a whole did not change, remaining around 24%.

In 2000, the sex composition of disabled elderly people was not different from that found in 1991. Approximately 51% of disabled elderly people were men. However, in 2000 the proportion of disabled elderly persons was lower among women, with the exception of those over 80 (Figure 14). It can be noted in this figure, as expected, that the proportion of disabled people increases as age does.

The largest difference between data gathered by the 2000 and the 1991 Censuses was related to the proportions of elderly Brazilians according to the kind of disability. In 2000, the proportion of elderly people with mental disabilities was high, 51.4% of disabled men and 58.5% of women (Figure 15). Hemiplegia was the second most important kind of disability, affecting 20.2% of elderly disabled men and 17.4% of elderly disabled women.

The sex ratio of the disabled elderly people shows that there are more disabled men than women in despite of the slight reduction of the ratios calculated for 1991 and 2000 (see Figure 16). The ratio for the elderly population fell from 105 disabled men for each 100 disabled women in 1991 to 102 in 2000. The differences in this ratio are reduced as age increases.

FIGURE 14
PROPORTION OF DISABLED ELDERLY BRAZILIANS ACCORDING TO AGE GROUPS AND SEX—2000

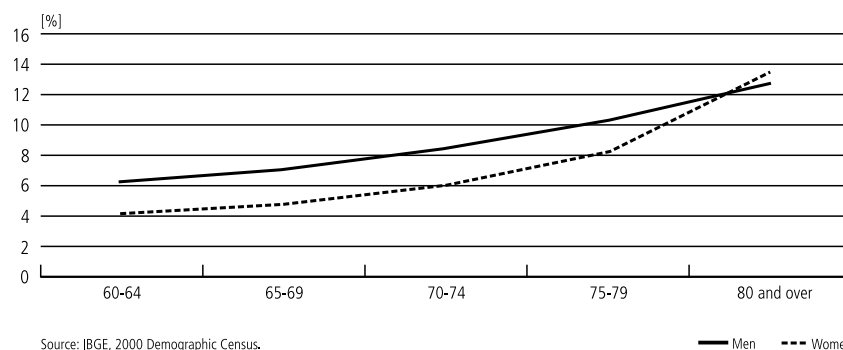


FIGURE 15
PROPORTION OF ELDERLY BRAZILIANS WHO REPORTED THEMSELVES DISABLED BY TYPE OF DISABILITY—2000

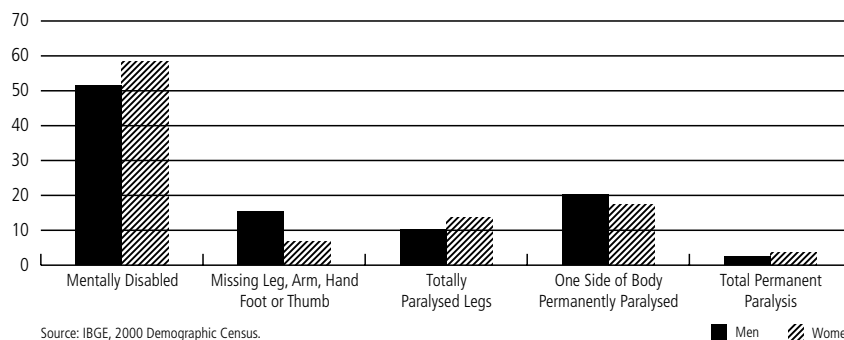
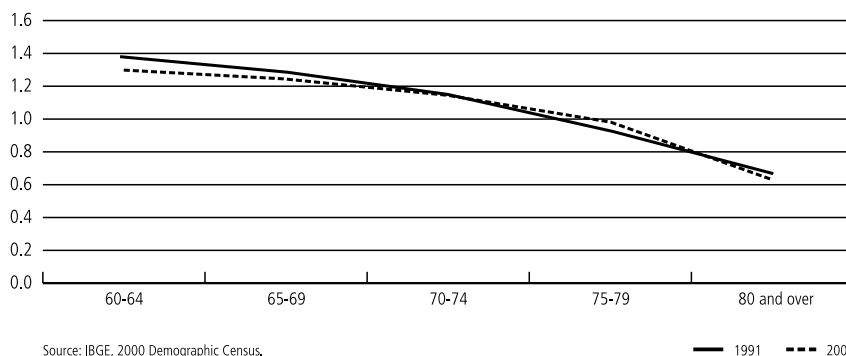


FIGURE 16
SEX RATIO AMONG DISABLED ELDERLY BRAZILIANS—2000



After 75 years of age, women are more common among the disabled. This is due, among other things, to the types of disability composition effect. For example, in 2000 for every 77 men who reported that they had some sort of visual, hearing or motor impairment, there were 100 women.

The 2000 Demographic Census, as it has previously been stated, collected some information that can help measure individuals' degree of autonomy. According to IBGE (2000), "it allowed the observation of some of the perceptions that the researched persons had in relation to the alterations caused by disability on their capability in doing things, in their behaviour and their participation in social life".

Around 26.8% of elderly people reported that they had some difficulty in walking/climbing stairs. This proportion is quite differentiated by sex; it

was 22.3% for men and 29.1% for women. These difficulties were classified in three groups: some permanent difficulty, much permanent difficulty and incapacity. Figure 17 shows the level of difficulty of elderly Brazilians according to age groups and sex. It can be noted that, irrespective of the type of disability, difficulties increase with age and are higher among women. In 2000, approximately 10% of elderly women aged over 80 and 5% of men were incapable of walking and/or climbing stairs.

Another two types of analyzed difficulties were “hearing” and “seeing”, in which the degree of difficulty was also taken into account. Figure 18 shows the proportions of elderly people who reported experiencing these difficulties disaggregated by sex and degree of difficulty. Difficulties in hearing are more common among men and difficulties with sight were

FIGURE 17
PROPORTION OF ELDERLY BRAZILIANS WHO REPORTED DIFFICULTIES IN WALKING AND/OR CLIMBING STAIRS—2000

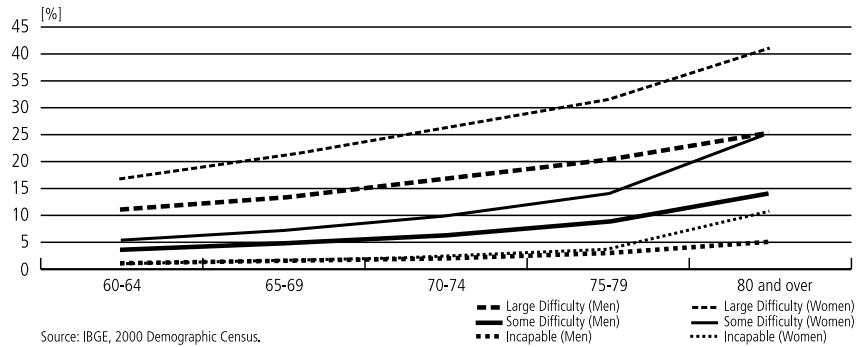
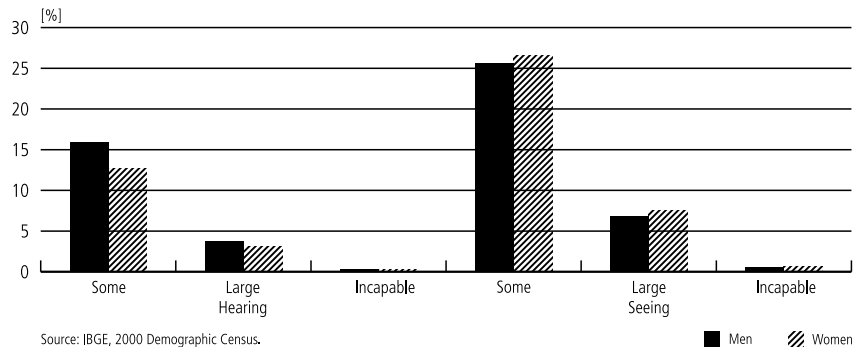


FIGURE 18
PROPORTION OF ELDERLY BRAZILIANS WHO REPORTED DIFFICULTIES WITH HEARING AND SEEING—2000

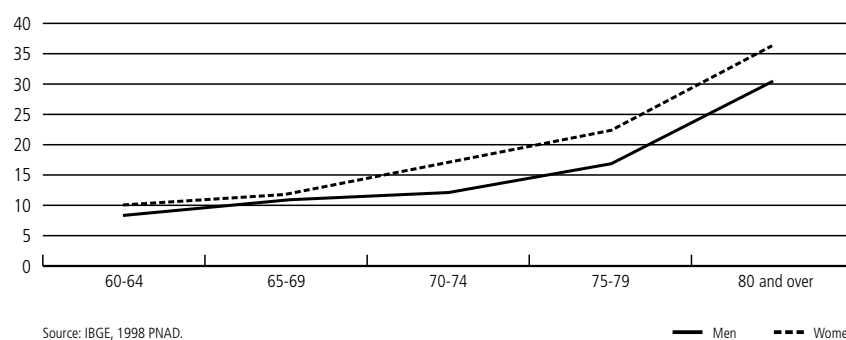


more common among women. Only a very low proportion, either of men or women, reported that they were incapable of hearing or seeing. On the other hand, approximately 31.8% and 33.9% of Brazilian elderly people reported hearing difficulties or difficulties with sight.

As it was previously mentioned, there was a special supplement about population health conditions in the 1998 PNAD. It was looked at the conditions of disability and physical autonomy of the Brazilian population.¹⁰ One of the questions looked at the difficulties in carrying out basic daily activities, such as eating, having a bath and/or going to the toilet alone. Figure 19 shows the proportions of elderly people who have difficulties with these types of activities, disaggregated according to sex and age groups. As expected, these increase with age and are higher among women. The difference between men and women increases with age. Among the population aged 80 and over, 30.1% of men and 36.1% of women are unable to carry out basic daily activities on their own.

In summary, the results show the influence of age on the vulnerability of elderly people according to the four indicators looked at. This group needs medical care services and also human care. In Brazil, the later one is almost entirely provided by the family, especially women. As it can be seen in another chapter in this book [see Camarano and Pasinato (2002)], neither the Brazilian Government, nor private enterprise have the tradition of offering long-term care to the dependent population. This chapter also

FIGURE 19
PROPORTION OF ELDERLY BRAZILIANS WHO HAVE DIFFICULTIES IN EATING, HAVING A BATH,
OR GOING TO THE TOILET BY THEMSELVES ACCORDING TO AGE AND SEX—1998



10. The issues looked are divided into two parts. The first dealt with health characteristics, subdivided into: morbidity, coverage of health insurance, access to health services, hospitalization, expenditure on health goods and services. The second part investigated the physical mobility of inhabitants aged 14 or over.

showed that women are more vulnerable than men, which can be the consequence of their longer survival. Women are more capable of surviving to chronic diseases and other physical impairments than men.

4 ELDERLY BRAZILIANS LIVING ARRANGEMENTS¹¹

The family is one of the most important and efficient institutions in providing welfare to individuals and in distributing resources. It intermediates part of the relationship between the market and individuals, since it distributes earnings among family members, as well as intermediating the state and the individual distributing, directly or indirectly, received benefits from the State.

The hypothesis being worked with is that due to the near total predominance throughout the world of a social policy model that emphasises reducing the role of state, the family is increasingly required to care for the “vulnerable” segments. In many countries it appears to be the only alternative for caring the elderly population. This occurs through co-residence and transfer of goods and financial resources. Family members help each others in the attempt to find collective welfare, creating a space for “co-operative conflict” where differences between men and women and between generations intercross. This results in a wide array of family arrangements.

On the other hand, throughout almost the whole world, the period that children remain economically dependent on their parents, in many cases elderly people, has increased. This is due to the instability of the labour market, the longer length of time spent in school and the greater fragility of affective relationships. In both cases, the co-residence of elderly people and children appears to be a family strategy used to benefit both the younger and the older generations. Variations in the income of parents and children play an important role in co-residence. The literature from the 1980s shows that a family strategy for dealing with poverty in Latin America has been to increase or to reduce family size [Arriagada (1997)].

On the other hand, the generalized fertility decline, the also generalized increase in women labour force participation (the traditional carers of dependent), as well as marked changes in familial arrangements (separations, cohabitation, increase in the proportion of never married women and/or childless women), have to be taken into account in the Brazilian situation.

11. Although the text refers to the family, the information used refers to households.

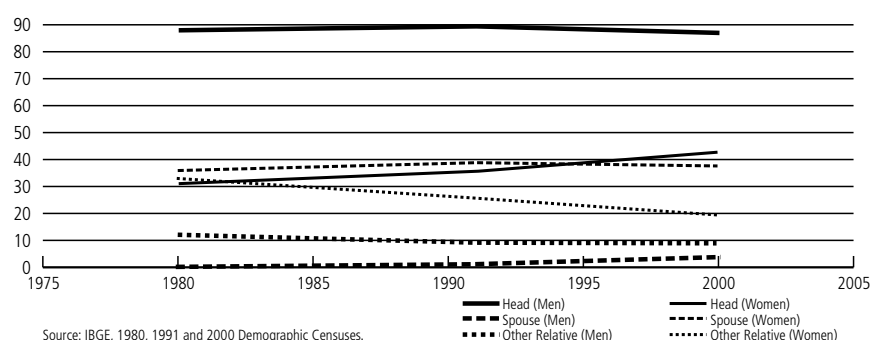
This has hindered and will make more difficult the actions of families as the promoters of support for elderly people. It is to be expected that a decline in co-residence and in other family supports will result in an increase in the demand for certain social policies. Due to the ongoing tendency for the state to reduce its social protection activities, other mechanisms are required to provide care for elderly people.

A first point highlighted here in relation to the elderly people living arrangements is that while only 8.6% of the Brazilian population were aged 60 or over in 2000, 24.1% of Brazilian families contained at least one person of this age. This proportion has been increasing; in 1980 it was 21.6%, due to population ageing. This section aims to analyse the elderly Brazilians living arrangements, looking at from the point of view of elderly people and the family.

4.1 The Situation of Elderly Brazilians in the Household

Figure 20 shows the distribution of elderly people according to their position in the household in 1980, 1991 and 2000. This position is quite affected by gender. The large majority of elderly males are the head of their families, a proportion that has been kept over time—being around 87%. The increase in male spouses is noticeable, though it remains quite low, having risen from 0.4% in 1980 to 3.9% in 2000. On the other hand, in 1980 the majority of elderly women were spouses. This proportion has been declining over time due to the increase of female heads of families. This became the most common status of elderly women in 2000.

FIGURE 20
PROPORTION OF ELDERLY BRAZILIANS ACCORDING TO HOUSEHOLD CONDITION AND SEX—
1980, 1991 AND 2000



It has already been mentioned in other papers [see Camarano and El Ghaouri (1999 and 2003)] that one method of measuring the dependency of elderly people on families using secondary data is through the proportion of elderly people whose relationship with the head of the family was that of “relatives”. In general, this group is composed of parents, parents-in-law, aunts, brothers or sisters who, due to lack of money or physical or mental autonomy, live with children or other relatives. Figure 20 also shows the proportion of the elderly Brazilians classified as “other relatives”. This to the opposite of the proportion of heads of families decreased during the 20 year period analysed, especially among women. It fell from 32.9% to 19.7%, suggesting a reduction in the dependency of elderly people on the family. Among men, it dropped from 12.3% to 9.0%.

Also in the case of family relationships, women experience a higher proportion of “dependency” than men. They experience lower autonomy and having a higher percentage of individuals without income. These are probably the reason why they live in the household of “other relatives”. It is believed that part of this “dependence”, in the case of lack of income, for example, is more associated with a low social status in the past than with ageing itself.

The proportion of other relatives grows with age, as shown in Figure 21. Between 1980 and 2000, all age groups experienced a decline in the mentioned proportion, with the sharpest fall being among women under 80. Among them, they were reduced to almost half. Among men, the reduction was less but gets larger as age increases.

As has already been mentioned, the category of other relatives is formed of parents, parents-in-law, siblings, other in-laws, etc. Table 9 shows the

FIGURE 21
PROPORTION OF ELDERLY BRAZILIANS LIVING AS “OTHER RELATIVES” OF THE HEAD OF THE HOUSEHOLD ACCORDING TO AGE AND SEX—1980 AND 2000

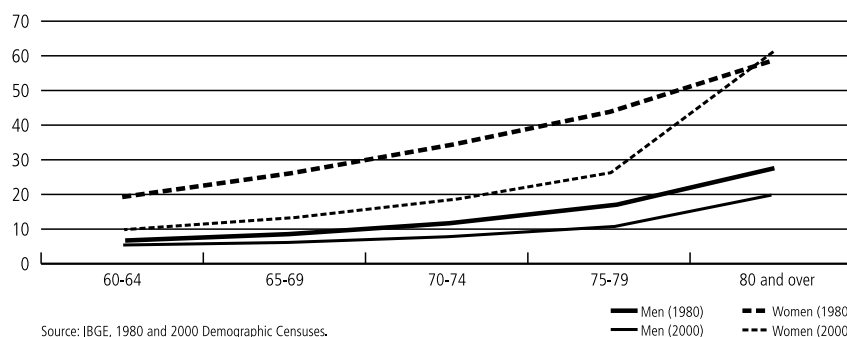


TABLE 9
BRAZIL: PROPORTION OF ELDERLY OTHER RELATIVES ACCORDING TO THE RELATIONSHIP WITH THE HEAD—2000

	Father, Mother, Mother-in-Law	Brother/Sister	Other Relatives
Male			
60-64	35.7	25.6	38.7
65-69	50.4	20.6	29.0
70-74	64.1	15.0	20.9
75-79	72.4	9.1	18.5
80 and over	79.5	4.1	16.4
Female			
60-64	61.1	17.0	21.9
65-69	70.8	14.4	14.8
70-74	75.9	11.4	12.7
75-79	78.6	9.0	12.4
80 and over	79.1	6.3	14.6

Source: IBGE, 2000 Demographic Census.

composition of this category by gender and age group. For both men and women, this category is basically formed by parents, mothers and parents-in-law. Among the youngest elderly men, those between 60 and 64, other relatives were the most common. Afterwards, the proportion of fathers/mothers and parents-in-law increases as age does, especially among men.

4.2 Elderly Brazilians Familial Arrangements

The proportion of households headed by elderly people has grown over time. They have increased from 17.7% of the total households in 1980 to 20.9% in 2000. On the other hand, the proportion of households with elderly Brazilians who are parents/parents-in-law and/or other relatives declined from 4.5% to 3.3% in the same period.¹²

Table 10 compares the statistical profiles of Brazilian families with and without elderly people living in 2000. It is observed that families with elderly people, either as the heads of their own families or as part of another

12. A more detailed analysis of these types of family arrangements can be found in this book in a chapter by Camarano et al.

TABLE 10
FAMILY STRUCTURE ACCORDING TO PRESENCE OF THE ELDERLY BRAZILIANS—2000

Characteristics of Families ^a	All Families	Families without Elderly People	Families with Elderly People
Family Profiles			
Mean Family Size	3.77	3.86	3.48
Mean Number of Children	1.65	1.82	1.11
Per Capita Family Average Income ^b	293.46	281.91	333.60
Average Proportion of Family Income Dependent on the Head of Household	67.4	70.0	59.7
Mean Number of Working Persons	1.29	1.40	0.96
Mean Number of Beneficiaries	0.42	0.17	1.18
Proportion of Households with a Per Capita Income Lower than Half a Minimum Wage	24.74	27.84	14.99
Characteristics of Heads of Families			
Mean Age of the Head of Household (Years)	45.55	39.27	65.16
Proportion of Male Heads of Household	75.15	78.82	63.62
Proportion of Female Heads of Household	24.85	21.18	36.38
Mean Number of Schooling Years of the Heads of Household	5.73	6.29	3.96
Average income of the Head of Household	748.11	765.05	695.20
Distribution of Types of Families (%)			
Nuclear	77.33	83.79	56.98
Couple without Children Living in	10.61	9.13	15.25
Couple with Children Living in	47.72	57.21	17.84
Mother with Children Living in	8.90	9.37	7.44
Woman Living Alone	4.42	2.69	9.85
Father with Children Living in	1.17	0.97	1.83
Man Living Alone	4.50	4.42	4.77
Extended Families	22.67	16.21	43.02
Couple without Children Living in	1.86	0.99	4.59

(continue)

(continuation)

Characteristics of Families ^a	All Families	Families without Elderly People	Families with Elderly People
Couple with Children Living in	10.87	8.46	18.45
Mother with Children Living in	5.13	3.64	9.79
Woman Living Alone	2.46	1.33	6.00
Father with Children Living in	0.64	0.31	1.67
Man Living Alone	1.72	1.47	2.52

Source: IBGE, 2000 Demographic Census.

^a Families were defined by the Census as a group of persons connected by blood ties, domestic dependence, or norms of living together, who live in the same household. Also, considered to be families are people living alone.^b Per capita household average income includes all family earnings. These are divided upon by the number of living persons in the household.

family, have very differentiated structure from those that did not contain elderly people, as it can be expected. They are smaller families, in more advanced stages of the life cycle and, as a result, have older age structure. The heads of families that contain elderly people have an average age of 65.2 years compared to the 39.3 years observed among the heads of families without elderly people. The former also have a higher presence of women as heads of families; 36.4% compared to 21.2% for families without elderly people.

In terms of the differences in internal familial arrangements, Table 10 shows that in families without elderly people living in, couples with children are the most common (65.7%) kind of arrangement. On the other hand, among families with elderly people the presence of couples with children falls to 36.3%, but is still the predominant form of arrangement. About 50% of them were extended families. Nevertheless, the marked proportion of couples without children (19.9%) and people living alone (23.1%) are also stressed. They are much higher than the comparable for families without elderly living in. These differences are mainly due to the timing in the life cycle of families with elderly people where a high proportion no longer live with their children, as well as higher male mortality resulting in women surviving for more time alone, or with children. In 2000, the proportion of elderly mothers living with their children without a spouse was almost four times that of fathers. These proportions are also affected by the break up of marriage, since women are less likely to start a new union than men.

When the structures of families with and without elderly people living in are compared, it is observed a higher proportion of single women and

mothers with children, but without spouses, among the former families. These categories represent approximately 15.9% and 17.2%, respectively of families with elderly people. The same phenomenon does not occur with the same intensity among families without elderly people. Mothers with children account for about 13.0% of families without elderly people.

The differences between single mothers with children between families with elderly people living in and families without elderly people are not just differences in the proportions. While the latter are mainly the result of separations or arrangements of single women with children, single mothers in families with elderly people are in general widows. Therefore, in the former case the children should be younger (under 15 years old), while in the latter their children are probably adults, single or married. This signifies different living conditions.

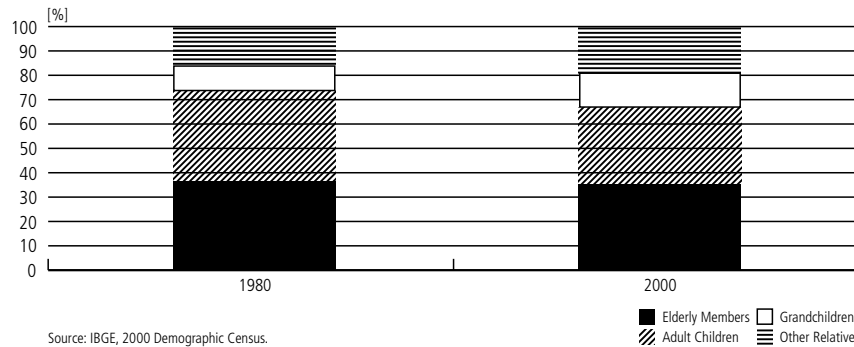
Another important contrast between the different family structures is the weight of the extended families. Among families that include elderly people, 43.0% are extended ones, in other words they also contain other relatives. These may be elderly people or grandchildren, brothers and nephews of elderly heads of households. More important than the actual proportion is the recognition that it is much higher than the figure 25.2% observed in 1980. In other words, there was significant growth during the period. Several papers¹³ have shown that the family arrangement that includes elderly people has become more complex.

As has already been mentioned, elderly people are the heads of households in 86.5% of the families in which they live. It is stressed here, the increase in the proportion headed by elderly people. This increased from 79.1% in 1980 to 86.5% in 2000. To better understand the structure of family arrangements of elderly people, they were divided into two groups: those headed by elderly people or those where the elderly Brazilians are spouses and those where they are “other relatives”. This section only deals with the former kind of households. Figure 22 compares their composition in 1980 and 2000.

The average size of these households has decreased, falling from 3.7 people in 1980 to 3.25 in 2000. Nevertheless, this figure (3.25) eliminates

13. See for example in this book, Camarano, Kanso and Mello, and Beltrão et al. Other papers on the matter include: Camarano and El Ghaouri (1999 and 2003), Beltrão, Camarano and Mello (2004) and Camarano (2002). In 1980 and 1991 there was a high percentage of “non-discriminated culture”, which indicates that there are problems with the quality of information. In 2000, there is no longer the item “non-discriminated culture”.

FIGURE 22
**FAMILY COMPOSITION WHERE ELDERLY BRAZILIANS ARE THE HEADS OF HOUSEHOLD—1980
 AND 2000**



the possibility of describing these households as “empty nests”, as households with elderly people are commonly referred to in the literature.¹⁴ Although these are households of elderly people, the latter only constitute 35% of their members, a smaller proportion than that found in 1980. The proportion of other relatives living in elderly people’s households also increased, characterising their complexity. In 2000, these households had 2.2 elderly persons, 1.03 adult children, 0.45 grandchildren and 0.63 other relatives. The latter two figures have increased during the studied time period.

4.3 The Living Conditions of Families with Elderly People

Table 10 also shows, taking into account the limitations of the data, that Brazilian families containing elderly people are in better economic conditions than other families. They are less poor relatively speaking, if measured by the proportion of families whose per capita average monthly income is less than a minimum wage. The proportion of families without elderly people that are poor is almost twice as high as those with elderly people (27.8% and 15.0%, respectively).

The per capita monthly income of families with elderly people is higher and individual members depend less on the income of the head of household than those that do not have elderly people—59.7% compared to 70.0%. On the other hand, the mean number of working persons is lower and the mean number of persons receiving social security benefits is much higher. This is due, to some extent, to the types of internal arrangements and the

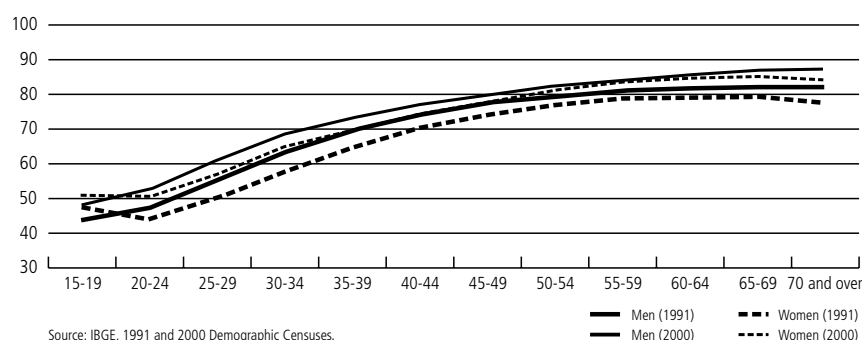
14. These are households formed by only one couple or single person.

stages of the family life cycle that establish different relations of economic dependency among family members. Furthermore, the importance of social security benefits in the composition of the income of these families cannot be ignored. It has been seen in other papers and this matter will be returned to in the sixth section, that retirement benefits play a very special role in the income of elderly people, especially women, and that this importance increases as age does [see Camarano et al (1999)].

In addition, Figure 23 shows that the proportion of elderly heads of household living in their own households was higher than that of younger people in the years looked at. The proportion of male heads of households who live in their own houses increases with age does until 70 years of age. Among female heads of households, it grows until 65 years. Comparing the proportions for 1991 and 2000, it can be seen that the proportion of heads of households living in their own houses has increased, with the highest increase being among women, especially elderly ones.

Furthermore, elderly people have the highest proportion of people living in their own fully paid house and as result the lowest proportion of people living in rented or ceded accommodation [see Neri, Nascimento and Pinto (1999)]. This can be explained by the fact that today's elderly people are at a more advanced stage in the life cycle, and they have been able to accumulate assets, such as houses. In addition, they have spent most of their productive life in a more favourable situation of the Brazilian economy. They were able to enjoy stable employment and family life, the benefits of a housing policy, such as that of National Housing Bank [Banco Nacional da Habitação (BNH)].

FIGURE 23
PROPORTION OF HEADS OF HOUSEHOLD LIVING IN THEIR OWN HOUSE ACCORDING TO AGE AND SEX—1991 AND 2000



5 THE INSERTION OF ELDERLY BRAZILIANS IN THE LABOUR MARKET¹⁵

The objective of analysis of the insertion of elderly people in the labour market is due to the population ageing, which results in the ageing of the EAP. Moreover, the Brazilian labour market has a specific characteristic: retired people return to it, or, in some cases, remain carrying out their functions. Despite the expansion on coverage of the social security, the contribution of earnings from labour to elderly people's income is important. Thus, working for retired elderly people can mean a higher income, as well as physical and mental autonomy and greater social integration.

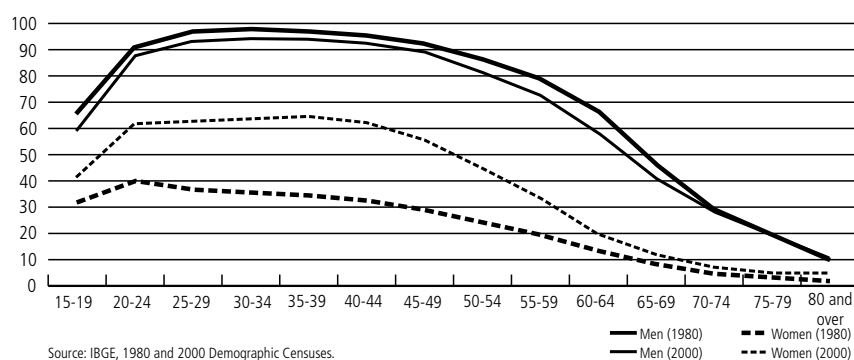
In this section, the insertion of elderly Brazilians in labour market is looked at in terms of their age, the number of working hours, their main occupations and occupational position.

5.1 Elderly Participation in the Labour Market by Age

The comparative analysis of the participation of elderly Brazilians in the labour market in recent decades is made up difficult by the changing of the definition of occupation utilized in the various censuses. However, it can be stated that the male activity rate has fallen and the female increased. Furthermore, the EAP has got older; in other words, the average age of the Brazilian EAP has risen, increasing from 33.2 years in 1980 to 34.7 years in 2000.

Figure 24 shows the participation rates of the Brazilian population in 1980 and 2000. During this time period, the participation rate of the elderly

FIGURE 24
BRAZIL: AGE SPECIFIC ACTIVITY RATES—1980 AND 2000



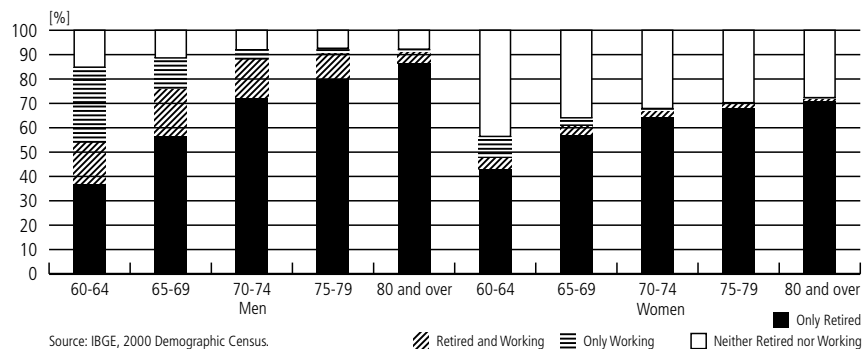
15. A detailed analysis of the participation of elderly Brazilian in the labour market can be found in this book in Wajnman, and Oliveira et al.

male population fell from 44.5% to 37.3%, reflecting the increase in the coverage of social security, while the female rate rose from 7.4% to 11.1%. This reflects a cohort effect, in other words, the increase in the participation of women in the recent past. Participation is always higher among men.

It can also be observed that the activity rates for elderly people are lower than those of adults, especially for women. Among elderly people, they peak in the 60-64 age group, decreasing with age does. This was observed for the two studied years. In 2000, the activity rate among men aged 60-64 was 57.1% and, among women, 19.2%. The participation of elderly people aged between 75 and 79 years is much lower. Among men, it was around 19%, and among women, 4%. This shows the speed of the decline of the participation of elderly people in the labour market with age. Some factors associated with the reduced participation of elderly people in the labour market can be identified: higher public expenditure on social benefits, a lower proportion of the population engaged in agricultural activities, more urbanisation, etc. [see Durand (1975)].

Figure 25 shows the distribution of the elderly Brazilians according to their working condition and/or retirement condition in 2000. Four categories were considered: retired only, retired and working, working only and neither. The most common category found among the elderly Brazilians is to be retired only, which accounts for 58.1% of the elderly population. If the retired and working category is added, it can be concluded that 2/3 of the elderly population are retired. Approximately 1/4 of elderly people did not fit into any of these categories. Of these, 80.5% were women.

FIGURE 25
PROPORTION OF ELDERLY BRAZILIANS ACCORDING TO THEIR RETIREMENT OR WORKING STATUS—2000



On the other hand, 17% of elderly Brazilians worked, of whom half were retired. This percentage is quite differentiated by sex. The large majority, 76.7%, are men; 51.1% of these are retired who were working. The overlapping of work and retirement is lowest among women. Of elderly people as a whole, 3.2% are retired and working.

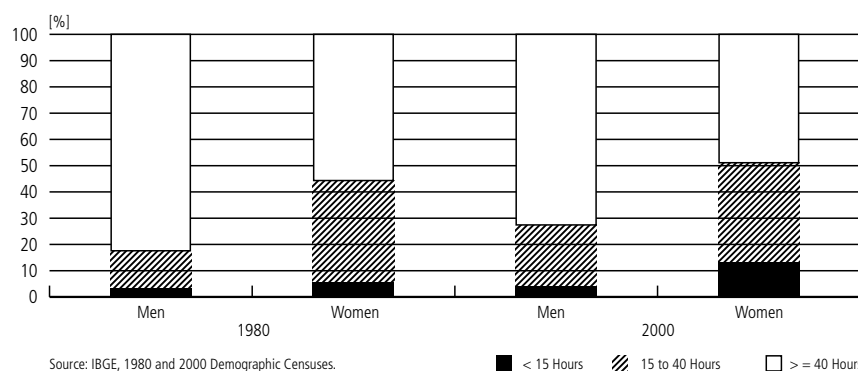
Looking at these figures by age groups, it can be seen for the male population that the proportion of those only working falls and the proportion of retired and working persons increases between the first and second age groups. After 70 years of age, the proportion of the just retired group grows, while the comparable for other groups decline. In the 80 and above age group, 86.3% of men are retired. Among women, it is observed that the proportion of the retired ones increases as age does and the proportions of the remainder categories decline. Of women aged 80 and over, 70.8% were retired. It is possible that a marked fraction of these women who reported to be retired are survival pensions' beneficiaries or were receiving social assistance benefit. About 28% were not in any of the other categories.

5.2 Elderly Brazilians Working Hours and Main Occupations

Looking at the average number of working hours by the elderly Brazilians, two tendencies can be identified. The first is that the time worked by elderly people fell between 1980 and 2000. The second is that women's average working hours are shorter than men's. The later tendency can be seen in both years analysed (see Figure 26).

The proportion of elderly Brazilians who work less than 15 hours increased approximately twofold both for men and women. This can be a

FIGURE 26
WORKING HOURS BY ELDERLY BRAZILIANS IN THEIR MAIN OCCUPATION—1980 AND 2000



result of the changed definition of occupation between the two censuses. On the other hand, the number of elderly persons working more than 40 hours a week has declined. In 1980, approximately 81% of men worked more than 40 hours a week. This proportion fell to 72.6% in 2000. Even declining, it can be said that the large majority of male elderly Brazilians work fulltime. Among women the comparable proportion was 55.7% in 1980, which fell to 48.9% in 2000. The proportion of elderly women who worked between 15 and 39 hours a week remained practically the same. Among men, there was a small increase in the comparable proportion.

Table 11 shows the occupational profile of the elderly Brazilians in 2000. Approximately 37% of elderly men carried out occupations connected to agriculture. The two main occupations were employees (16.1%) and producers (15.8%). In fourth place were cattle producers (4.5%). Commerce also absorbed a marked part of elderly workers—around 8%. Those were divided between working in shops and supermarkets (4.7%) and street sellers (3.4%).

Agriculture is also an important activity of occupied elderly women. Around 23% of them work in agricultural activities. Employees are the most common occupation (18.3%) and that of agricultural producers is the smallest proportion (4.9%). The latter is much higher among occupied

TABLE 11
PROPORTION OF ELDERLY BRAZILIANS ACCORDING TO THEIR MAIN OCCUPATIONS AND
SEX—2000

Occupations	Men	Occupations	Women
Agricultural Employees	16.12	Agricultural Employees	18.28
Agricultural Producers	15.82	Household Staff in General	13.34
Sellers and Representatives in Shops or Markets	4.71	Sewing Machine Operators	6.89
Livestock Producers	4.50	Travelling Salesmen	5.61
Bricklayers	4.20	Agricultural Producers	4.88
Production and Operation Managers	3.45	Sellers and Representatives in Shops or Markets	4.65
Travelling Salesmen	3.41	Cooking Working	3.77
Security Guards	2.37	Maintenance Workers	2.76
Badly Defined Occupations	2.11	Production and Operation Managers	2.27
Waiters, Barmen and Kitchen Staff	1.82	Waiters, Barmen and Kitchen Staff	2.08
Other Occupations	41.50	Other Occupations	35.46

Source: IBGE, 2000 Demographic Census.

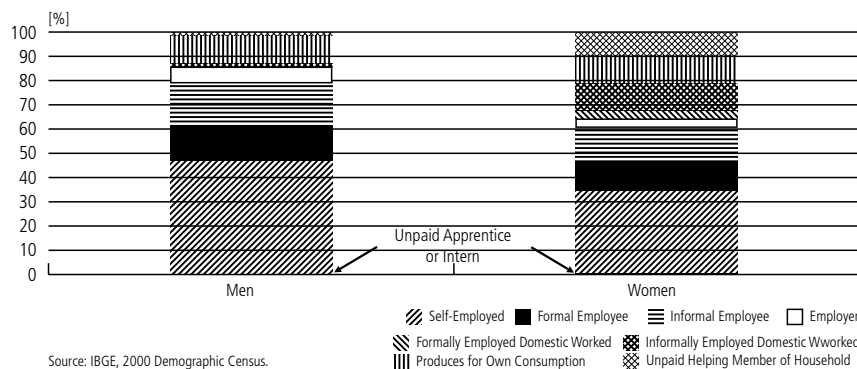
males, as mentioned above. Domestic employment is the second most important occupation among elderly women. This accounts for 13.3% of occupations of elderly women. Commerce is also important, it accounted for about 10% of the elderly female occupations in 2000.

5.3 Occupational Position

The majority of the elderly Brazilians who work in 2000 are self-employed, as shown in Figure 27. Almost half of the men who worked were self-employed (47%). This figure was lower among women, but still very significant (34.2%).

The proportion of formally employed elderly people is very low and differs between men and women. This proportion is higher among men, around 15%, compared to 12% for women. Among elderly men, 17.5% were informally employed, compared to 14.4% of women. Around 15% of elderly women did domestic work, 3.5% were employed formally and 11% informally. The percentage of elderly women who carried out unpaid work helping members of the household was high. Almost 10% of elderly women were in this situation. Among men the figure was only 1.3%.

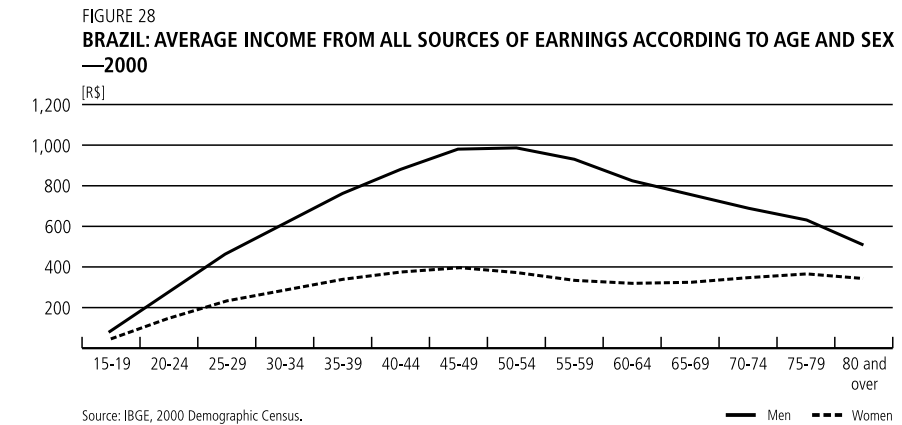
FIGURE 27
PERCENTAGE DISTRIBUTION OF ELDERLY BRAZILIANS ACCORDING TO OCCUPATION POSITION
—2000



6 ELDERLY BRAZILIANS INCOME

6.1 Overview

The importance of analysing the earnings of elderly people is because it plays an important role in the income of the families in which they are inserted. Figure 28 shows the average income from all sources of the Brazilian

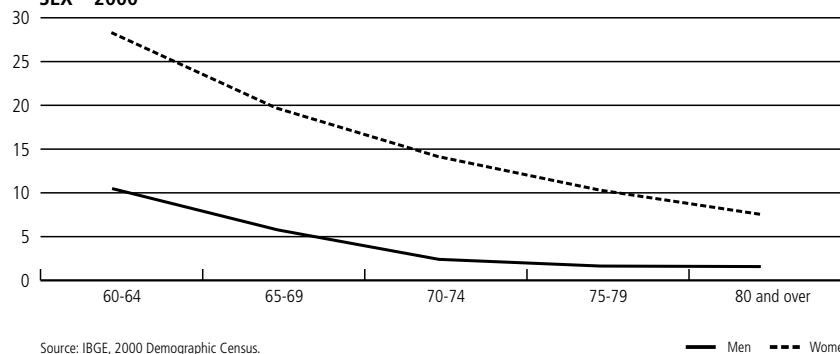


population according to sex and age groups in 2000. As expected, the average earnings of male Brazilians grow until 55 years of age and decline afterwards. None the less, the earnings of the elderly population are at a higher level than that of the youth population. For example, among men the lowest average income found among the elderly population was that of the 80 and over age group. This was, nevertheless, higher than that of the under 25 years age group. The population aged 60 to 64 had higher income the under 40 age group. It is their higher income compared to that of the youngest age groups that have provided elderly people with a greater capacity to offer family support.

The behaviour of the average income curve of the female population differs from that of the male population, as shown in Figure 28. First, absolute earnings are much lower. Second, they increase with age until the 45-49 age group, where the differences in relation to the male population are most marked. Afterwards, average earnings decline slightly and stabilise around 55 years. Female earnings are not very much affected by age. The earnings of elderly women are only lower than that of the women aged 40-59. Several papers have shown that in relation to earnings, elderly women are relatively better off than women of other age groups [see Camarano (2003) and Camarano and Pasinato (2002)]. This is due to their survival pensions, which is equal to the last husband benefit or wage.

The proportion of elderly people without any earnings is low, a proportion that decreases as age increases and is higher among women (see Figure 29). Among elderly people, less than 13% did not have any income in 2000. This proportion was much less than that observed in 1981, when

FIGURE 29
PROPORTION OF ELDERLY BRAZILIANS WITHOUT ANY INCOME ACCORDING TO AGE AND SEX—2000



it was 21% [Camarano and El Ghaouri (1999)]. This reduction was due to the increase in the number of women with some sort of earnings. Nevertheless, the differences between male and female earnings remained quite clear. In 1981, 2.5% of elderly men had no earnings, while among women the comparable proportion was 37.4%. In 2000, 18.5% of women did not have any earnings. Between 1981 and 1998, the most significant variation was related to the proportion of women receiving more than one minimum wage. This rose from 15.3% to 34.4% [Camarano and El Ghaouri (1999)]. In Section 4 above it was shown that the proportion of poor families among families with elderly people was lower than those that did not contain them.

This improvement did not occur linearly. Between 1981 and 1987 the situation worsened, while it improved in the last ten years analysed [Camarano and El Ghaouri (1999)]. This improvement is the result of the expansion of the coverage of rural social insurance and the social assistance. This was determined by the 1988 Constitution.¹⁶

Among the various situations of elderly males, those with the highest earnings are found among those who are retired and working, as it can be seen in Table 12. Ignoring the differences in levels of education, for example, the average earnings of those who were only retired were R\$ 994 lower than those retired and working. Those who were retired and workers earned R\$ 598 more than those who just worked. The latter, in turn, earned approximately R\$ 400 more than those who were just retired. This suggests that there is a

16. For details, see in this book: Camarano and Pasinato, Beltrão et al., Delgado and Cardoso Jr. and Saboia.

TABLE 12
AVERAGE INCOME OF ELDERLY BRAZILIANS ACCORDING TO RETIREMENT OR WORKING STATUS AND AGE AND SEX—2000

	Only Retired	Retired and Workers	Only Working	Not Retired and not Working
Men				
60-64	690.47	1,708.14	915.46	231.98
65-69	583.83	1,507.50	1,030.82	313.67
70-74	550.86	1,443.71	1,205.86	443.31
75-79	541.38	1,439.91	1,371.24	465.05
80 and over	462.96	1,503.54	1,007.51	408.24
Total	570.29	1,564.20	966.20	314.70
Women				
60-64	361.63	1,018.42	609.07	142.08
65-69	345.13	914.94	659.47	196.08
70-74	355.79	883.56	743.98	268.80
75-79	351.19	954.95	683.15	356.94
80 and over	311.64	866.51	525.79	406.67
Total	346.37	959.83	626.98	227.32

Source: IBGE, 2000 Demographic Census.

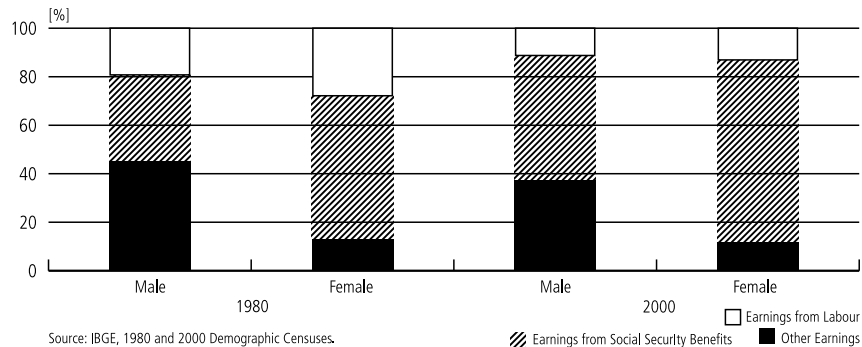
selectivity of elderly people who work in terms of education, income and, obviously, health.

As it has already been seen, female earnings are much lower than male in all categories. The lowest difference was found among those who are just retired, and the greatest among those who just work (see Table 12). However, the differences are in the same direction as that observed among the male population.

6.2 Source of the Elderly Brazilians Earnings

Figure 30 shows that the highest portion of elderly people's income in 2000 came from retirement benefits, both for men and women. It also shows that this increased between 1980 and 2000. For elderly males, the contribution of income from retirement and other social security benefits increased from 35.5% in 1980 to 51.3% in 2000. On the other hand, the proportion of income coming from work dropped from 45.3% to 37.5%.

FIGURE 30
COMPOSITION OF INCOME OF ELDERLY BRAZILIANS ACCORDING TO SOURCES OF EARNINGS
—1980 AND 2000



Among women, the importance of income from retirement and other social security benefits is higher than among men. This is due to the high importance of survival's benefit and to the low importance of labour earnings. The two types of benefits were responsible for 58.1% of the income of elderly women in 1980 and have risen to 75.3%. The increase in the importance of retirement benefits in the income of elderly people may reflect a composition effect, in other words the greater weight of the oldest groups, as well as the greater coverage of the social insurance system. This is particularly true for women who were the main beneficiaries of the constitutional changes related to rural social insurance.¹⁷

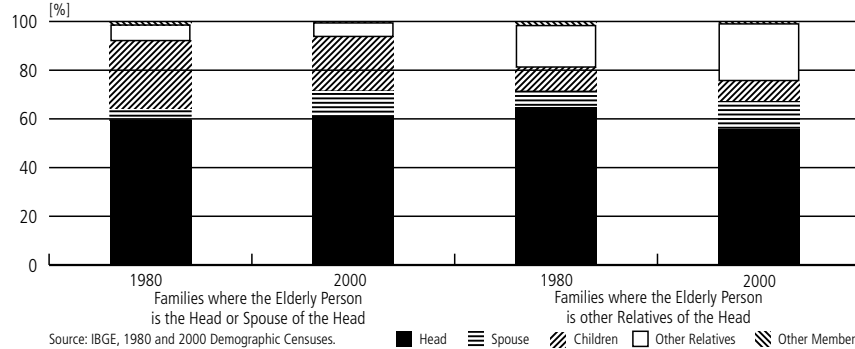
6.3 The Participation of the Income of Elderly Brazilians in Family Income

Elderly people make an important contribution to the income of their families, a contribution that has grown over time. In 1980, the contribution of the earnings of elderly people to family income was 46.6%, a figure that increased to 58.5% in 2000. This contribution differs according to the position of elderly people in the family. Figure 31 shows the participation of the elderly Brazilians income in family income according to their household position in 1980 and 2000. They were divided into two groups: one, formed by those families where elderly people are heads of households or spouses of a head and the other, by families where elderly people are other relatives

In 2000, when an elderly person was the head of household or a spouse of one, their contribution to the income of the family in which they were

17. In relation to this, see in this book Delgado and Cardoso Jr., Beltrão et al and Soboia.

FIGURE 31
BRAZIL: PROPORTION OF FAMILY INCOME ACCORDING TO MEMBERS CONTRIBUTION AND TYPE OF FAMILY—1980 AND 2000



inserted was 71.3%, while if the elderly person was another relative this proportion declined to 23.3%. In 1980, the comparable proportions were 64.3% and 17.0%, showing an increase in their contribution, irrespective of their household position. As it has been seen before, many families of elderly people are families that also contain children and grandchildren. This can be explained, on the one hand, by the better living conditions of elderly people and on the other by the increase in exclusion and the limitation of opportunities for young people in the country. This has led to the parents of these young people, probably elderly persons, to provide additional material support. On the other hand, the contribution of other relatives to family income is not negligible.

6.4 Participation of Social Benefits in the Income of Elderly Brazilians

As it was seen in an earlier section and in various other chapters in this book¹⁸ the proportion of elderly Brazilians receiving some sort of benefit (retirement pension or survival's benefit) significantly increased between 1980 and 2000. It can also be seen that a large part of the income of elderly people comes from social security benefits. The proportion of these earnings in family income increased from 36% in 1980 to 45% in 2000.

Based in what was mentioned above, it can be concluded that, at the micro level, the degree of dependence of elderly people is determined to a large extent by the provision of income by the state. This suggests that

18. See in this book Oliveira et al, Saboia, Delgado and Cardoso Jr. and Beltrão et al.

when social insurance benefits are reduced or increased, the state is not simply affecting individuals, but rather a significant fraction of the earnings of entire families. This is important to note because, as a result, the profile of the social insurance system created today will influence the future income distribution of family income.

7 SUMMARY OF RESULTS

This chapter described the elderly Brazilian living conditions and it has also sought to infer, as far as possible, whether current living conditions differ from those of elderly people in the recent past. In addition, it looked at other impacts of ageing on the state and the family.

The first difficulty faced was with the definition of the elderly population. The criterion of chronological age was not appropriate, since the category of elderly people cannot be defined just by this criterion, as it is a socially constructed category. In addition, it needs to be acknowledged that this comprises an age interval of approximately 30 years, resulting in a large heterogeneity in the studied group. It was sought to highlight these differences disaggregating the elderly population in some age groups.

One of the conclusions that can be reached is that the relationship between ageing and dependence is not so clear. A great fraction of Brazilians seems to be, despite being considered elderly, still in full physical vigour, enjoying good health. They are inserted in the labour market, even though they are retired, and assume non-expected roles, such as providing support to other family members, especially adult children.

One of the reasons is the higher income of elderly people vis-à-vis that of some population age groups, such as the youth one. This results in the fraction of their income in family budgets being quite marked. It has been seen that retirement benefits and pensions play a very important role in the income of elderly Brazilians, especially of the elderly women.

The other reason is the mortality decline along with improvements in health conditions, caused by more advanced medical technology. In addition, the expansion of the coverage of the social security, the greater access to health services and other technological changes have resulted in an increase in the life expectation of the elderly Brazilians as well as in a reduction in the degree of mental or physical disability. As a result, more elderly people are being able to head their families and to work and lesser having to live in relatives' houses.

Generally speaking, it can be said that elderly people have better living conditions than the younger population: they have higher earnings, a larger proportion have their own fully paid houses and they contribute significantly to family income. In families where elderly people are heads of households, a marked proportion of children and grandchildren live together. This has to be analysed taken into account the transformation that the Brazilian economy is going through. This is resulting in young people having great difficulties in relation to their participating in the labour market, which has repercussions such as high rates of unemployment, several types of violence, criminality, etc.

On the other hand, the results show the influence of age on the increased physical/mental vulnerability of the population. A not negligible part of the elderly population has difficulties in hearing, seeing, climbing stairs and dealing with basic daily tasks. These difficulties seem to be postponed to more advanced ages, similar to what is happening with mortality. Nevertheless, this is the group that requires care, a task that in the Brazilian case falls almost entirely on the family, especially on women. A large part of these elderly people live in family houses as “other relatives”. This is analyzed in another chapter in this book [see Camarano et al].

The potential inactivity attributed to individual elderly people is most observable among women. They are most vulnerable from the point of view of lesser autonomy and also because they present a higher proportion of people without earnings. In relation to them, it is easy to associate ageing with inactivity but not necessarily with economic dependence. This is also due to cohort effects: the lower participation of elderly women in economic activity in the past. Marriage was an important condition for the economic welfare of these women in the final stages of life.

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PART 2

WELL BEYOND?





HOW FAR BEYOND 60 WILL ELDERLY BRAZILIANS LIVE?*

Ana Amélia Camarano

Instituto de Pesquisa Econômica Aplicada (IPEA)

Solange Kanso

Instituto de Pesquisa Econômica Aplicada (IPEA)

Juliana Leitão e Mello

Instituto de Pesquisa Econômica Aplicada (IPEA)

1 INTRODUCTION

The rise in life expectancy at birth can be seen as one of the greatest achievements of Brazilian society in the second half of the twentieth century. The post-Second World War period was marked by a significant reduction in the infant mortality rates. This reduction was followed by an equally significant decline in adult mortality, which from the 1980s onwards began to reach the elderly population. This contributed to an expressive increase in life expectancy.

As a result, the population ageing process in Brazil, triggered by the fertility decline, has been accelerated. Moreover, elderly population is ageing as well. In other words, not only have elderly people increased more than other population age groups, but among the elderly Brazilians there has also been an increase in the number and in the proportion of very old people. An increase in the number of centenarians has also been noted. In the 2000 Brazilian Demographic Census there were counted 24,500 people aged more than 100 years. This is basically due to the decrease in mortality among the elderly population.

There are indications that mortality among the elderly population can be reduced still further. Gerontologists are forecasting that premature deaths will continue to decline, mortality will be compressed close to the biological limit and that the pattern of natural death at the end of the natural period of life will emerge.

* This chapter was translated from Portuguese to English by Eoin O'Neill and reviewed by Ana Amélia Camarano. The authors would like to thank Kaizô Beltrão for carefully reading this chapter and Jordana Fonseca and Bruno Negreiros for helping in processing the data and the bibliographic survey.

In other words, it is believed that life expectancy will continue to increase and as well as morbidity will continue falling. Although the literature agreed that mortality will continue to fall, there is no consensus about when and how much it will fall.

Various scenarios and projections for life expectancy have already been proven wrong by reality. Nonetheless, studies are still carried out with the aim of speculating on probable future life expectancy.

At present, life expectancy is above 80 years in Japan, Australia, Singapore, Switzerland and Sweden.¹ Life expectancy at birth in Brazil reached 71.2 years in 2000, having increased by nine years between 1980 and 2000. In 2000, a 60 years old person could expect to live another 21.1 years on average, 3.3 years more than in 1980.² The objective of this paper is to infer how much further the mortality of elderly Brazilians can fall and what will be the impact of this on life expectancy at birth and at 60 years.

To answer this question, the chapter tries to identify the causes of death that can be avoided to increase life expectancy. As an academic exercise, a number of simulations were carried out trying to measure the increase in life expectancy at birth and at 60 years if certain causes of death were avoided. The choice of these causes was based on a methodology contained in a study from the Escuela Andaluza de Salud Pública [EASP (n.d.)].

Elderly people are considered to be those aged 60 and over. The data on deaths used come from the Ministry of Health's Mortality Information System [Sistema de Informações de Mortalidade (SIM)] for 1980, 1991 and 2000, while population data was obtained from the demographic censuses for the same years.

The paper is divided into six sections, including this introduction. The second section contains a brief review of the literature on the possibility of a continued increased in life expectancy in the international sphere. The third section details the methodology of the EASP study for classifying avoidable deaths and the adaptations made to attend the objectives of the of this chapter. Using this methodology, it is possible to calculate the number of years lost in life expectancy at birth and at various given ages due to causes considered to be avoidable. The fourth section looks at the trends in mortality rates that are believed to be avoidable while the fifth presents the main impacts on life expectancy at birth and at 60 years that would be obtained by the elimination of these causes of death. The

1. Data, referring to 2003 were obtained from the US Census Bureau site on 26/05/2004.

2. Chapter 1 by Camarano, Kanso and Mello.

sixth section discusses the results in relation to the implications of future increases in life expectancy on health conditions.

2 FOR HOW LONG ARE HUMANS ABLE TO LIVE?

2.1 Perspectives on the Continuation of Increases in Life Expectancy

This is a question raised by Olshansky, Carnes and Brody in 2002, but it has been matter of concern since the eighteenth century. One of the first papers that dealt with this question is that of Abraham and Moivre.³ These authors used a mathematical function for age survival probability to estimate the maximum length of life. From then on a series of models have been proposed through the centuries. These models vary from ones characterised by the absence of proper information about age at death and exposure risk to the most complex ones developed in the twentieth century. All shared the objective of speculating about the duration of life and theorising about methods capable of estimating the time lived by people. Nonetheless, they were not able to answer the question of the maximum length of life—the limit of the life table [Duchene and Wunsch (1988)].

At present, there is considerable controversy about future patterns of morbidity/mortality, some with optimistic scenarios, others heading in the opposite direction, with some already having been proven wrong by reality.

For example, in 1978, Pichat estimated a limit for life expectancy at birth for the humanity at around 77 years. This was obtained by separating endogenous and exogenous causes of death and eliminating the latter. This limit has already been reached in many developed countries, such as Japan in 1990. In the United States, for example, life expectancy at 65 for both sexes in 1900 was less than 12 years. Only 13% of people of this age lived more than 85 years. By the end of the twentieth century, life expectancy at 65 had increased to 17 years and 42% of people aged 65 reach 85 years [Costa and Lahey (2001)].

Wilmoth (1997) describes three theoretical approaches to the limit of human life that can be found in the literature. The first one assumes the existence of a maximum limit for life, based on the age of death of the oldest individual, considered to be the most resistant. In this case, the maximum limit of life is close to current values. Duchene and Wunsch (1988), based on research of biologists and gerontologists, state that the maximum age of death is 115 for both sexes. The argument is that longevity is genetically programmed and even with the

3. Apud Duchene and Wunsch (1988).

elimination of all diseases, death will occur anyway, since cell reproduction capacity is limited.

Records of an elderly people who died at 122 were found by Robine and Allard (1995).⁴ On the other hand, according to Wilmoth et al (1996),⁵ the oldest human being lived 115 years. Is it possible for human life to go beyond these ages? According to Wilmoth, it is not possible to either confirm or refute these possibilities.

In the view of Wilmoth (1997), the hypothesis the existence of a maximum limit for life is not sustainable, since it assumes that it is possible for someone to live until age x , but that survival at the age $x + 1$ day is impossible. It is based on two demographic arguments that do not seem to be sustainable. The first is that there have been no increases over time in the maximum age of death for human populations [Fries (1980) and Olshansky et al (1980), apud Wilmoth (1997)]. Wilmoth and Lundstrom (1996) show different tendencies in a number of countries. In Sweden, for example, the maximum age at death, reported between 1850 and 1990 was 130 years [Apud Wilmoth (1997)]. Analysis of these information pointed to growth during the time period.

The second demographic point, on which the above hypothesis is based, is that mortality rates increase exponentially with age, as shown by the Gompertz function. This ensures that there is a maximum limit of finite life. Wilmoth (1997) also refuses to accept this assumption, since he believes that the Gompertz function does not describe human mortality at advanced ages.

The second approach described by Wilmoth (1997) is that of the compression or “squaring” of the survival function. According to this hypothesis, the variance of the age of death in the life table should decline as life expectancy increases. In other words, mortality rates would decline to minimum levels until they reach a certain age, after which they would dramatically grow. According to Rogers (1995),⁶ the survival function in developed countries is increasingly square due to the continuation of childhood mortality decline. This is reaching minimum rates. Also, the postponement of deaths caused by chronic degenerative diseases due to medical advances is contributing to the square shape of the survival function.

The squared function proposed by Fries (1980) considers that most people survive until 70 years, 66% of deaths occur between 81 and 89 years, 95% between

4. Apud Wilmoth (1997).

5. Apud Vaupel (1997).

6. Apud Cunha (2004).

77 and 93 years and by 100 years everyone will have died. It was found that the age at which the survival rate of the Japanese female population began to fall was very similar to that of the Fries' function (1980). On the other hand, the maximum biological limit is different, since the centenarian population has increased in Japan as well as in other countries [Vaupel (1997)]. Several demographers have speculated that life expectancy at birth could easily reach 100 years.⁷

The last approach looked at by Wilmoth (1997) is that of the mortality distribution limit function. This assumes that there is a distribution to which the mortality function will approximate, but not goes beyond. The most common way of estimating the distribution limit is through the exclusion of the causes of death considered to be exogenous. Wilmoth believes that this hypothesis is very useful for the demographic debate on the maximum limit of longevity, although he acknowledges some limitations. One is the interdependence between the causes of death and the other comes from difficulties in distinguishing exogenous from endogenous causes of death or between senile and non-senile causes of death.

Human mortality can be understood as the result of a double process. At young ages, endogenous mortality can be seen as a "manufacturing defect", independent of age. In the second process, mortality is the result, on the one hand, of the gradual ageing of the organism, the product of external aggression, and, on the other hand, of the intrinsic process of ageing that is already genetically programmed. Taking into account the heterogeneity of population, the average age of "natural" death should vary between 85 and 100 years [Duchene e Wunsch (1988)].

According to Manton, Stallard and Tolley (1991), the various theoretical perspectives on the increase in life expectancy can be classified in three groups: *traditional*, *visionary* and *empirical*.

The *traditional* perspective suggests that the limit of life expectancy is not much higher than the current life expectancy found in some countries, it means, around 85 years.⁸ Fries (1980) defends the idea of the existence of biological limits in human life that are not affected by changes in mortality for specific causes. His studies point to a low number of centenarians throughout the world. Furthermore, he also believes that many people who reported to had celebrated their hundredth birthday did not. Reported figures could be mistaken due to the precariousness of birth registration in the past, especially in poor countries.

7. Apud Olshansky, Carnes and Cassel (1993, p. 21).

8. This view is supported by Olshansky, Carnes and Cassel (1993) and Fries (1980).

Other more recent studies, however, have confirmed the existence of centenarians through the precise verification of information. For example, Rosenwaik and Stone (2003) confirmed the veracity of the records of most people over 110 years of age in the United States, who are known as supercentenarians. According to these authors, among those who declare themselves to be supercentenarians, 90% of white people were precisely reported. Among the black population, the proportion fell to 50%.

Vaupel (1997) also stated that the number of centenarians is growing throughout the world, though the total number is still scarce. It was estimated that there were approximately 100,000 centenarians throughout the world at the end of the last century. In China, this number has been doubling every decade. In England, approximately 3,000 people celebrated their hundredth birthday in 1997. The decline in the mortality rates of the population aged over 80 is one of the determinant factors of this process.

The *visionary* perspective suggests that the advances in biomedical research will increase the limits of biological brakes. The results points to an increase in life expectancy by between 25 to 50 years. In this case, life expectancy at birth can reach between 100 and 125 years [Strehler (1975) apud Manton, Stallard and Tolley (1991)], or even go as high as between 150 and 200 years [Rosenberg et al (1973) apud Manton, Stallard and Tolley (1991)].

The *empirical* perspective believes that the limit of life expectancy at birth is far from being reached, since mortality is declining and progress is being made in the treatment and administration of chronic diseases and disabilities that characterise mortality in the last stage of life.

This perspective suggests that the senescence caused by age is multidimensional; each dimension is associated with a chronic disease. Therefore, progress in the treatment of diseases such as arterioscleroses, Alzheimer's and osteoporosis can result in an increase in the limit of life expectancy. Reductions in mortality caused by cardiovascular diseases have been observed in almost the whole world. Luepker (2001) showed that in the 1970s, 30%-40% of adults older than 65 years did not survive to hospitalisations due to myocardium heart attacks. In 1995, this figure had fallen to 15%. Also, the numbers of days spent in hospital for this reason declined, falling from eight days in 1980, to five in 1995.

In support of this hypothesis, several demographers speak about a fourth phase of epidemiological transition, where the oldest generation, especially in the developed countries, will experience clear decline in mortality and an increase in life expectation. This perspective underpins Vaupel's (1997) view on the growth

of centenarians worldwide. In Brazil, the number of centenarians doubled between 1980 and 2000: passing from 12,225 to 24,576.

To estimate the limit of human life, various authors consider past mortality trends and project them to the future. Others theorise about the forces that influence the duration of animals' lives. It is widely recognized that health and mortality at advanced ages are affected by socioeconomic conditions, nutrition, the practice of physical exercise, etc. In this approach, life style is of fundamental importance. Nonetheless, these factors are not always included in mathematical models [Manton, Stallard and Tolley (1991)].

Projections about the duration of human life based on mathematical models have lead some researchers to conclude that there are no lower limits to mortality rates, and, as a result, there are no upper limits for life expectancy. They stress the possibility that a life expectancy at birth of approximately 100 years will be reached in the twenty-first century [Carnes, Olshansky and Grahan (2003)]. Various authors have discussed the feasibility of these forecasts from the point of view of evolutionary theory.⁹

According to Carnes, Olshansky and Grahan (2003), the evolutionary theory of ageing assumes that a hostile environment brings about barriers on infinite survival, making it impossible for any organisms to reach immortality. Any living organism is composed of biological materials (genetic material) from past generations that suffer the extensive influence of biological processes. Nonetheless, those needed to guarantee great longevity are never found among these materials. The biological consequences of ageing, which can be understood as fatal or non-fatal diseases that affect individuals, are revealed when individuals survive beyond their reproductive period. Human beings as well as laboratory animals protected from the dangers of nature have predictable standards of morbidity/mortality by age. This suggests the existence of a functional duration for organisms, which the authors call the "period of biological guarantee".

Carey and Judge (2001) describe a general theory for the longevity of sociable species, especially applied to humans. Their observations are based on a database containing information about the maximum duration of life of vertebrate and invertebrate species. These data were classified in two groups according to the determinant factors of the length of life: *a*) length of life affected by environmental conditions—this category includes animals, which live in generally adverse conditions, such as the lack of water or food and *b*) length of life affected by

9. About this, see Carnes, Olshansky and Grahan (2003), and Olshansky, Carnes and Brody (2002).

sociable life—this category includes species, which exhibit intense family or social care. Longevity is generally associated with natural, sexual or parenthood selection.

A point that draws attention in the evaluation of the increase in the longevity in sociable species is that some generations (age groups) take care of other generations. This process alters the rhythm and the dynamic of events of the life cycle and its qualitative properties. This theory suggests that longevity in solitary species in the same environmental context is shorter than that of social species. For example, in a situation of caloric restrictions the response of solitary species differs from species that lives in societies, who experiences help, sharing and storage of food.

Human longevity is related not just to humans' capacity to control the environment, but also to the filogenetic legacy. Long gestation, restricted number of offspring, long birth intervals plus maternal care and sociability are important determinants of the growth of longevity. If one accepts this perspective, family support and social integration become important policies in the continuation of increases in life expectancy in the Brazilian population.

According to biodemography, future increases in life expectancy in developed countries will be reached through reductions in elderly mortality through intervention in the ageing process. Nonetheless, in the biomedical areas the limit of life is still biologically given. So, any mathematical model that does not take biological evidence of this limit into account in its projections will fail [Olshansky, Carnes and Brody (2002) and Carnes, Olshansky and Grahan (2003)].

It seems to be agreed by biodemographic specialists, as shown by the authors discussed above, that no organism can escape from death, even if all causes of death would be eliminated. Wilmoth (2001) states that these authors underestimated the capacity of human organisms to respond to changes in environmental and behavioural conditions of societies. In this way, he believes that there is still room for future increases in life expectancy.

There has also been some discussion about the differentiated possibilities for an increase in life expectancy in the international arena. Caselli, Meslé and Vallin (2002) draw attention to the fact that various developed countries are experiencing undeniable advances in the treatment and prevention of cardiovascular diseases, and, as a result, may experience new increases in life expectancy. Nonetheless, some other countries, as some African ones, are yet in the second phase of the epidemiological transition, the era of infectious and contagious diseases, as postulated by Omran (1971). At present, at the start of this century, they are experiencing the Acquired Immune Deficiency Syndrome (AIDS) epidemic, the re-emergence of old diseases and as a result a fall in life expectancy.

In the Brazilian situation, the age pattern of mortality as well as that of causes is moving to that of an older population with a reduction in the proportion of deaths from infectious and contagious diseases and an increased proportion of mortality due to cardiovascular diseases. This has been followed by an increase in life expectancy. At the same time, mortality due to external causes (violence) has increased and prevented greater increases in life expectancy [Beltrão, Camarano and Kanso (2004)].

2.2 The Increase of Life Expectancy and Health Conditions

The increase in life expectancy has addressed an important question for public policies: in what sort of health conditions will the long-lived live? For Fries (1980), once life expectancy closely approaches to the biological limit, a “compression of morbidity” will be reached. In other words, better health conditions will accompany the increased life expectancy. In a more recent paper, Fries (2002)¹⁰ describes the results of a research carried out in the United States which indicates that the decline in functional limitation rates was superior to that of mortality rates. This confirms the assumption of the compression of morbidity in this country.

Negative views about the increase in life expectancy relate this to a dramatic and catastrophic increase in the prevalence of mental disturbances and chronic illnesses in elderly people. This can be found in the discourse of several researchers on ageing and quality of life in the 1960s and 1970s [Gruenberg (1977), Verbrugge (1984) and Kramer (1980)]. This process is called the failure of success [Fries (2003) apud Cunha (2004)]. As pointed out by Egidi (2003), population ageing was considered a problem and not a result of social and economic development. In other words, in this view, a continued increase in life expectancy is expected, without, however, any reduction in the frailties and disabilities brought about by chronic diseases.

On the other hand, Thomas (1977) presented a more optimistic point of view, predicting that the main diseases troubling humanity would be brought under control and it can be expected a society relatively free of diseases. From the 1980s onwards, research in several developed countries showed that the youngest elderly people had experienced improvements in health conditions, with a reduction in disabilities and incapacities to carry out daily activities [Egidi (2003)]. These results make it possible for the severity of chronic illnesses to be gradually reduced and for many elderly people to be able to enjoy better health, have greater autonomy

10. Apud Cunha (2004).

and a better quality of life. As a result, mortality rates would reduce furthermore and life expectancy would increase.

Based on research carried out among elderly people in Europe, Egidi (2003) argues that population ageing is not necessarily linked to worsened health conditions and an increase in disability, especially among the youngest elderly people. Analysing hospital admittance data, he observed that only 1 out of 5 elderly men and 1 in 6 elderly women had been admitted to hospital in 1995; while 1 in 3 elderly men and less than half of elderly women experienced some sort of disability. The majority of elderly people, especially those residents in Denmark, Holland and Belgium, reported that they were experiencing good health.

Egidi (2003) called attention to the fact that today elderly Europeans experienced worse social conditions in their adult life than those that future elderly people are experiencing now. The 1920s generation left school earlier, went through the Second World War, worked to reconstruct their countries and, most especially, were exposed to greater health risks than today's generations. In the future, elderly people will have better levels of education and will have an active role in social and cultural life. These characteristics can positively affect their health and well-being, though this will nonetheless depend on public policies concerned with the promotion of health for all ages.

In summary, there is not much to indicate that a significant proportion of elderly people can live past 110 years, irrespective of the decline in mortality at advanced ages. It is probable, to the extent that deaths tend to concentrate at more advanced ages, that the decline in mortality rates will tend to decrease.

3 METHODOLOGY USED

Some deaths in all age groups are due to avoidable causes and, for this reason, are considered premature. They correspond to deaths that should not have happened since they could have been avoided. This concept includes the possibility of improvement on health services, on life conditions, etc. All age groups are affected by deaths considered to be avoidable by greater access to medical treatment. In this paper, the elderly age group is looked at.

Some studies define the possible avoidable causes for the elderly population in order to develop strategies to avoid them.¹¹ The first classification of the avoidable causes of death was proposed by Rutstein and was afterwards developed by Charlton

11. Several simulations have been made for Brazil measuring the impact of the reduction of mortality due to avoidable causes in early childhood [see, for example, Ortiz (1996 and 1999)].

Rutstein (1976) and Charlton (1983) apud EASP (n.d.). The causes of death influenced by the quality of health services and the resources used were identified. These causes were divided into the following groups:

- Group I: causes that can be avoided through primary care—including the pathologies that can be diagnosed at the primary health level, allowing prevention, reducing the incidence of the diseases;
- Group II: causes that can be avoided through “early” diagnosis and opportune treatment—causes that require secondary treatment;
- Group III: causes that can be avoided through improvements in treatment and medical care—including illnesses susceptible to medical advances and treatment.

Table 1 details the avoidable causes of death for each one of the groups mentioned above. In addition to these causes, deaths due to external causes are looked at separately, since this was the seventh cause of death for the elderly population in 2000 [see Chapter 1 by Camarano, Kanso and Mello]. The Brazilian Institute of Geography and Statistic [Instituto Brasileiro de Geografia e Estatística (IBGE)] has also measured the reduction of the impact of mortality due to external causes in all ages on life expectancy at birth.

The concept of avoidable causes can also be used in the construction of indicators of health policy efficiency and the quality of provided services. One of the ways of measuring this is by taking away these causes and afterwards comparing the life expectancies at birth obtained with that observed.

The proposed exercise consists of measuring life expectancy resulting from the elimination of causes of death for 1991 and 2000. The calculation was based on the life tables methodology¹² developed by Coale and Demeny (1966). They propose a combination of two methods: the first one consists of the adoption of the concept of avoidable causes and the second one, using the life table models, looks to find out how many years of life are lost due to these causes. Although the focus of this chapter is on the elderly population, it was looked the reducing effect on mortality rates of all age groups.

To achieve these results, six groups of life tables for Brazilian males and females were calculated, for 1991 and 2000, as follows:

- T1: Total deaths—This group considers all deaths occurring from all causes;

12. This is a means used to simulate the experience of mortality in a hypothetical birth cohort. The total population is transformed into a hypothetical population with 100,000 births born at the same time. Year after year, deaths are accounted for in this hypothetical population, allowing the calculation of a set of indicators. The table remains open until the death of the oldest survivor.

TABLE 1
GROUPS OF AVOIDABLE CAUSES OF DEATH

Group I

Malignant Neoplasms of the Digestive and Respiratory Tracts
 Malignant Stomach Neoplasms
 Malignant Colon Neoplasms
 Malignant Liver Neoplasms
 Malignant Neoplasms of the Trachea, Bronchia and Lungs
 Malignant Bladder Neoplasms
 Cerebrovascular Diseases
 Hepatitis and Chronic Cirrhosis
 External Causes (Injuries) and Poisoning
 Traffic Accident
 Falls
 Poisoning
 Suicide and Self-Inflicted Injuries

Group II

Malignant Skin Neoplasms
 Female Malignant Breast Neoplasms
 Malignant Neoplasms in the Cervix
 Malignant Neoplasms in the Uterus

Group III

Tuberculosis
 Infectious and Parasitic Diseases
 Malignant Testicle Neoplasms
 Leukaemia
 Cardiovascular System Diseases
 Rheumatic Fever
 Hypertension
 Ischemic Cardiopathy
 Pulmonary Circulation Diseases
 Atheroscleroses
 Respiratory Diseases
Diabetes Mellitus
 Gastric and Duodenal Ulcers

Group IV

External Causes

Source: EASP/Adult study in Argentina, Chile and Uruguay.

Note: Adapted by the authors.

- T2: GI—avoidable deaths due to causes classified in Group I were excluded;
- T3: GII—avoidable deaths due to causes classified in Group II were excluded;
- T4: GIII—avoidable deaths due to causes classified in Group III were excluded;
- T5: External causes—deaths due to external causes were excluded; and
- T6: GI, GII, GIII—all causes of death considered avoidable from groups I, II and III were excluded.

After the life tables were constructed, the lost years due to each one of these groups of causes of death were calculated for both sexes for the two studied years. It should be mentioned that the methodology for classifying avoidable causes used in the EASP work was based on the ninth International Classification of Diseases (ICD-9) by the World Health Organisation. This allowed the straight application to the Brazilian data for 1991. In 2000, the tenth ICD revision of causes of death was already in use in Brazil. This brought about difficulties in using the EASP methodology. Therefore, it was necessary to make the data compatible,¹³ since there had been significant changes between the two classifications. In addition to the alteration of codes, diseases are more disaggregated, which is to be expected since the mortality pattern had been altered new diseases emerged, others were brought under control and some eradicated. These changes can affect the comparison of the results.¹⁴

4 MORTALITY RATES DUE TO AVOIDABLE CAUSES

The proportion of deaths in Brazil considered to be avoidable is quite high. In 2000, approximately 75% of Brazilian deaths were thus classified. It is higher among the non-elderly population than among elderly people and higher among male than female due to the impact of deaths from external causes. Looking just at female deaths, it can be seen that there is a higher proportion of avoidable deaths among elderly women (see Figure 1). Also observed was an increase during the time period in the mentioned proportion for the two population groups and for both sexes. This suggests that the greatest impact on the mortality decline that took place during the 1990s was that caused by causes considered to be non-avoidable. This also signifies the existence of a clear room for the continued reduction in mortality and increase in life expectancy.

13. We would like to acknowledge the assistance of Felipe F. S. Teodoro, a medical student, in making ICD-9 and ICD-10 compatible.

14. It should be mentioned that there does not appear to be any official publication that makes the two classifications compatible.

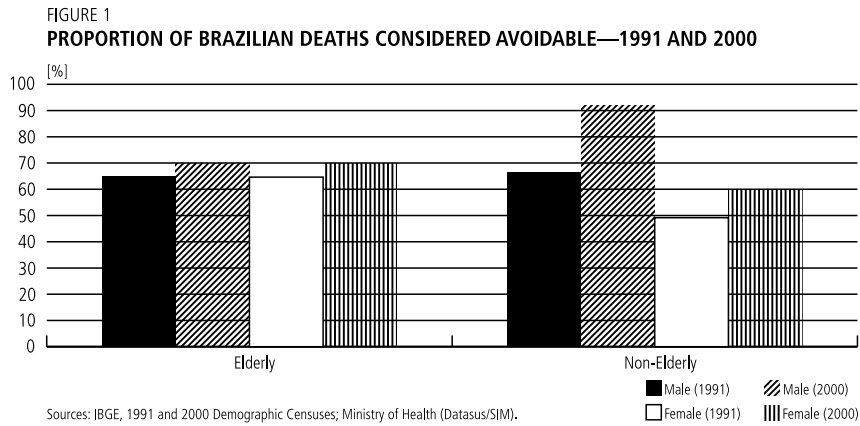


Table 2 displays the mortality rates for the Brazilian elderly population considering all causes of death and those disaggregated by the causes considered to be avoidable in 1991 and 2000. While the mortality rate including all causes fell by 22% for both sexes, only two groups of avoidable causes of death experienced a decline: Group I and that of external causes. Nonetheless, this reduction was significant, leading to a reduction in mortality rates of the whole group of causes considered to be avoidable.

The mortality rate of the elderly population as a whole is not the best indicator to compare time period variations in the phenomenon, since it is strongly affected by age distribution. The small decline observed in the period is probably due to

TABLE 2
BRAZIL: MORTALITY RATES OF ELDERLY PEOPLE BY GROUPS OF AVOIDABLE CAUSES—1991 AND 2000
[per thousands of individuals]

Groups of Causes of Death	1991		2000		2000 Standardised	
	Men	Women	Men	Women	Men	Women
Group I	10.26	6.50	9.96	6.06	9.61	5.67
Group II	0.08	0.76	0.10	0.97	0.86	1.09
Group III	16.05	13.24	17.60	14.32	12.14	13.24
External Causes	1.57	0.65	1.39	0.57	1.36	0.54
Total Avoidable (Excluding External)	26.38	20.50	27.67	21.35	23.97	20.53
Total	52.56	40.23	41.10	31.47	39.18	29.13

Source: IBGE, 1990 and 2000 Census; Ministry of Health (SIM).

the ageing of the elderly group. To eliminate this affect, Table 2 also shows the mortality rates for the elderly population in 2000, standardised by the age distribution in 1991. The population ageing of the group considered elderly brought about an increase in the total male mortality rate of 5% and of 7% in the female rate, annulling part of the impact of the reduction in age specific mortality. If ageing had not occurred, the reduction in these rates would have been 25% among Brazilian males and 28% among females more than the 22% observed.

The male mortality rates provoked by avoidable causes classified in Group I (primary prevention) were reduced by 3% and those of the female population by 7% (see Table 2). Among the groups of avoidable causes, these experienced the largest decline and were also affected by the ageing of the age group. The fall could have been 6% among men and 13% among women.

Figure 2 shows that mortality rates due to the avoidable causes classified in Group I were reduced in all age groups and both sexes. The largest reduction was observed among the youngest groups and among women. In other words, the age when Brazilians are dying due to this group of causes is being postponed, which can be seen in the average age at death of the elderly Brazilians (Table 3). This has increased from 82.8 to 85.0 for males and from 82.5 to 85.0 among females. The postponement was slightly higher among women. Among the four groups of causes considered avoidable, those of Group I experienced the highest delay in the age at death.

Among the causes of death analysed in Group I, the highest mortality rate in 2000 was caused by malignant neoplasms of the trachea, bronchus and lungs, whose rates were very high: 0.72 per 1,000 elderly Brazilians in 2000. It affects

FIGURE 2
BRAZIL: AGE SPECIFIC MORTALITY RATES OF GROUP I BY AVOIDABLE CAUSES—1991 AND 2000

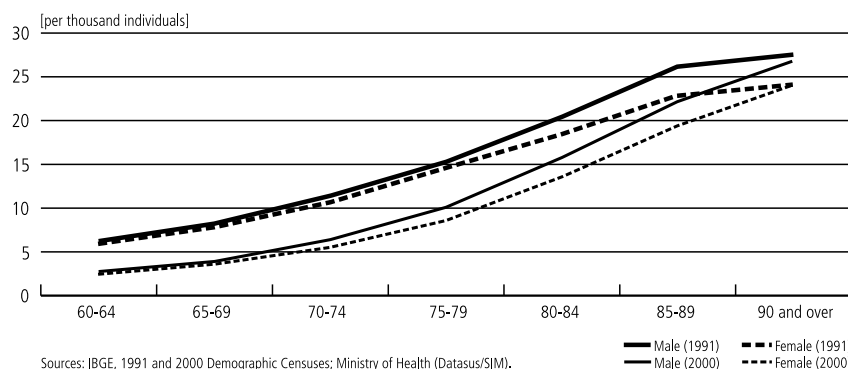


TABLE 3
AVERAGE AGE AT DEATH OF BRAZILIAN ELDERLY POPULATION BY AVOIDED CAUSES IN YEARS

Groups of Causes of Death	1991		2000	
	Male	Female	Male	Female
Group I	82.82	82.50	84.97	85.04
Group II	84.18	65.08	81.05	65.08
Group III	84.93	84.54	86.23	86.10
External Causes	83.71	85.68	81.55	85.85
Total Avoidable (excluding external)	84.22	85.75	83.89	85.66
Total	84.44	85.70	84.76	85.83

Source: IBGE, 1990 and 2000 Demographic Censuses; Ministry of Health (Datusus/SIM).

male more (1.13 per 1,000) than female (0.39 per 1,000). The lowest mortality rates were those caused by malignant liver neoplasms.

Mortality rates due to Group II and III causes of death increased during the period. The smallest impact on the mortality of the elderly Brazilians was that caused by the elimination of deaths that could be avoided by early diagnosis and timely treatment, causes of deaths classified in Group II. These rates were very low. These were 0.6 per 1,000 elderly people in 2000 and were concentrated in the youngest elderly population. Its increase also occurred among the youngest elderly people leading to a reduction in the age at death for this group of causes (Table 3). If there had been no population ageing, the increase would have been higher, especially among the male population.

Due to the low values involved, those rates disaggregated by age are not shown. Among the four causes included in this group, three affect only female. They are malignant neoplasms in the breast, the cervix and the uterus. The low rate can be an indicator of prevention and care with health, which is more common among women than among men.

The highest mortality rates were found among those provoked by the third group of causes of deaths. This group contains the causes that can be avoided by improvements in treatment and medical care. The importance of this group of causes on elderly Brazilians mortality increases over time and affects mostly female. In 2000, it was responsible for 42% of male deaths among elderly Brazilians and 46% of female. Consequently, its elimination would cause the largest impact on the reduction of mortality among all the considered causes.

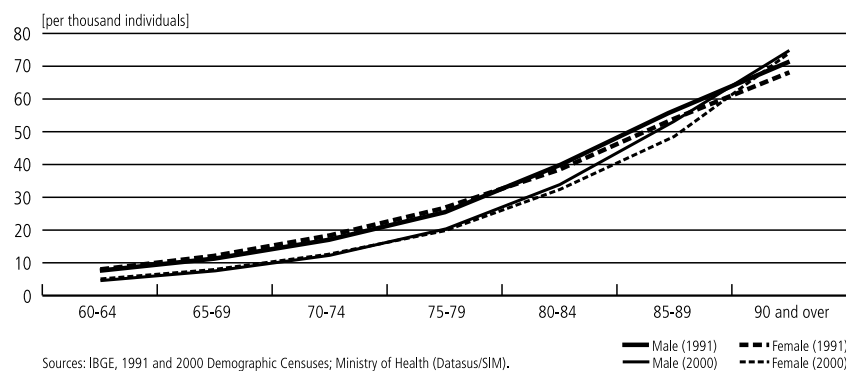
The mortality rates of this group are also the most affected by the age distribution. If the studied age group had not aged, the male rate would have fallen from 16.1 per 1,000 elderly people to 12.1 per 1,000 instead of having increased to 17.6 per 1,000, the actual final impact. The female rate would have remained constant instead of increasing (see Table 2).

Figure 3 presents the age specific mortality rates due to the third group of avoidable causes for the elderly Brazilians. This also points to a decline in the mortality rates of all age groups, with the exception of that of people aged above 90 years. The largest decline was observed among the female population. The average age of death increased from 84.9 to 86.2 years for elderly men and from 84.5 to 86.1 years for women (Table 3).

This group of causes of death includes tuberculosis, hypertension illnesses, cardiopathy and *diabetes mellitus*. Although tuberculosis has been brought under control, it is yet an important cause of death, especially in developing countries. The age group most affected is that of elderly people. In the last twenty years, there has been an increase in the numbers of persons infected with HIV/AIDS, both in developed and developing countries and a growing number of cases of tuberculosis among people infected with the HIV virus. The association of HIV with tuberculosis is a grave public health problem, since it can lead to an increase in morbid-mortality due to tuberculosis.¹⁵

Hypertension and illnesses and cardiopathy are typical illnesses of elderly people associated with an unhealthy lifestyle. Obesity, a sedentary life, stress, the excessive consumption of alcohol and irregular eating are examples of situations

FIGURE 3
BRAZIL: AGE SPECIFIC MORTALITY RATES OF GROUP III BY AVOIDABLE CAUSES—1991 AND 2000



15. Funasa site: <http://www.funasa.gov.br/pub>. Accessed on 12/2003.

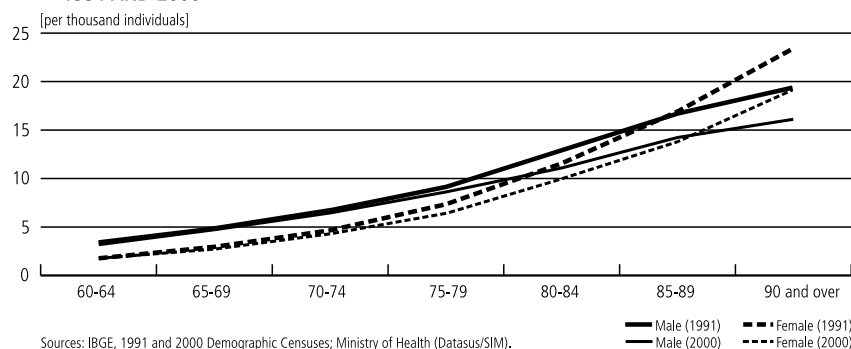
and habits that can collaborate both with the hypertension illnesses and with cardiopathy in people with a predisposition. It should also be emphasised that, as well as this predictable factors, hypertension itself contributes to cardiopathy. These diseases are also quite affected by age.

Figure 4 shows the age specific rates of mortality by hypertension illnesses and cardiopathy among elderly Brazilians in 1991 and 2000 by sex. These grew as age did and affected men more than women, with the exception of people aged 90 and over. It can be seen that there was a decline in these rates for all ages, especially for women and in the most advanced ages. The highest mortality rates were due to cardiopathy. Among all the considered causes, these provoked the largest impact on the mortality reduction of the elderly Brazilians.

The last cause of death analysed is *diabetes mellitus*, which affects all age groups, but it is higher among elderly people, especially women. It is a disease that can require greater care, since it can involve physical incapacities. The costs involved in its control and in the treatment of its complications are very high.¹⁶ Figure 5 shows the age specific mortality rates due to *diabetes mellitus* for the elderly Brazilians in 1991 and 2000. It should be noted that these rates are quite affected by age and increased during the considered time period. This growth was most marked among the 60-75 age group and among female.

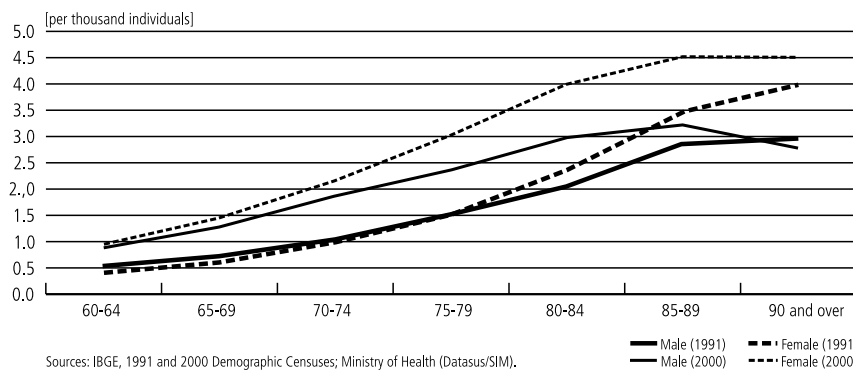
Elderly mortality rates due to external causes were very low, and showed a slight decline. They were concentrated at the younger ages and did not much affect the mortality rates at old ages. The average age of death from this cause

FIGURE 4
BRAZIL: AGE SPECIFIC MORTALITY RATES FOR CARDIOPATHY AND HYPERTENSION DISEASES
— 1991 AND 2000



16. Funasa site: <http://www.funasa.gov.br/pub>. Accessed on 12/2003.

FIGURE 5
BRAZIL: AGE SPECIFIC MORTALITY RATES FOR *DIABETES MELLITUS*—1991 AND 2000



among elderly males fell by 2.2 years. For this reason, these rates for the elderly Brazilians are also not shown in this paper.

In summary, the joint effect of the mortality reduction and the ageing of the elderly Brazilians was an increase in the mortality rates of the group of avoidable causes during the studied time period. If the effect of ageing was eliminated, the male rate mortality rate would have declined by 9.0%. The impact of ageing on female mortality was lower. Their mortality rate would have not changed. For the group of avoidable causes, the average age at death fell slightly due to the impact of the rejuvenation of mortality shown in Group II.

Among the causes of death defined as avoidable, those with the highest prevalence among elderly people, both in 1991 and 2000 were:

- GI — cerebrovascular illnesses;
- GII — malignant breast neoplasms among females;
- GIII — illnesses of the cardiovascular system.

The classification of the most important causes of death was not differentiated by sex. The rates were systematically higher for men than for women, with the exception of breast neoplasms.

5 PERSPECTIVES ON THE INCREASE IN LIFE EXPECTANCY

Chapter 1 showed that life expectancy at birth and at 60 for Brazilians has considerably increased. This was a result of improvements in living conditions, advances in medical technology, the expansion of health services, etc. Nonetheless, it was also observed that there are still a high and growing percentage of deaths

that can be avoided. This section presents the results of a simulation that aims to measure the number of years that could be added to life expectancy at birth and at 60 years if these causes of death were avoided. This exercise was carried out for 1991 and 2000.

5.1 Life Expectancy at Birth

Table 4 shows the life expectancy at birth and at 60 years for Brazilian male and female in 1991 and 2000.¹⁷ Included here, as well as these values, are the results of

TABLE 4
BRAZIL: LIFE EXPECTANCY AT BIRTH AND AT AGE OF 60 BY AVOIDABLE CAUSES, ACCORDING TO GENDER

	1991		2000	
	Male	Female	Male	Female
Observed Values				
e^0	62.11	70.60	67.24	75.30
e^{60}	16.43	19.57	19.33	22.40
Excluding Deaths Due to Group I Causes				
e^0	66.27	73.46	72.97	78.34
e^{60}	19.01	21.65	22.31	24.67
Excluding Deaths Due to Group II Causes				
e^0	62.13	71.03	67.28	75.89
e^{60}	16.45	19.79	19.36	22.72
Excluding Deaths Due to Group III Causes				
e^0	67.09	76.40	74.40	83.26
e^{60}	21.14	24.97	26.22	29.89
Excluding Deaths Due to External Causes				
e^0	65.56	71.38	70.80	76.02
e^{60}	16.79	19.75	19.70	22.59
Excluding Deaths Due to all Avoidable Causes (Groups I, II and III)				
e^0	71.28	79.69	80.16	86.89
e^{60}	23.73	27.29	29.23	32.48

Source: IBGE, 1990 and 2000 Demographic Censuses; Ministry of Health (SIM); EASP.

17. The life expectancy values presented in this chapter differ slightly from those presented in Chapter 2. The calculation of the former values took into consideration the upper limit of 90 years and over, and the second of 80 years and over.

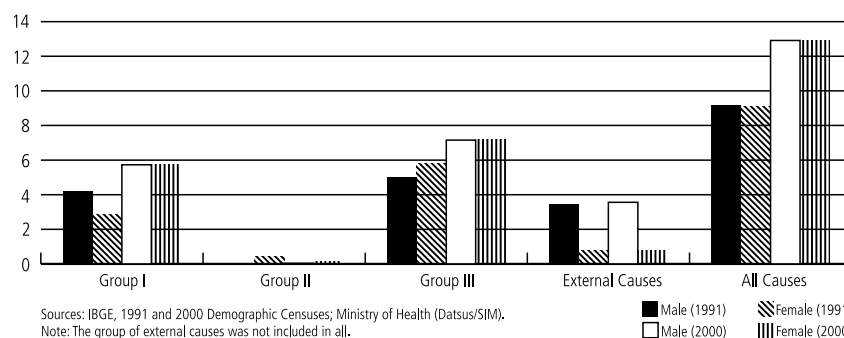
the simulations made taking into account the causes considered avoidable desegregated into the three groups proposed by EASP and the external causes of death. A simulation was also carried considering the total of deaths considered avoidable, excluding external causes.

The estimated life expectancy at birth was 62.1 years in 1991 for the Brazilian males and 70.6 years for females. This indicator was compared with the results of the various simulations made for the same year. The potential increases, expressed in numbers of years that can be added to life expectancy at birth, are shown in Figure 6. The largest increase would be observed in the case of the elimination of deaths that could be avoided through improvements in medical care and treatment (Group III). These are illnesses that depend on precise diagnosis, proper medical treatment and even surgery in some cases. Among men, life expectancy at birth would increase by 5.0 years, compared to 5.8 years for women, if these causes were eliminated.

The second most important group of causes of death (Group I) includes deaths that can be avoided through primary prevention of certain illness. This means early diagnosis. If these causes were eliminated, men would reach a life expectancy of 66.3 years and women of 73.4 years (see Table 4). The impact of the reduction of these rates would be greater for males, whose life expectancy would increase by 4.2 years, compared with an expected increase of 2.9 years for females.

As has been seen before, a lower impact on life expectancy at birth is observed if deaths of Group II, those that can be reduced through early diagnosis and timely treatment, are excluded. These causes of death mostly affect female. Their life expectancy would increase by 0.4 years in the case of their elimination. The

FIGURE 6
NUMBER OF YEARS THAT CAN BE ADDED TO LIFE EXPECTANCY AT BIRTH FOR THE BRAZILIAN POPULATION IF CERTAIN CAUSES OF DEATHS WERE ELIMINATED—1991 AND 2000



last group of causes looked at was external causes, which have a greater impact on male mortality. Men lose 3.5 years due to this cause of death and women 0.8 years (see Figure 6).

IBGE estimates show that life expectancy would have increased by 2.5 years in 1991 and 2.6 years in 2000 if mortality due to external causes was reduced.¹⁸ For women, the reducing impact of avoidable causes is much less than for men, around 0.7 a year according to the IBGE estimates for the two years in study.

When all avoidable causes are eliminated,¹⁹ both sexes make significant gains. Male life expectancy increases from 62.1 years to 71.3 years and female from 70.6 to 79.7. This means an increase of approximately 9.2 years for men and 9.1 years for women (see Table 4).

Between 1991 and 2000, male life expectancy increased by 5.1 years and female by 4.7 years. Life expectancy at birth in 2000 was 67.2 years for men and 75.3 for women. These figures are far from what could have been reached according to the simulated elimination of causes of death carried out with 1991 data. On the other hand, only male mortality was affected by the reduction in mortality due to avoidable causes that took place during the time period. Eliminating the affect of population ageing, this was responsible for 36% of the decline in male mortality.

The same exercise was also made with the data from 2000. The results are also displayed in Table 4 and Figure 6. They show more significant impacts on life expectancy at birth for 2000 than for 1991, when the causes of death are excluded, especially for women. The greatest impact keeps being that caused by the exclusion of Group III illnesses.

The exclusion of all the avoidable causes of death observed in 2000 would result in life expectancy at birth reaching 80.2 years for men and 86.9 for women. In addition to increased life expectancy, a reduction in gender differentials to 1.3 years and an alteration in the gender composition of the Brazilian population, especially of elderly people, could be expected. It should be acknowledged though, that the high values obtained from the simulation can be in part explained from the interdependence of causes of death.

Based on the results, the first question raised is whether these values have already been reached by any country. Table 5 contains the life expectancy at birth

18. See www.ibge.gov.br, accessed on 08/23/2004.

19. External causes were excluded.

for the five countries with the highest life expectancy at birth in the world. It is also shown that the highest male life expectancy found was 77.5 years, in Japan, 2.7 years lower than the simulated Brazilian value using data from 2000. The life expectancy of Japanese women (the highest) was also lower than the simulated result for Brazilian women, but with a lower difference, 2.2 years.

Life expectancy at birth projections based on mathematical models for the purposes of population projections assume that life expectancy at birth will reach 79.5 years for men and 87.9 for women in 2020 [Beltrão, Camarano and Kanso (2004)]. In other words, these values are very close to those simulated in this chapter. Although these values are higher than those observed in the countries with the highest life expectancy, they are below the forecasts made by the studies that discuss the upper limits of life expectancy.

The second addressed question, which is also present in the debate about the increase in life expectancy, is related to the survivors' health. One of the ways of thinking about this is through healthy life expectancy calculated by the World Health Organisation. The results are found in Table 5. The data suggests a negative association between life expectancy at birth and the number of years of life spent without good health. In all the countries looked at, women spent longer without good health than men.

TABLE 5
LIFE EXPECTANCY AND EXPECTANCY OF A HEALTHY LIFE AT BIRTH AND NUMBER OF YEARS WITHOUT GOOD HEALTH SELECTED COUNTRIES—2000

Countries	Life Expectancy at Birth		Expectancy of a Healthy Life at Birth		Number of Years without Good Health		% of Life without Good Health	
	Male	Female	Male	Female	Male	Female	Male	Female
Japan	77.5	84.7	72.3	77.7	5.2	7.0	7	8
Switzerland	76.7	82.5	71.1	75.3	5.6	7.2	7	9
Australia	76.6	82.1	70.9	74.3	5.7	7.8	7	10
Sweden	77.3	82.0	71.9	74.8	5.4	7.2	7	9
Canada	76.0	81.5	70.1	74.0	5.9	7.5	8	9
Brazil ^a	65.5	72.0	57.2	62.4	8.3	9.6	13	13
Brazil Simulated	80.2	86.9	69.7	75.6	10.4	11.3	13	13

Source: WHO.

^a Data from WHO.

In Japan, males spend 7% of their lives without good health. In Brazil, the comparable percentage is 13%. Assuming that this percentage will be kept constant and taking into account the simulated increases in life expectancy at birth, it can be projected that 10.4 and 11.3 years lived by men and women, respectively, will be spent without health.

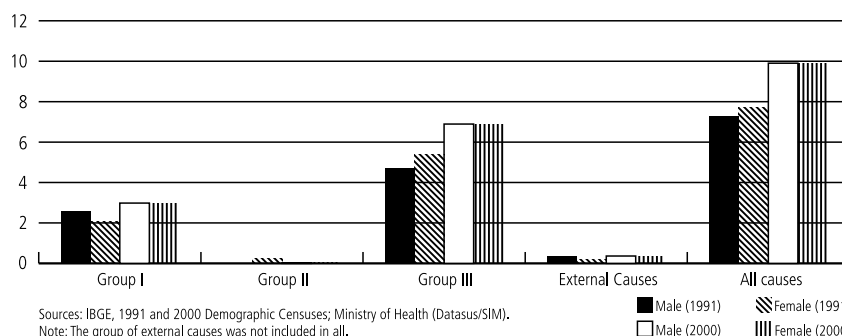
In short, it can be concluded that there is ample room for a continued decline in the mortality rate in Brazil and also in the other countries looked at here for comparison purposes. If the health of the surviving population does not improve, it can also be forecast that the time lived without good health will increase. This raises the following question: what are the chances of a mortality decline being accompanied by a reduction in the time spent without health by the Brazilian population?

5.2 Life Expectancy at 60

The two exercises above also allowed the calculation of life expectancy at 60 years through the elimination of avoidable causes of death. The results can be found in Table 4 and the numbers of years that can be added to life expectancy at 60 years are presented in Figure 7. It is estimated that in 1991, life expectancy at 60 years was 16.4 years for men and 19.6 for women. This would have been 23.7 years for men and 27.3 for women, if the causes considered avoidable were excluded.

Between 1991 and 2000, this indicator increased by 2.9 years for male and 2.8 years for female. However, male life expectancy could have increased by a further 5.5 years and female by 5.2. In 2000, life expectancy at 60 years was estimated to be 19.3 years for men and 22.4 for women. The exclusion of all the

FIGURE 7
NUMBER OF YEARS THAT COULD BE ADDED TO THE LIFE EXPECTANCY OF BRAZILIANS AT THE AGE OF 60—1991 AND 2000



avoidable causes would have resulted in life expectancy of 29.3 years for males and 32.5 for females.

The causes of death classified in Group III have the greatest impact on life expectancy at 60 years as well as on life expectancy at birth. This is true for both 1991 and 2000. The effect of the exclusion of external causes is much less than on life expectancy at birth, due to the fact that these causes of death mainly affect the youngest population. However, this will affect the number of people who reach advanced ages, especially males.

As in the case of life expectancy at birth, the values of life expectancy at 60 years were compared to the group of countries with the highest life expectancies for this age, (see Table 6). In addition, as in the case of life expectancy at birth, the exclusion of all the causes of death observed in 2000 could result in life expectancy at 60 reaching much higher values than those observed in the countries with the lowest mortality, such as Japan or Sweden. Compared to Japan, this difference is 7.9 years for men and 5.9 for women.

The proportion of years spent without good health is proportionally higher among elderly people than the population as a whole, as is to be expected. This was also found for all the countries analysed. In addition, among elderly Brazilians, the time is much higher. While elderly male Japanese spend 17.8% of their lifetime without good health, for elderly Brazilians this proportion rises to 40%. Among

TABLE 6
LIFE EXPECTANCY AND EXPECTANCY OF A HEALTHY LIFE AT 60 YEARS AND NUMBER OF YEARS WITHOUT GOOD HEALTH SELECTED COUNTRIES—2000

Countries	Life Expectancy at 60		Expectancy of a Healthy Life at 60		Number of Years without Good Health		% of Life without Good Health	
	Male	Female	Male	Female	Male	Female	Male	Female
Japan	21.30	26.80	17.5	21.7	3.8	5.1	18	19
Switzerland	20.60	25.20	17.1	20.4	3.5	4.8	17	19
Australia	20.70	24.60	16.9	19.5	3.8	5.1	18	21
Sweden	20.60	24.30	17.1	19.6	3.5	4.7	17	19
Canada	19.80	23.90	16.1	19.3	3.7	4.6	19	19
Brazil ^a	19.33	22.40	11.6	13.7	7.7	8.7	40	39
Brazil Simulated	29.23	32.48	17.5	19.9	11.7	12.6	40	39

Source: WHO.

^a Data from WHO.

women, the comparable proportions were 19.0% and 39%, in Japan and Brazil, respectively.

If the Brazilian life expectancy at 60 years would reach the simulated values as well as the proportion of elderly time spent without good health would keep constant, it can be expected that elderly Brazilians will spend 11.7 years of their last part of their lives without good health. For elderly women, the corresponding simulated figure is 12.6 years.

In conclusion, it can be said that there is still a broad space for a continuation in mortality decline of the Brazilian population, both for elderly and non-elderly people in the near future. This decline will signify higher life expectancy at birth and at the age of 60, as well as an increase in the growth rate of the elderly Brazilians. The challenge this poses to public policies is not just to continue investing in increases in life expectancy, but, also, to invest in the reduction of the number of years spent without good health.

6 FINAL CONSIDERATIONS

What has been observed in this paper is that there is quite a broad room for the continuation mortality decline of the Brazilian population, especially among the elderly population. The increases in life expectancy resulting from the simulations carried out in this chapter points to higher life expectancies than that observed today in countries such as Japan and Sweden. Furthermore, this is still lower than the forecasts of longevity specialists. It was also noted that elderly Brazilians spend approximately 40% of their time without good health.

This addresses a complex challenge for Brazilian public policies: to invest in the continued increase in life expectancy, but, at the same time, taking into account the challenge raised by the United Nations of “adding life with quality to the additional years of life”. This involves not just the improvement and expansion of health services to all ages, but also quality of life in the widest sense.

Health policy for elderly people should be based on the promotion of health through the entire life cycle, as well as to include specific policies for elderly people. Social integration policies and the formation of an awareness of a healthy style of life should also be included in the “health package policy”.

The health needs of the Brazilian population are not fully met through public policies. This can result in an elderly population with high levels of chronic diseases and low autonomy. In addition, future Brazilian elderly people shall experience a large part of their lives in situations of greater economic vulnerability than those of today, which shall certainly affect their health conditions.

Concern with the increase in health costs for the ageing population is clear among the formulators of both Brazilian and international policies. However, it should be recognised that the determinants of the cost of health services for the elderly population goes much beyond demographic determinism. The prophets of “the explosion of health costs” do not take into account the conditions in which population ages, the institutional arrangement and the forms of financing health service, nor the contribution of basic health services [Lloyd-Sherlock (2002)].

The proposal made here is an increase in the number of years lived with quality. For this reason, health policies for all ages, changes in the paradigms of health services, healthy life styles, familiar and social integration are variables that need to be considered.

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AGEING AND DISABILITY*

Marcelo Medeiros

United Nations Development Programme (UNDP)/International
Poverty Center
Instituto de Pesquisa Econômica Aplicada (IPEA)

Debora Diniz

Universidade de Brasília (UnB)
Instituto de Bioética, Direitos Humanos e Gênero (ANIS)

1 INTRODUCTION

The debate about disability has become increasingly important in Brazilian social policy. This has occurred, on the one hand, because of the ageing of the population, which has led to the recognition that the experience of disability is not just something unexpected, but rather is part of the lives of a large amount of people. On the other hand, it is a result of changes in the definition of disability and the understanding of how society is responsible for disability. The combination of these two factors is of special importance for policy makers, since it has direct implications for the determination of the content of policies and their target public.

The expansion of this debate has run into various difficulties, including the “correct” terminology to be used when discussing disability. For some time the use of the word *deficiente* (disabled) to describe disabled people has been avoided, since it is now believed to be a stigmatising term. Alternatives have been looked for, such as *peessoa portadora de necessidades especiais* (person with special needs), *peessoa portadora de deficiência* (person with a disability) or most recently *peessoa com deficiência* (disabled person), all of which try to highlight the importance of the person when referring to disability. Those who prefer to recognise identity in disability simply use the term *deficiente* (disabled), adopting similar principles to those used in the choice of the term *negro* (black) to refer to coloured or mixed-race people. With the exception of the need to avoid the use of clearly insulting expressions, it seems that the dispute about the use of the correct terminology

* This chapter was translated from Portuguese to English by Eoin O’Neill and reviewed by Marcelo Medeiros.

wastes energy that should be expended in more substantial questions. For this reason, various well-known terms are used interchangeably in the text.

Social policies concerned with the disabled need to define disability. This is not an easy task, since the attempt to find technical and neutral criteria to decide what disability is, is not just naïve, but also hides prescriptive values behind a façade of neutrality in relation to the function and objectives of social policies. The same can be said about the elderly, in which the core of the Brazilian welfare debate is concerned with discussions about age.

The objective of this article is to combine the debate about ageing and the question of disability. The field of disability studies is rather small in Brazil. The social model of disability, a political and theoretical approach that originated in the United Kingdom in the 1960s, overturned traditional models of understanding disability by replacing individual causes of inequality with social ones. Due to the increased ageing of the population, the main group of disabled is now found among the elderly, a phenomenon that makes this theoretical approximation even more urgent. The social model of disability involves a wide-ranging debate about welfare policies and social justice in which the medical explanation of disability is no longer accepted as sufficient. The principal argument of this article is that due to the inter-mixing of the disabled and elderly, the theoretical and political perspectives of the social model of disability are a rich source of dialogue and inspiration for the welfare of the elderly.

2 THE SOCIAL MODEL AND THE MEDICAL MODEL

The social model of disability emerged in the United Kingdom in the 1960s as a reaction to biomedical approaches. The basic idea of the social model is that disability cannot be understood as an individual problem, but as a predominantly social question, thereby transferring the responsibility for the disadvantages of the disabled from the corporal limitations of the individual to the incapacity of society to predict and adjust to diversity [Oliver (1990)]. The 1970s saw the emergence, based on the social model, of the Union of the Physically Impaired Against Segregation (UPIAS), one of the first organizations for the disabled with objectives that were essentially political and not just welfarist, as in the case of institutions for the disabled created during the previous two centuries [UPIAS (1976)].

The theoretical starting point of the social model is that disability is an experience resulting from the interaction between corporal characteristics of the individual and the conditions of the society in which this individual lives—in other words, the combination of the limitations imposed by the body and some

type of loss or reduction in function (“impairment”) in a social organization not particularly sensitive to corporal diversity. UPIAS originally proposed a definition that highlighted the impact of exclusion on the creation of disability: “Impairment: partial or total loss of a limb or organ, or the existence of a defective corporal mechanism. Disability: disadvantage or restriction of activity produced by contemporary social organizations which underestimate the worth of those with physical impairments and exclude them from the principal activities of social life” [UPIAS (1976, p. 3-4)].

The initial emphasis on physical limitations was immediately revised, leading to a big debate about the limitations of the vocabulary used to describe disability. The intention was to emphasise that there was not necessarily a direct relationship between impairment and disability, transferring the debate of the discussion about health to the sphere of social and political organization. Impairment was seen as a corporal characteristic, such as sex or skin colour, while disability was the result of oppression or discrimination suffered by people as the result of a society that was organized in such a way that the disabled could not be included in daily life. A person can suffer impairments and not be disabled, depending on the extent to which society is ready to accept diversity. As shown by Morris (2001), not being able to walk is the expression of impairment; the disability consists of the inaccessibility imposed on people who use wheelchairs. The result in this revision in the semantics of concepts was a radical separation between impairment and disability: the former is the object of discussion about health, while the latter is related to questions of rights and social justice and is, therefore, essentially normative.

While for the medical model impairment leads to disability, for the social model, exclusionary social systems cause people with impairments to experience disability. In short, the medical model identifies the disabled person as a person with some sort of social inadequacy; the social model, in turn, inverts the argument and identifies disability in the fact that society is unable to include everyone. In general, definitions based on the medical model require someone to be significantly distant from the standards of normality to be considered disabled. The criteria used to define disability generally refer to the complete loss of certain organs or functions. Disability is identified by taking into account the isolated characteristics of these organs and functions and comparing them with the limits established for each one of them. This results in criteria that establish, for each compromised organ or function, the limits of disability, such as, for example, minimum level of visual acuity, hearing abilities etc. that can be evaluated in isolation from each other, as well as separated from the needs imposed by the social characteristics of individuals.

The combination of the existence of a state of health far below the abstract standard of normality and the persistence of this condition allows the medical model to differentiate *illness* from *disability*. Most illnesses are understood as temporary situations. Therefore, although they involve a state of health below that determined by some criteria of normality, sick people are not considered as disabled by the medical model because the reduction in abilities is only temporary and does not permit the definition of an identity. The inverse path is followed by the separation of disability from illness, though with a rather more sophisticated argument [Diniz (1996)]. If disability is an irreversible situation, it is perfectly possible to redefine the concept of normality in order to adjust it to the permanent condition of people. Blindness, for example, is the normal condition of a blind person and, therefore, it makes no sense to classify it as an illness. In this scheme, a person who cannot see because they have a serious ocular inflammation is a sick person and a permanently blind person is disabled.

Since the recognition that the “disablist society” is as, or even more, important for the debate about public policies and disability as the identification of the “disabled person”, the social model’s concerns about identity are quite distinct from those of the medical model. Abberley (1987), for example, does not insist on the distinction between disability and illness and practically ignores the rule about the persistence of impairments in time to identify the disabled, a criterion very dear to the makers of social policy in the 1980s, who used it systematically in population censuses in various countries. The logic of the social model does not recognize this distinction, especially because it is understood that the changes required in society to comprehend the diversity of deficiency are independent of the time a corporal condition will last. After all, if a person who uses a wheelchair while recovering from fractures in her legs will need the same changes in the transport system as a person permanently unable to walk, why separate them into different groups? By not recognizing that sick people also experience disability, the medical model excludes from the scope of public policies a large part of the population who need these policies, which can affect a significant part of the elderly population. Not using the distinction between illness and disability in this way is an attempt of the social model to avoid this type of exclusion.

The obvious consequence of the definition of the social model is that research and public policies aimed at disability cannot concentrate solely on the corporal aspects of individuals to identify disability. In addition, by separating disability from impairment, the social model demonstrates that, despite the diversity of impairments, there is a factor that unites the different communities of disabled around a single policy project—the experience of exclusion. According to Oliver

(1990, p. XIV), “all the disabled experience disability as a social restriction, and it does not matter whether these restrictions occur as a result of inaccessible environments, dubious notions of intelligence and social competence, the inability of the population in general to use sign language, the lack of material in Braille or hostile public attitudes to people who do not have visible impairments”.

In the middle of the 1990s, feminist theorists developed an argument that had significant implications for public policies: the experience of disability is a family experience with a gender-based aspect. By showing that disability is accompanied by family arrangements to take care of the disabled, these theorists showed that it was not just people with some kind of impairment who needed to be the object of public policies. Carers are predominantly women, due to the sexual division of labour. Therefore, disability, when understood as a family phenomenon, has a gender aspect. For example, women leave the labour market to take care of disabled people, small children, or elderly people. In the case of elderly men, this includes the superimposition of gender and age. In the typical family arrangement, elderly women look after these men. This withdrawal from the labour market has a series of implications for women, such as the absence of social insurance contributions for economically active women, who should not be ignored by public policies [Barton and Oliver (1997)].

At the end of the 1990s, some of the arguments of the social model began to be revised. The motto “limits are social not individual” used as a slogan to demand conditions that would allow the disabled to be independent, began to be adapted. A long tradition of feminist philosophy criticised the value of absolute independence, showing that that interdependence through the act of taking care of dependents is a basic element in social life, which in many cases of disability cannot be avoided. Public policies, therefore, should not only aim to make the disabled independent, but also to create favourable conditions for this care to be carried out. Feminists also showed that the experience of disability converges with other experiences of inequality, such as race, gender, sexual orientation or age. Being a disabled woman or a woman looking after a child or an elderly disabled is a very different experience from that of a male with spinal column problems, for example. Thus, they showed that disability is a question that should be on the agenda of all egalitarian social movements and not just limited to organizations for disability.

3 AGEING AND DISABILITY

By emphasising that impairment is not the sole determinant of disability and in many cases is perhaps not even the principal factor, the social model’s approach found a paradigmatic case in the elderly: a hostile environment in which the

accumulation of light corporal limitations could become the cause of significant disabilities among the elderly. Drawing on the argument of the social model that the phenomenon of disability cannot be solely explained by individual characteristics, but also by the socioeconomic context in which the persons with impairments live, Abberley (1987) uses the example of arthritis, very common amongst the elderly, to argue that it is necessary to expand the concept of impairment and disability to other social groups, such as the elderly. Numerous other cases show that disability is not an experience limited to a small minority, but a common and predictable fact during people's lives, as is ageing.

To the extent that an increasing number of groups are recognized as disabled, the weight of impairment in the definition of disability has been reduced. Pregnant women, for example, can experience the same restrictions in the use of public transport as people in wheelchairs and, from the public policy perspective, it is reasonable to state that deserve the same changes in the organization of public services. Although pregnancy can be understood as a phase in which certain functional capacities are reduced, it is obviously questionable to treat it, from the medical point of view, as an impairment.

Showing that people who are completely unable to see or walk are only a very small part of the world of the disabled is a strategy not just to include other disabled persons in social movements, but especially to expand the meaning of the disablement, removing it from the sphere of the unexpected and transforming it into something recurrent in human life. For this reason, social model theorists of disability refuse to see disability as a "personal tragedy". This "vulgarization" of disability does not signify that the particular needs of the disabled are ignored. To the contrary, the objective is to show that the world of the disabled is much broader than is usually assumed when disability is accounted solely in terms of the existence of persons whose visual, auditory, intellectual or motor capacities is seriously impeded.

In 2001, the World Health Organization (WHO) revised the international classification of disability to accommodate this perspective [WHO (2001)]. In this revision, all and any corporal limitations or difficulties, whether permanent or temporary, can be classified as disabilities. Covering the elderly, pregnant women and children with cerebral palsy, the International Classification of Functioning, Disability and Health proposes a disability evaluation system that relates functions to social contexts, showing that a person can have impairments without being disabled (a spinal column impairment in environments that are sensitive to wheelchairs, for example), whilst it is possible for someone to have expectations

of impairments and to be already socially considered to be disabled (a predictable diagnosis of a genetic illnesses, for example).

Within the social model, recognizing that a large part of the population experiences disability implies acknowledging that the incapacity of society to adjust to diversity results in the exclusion of many from daily social life. Associating ageing and disability is something that runs into resistance due to the stigma associated with the term “disabled”, but from the point of view of the social model it makes sense to argue that many elderly are excluded from an important part of social life to a greater extent than can be ascribed to any corporal limitations and, thus, experience not just disability but also discrimination based on prejudices related to their corporal capacities.

It is important for various reasons to highlight the relationship between ageing and disability. First, although ageing is accompanied by some limitations of physical and sometimes intellectual capacities and the elderly population is increasing in almost every part of the world, in most countries little or nothing is done to prevent these limitations from becoming the cause of disabilities. Second, since it shows that, in the absence of changes in the way society organizes daily life, everyone is ultimately destined for a phase in life in which they will become disabled. Even if only to defend selfish interests, this situation will result in the improvement of public policies aimed at disability. Third, it highlights that interdependence and care are not something only necessary in exceptional situations; rather they are common needs that occur at various moments in everyone’s lives. Fourth, the predictability of ageing highlights that much disability is the result of a social and economic context reproduced in time, since disability in ageing is, in part, the expression of inequalities that emerged in the past which have been maintained.

It is worth remembering that population ageing does not necessarily need to be accompanied by disability. Behavioural changes and medical advances may make it possible for the increase in longevity to be accompanied by the maintenance of good physical and mental conditions until advanced ages. In addition, in various countries it is perfectly possible for social changes to be made to prevent corporal restrictions from becoming a serious impairment in people’s daily lives.

4 THE EVOLUTION OF THE CONCEPT OF DISABILITY IN BRAZIL

Until the second half of the 1990s, the medical model dominated the definition of disability. The demographic surveys that have collected information about disability in Brazil since the end of the nineteenth century and the legal texts that dealt with the subject in greatest detail during the twentieth century reflect to a

large extent the vision that disability is defined by a specific set of corporal defects. Although this still occurs in some cases, in recent years there has been a tendency to understand disability through the social model, as can be seen, for example, in changes in survey questionnaires and in the interpretation of disability legislation.

In 1860 the congress that would come to be known as the International Statistical Commission was held in London. One of the questions discussed was how to collect information in population censuses about people with “physical defects”. The London Congress recommended the identification of two categories of “physical defects”, “blind” and “deaf and dumb”, using a demographic classification model that would be used for almost a century and a half in various parts of the world. In 1872, the St. Petersburg Congress of the “International Statistical Commission, later ratified by the first Congress of the International Statistical Institute” in 1885, expanded these categories to “blind, deaf and dumb, idiot, cretin, and mentally alienated”.

From the records available, this type of information began to be collected in Brazil in surveys in 1872, 1890 and 1900, using the St. Petersburg Congress guidelines. The 1920 census in Brazil was limited to the categories identified in the Congress of London, an approach which, to a certain extent, would be used until the 1940 Census. It followed an international tendency resulting from the difficulties in obtaining precise information referring to the types of dementia then identified (idiot, cretin, or mentally alienated). After the 1940 Census it would be 41 years before the question of disability would again be included in the large Brazilian domicile surveys.

The 1981 National Household Sample Survey [Pesquisa Nacional por Amostra de Domicílios (PNAD 1981)] included in its questionnaire on health a section called “Disability” whose objective was to identify people with serious and permanent corporal impairments. The 1988 National Health and Nutrition Survey [Pesquisa Nacional sobre Saúde e Nutrição (PNSN 1988)] identified physical and mental conditions that could affect people’s health, in order to gather information about different degrees of some impairments. The sample questionnaire of the 1991 Census sought to classify serious and permanent impairments in nine categories, which were more restrictive than those used in the 1981 PNAD and the 1988 PNSN.

In relation to the legal texts of this period, the theme of disability was present in several constitutions. As well as the clauses about equality included in the 1824 Constitution, which have been present in some form in subsequent constitutions, the question of disability has existed, in an embryonic form, since the 1934

Constitution.¹ Nonetheless, it was only explicitly mentioned for the first time in the 1967 Constitution.² In the 1998 Constitution the issue was dispersed among various articles in distinct sections,³ as shown by Araújo (2003, p. 58-64). As can be expected, the constitutional text is not concerned with the definition of disability, which is the object of infra-constitutional regulations.

Among the most recent definitions, Decree 914/93 maintains two characteristics of definitions predominantly used by the medical model and still present in demographic surveys: the identification of disability by corporal attributes without reference to social contexts, and insistence on the permanence of disability. The General Social Welfare Law [Lei Orgânica da Assistência Social (Loas)], which conceded social welfare benefits to the disabled, initially delegated the function of identification to the National Health System [Sistema Único de Saúde (SUS)], or to specially designated organizations. This actually transferred to health teams the responsibility to restrict, based on their own judgement, the universe of people who could be considered disabled, which tended to maintain the identification according to the criteria of the medical model.⁴ Afterwards, responsibility for the evaluation of eligibility for benefits was delegated to the Minister for Social Welfare, keeping, for the effects of the concession of benefits, the definition of a disabled person as someone incapable of having an independent life or working.⁵ If applied rigorously, this definition would identify only a minimum part of society as disabled. In practice, this definition was ignored and disability continued to be identified according to the ad hoc judgements of evaluations teams.

In an attempt to improve the legal definition of disability, the National Policy for the Integration of Disabled Persons (Política Nacional para a Integração da Pessoa Portadora de Deficiência) added to the above definitions the notion of permanence and the incapacity of social integration.⁶ This brought together an extremely rigorous criterion, permanence, and an extremely vague one, the incapacity of social integration. To deal with this problem the second criteria was simply abandoned and in the following articles of the law, disability is defined solely on the basis of a restricted list of corporal attributes.

1. Article 138.

2. Art. 175 and the Single Article of Amendment 12, 1978.

3. Articles 7, 23, 24, 37, 203, 208, 227.

4. Law 8742/93.

5. Decree 1744/95.

6. Decree 3298/99.

Changes in legislation tend to take place at a slow pace, but there are signs that they are occurring on a small scale. Brazil is a signatory of the Inter-American Convention for the elimination of all forms of discrimination against disabled persons, which has the effect of law. Based on this convention, a Public Civil Lawsuit recently created jurisprudence invalidating the Loas definition of disability, which is based on the “incapacity to have an independent life and to work”.⁷ As a result, these criteria can no longer be used to identify disabled persons, something of extreme significance considering that they are used to exclude beneficiaries. The decision about the Public Civil Lawsuit also changed the formula used to calculate income in the definition of eligibility for Social Welfare Benefits [Benefícios de Prestação Continuada (BPC)], deciding that in the measurement of family income one minimum salary for each elderly or disabled person would be excluded from the total income of a family. In practise, this signifies a semi-universalization of the policy, since the benefit is made available to all families composed of elderly couples and single person households.

These changes are related to the recognition that it does not make sense to use extremely limited definitions in a national policy for the integration of the disabled. In the identification of those eligible for the BPC, the state is able to use a restrictive definition to avoid pressure on programme budgets. This is not justifiable from the point of view of the guarantee of human rights, but understandable from the fiscal viewpoint. In a broader national policy, however, there is no reason for such restrictions. This was partially recognized in demographic surveys carried out from the end of the 1990s onwards and is reflected in changes in the way information about disability is collected.

The classic model used in the identification of disability, based on the collection of information about “corporal defects”, was abandoned in the section of questions about the physical mobility of people in the 1998 PNAD. The objective of the questionnaire was to measure stages of physical limitation based on a gradual scale. The questions were planned in order to identify the degree of difficulty resulting from problems in health that people face when carrying out certain common daily activities, including personal care, domestic activities, intense physical activities, dealing with common obstacles to mobility, the capacity to carry out movements and walking, all of which neither make reference to the corporal characteristics of persons nor use criteria based on the irreversibility of personal conditions.

7. Federal Judge Maria Cristina Barongeno Cukierkorn, from the 23rd Federal Circuit Court of São Paulo, accepted the motion of the Federal Prosecutors’ Service (Ministério Público Federal) in a Public Civil Lawsuit against the Federal Government and the National Social Service Institute [Instituto Nacional de Seguro Social (INSS)].

Following the worldwide tendency to no longer limit the collection of information about disability to the identification of the population with some form of impairment, the sample questionnaire of the 2000 Demographic Census used an approach drawing on two distinct designs. The first was based on a model centred on corporal characteristics, such as the 1991 Census and previous research. The second was based on a gradual scale of difficulties in carrying out certain tasks. Its design had some similarity with that used in the 1998 PNAD. Thus, the 2000 Census ensured an acceptable level of compatibility with the 1991 Census, while, at the same time, it marked a transition to a new way of collecting information about disability.

The questionnaire in the 2000 Census was not as broad-ranging as that of the 1998 PNAD, with difficulties having to be permanent to be registered. This excluded people who experience disability. Nonetheless, it cannot be denied that the new method of identification is much broader than that used in the previous census. The need for permanence was removed from other international surveys, which tend either to use separate questions to identify the existence of difficulties and the permanence of these difficulties, or to use questions with a slightly different text, asking about normally existing difficulties. Although it may appear subtle, the difference between “permanent” and “normally” can be crucial in the identification of various types of difficulties that appear intermittently.

Even though it is not only possible but also important to further improve the collection of information about disability in the country, it is also necessary to understand that the progress in the 2000 Census was very significant and overcoming its limitations was perhaps impossible at that moment. Among all the questions in the census, only those related to disability are obligatory, though the legal provisions correctly leave open the way the information is to be collected. The census and the sample research that accompanies it comprise an extremely expensive operation and the costs of expanding the questionnaire or applying it to the whole population are prohibitive. Transferring the questions from the sample questionnaire to the census itself, reproducing the 1998 PNAD questions, or using a broader scheme was economically unviable.

Believing that the difficulties in carrying out activities are identified by self-declaration is a common mistake. In reality, the degrees of difficulty are defined in accordance with the judgement of the person who is interviewed and provides information about the other people in the household. Therefore, this does not necessarily involve self-declaration. The 1998 PNAD recorded whether the information was provided by the actual individual, by someone else living in the household, or even by someone not living there.

Although there is consensus amongst the specialists in the area that the way information was collected for the 2000 Census is much more appropriate for the study of disability than that of previous census, which were limited to recording a restricted number of “physical and mental handicaps”, the judgement of the difficulties by respondents themselves has already been accused of producing “subjective” information, while the identification of “disabilities” produces “objective” information. This argument not only lacks any basis, but is also misses the point, which is how to collect in the best possible way, considering the limitations of resources, information that allows disability in the population to be studied. In addition to the fact that attempts to propose schemes to collect “objective” information (i.e., independent of respondents’ judgements) about colour or race have proven to be inefficient, the search for “objective” criteria to identify difficulties based on personal characteristics is of little use considering that the level of disadvantages of the disabled depends on the context in which they live.

Is the new design of the 2000 Census or even the 1998 PNAD sufficient to identify disability in Brazilian society? From the point of view of the social model, disability is identified on the basis of the incapacity of society to create inclusive conditions for everyone. The labour market disadvantages experienced by deaf people, for example, in part result from the incapacity of others to use sign language; the mobility difficulties that many old people have, to a large extent, are associated with the poor quality of pavements and the unsuitability of the mass transport system. Furthermore, a survey aimed at identifying personal difficulties in carrying out certain abstract activities only addresses one side of the question. It cannot be denied though that this aspect is important and the efforts made in recent surveys are praiseworthy. These surveys are only a first step in the study of disability and the relationship of the disabled with other social groups in the country; nonetheless, it is an extremely important step.

For the elderly, excessive rigour in the definition of disability can have negative consequences. Since disability is treated as a situation of total incapacity, a series of social changes needed to improve the living conditions of the elderly receives little or no attention from measures designed to support disability. For several years, the question of how to allow the access of people in wheelchairs to mass transport has been discussed, but little attention has been given to simple—and, therefore, easy to implement—measures that could facilitate the access of people with limited capacity to climb into these vehicles—a relatively common problem among the elderly. There are other examples. There are projects, including private ones, that make texts available in Braille—restaurant menus, labels of goods, etc.

—but little is done to make the same texts available in large clear letters for people whose visual accuracy is reduced—something also common among the elderly.

5 FINAL COMMENTS

In recent years, there has been a tendency to change the way in which both disability and the responsibility of society for disability are understood. The background to this change is the emergence in Brazil of a political and theoretical approach that began in the United Kingdom in the 1960s, known as the *social model of disability*. The social model starts from the idea that disability is the result of the combination of limitations imposed by the body on a social organization that is not sensitive to corporal diversity. In other words, disability is not located only in individuals, but in the incapacity of society to predict and adjust to diversity.

From the conceptual point of view, the social model emphasized a change in perspective in relation to the significance of corporal characteristics in the experience of disability, a change which has consequences for policy formulation: the recognition of a “disablist society” is as, or even more, important as the identification of the “disabled person” for the formulation of public policies. The social model has never ignored the role that the loss of functionality has in the experience of disability, but emphasizes that in many cases this experience only occurs because of essentially social reasons. It is perfectly possible, for example, in a properly adjusted society for a person with some type of functional limitation not to experience disability.

The perspective of the social model of disability found a paradigmatic case in the elderly. The accumulation of light limitations on corporal functionality, typical among the elderly, can result in the experience of significant disability, if the elderly live in a society that is organized in a form that is hostile to people with these limitations. Moreover, population ageing shows to a certain extent that disability does not solely belong to the universe of the unexpected. The idea that the experience of disability is, or will be, experienced by a large amount of people makes disability an issue no longer limited to the disabled movement, instead it should be on the agenda of all egalitarian movements.

Although the definition of disability in what is usually called the *medical model* is still dominant in Brazil, there is evidence of a change of perspective towards the social model. Until the middle of the 1990s, the medical model was hegemonic in population surveys, but at the end of this decade the questionnaires used changed dramatically and began to collect information in a manner nearer that advocated by the theoretical approach of the social model. The fact that the

demographic surveys are carried out by governmental institutions will probably have an impact on the way in which social policies in general define disability.

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DYING WITH DIGNITY: A FUNDAMENTAL RIGHT*

Debora Diniz

Universidade de Brasília (UNB)
Instituto de Bioética, Direitos Humanos e Gênero (ANIS)

Sergio Costa

Instituto Camillo Filho (ICF)

1 INTRODUCTION

In all developed countries as well as in all developing ones, demographic changes that occurred over the last few decades have signalled greater population longevity. Let us consider the American population as an example: in 1950 the number of people who lived in the U.S. at the age of 85 or over totalled 585,000 and this number jumped to 3.1 million in 1990 and will soon reach the 5.3 million mark [Carr (1998, p. 73-79)]. In Brazil, between 1950 and 2000, the population in this age group went up from 493.2 thousand people to 900.1 thousand. To the great majority of scholars interested in this subject, the growing number of people at ages 85 and above indeed constitutes both a political and public health concern of utmost importance.

There are multiple reasons for the increase in life expectancy, from urbanization of cities to improved working conditions. Biomedical advances that have occurred from the middle of the last century onwards have also played a decisive role. As a result, classic ethical issues such as euthanasia or the right to die have come into focus. The possibility of intervening in the life cycle in order to accelerate or extend the moment of death is perhaps one of the main ethical issues applied to health and the Hippocratic oath, for that matter, is one of the oldest ethical references. There are authors who even attribute the consolidation of Bioethics in the United States to the debate on transforming death and euthanasia into medical issues [Adre (2002, p. 102-134)]. Biomedical breakthrough, especially with regard

* This chapter was translated from Portuguese to English by Maurício Brito and reviewed by Debora Diniz.

to palliative procedures, has brought into the debate the discussion of whether there is or not a purported right to choose the moment of death and the question of extraordinary treatments, which may extend life indefinitely, hindering people from actually dying.

No wonder there is growing concern as regards the active participation of biomedical personnel in assisted deaths. Unlike the past, when decisions on the treatment of patients were exclusively in the hands of health professionals, today users of the health system are encouraged to take part in decision-making, especially in those central to human existence, such as the ones related to the beginning and to the end of life. Acknowledging the fact that the decision, centred round the moment of death, should not be merely a technical issue, but an essentially ethical one and, thus, within one's own private realm, has been considered a real challenge for health professionals. Having been trained traditionally to face and resist death, they operate under the assumption that the mission of Biomedicine is to save lives. Thus, moral resistance to any formal debate on euthanasia or even the right to die is quite strong.

However, there is enormous ethical incongruence in this resistance since various ethnographical studies in intensive care units, both for children and adults, have revealed that passive euthanasia, the practice of "switching off the machines" or "allowing death to take its natural course", is currently being practiced. What there is, in fact, is enormous resistance to dealing openly with this issue. It represents, on the one hand, the fallibility of Biomedicine and, on the other, occasions in which the best therapeutic procedure is to allow death to occur free of technological or biomedical interventions. Intentionally or not, and differently from other situations analysed by Bioethics in Brazil, the debate on euthanasia or on the right to die has been waged mostly at the patient's bedside. There are few public debates or bills being drafted in Congress that propose to regulate the practice of passive euthanasia as a right in Brazil.¹

Doctors and nurses, especially those involved in treating chronic and degenerative diseases or those working in intensive care units, are continuously faced with different choices as to when, how and where to allow dying, preferences directly related to how good a standard of living their patients have and not just to technical issues, such as the availability of treatments or surgical procedures. In fact, in certain critical and terminal cases, due to the inevitability of death and the exhaustion of biomedical treatments or palliative alternatives, the possibility of deciding as to one's own death takes on a morally comforting role. A growing

1. The bill drafted by Representative Roberto Gouveia (PT-São Paulo) currently being examined in Congress is one such exception.

number of people, especially old persons, look to their doctors and nurses for help not only in treating illnesses but also in ensuring that their death experience will be the result of their own individual choices.

The difficulty is not only in acknowledging that there are clinical circumstances in which death is a more comfortable choice than proceeding with treatments or being connected to an intensive care unit. The fact is that, apart from extreme cases approaching moral consensus over the ethicality of voluntary euthanasia, there will be occasions in which patients and health professionals will view treatment options differently [Costa (2001, p. 155-158)]. This difference in perspective points to the separation between technical knowledge and ethical authority in caring for one's body and health. There will be occasions in which the patient will insist on treatments considered futile by health specialists, whereas it is possible to imagine situations in which the patient deliberately chooses not to proceed with treatments to prolong life, despite medical advice. Recognizing the fact that there will be occasions in which biomedical recommendation for proceeding with a treatment will not correspond to a patient's expectations is a new challenge, especially for medical doctors used to sovereignty in therapeutic decisions.

This growing process of withdrawing the death theme from the biomedical realm and its increasing approximation to the sphere of daily decision-making should not be seen merely as a consolidation amongst ourselves of moral individualistic values. On the one hand, the debate over voluntary euthanasia is, indeed, the result of liberal values, especially of autonomy, but it is also based upon values that are dear to other moral traditions, especially to the principle of human dignity in the Christian tradition.² There are various ethical foundations substantiating the debate over the right to die, even though the principles of autonomy and dignity are necessary references in any decisional process. This is the case in countries that have passed laws regulating the right to some form of euthanasia—for example, Holland, Columbia and Belgium. Besides making explicit the ethical values that support the legitimacy of the right to euthanasia, the conditionality of biomedical authority in deciding moral conflicts related to health and illness is part of a greater process of social criticism, of which bioethical consolidation is but one such example [Diniz and Guilhem (2002, p. 34-38)].

Bioethics has been consolidating itself as a field in research, teaching and social ethics intervention specialized in intense moral conflict issues [Diniz (2001*d*)].

2. For a worthwhile introduction to the liberal arguments, cf. Dworkin (2002, p. 251-308), and for a Brazilian Christian/Catholic approach cf. Barchifontaine (2001, p. 283-296) and Lepargneur (2001, p. 297-336), and for a comprehensive survey of religions, cf. Pessini (2001, p. 261-282).

Even though the universe of bioethical pursuits extends from environmental issues to research into non-human animals, Brazilian Bioethics has become specialised in themes related to the process of health and illness in human beings. Classic issues in biomedical practice, as abortion and euthanasia, or new themes, as cloning and assisted reproduction, are central to the Brazilian and the international bioethical debate by way of legislative bills, public debates, access to health services and scientific research. Debates on euthanasia and on research into human beings have been crucial to the introduction of Bioethics at universities, especially in the first phase of implementation of Bioethics as an academic subject in the United States in the 1970s [Adre (2002, p. 102-134) and Singer (2002, p. 242-250)]. The central standing of the euthanasia theme in the academic consolidation of Bioethics should be seen in light of demographic changes occurring in countries like the United States and the United Kingdom, where Bioethics was first established.

This paper presents a conceptual state-of-the-art in the bioethical debate on the right of old persons to die. As it is one of the main themes linked to intellectual production in Bioethics, it is rich in argumentative subtleties that attempt to establish euthanasia as an exercise in a fundamental right, different from the extermination practiced by Nazi medicine, in which old persons and the disabled were arbitrarily put to death. The analysis and presentation of the concepts of passive and active euthanasia, voluntary and involuntary euthanasia and disthanasia will allow for a better evaluation of advances and resistances in the regulation of euthanasia as a right. Even though requests for euthanasia may be made in all phases of the life cycle, this paper attempts to shed light on the circumstances surrounding old persons undergoing terminal treatment, or those with chronic, incurable, or degenerative illnesses that wish to deliberate about their own deaths.³ The main part of the arguments, therefore, pertains to the discussion of euthanasia within contexts of medicalization of death among old persons. The final aim is to show that euthanasia, be it active or passive, should be the result of a free and informed process and should be understood, therefore, as a fundamental right supported by ethical principles of autonomy and dignity.

2 A PARADIGMATICAL HISTORY

During a lengthy period in medical history, to refer to euthanasia was to touch upon one of the forbidden themes in biomedical Ethics. The spectre left by the

3. Another fierce debate in Bioethics is the one about neonatal Bioethics, especially after the dissemination of the ideas of Peter Singer and Helga Kuhse about the quality of life and about seriously disabled babies. This debate will not be examined in this article but a worthwhile initial reference is Kuhse and Singer's 1985 book.

ruinous and totalitarian experience of the Nazi state abolished any and all possibility of salvaging the right to die with due dignity. The eugenic experience conducted by Hitler confused common sense: the term euthanasia is still used indiscriminately today as a synonym for both genocide and dying with dignity. Unfortunately, for many health professionals, and not just for doctors, euthanasia is still a synonym for premeditated homicide. Under such a banner, the bioethics proposal to redeem the theme in the name of individual rights is seen by many as a violation of the basic precepts of biomedical practice. Common expressions, such as: “Medicine is meant to cure not to kill”, “doctors mustn’t be killers”, “nurses take an oath to care for their patients”, among others, point to the conceptual confusion left over by Nazi intolerance.

In 1988, one of the most important medical journals in the world, *Journal of the American Medical Association (JAMA)*, published an anonymous report that re-ignited the debate over euthanasia internationally [Anonymous (1995, p. 31-32)]. The report entitled “It’s over Debbie” was credited to a young resident doctor working in the oncology ward of a hospital. The story is brief and the narrative simple, the strength of the story being derived from the fact that not only was it true but it was published in one of the most prestigious journals of medical research. Debbie was a 20-year-old woman confined to an oncology treatment centre, a terminal patient with ovary cancer. During a bout with pain, the resident doctor was asked to see her. It was the first time they had met. Staggering from sleepiness—these are the two words that sum up the resident doctor’s state of mind in the narrative—the resident is ushered into the room of a woman devastated by pain. The only words spoken between them were Debbie’s single plea: “Doctor, please put me out of my misery”. This one sentence was all it took for the doctor to administer an overdose of morphine to Debbie, which killed her instantly. The author of the narrative, who assumed sole responsibility for the act, knew the drug would kill Debbie and justified his actions based on the right Debbie had to deliberate over her own death.

Debbie’s story provoked an uproar in bioethical debates on euthanasia and the right to die, resulting in *JAMA* not only having to investigate the veracity of the tale but also the hospital in the United States where the story might have taken place. Regardless of whether the story was true or had been contrived by an imaginative resident doctor, it brought up plausible facts that could have actually occurred in any one of several hospitals around the world. Debbie’s story has the merit of bringing up for discussion the ambiguities surrounding the subject of euthanasia. Euthanasia seen as the result of exercising one’s rights—the right to deliberate over one’s own death—cannot be based on hurried, irresponsible and

authoritarian assessments as the one made by the resident doctor. Debbie and the resident didn't know each other, which renders their relationship as essentially superficial, making it impossible for the doctor to evaluate properly the meaning of Debbie's appeal: if a plea to stop the pain, or a request to help her die.

Since the publication of the account, certain conceptual agreements have been incorporated into the bioethical debate.⁴ The first has been that it is not correct to confound voluntary euthanasia, i.e., one that is founded on an autonomous, informed process with involuntary euthanasia or homicide.⁵ Voluntary euthanasia takes place when the ailing person wishes to die, is duly informed about his or her clinical condition and is not depressed at the moment he or she makes the decision. The diagnosis of one's illness as well as the existence or not of therapeutic solutions should not be established by just one doctor, but by a multidisciplinary medical staff. These were the ethical and technical prerequisites not complied with in Debbie's case. Because of this, Debbie's story was understood by many critics to represent a mere case of homicide or involuntary euthanasia: a woman in deep distress asks for help in order to relieve her pain and the doctor kills her [Gayliln et al (1995, p. 33-36)]. Involuntary euthanasia occurs whenever the ailing person does not wish to die or has not made his or her wishes known. The mere fact that Debbie said "doctor, please put me out of my misery" was not considered a good enough reason to justify the euthanasia option. Other commentators, however, used the paradigm in the story to show the importance of regulating procedures to legitimise euthanasia as a health-assisted practice [Engelhardt (1995, p. 42-50)].

3 THE CENTRAL ISSUE OF AUTONOMY

The main divergence with respect to Debbie's story was not a technical one, i.e., to what degree a terminal cancer condition might or might not justify a request for euthanasia, but an ethical one. In the history of Bioethics few commentators have opted to discuss the clinical conditions or the levels of pain that might justify euthanasia. The argumentative dilemma for those that found fault in the narrative was the central issue of respect for the principle of autonomy in the practice of euthanasia. The question was not whether the terminal cancer condition might or might not justify someone choosing death over the maintenance of treatment but rather to what degree this choice had been an informed and autonomous one when made in the middle of the night by a frail woman in great physical pain and

4. An interesting presentation of the concepts of euthanasia can be found in: Laceywell (1987, p. 449-463), Leonard-Taitz (1992, p. 597-610) and Rachels (1999, p. 227-230).

5. The Members of the Task Force on Life and Law (1993, p. 180) and Pellegrino (1993, p. 874-875).

by a sleepy resident doctor. In Debbie's case there was no way of knowing whether this had been her choice or an impulse caused by extreme pain, for the doctor did not follow any of the existing procedures to safeguard the moral integrity of the act. Without running the risk of exaggerating, Debbie was indeed imprudently put to death by a young intern, either tired or compassionate of her pain. Her death cannot be seen as an act of respect for her wishes, thus it would be a mistake to interpret it as voluntary euthanasia. Ever since then the principle of autonomy has come to play a central role in the debate on the right to die, as it is considered a fundamental player in determining the ethical premise of the practice.

Autonomy is one of the pillars of current bioethical theories. The publication of the book *Principles of biomedical ethics* by Tom Beauchamp and James Childress (1978) was decisive in the consolidation of the principle of respect for autonomy as a legitimate mechanism in the solution of moral conflicts in health [Beauchamp and Childress (2002, p. 137-208)]. Beauchamp and Childress do not refer solely to autonomy, but also consolidate the importance of respect for individual autonomy as a cornerstone in Bioethics [Diniz and Guilhem (2002, p. 34-38)]. Decisions are considered autonomous not only when they result from individual decisions or when they are derived from individual preferences or wishes but mainly when they involve well-informed explanatory processes about treatments, therapies, prognostics, risks, harm and benefits of each biomedical procedure. In other words, for a decision to be considered autonomous it is not enough that the person be free of moral constraints contrary to his or her choices but also that it promote that person's autonomy especially through qualified, honest and reliable sources of information.

The insistence that the decision for euthanasia be the result of a deliberate, informed and autonomous process brought new arguments to the debate [Horta (1999, p. 727-733)]. If autonomy is one of the fundamental ethical prerequisites for the legitimacy of voluntary euthanasia what is to be done when the person has not expressed his or her wishes? To what degree can the family take on the responsibility for deciding and yet be considered a legitimate agent for maintaining or interrupting treatments? Are there cases in which involuntary euthanasia can be considered to be the same as voluntary euthanasia? The first challenge was then to recognize that, although autonomy is the basic principle for the legitimacy of voluntary euthanasia, there are people who are in no fit condition to express their preferences due to the seriousness of their clinical condition. The classical situation of someone with brain damage in an intensive care unit is a recurrent example in this debate. Another common example is that of old persons in advanced process of dementia, as in the case of those suffering from Alzheimer's disease, in which it

is no longer possible to consider the cognitive and evaluative capacity to express individual volition. Some theoreticians believed they had solved the question suggesting, in the absence of an explicit wish at the moment of making the decision, one should consider as valid previous legal documents, such as a will, letters or even informal statements. In other words, although it was no longer possible to appeal to the explicit wish at the moment of decision-making, euthanasia would prevail as a result of individual volition, having been expressed at other moments and under other circumstances.

In fact, a large number of appeals for euthanasia do not occur with the explicit formalization of the desire, registered in letters or wills, but instead by argumentative arrangements made by the family, helpers and health staff. The ethical expectation that decisions concerning euthanasia only occur after an informed appointment with patients does not correspond to the daily routine of intensive care units or hospital wards with high-risk patients, but rather to an idealized world created by moral philosophers and incorporated by Bioethics. The practice of passive euthanasia, i.e., the switching off of equipment or the withdrawal of artificial life-sustaining mechanisms is, in the majority of cases, a peacefully consented practice agreed upon by the family and the health staff, especially when patients are elderly and in terminal stages of their lives. In such cases, even though there is no official record of the old person's wishes but only the account of family members and helpers, the health staff tends to accept family decisions, especially when dealing with incurable, terminal illnesses, with no possibility whatsoever of cure or treatment, involving extreme physical suffering for old persons. Indeed, some authors refuse to call the switching off of artificial life sustaining mechanisms or of extraordinary treatment procedures as passive euthanasia. They prefer to classify it as simply "refusal to undergo treatment", because of the emotional and moral implications that the concept of euthanasia conveys.

Refusal to undergo treatment should be understood as a decision in favour of the non-medicalization of death, especially in situations where biomedical assistance is not able to offer any benefit whatsoever to the patient beyond the experience of therapeutic obstinacy. Prolonging life is not a benefit in itself, especially when one is dealing with terminal patients, for whom there is no possible change or reversal in clinical condition. Removing the refusal to undergo treatment from the debate on the morality of euthanasia is comforting both for patients and for health professionals. Refusing a futile or extraordinary treatment should not be seen in the same descriptive terms as active euthanasia by potassium injection or by assisted suicide in which a death machine is provided for the patient. Some

biomedical professionals understand the refusal to undergo treatment as an act of disobedience against technical authority or as a threat against the ideology of vitalism, but this is a shift in mentality that is slowly being altered in the daily routine of hospitals and health centres. The refusal to undergo treatment should thus be seen simply as the expression of the individual desire to confront death without resorting to medicalization.

4 REFUSAL TO UNDERGO TREATMENT AND DISTHANASIA

If one considers the respect for autonomy as the key principle in health-care Ethics, it matters little if the most adequate scientific concept is that of passive euthanasia or of refusal to undergo treatment. The fact is that as a general rule people do not qualify their choices to shorten life as “euthanasia”—be it actively by lethal injection as was Debbie’s case or passively by the removal of artificial devices. More amenable terms as “allowing death to take its natural course” or “recognizing that nothing more can be done” are equivalent expressions that sum up, under a different moral lexicon, the practice of passive euthanasia or the withdrawal of treatment. The refusal to undergo treatment can occur at various points in the course of a disease, but it most commonly occurs after several unsuccessful attempts are made to revert the clinical condition, followed by long periods of hospitalization. The story of Sigmund Freud is perhaps one of the most enlightening examples of the decisional process. At the age of 83, Freud, after having undergone his thirty second surgery in a futile attempt to extract a jaw tumour, asked a colleague to speed up his death. His request was honoured. Like Freud, quite a few people know what it is like to speed up death. And they act under the conviction that this is a decision they have a right to make.

But under what circumstances would it be legitimate for a person to refuse to undergo treatment? Unlike active euthanasia, in which death is intentionally provoked, the circumstances that call for passive euthanasia do not require such direct and aggressive action by the health staff. In order that refusal to undergo treatment accelerate or provoke the death of a person would entail that he or she already be in such a serious debilitating process that death would be imminent. A person is commonly said to have an incurable or irreversible disease with high probability of death if he or she will die over a short period of time—no more than six months—regardless of medical intervention. In other words, a terminal patient is one who presents two fundamental characteristics: incurability and therapeutic failure of medical treatments. The majority of cases of refusal to undergo treatment among old persons occurs in terminal cases; it is rarely the case that refusal to undergo treatment occur when the condition is curable or reversible. It

is possible, therefore, to consider the futile character of treatment as a precondition for situations of passive euthanasia or of refusal to undergo treatment among old persons, strengthening even more the thesis of individual rights.

Treatment is considered futile or extraordinary when the only justification to maintain it is the medicalisation of death, i.e., prolonging a patient's life by artificial life sustaining mechanisms or by medication, regardless of the irreversibility of clinical conditions and imminence of death.⁶ There are cases in which the medicalisation of death is so aggressive and useless that some authors started referring to it as disthanasia.⁷ Disthanasia is a recent phenomenon that represents the increasing medicalisation of health, especially by the exaggerated use of medical technology. Disthanasia occurs mainly among old persons and it could be defined as a decision or a set of medical procedures aimed at preventing the death of a patient about to die. The bioethical debate has mostly grown around disthanasia or futile treatments, especially because of the impact that the practice causes on the quality of life of both the patients and of their helpers and families. The greater part of public and journalistic debate focused on the right to die specifically discusses the theme of disthanasia, i.e., the unnecessary prolonging of survival without any consideration for the well-being of the patient or for his individual preferences.

Disthanasia is the practice that most directly threatens the endorsement of the human dignity principle in health care in relation to old persons. It is also the experience that most causes fear in hospitalised old persons or in those undergoing chronic illness treatments. Much of the research shows that old persons do not directly fear death, but they do fear the approach of death accompanied by physical and mental suffering, prolonged treatments and therapeutic obstinacies. This fear, unfortunately, is not unfounded. The ideology of vitalism that inspires biomedical careers is still a central moral value that motivates doctors and nurses to keep a terminal old person under heavy medication and continual reanimation. The principle of the sacredness of human life that defines human life as being untouchable, although increasingly relegated to a relativistic plane by scientific research into human beings and into techniques of human reproduction, is a moral appeal that justifies the mechanism motivating disthanasia. Not only are people not allowed to exert the right to decide as to how, when and where to die, but they actually run the risk of being forcibly kept alive for the sake of the ideology of vitalism.

In order for voluntary euthanasia to be considered a possibility in health assistance it is necessary that the principle of respect for autonomy be endorsed

6. US literary references use "futile treatments" as a synonym for disthanasia.

7. An excellent bioethics study on disthanasia is Pessini (2001b) and Lepargneur (1999, p. 741-748).

and assured. Furthermore, it is necessary that the principle of dignity be seriously respected in order to avoid the pitfalls of medicalisation leading the patient to the condition of disthanasia. The ideology of vitalism, whether arising from the insistence of helpers and family members or whether by determination of the health centres themselves, needs to be seriously confronted. There are two possible ways of analysing and confronting the situation. Firstly, in situations where the patient has argued against the maintenance of the treatment, it must then be considered a violation of rights and of individual liberties. Secondly, from a social justice perspective, it is important to bear in mind that according to current claims, 50% of individual health expenses are incurred during a person's last six months of life.

The reference to collective interests in the debate on the right to die does not mean that old persons may have their life sustaining equipment switched off or that they may be denied hospital beds for the simple reason that they have not got much time left to live. These would be cases of involuntary euthanasia and should be classified as homicides and confronted as being a serious violation of an old person's basic human rights. What is noteworthy, however, is the fact that, from the point of view of individual liberties, i.e., in situations where patients have expressly refused to undergo treatment or, inversely, have refused passive euthanasia, the issue of better allocation of resources is a variable that should also be considered on ethical grounds in order to justify the legitimacy of the decision.

5 THE RIGHT TO DIE

Although in Brazil the debate over the legalization of euthanasia is still incipient as compared to other countries such as Holland where this practice has been depenalized since 1993 and legalized since 2001, or even Colombia, where passive euthanasia was authorized in 1997, the subject grows stronger by the day [Diniz (2001*a*, p. 169-174) and Holm (1999, p. 101-106)]. And this happens not only in academic circles, especially with Bioethics becoming a professional concern, but also within society itself, as a reflex of the disclosure of cases involving people's rights, especially those of old persons, to decide with respect to the continuity or not of their own lives. Over the last few years, due to accusations directed at Dr. Death, the American doctor who created the mercy-killing machine, and the Brazilian nursing aid, accused of killing over one hundred patients, mostly old persons, in a hospital in Rio de Janeiro, the debate around euthanasia has been revitalised, having become one of the main themes in Bioethics [Diniz (2001*b*, p. 159-161, and p. 165-198)].

Permitting or even facilitating someone's death does not necessarily transform a doctor or nurse into a murderer. There is a fundamental difference between these players. The health professional that acts out of solidarity to suffering and thus practices euthanasia out of respect for a patient's personal wishes or who refuses to practice disthanasia, does so in the firm belief that free deliberation as to the moment of dying is an inalienable right of the patient's and that it should be respected for the sake of maintaining his or her dignity. The doctor and the nurse who help someone die base their acts neither on personal beliefs as to the best moment of death, nor on ideas concerning natural life cycles nor on vitalist ideologies. They make their decision based on two ethical principles that should guide not only the professional practice of doctors and nurses but also the understanding of various situations of moral conflict in health: the principles of respect for autonomy and for dignity.

Health professionals should be both companions and facilitators in the institutionalisation process of the right to die, since the reasons that justify euthanasia or not are strictly personal, being, thus, impossible to define any rule that might compel, for example, the switching off of equipment in serious clinical cases involving old persons. It is on the opposite end of the principles of respect for the autonomy of the patient that the homicidal stands. He, the villain in the debate on euthanasia, bases his acts on arbitrary, selfish, disrespectful attitudes that ignore not only suffering but also the integrity of those who suffer. The place of the doctor or nurse, however, is beside the patient, either for palliative care or for euthanasia, restoring the dignity being threatened by physical and moral suffering, by continuous hospitalizations or by extreme medicalization.

It is fundamental, therefore, that one distinguish between euthanasia, disthanasia and homicide. Just as health professionals who recognize the domain of autonomy and of dignity, allowing terminal patients to decide on their own deaths, should not be seen as monsters, the boundary should be well defined between the right to die and involuntary euthanasia, equated to homicide. There is nothing in common between these two practices. The purported confusion between the two categories stems from the period in history that humankind is ashamed of and fears any possibility of relapse. Fortunately we do not live under a totalitarian state that determines evil rules about who is and who is not allowed to live. The debate about euthanasia, in times of human rights, is related to the freedom each person has to rule over his own life and is not in any way related to a belated inheritance from Nazi medicine.

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PART 3

**INTERGENERATIONAL EXCHANGES AND FAMILY AS LOCUS
OF SUPPORT**



FAMILIES: A SPACE FOR SHARING RESOURCES AND NEEDS*

Ana Amélia Camarano

Instituto de Pesquisa Econômica Aplicada (IPEA)

Solange Kanso

Instituto de Pesquisa Econômica Aplicada (IPEA)

Juliana Leitão e Mello

Instituto de Pesquisa Econômica Aplicada (IPEA)

Maria Tereza Pasinato

Instituto de Pesquisa Econômica Aplicada (IPEA)

1 INTRODUCTION

Population ageing also leads to changes in families. They age as well. This can be measured by the increase in the proportion of families containing elderly people and by their greater verticalisation, in other words, having several generations interacting with each other. This may or may not result in co-residence.

The family is seen as the most direct source of informal support for the elderly population. In many countries it is the only source. This has resulted in co-residence and/or transfer of financial resources, goods and services. Their members help themselves in the pursuit of collective welfare, creating a room of “cooperative conflict” where intergenerational and gender differences meet themselves. As a consequence, a wide variety of family arrangements arise.

The expected types of arrangements for families containing elderly people are couples with children or single person, in other words elderly people living alone. Conjugal status is an important factor in determining the kind of arrangement as well as the independence of child, shown by their leaving the family home.

The two types of arrangements described above presume some physical, mental and financial autonomy, at least, by heads of families. When this does not

* This chapter was translated from Portuguese to English by Eoin O'Neill and reviewed by Ana Amélia Camarano.

happen, co-residence or family extension can be a strategy used by the family to benefit both younger and older generations [Arriagada (1997)].

As well as population ageing, two other tendencies can be observed in Brazilian population: elderly people are living longer and in better financial conditions and in better health and young people are postponing the age at which they leave their parents' homes. The period in which children spend as economically dependent on their parents has grown due to the instability of the labour market, the greater time spent in school and the higher instability of affective relations.¹

Starting from this premise, the general objective of this chapter is to understand how Brazilian families are organising themselves to deal with population ageing and its consequences, such as the loss of functional and financial capacity for elderly people, the increased economic dependence of young people and the reduced role of the state. To achieve this, the changes in the composition of Brazilian families containing elderly people between 1980 and 2000 were looked at, in order to make some inferences about the strategies of intergenerational transfers.

The working hypothesis is that due to the predominance almost everywhere in the world of a model of social policies that emphasises the reduced role of the state, families are increasingly required to look after “frail” population groups. Intergenerational support has become increasingly important in survival strategies, although in different ways. One of the strategies has been co-residence. It is assumed that variations in parents and children's income play an important role in co-residence.

Families that contain elderly people were divided into two groups: *elderly families*, where an elderly person is the head or the spouse of the head, of the household and *families with elderly people*, where elderly people live as relatives of the head of household.² It is assumed that the former includes independent elderly people and the second elderly people who are frail and need help from family members.³ Assuming that elderly people's need for care comes mainly from those who do not have any income or who have lost their capacity of managing with their daily activities, *families whose elderly people had no income* and *those who had lost their functional capacity* were considered separately.

The chapter is divided into five sections, with the introduction being the first one. The Section 2 consists of a brief overview of the literature. This aims to

1. For this, see Camarano et al (2004).

2. This approach has been used in other papers [see Camarano and El Ghaouri (2003) and Beltrão, Camarano and Mello (2004)].

3. A detailed analysis of the arrangements of *elderly families*, using this classification, was carried out by Camarano and El Ghaouri (2003). In this, the data used was essentially obtained in the 1981 and 1999 PNADs.

analyse how families that contain elderly people living in are organised in various countries in order to look after the “dependent” segments and to investigate who they are. The Section 3 contains a brief description of how *elderly families and families with elderly people* are arranged in Brazil. It is sought to understand how their organisational strategies are contributing to the welfare of families. In the Section 4, the focus of the analysis is families that contain frail elderly Brazilians: those without income and those with a loss of functional capacities. The concern is the same as in the previous section. How are these elderly persons being cared for? Are they also care-givers? Finally, the main results are summarised in the Section 5.

2 FAMILY ARRANGEMENTS IN AN INTERNATIONAL PERSPECTIVE⁴

The elderly population group is, in general, considered to be a frail group, and, as a result, is the target of specific public policies. This is due to the fact that is assumed that they do not participate in the productive activities and, as a result, do not have income and experience physical and mental disabilities brought about by age. In other words, it is believed that elderly people constitute a group whose autonomy is affected by the lack of income and/or health. These are two important determinants of the well-being of the elderly population and their family arrangements. They are greatly affected by social policies. From the point of view of the state, three specific policies are required to deal with this kind of frailty: income policy (Social Insurance or Social Assistance), long-term care and health policies.

Policies related to long-term care in institutions are not common in the southern hemisphere. The great majority of frail elderly persons live with their children. Co-residence is an important way of transferring support between generations. It generally reflects the needs of both generations. Iacovou (2000^b) emphasises that co-residence implies some degree of reciprocity of care, even though it is probable that this reciprocity occurs in a sequential way and not a contemporaneously.⁵

The transfer of intergenerational support, however, is not restricted to co-residence. It includes other aspects, such as income transfer as well as goods and resources transfers. A not insignificant part refers to emotional support, personal care and other intangible assets. The chapter by Saad in this book shows that in the Latin American capitals analysed, the proportion of elderly people who stated

4. This section is strongly based on the bibliographic review contained in Camarano and El Ghaouri (2003).

5. For example, the youngest elderly persons provide care, while the oldest ones receive it.

that they received some type of support from adult children varied from 85% in Buenos Aires to 93% in São Paulo. This is a little higher than the amount of elderly people who declared that they provided some sort of support. This varied from 76% in Mexico City to 88% in São Paulo.

In developed countries, where co-residence is declining, the same cannot be said for the other mechanisms of intergenerational transfers. In the five countries analysed, Germany, Canada, Japan, the United Kingdom and the United States, a significant proportion of elderly people declared that they received some sort of help from their children [Sündstrom (1994), Silvertein and Bengston (1997), Bonvalet and Maison (1999) apud Grundy (2001)]. In cases of illness, for example, the proportion of elderly people over 65 who reported that they received help from their children varied from 69% in the United States to 90% in Japan. In Germany, 90% of elderly people declared that they received some type of help from children: 87% when they were ill; 60% to carry out some sort of domestic activities; 72% with transport and only 24% with money [Grundy and Tomassini (2002)].

The internal aspects of family arrangements are complex and difficult to analyse. It should not be assumed that a higher number of people living together necessarily result in greater support for elderly people, especially in poor regions, as pointed out by Lloyd Sherlock (2001). On the other hand, various studies in different countries⁶ have shown that co-residence in many cases is a result of the needs of the younger population. These are remaining economically dependent on their parents for longer periods, prolonging their juvenile condition or becoming adults while living in their parents' home in conditions that differ from previous generations. Among the factors pointed to as explaining these processes are the instability of the labour market, the higher number of years spent in school and the instability of affective relations.⁷

2.1 Co-residence Due to Needs of Children

The direction of the flow of intergenerational support appears to be most significant from the oldest generations to the youngest during the life cycle of individuals. In general, elderly parents begin to demand help from their children from 75 onwards.

6. See Heslop (1999), Ofstendal, Knodel and Chayovan (1999), Lloyd-Sherlock (2001) and Camarano and El Ghaouri (2003).

7. The literature about the theme shows that young people have non-linear transition trajectories to adult life. They can both postpone the time when they leave their parents' house, or become independent living in the same household of origin. Qualitative research has shown that many young people assume different trajectories of insertion in the adult world, returning to their parents' homes in various cases, in conditions of financial dependence. For more details, see, for example, Camarano et al (2004), Pimenta (2004), Galland (2003) and Pais (1993).

Until then, it is the elderly people who help their children [De Vaus and Qu (1997)].

In Brazil, leaving parents' homes takes place at considerably advanced ages, in comparison, for example, with European countries, such as Denmark. There, it is considered late to leave parents' homes after 22 years.⁸ In Brazil, the watershed occurs at the age of 26 and the proportion of people living with their parents after this age grew between 1981 and 1993. In Denmark, it increased from 5.4% to 11%, while in Brazil the variation was from 13.8% to 18.4% [Carneiro, Knudsen and Osório (2002)].

Studies show that the postponement of leaving of parents' homes in Brazil and the Ukraine is also caused by economic restrictions that make difficult the purchase of houses by the youngest generation [Camarano (2002) and Bezrukov and Foigt (2002)]. Due to their particular moment in their life cycle, many elderly people have their own homes, own land, etc., in these countries.

Elderly people also make an important contribution in other aspects of family life. Due to their permanence in employment and/or the possession of social security benefits, elderly males maintain their tradition role as head and provider for the family. On the other hand, elderly women tend to maintain their traditional role as carers of the family, but also accumulating in certain cases, the role of provider [Camarano (2003)]. In Brazil, the higher the number of children, the higher the chance of an elderly woman having children living in her home [Andrade and De Vos (2002)].

The situation in South Africa is very similar to the Brazilian experience. The overthrow of apartheid coincided with the expansion of basic pensions to non-white South Africans. As in Brazil, this has been very important for social development. It has had a significant impact on the reduction of poverty, the well-being of elderly people and as an incentive to economic activity. Pensions fund family subsistence and small agricultural activities, also working as an investment in human capital. Thomas (1990) noted that the social insurance benefits received by women have positive results on the health of children [apud Bertrand, Miller and Mullainathan (2000)]. The co-residence of grandparents and grandchildren has resulted in an increase in the rate of school attendance and a reduction in child labour [Camarano (2002) and Ferreira (n.d.)].

In countries where the rate of HIV/AIDS is very high, elderly people have played a very important role in the care of both sick children and orphans. The

8. These measures were calculated only for women by Carneiro, Knudsen and Osório (2002).

AIDS epidemic in general affects people between 20 and 40 years of age. Their children can be affected by prenatal transmission or can become orphans. The age of the surviving parents of these children with AIDS varies from 50 to 70 years. While AIDS orphans receive a lot of attention from society and from public policies, the same does not happen with the parents of AIDS sufferers.

Knodel and Saengtienchai (2002) estimate that in Thailand approximately 30,000 elderly parents have lost at least one child from AIDS. Approximately 75,000 children are being looked after by their grandparents. It was also discovered that the majority of adult children who died from AIDS (59%) co-resided with one of their parents during their terminal stage.

In sub-Saharan African countries, the combination of high levels of fertility and the high rate of AIDS has resulted in a high number of AIDS orphans. For example, in Botswana the proportion of orphan children tripled between 1994 and 1997. In 1997, 4% of children under 15 in the country were orphans, as were 6% in Malawi, 7% in Zimbabwe and 9% in Zambia [UNAIDS (1999)].

A survey undertaken in Zimbabwe interviewed people over 50 years of age who cared or had cared for terminal victims of AIDS. Among them, approximately 72% were aged over 60. Among the sick persons, 40% were children and 28.2% were grandchildren of the heads of families. Of the orphans, 80.5% were looked after by grandparents. Among the carers, 75% were women [WHO (2002) apud De Graft (2002)]. To give care to orphans involves housing, food, clothes, education, comfort and socialisation in a situation of poverty. Approximately 90% of carers did not have any regular monthly earnings. The coverage of social security is very low, as are the values of benefits [De Graft (2002)].

The increase in female mortality due to AIDS has increasingly brought about a further task for grandparents: the care for orphans. Ntozi and Nakayiwa (1999) show that in 1992-1993, 10.6% of orphan children in Uganda were cared for by their grandparents. The same research showed that this proportion reached 13.6% in 1995. If a child's mother was dead, it increased to 17.5%.

The implication of the AIDS epidemic is enormous for family arrangements in relation to both people's lives and the future of orphan children. From the point of view of elderly people, the impact is also very marked. When adult children die, their parents lose support they would have received in old age. Economic conditions are also affected, since most often it is the elderly parents who pay for the expenses involved in their adult child's illness, the funeral and take over the responsibility for the care of orphans. In addition, caring for children with terminal diseases can affect the health of elderly people.

In Europe, the existence of family arrangements in which support is given to adult children has also been found, especially where young people have great difficulties with insertion in the labour market. Grundy (2001) compared the determinants of co-residence in Italy and Great Britain. He noted that in Italy house ownership and the high educational level of elderly women are strongly correlated to co-residence [Glaser and Tomassini (2000) apud Grundy (2001)]. The author emphasises the possibility that in the Southern European countries elderly people with higher incomes are a more important source of income for adult children than in the Northern Europe. This may be due to the non-existence or inefficiency of active support policies for young people in difficulties. Grundy (2001) provides some evidence showing that in these countries there is a greater concern with the construction of social policy mechanisms that stimulates more cooperation between families and the state in relation to the provision of care for the elderly population [Kunemund and Rein (1999), Penning and Keating (2000) and Liu et al (2000) apud Grundy (2001)].

Research carried out in Europe has shown the existence of a strong feeling of reciprocity and altruism, both among adult children and elderly people. A third of young Europeans believed that their generation has responsibilities to elderly people, while only 5% stated that they would not like to care for elderly relatives [European Commission (1997) apud Grundy (2001)].

2.2 Co-residence Due to the Needs of Elderly People

The probability of extended living arrangements due to needs of elderly people grows as they get older. This leads to an association between the co-residence of elderly people (elderly people living in their children's or in other relatives' homes) and their physical or economic "dependence". This relationship is strongly intermediated by cultural factors.

For example, in Europe the support mechanisms of adult children for dependent parents vary enormously among countries. While 73% of Spanish and 51% of Italians stated that they would help parents with disabilities living with them, the comparable proportion among English and Dutch is much lower, 34% and 10%, respectively. On the other hand, the possibility of adult children take their parents to institutions is more frequent in the Nordic countries. This was reported by 41% of the interviewed Swedes children compared to 2% of the Italians ones [Grundy (2001)].

In Asia, although the co-residence of elderly people and children is declining, the family continues to be the principal reference when support is needed. Adult

children are responsible for caring for parents when the latter lose their autonomy and need care. In research carried out in 1995 in the Philippines, Singapore, Taiwan and Thailand, it was shown that only a small part of elderly people did not have at least one adult child alive. In the 1990s, 70% of parents aged 60 or more lived with an adult child. Among the Chinese and Malays of Singapore, this figure rose to 90% [Ofstendal, Knodel and Chayovan (1999)].

In China, more than 70% of elderly people live with children. Of these approximately 3/4 live in families with more than three generations [Yi and George (2001)]. Peng and Phillips (2002) show that although the coverage of the social security system has been expanded in China, only a quarter of elderly people receive any type of benefit. In urban areas, 57% of elderly people depend on the economic help of their children, compared to 64% in rural areas. Women are much more dependent on the income of their children than men. Approximately, 75% of their income comes from the aid of children.

Ferreira (n.d.) shows that co-residence in South Africa has also been beneficial for older generations. In addition, she shows that in four other African countries, Ghana, Nigeria, Sierra Leon and Zimbabwe, the majority of elderly people receive economic and instrumental help from their children. Women are the main caregivers. Equally, women are also those who need more care from their children. This may be due to the fact that they live longer than men and are responsible for caring men.

A survey undertaken in 1994 in Mexico showed that families provided most of the care needed by elderly people [Conceição and Zavala (2002)]; 67% of elderly couple were living with their children. Among the single elderly women, the comparable proportion was 51%, while it was 41% among the single elderly men. In other words, women at the most advanced age are more privileged with the help of their children, while men remain in a more vulnerable situation.

De Vos (1990) shows that marital status affects the probabilities of both elderly men and women of living in their children's homes. This was observed in six Latin American countries. On average, 67% of single elderly people live with their families. Among the married ones this falls to 49%. The effect of marital status is more significant among women than men, controlling for age and residence. One exception was the Dominican Republic, where married men are more likely to live with their families than single men. Also for Brazil, Saad (1999) found that living in children's homes is more common among single women.

Andrade and De Vos (2002) show that physical disability is associated with the residence of women in children's homes in Brazil. Approximately 17% of the

women who live in their children's home state that they cannot carry out basic daily activities, such as eating by themselves. They accounted for 3.4% of the elderly Brazilian women in 1998. Poverty is also associated with co-residence, here considering both children in parents' homes and vice versa. Daughters are more looked for as "care-givers" for their mothers than sons. It was observed that mothers prefer to live in daughters' homes [Andrade and De Vos (2002)] as well. Similar conclusion was got by Lloyd-Sherlock (2001). He found that elderly people expected to live with daughters and not with sons.

In summary, co-residence can benefit both younger and older generations. Nonetheless, it is not known whether, from the point of view of elderly people, their living arrangements are a result of their preferences or of an imposed "solidarity". This can be the result of economic, social and/or health pressures, from both elderly people and their children. The same happens with the other members of the family. This is an important point to be taken into account, since this is a factor than can cause dissatisfaction and domestic violence.

3 FAMILY ARRANGEMENTS OF ELDERLY FAMILIES AND FAMILIES WITH ELDERLY PEOPLE IN BRAZIL

The changes in the composition of Brazilian families reflect the demographic changes that the population has experienced in recent decades, especially the fertility and mortality declines, as well as transformations in the labour market and the widespread coverage of social security. The objective of this section is to analyse the impact of these phenomenon on living arrangements that contain elderly people and their well-being conditions.

As it has already been mentioned, families containing elderly people living in were divided into two groups: *elderly families*, where the elderly person is the head or the spouse of the head of the household and *families with elderly people*, where elderly people live as relatives of the head.⁹ The existence of an association between economic dependence and autonomy to deal with the daily activities and the composition of households containing elderly Brazilians living in is looked at. It is expected to find a higher proportion of less economic dependent and healthier elderly people in *elderly families*. On the other hand, the most dependent shall be found in *families with elderly people*. It is also expected to find some combinations of living arrangements such as the head of household has income but not the autonomy to deal with daily activities and the spouse has no income but can look after the head. The utilized data are obtained in the 1980 and 2000 Demographic Censuses.

9. Despite referring to families, the unit of analysis adopted in this study is the household.

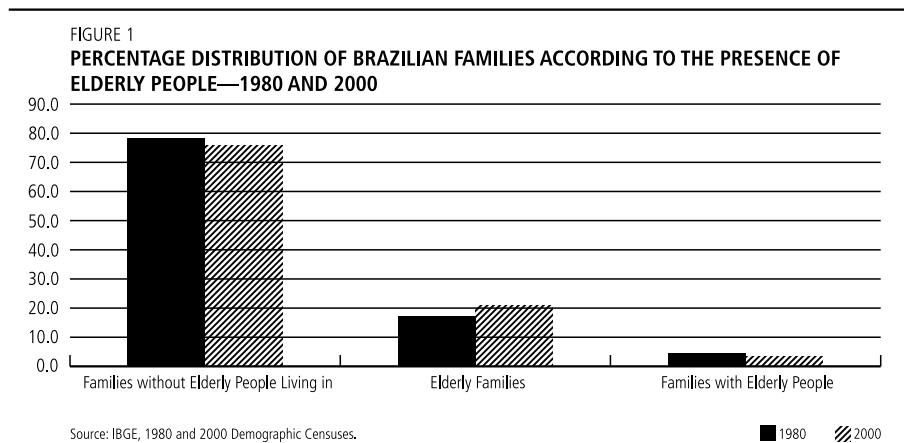
3.1 Composition of Living Arrangements

Figure 1 shows the proportion of families according to the presence of elderly Brazilians living in and their household position. An increase in the proportion of families containing elderly people living in can be noted, which is to be expected due to population ageing. This proportion rose from 21.1% in 1980 to 24.1% in 2000. The growth occurred among *elderly families*. In 1980, this group accounted for 17.1% of the total of Brazilian families, while in 2000 this had increased to 20.9%. The proportion of *families with elderly people* fell, pointing to a reduction in the dependence of elderly people, as has already been shown in other studies.¹⁰

The average size of Brazilian families has diminished in recent decades, which is mainly the result of a smaller number of children living there, as shown in Table 1. This fact is due, specially, to the fertility decline as the more intense reduction took place in families *without elderly people* and *with elderly people*, 24% and 18.2%, respectively.

The reduction in the number of children living in the household explains 88.1% of the reduction of the average size of families *without elderly people*, 84.2% of families *with elderly people* and 73.9% of *elderly families*. On the other hand, even though it is declining, the average size of an *elderly family* in 2000 was 3.3 persons. Families with *elderly people* were larger than elderly families and those *without elderly people*.

As well as size, the composition of *elderly families* and *families with elderly people* has changed. In households where an elderly person is the head or spouse of



10. In relation to this, see Camarano and El Ghaouri (1999 and 2003).

TABLE 1
AVERAGE SIZE AND AVERAGE NUMBER OF CHILDREN LIVING IN FAMILIES ACCORDING TO THE PRESENCE OF ELDERLY BRAZILIANS—1980 and 2000

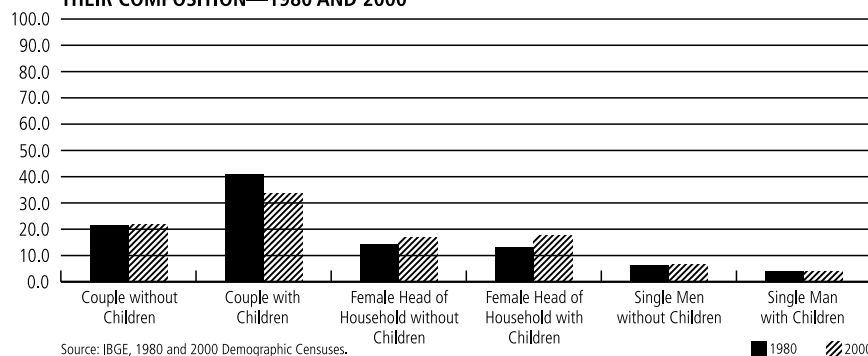
Type of Family	Average Size		Average Number of Children	
	1980	2000	1980	2000
Elderly Family	3.70	3.25	1.37	1.03
Family with Elderly People	5.84	4.94	2.39	1.63
Family without Elderly People	4.78	3.86	2.64	1.82

Source: IBGE, 1980 and 2000 Demographic Censuses.

the head of the household, there has been a decline in the proportion of families formed of a couple and children and an increase in that of families headed by women, as shown in Figure 2. This increase is related to the different life expectancies of male and female and the lower chances of remarriage on the part of women. Due to widowhood and separation, elderly women become responsible for their families. This behaviour reflects both alterations resulting from population ageing and from changes in living arrangements in the population as a whole, which has been shown in other studies [Camarano and El Ghaouri (2003) and Camarano (2003)].

The majority of *families with elderly people* were composed of couples with children, although this proportion has also declined during the studied time period. In 1980, they made up 64.1% of the total of these families, falling to 53.2% in 2000. The most important increase happened in the proportion of families headed by non-elderly women without children, where the elderly person lived as a relative or domestic employee. Although low, this proportion almost doubled between

FIGURE 2
PROPORTION OF LIVING ARRANGEMENTS OF BRAZILIAN ELDERLY FAMILIES ACCORDING TO THEIR COMPOSITION—1980 AND 2000



1980 and 2000, passing from 5.9% of families with elderly people to 10.6%. Also important was the increase in the proportion of families consisting of mothers and children and elderly relatives (see Figure 3).

As it might be expected, the number of resident children is higher in *families with elderly people* than in the *elderly families* (see Table 2). Comparing the composition of the two kinds of families, a reduction in the number of children aged less than 21 years can be noted between 1980 and 2000 in the two both types of living arrangements. This can be explained through the ageing of those living in the household and in *families with elderly people* by the fertility decline. The average number of children older than 21 increased slightly in both types of arrangements and, consequently, their proportion in the total of resident members in these families did so. In 1980 in *elderly families*, 19.2% of family members were adult children. This proportion rose to 22.4% in 2000. In *families with elderly people*, this figure increased from 4.2% to 6.2%.

In 2000, in *elderly families*, grandchildren accounted for around 14% of family members, compared to 2.2% in *families with elderly people*. On average, around 12% of members of the arrangements where elderly Brazilians were found, irrespective of their household status, were grandchildren. The majority of these are aged between 0 and 14. In *elderly families*, 72.5% were under 15 years, 24.2% were young people between 15 and 24 years and 3.4% were over 25. In *families with elderly people*, the proportion of grandchildren aged between 0 and 14 was considerably higher (94.6%) compared to those of the other age group, which is to be expected since their heads or spouses of heads of households were not elderly people.

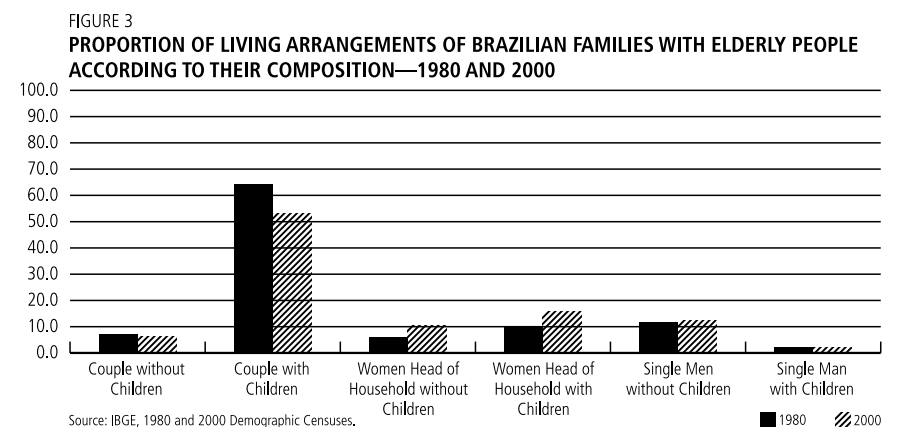


TABLE 2
BRAZIL: AVERAGE NUMBER OF FAMILY MEMBERS ACCORDING TO THEIR RELATIONSHIP WITH THE HEAD OF FAMILY—1980-2000

Relationship with the Head of Family	1980		2000	
	Elderly Family	Family with Elderly People	Elderly Family	Family with Elderly People
Head	1.00	1.00	1.00	1.00
Spouse	0.62	0.71	0.56	0.59
Children	1.37	2.39	1.03	1.64
Child < 21 Years	0.66	2.13	0.30	1.33
Child ≥ 21 Years	0.71	0.25	0.73	0.30
Other Relative ^a	0.62	1.57	0.62	1.57
Under 14	0.35	0.17	0.34	0.19
Between 15 and 60	0.22	0.36	0.24	0.34
Over 60	0.05	1.04	0.05	1.04
Pensioner	0.06	0.11	0.02	0.05
Domestic Employee	0.03	0.06	0.01	0.02
Total	3.70	5.84	3.25	4.87

Source: IBGE, 1980 and 2000 Demographic Censuses.

^a In 1980 the category other relative included children and son/daughter-in law and other relatives as grandchildren, brothers, etc. In order to make the 2000 category compared with that of 1980 father, mother, mother-in-law, grandson, great-grandson, brother, sister and other relative were grouped on only one category.

The comparison of the presence of grandchildren in families where elderly people live in the studied time period is made difficult by the absence of the question on the 1980 Census. An approximation that has already been used in other papers [see Camarano and El Ghaouri (1999 and 2003), Beltrão, Camarano and Mello (2004), amongst others] is done by analysing the category “other relatives”, since in the 1980 Census grandchildren were included in this category. Analysing the proportions of “other relatives” by age group, an increase in the proportion of children under 14 in *elderly families* is noted. This figure rose from 9.3% in 1980 to 10.4% in 2000. In *families with elderly people*, the variation in the comparable proportion was smaller—rising from 3.0% to 3.9%. In these families, the proportion of elderly other relatives was much higher. So was the time period variation, as this proportion rose from 17.8% in 1980 to 21.4% in 2000.

These are some of the indicators that suggest the existence of co-residence of various generations as an important form of family arrangement in which elderly

Brazilians are inserted. This fact reinforces the idea that experiences and values as well as financial and emotional support are being shared among various generations, especially among grandchildren and grandparents. In this way, intergenerational exchanges can play an important role in increasing the status of elderly Brazilian in society.

3.2 Some Characteristics of Brazilian Elderly Living Arrangements

Some indicators that characterise *elderly families* and *families with elderly people* in 1980 and 2000 are compared in Table 3 with the objective of detailing the living conditions of elderly Brazilians. The proportion of elderly Brazilians living in these families has grown in the last 20 years and, as it can be expected, is highest among *elderly families*. Nonetheless, this proportion was much lower than 45% of total family members. Among *families with elderly people*, the comparable proportion was 22%. These percentages confirm that family arrangements in Brazil

TABLE 3
SOME CHARACTERISTICS OF BRAZILIAN ELDERLY FAMILIES AND FAMILIES WITH ELDERLY PEOPLE—1980 and 2000

Characteristics	Elderly Families		Families With Elderly People	
	1980	2000	1980	2000
Proportion of Elderly People Living in	36.6	42.0	19.6	22.0
Mean Age of the Elderly Person	68.0	68.1	71.6	71.6
Mean Age of the Head of Household	67.8	68.7	41.1	42.9
Proportion of Female Heads	27.5	37.3	15.8	30.4
Mean Number of Working Persons	1.3	0.9	1.9	1.5
Mean Number of Elderly Workers	0.4	0.2	0.1	0.1
Mean Number of Working Children	0.7	0.5	0.5	0.3
Proportion of Elderly Brazilians Receiving Benefits	54.8	77.3	63.0	83.1
Average Income of Elderly Brazilians ^a	529.8	600.6	205.1	295.9
Average Family Per Capita Income	316.4	374.2	325.4	350.2
Proportion of Families Receiving Less than Half a Minimum Wage	41.0	14.5	35.0	18.0
Proportion of the Benefit Earnings on Family Income	25.8	42.9	13.4	24.4
Proportion of Elderly Brazilians Earnings on Family Income	61.4	67.2	12.4	19.7

Source: IBGE, 1980 and 2000 Demographic Censuses.

^a In order to compare earnings in 1980 and 2000, the deflators calculated by Courseil and Foguel were used. They are based on January 2002.

are characterized by different generations living together, even in *elderly families*, where elderly people are the head or spouse of the head of the household.

Elderly Brazilians who live in families where they are the head or spouse of the head of the household were on average 3.6 years younger than those who were not in this position. This difference remained the same in the last two years considered (see Table 3). This average age did not alter in the period studied. This suggests an association between age and dependence. Also noted was a growth in the percentage of elderly women acting as heads of households. In *elderly families*, this figure rose from 27.5% in 1980 to 37.3% in 2000. Despite the percentage of women heads of households being highest in *elderly families*, the relative increase in this figure was much more intense in *families with elderly people*. This reflects the generalised increase in families headed by women in Brazil and suggests a greater “preference” of elderly Brazilians to live with their daughters as in other countries, as indicated by the literature.

Table 3 also shows that in the twenty years studied, there was a reduction in the average number of working persons in the two types of family arrangements. This is due to a decline in the average number of elderly workers and in the number of working children. Elderly people who live in *elderly families* participated more in the labour market than those who lived in *families with elderly people*, which may be related to the fact that the former were younger than the latter and, consequently, healthier.

On the other hand, the proportion of social security beneficiaries living in the two types of family arrangements has also increased; the increase was more marked among those in *elderly families*. However, the proportion was higher among elderly people living in *families with elderly people*, which is probably associated with their more advanced age.

Advances in economic conditions were observed during the time period for those living in both types of family. These advances are measured by the increase in average per capita income and by the reduction in the percentage of families receiving less than half a minimum wage. The advances were more evident for *elderly families* than for *families with elderly people*. Table 3 shows that *elderly families* in Brazil were in worse economic conditions in 1980 than *families with elderly people*. This situation was inverted in 2000. *Elderly families* became relatively less poor¹¹ and had slightly higher average per capita income.

11. Poor families are considered those whose average per capita income was less than half a minimum wage.

4 INTERGENERATIONAL FAMILY EXCHANGES

This section aims to come across whether co-residence brings about intergenerational support and exchange. It starts with the assumption that, in general, family support mechanisms simultaneously work in two directions: parents help their children and the latter help their parents. Nonetheless, there are situations in which the prevailing flows are only in one direction. This appears more in this chapter because the focus of analysis is the elderly population. As it has already been mentioned, it is assumed that in *elderly families*, descending transfers are most common, those from the older to the younger generations. In *families with elderly people*, it is assumed that the inverse takes place.

4.1 Descending Intergenerational Family Support Mechanisms

The first variable used to find out the existence of intergenerational supports was income. In Brazilian *elderly families*, the income of elderly people is very important in the family budget, an importance that has grown with time. In 2000, 67.2% of the income of these families came from income of elderly Brazilians. As it has already been noted, these are not families composed of just elderly people.

The increase in the proportion of the income of elderly people on family income was higher in *families with elderly people* than in *elderly families*. It represented up to 20% of the income of these families in 2000 (see Table 3). Although this proportion is much lower than in the first group of families, it is still important, especially because it was assumed that the elderly people living in it are “dependents”. This raises the question of what type of dependency is being talked about.

Lloyd-Sherlock (2001) showed, based on fieldwork carried out in *favelas* in São Paulo that the elderly people living there tend to spend their income more on other family members than on themselves. Priority is given to the needs of grandchildren often to the detriment of their own medicinal needs, for example.

The increase in the contribution of the income of elderly Brazilians in family budgets is associated with the growth in the participation of social security benefits in their income. This participation has considerably increased in the family income of both types of living arrangements, especially among *families with elderly people*. Nevertheless, it kept greater in *elderly families*. The clear reduction in poverty that occurred in the two types of living arrangements is also associated with an increase in the proportion of elderly beneficiaries of social security.

On the other hand, the contribution of other family members to the income of elderly families was low and had diminished. The participation of children's

income dropped from 27.9% to 22.4% and that of spouses increased, but was still less than 11% in 2000 (see Figure 4). Table 4 shows some characteristics of labour market participation, earnings and school attendance of the adult children, other relatives and grandchildren in *elderly families*. These are compared with family members aged between 21 and 40 living in *families with elderly people*. Probably, much of this later group is composed of heads and spouses of heads of families.

Among children aged 21 years and over who lived in *elderly families*, 35.4% did not have any earnings in 2000, a figure that is higher than the 31.3% observed in 1980. The proportion of working children declined from 67.5% in 1980 to 55.4% in 2000, while that of were attending school rose slightly. Their average income was approximately equal to the average per capita household income, but about 40% lower than the average income of elderly Brazilians.

The data in Table 4 also shows that a higher proportion of family members aged 21 to 40 years who lived in *families with elderly people* working compared that of adult children living in *elderly families*. Nevertheless, the former proportion fell during the studied time period. The earnings of these adults were higher than that of the adult children who lived in *elderly families*. It was also much higher than that of the elderly Brazilians living in these families, though the difference has diminished over the studied time period. In 1980, the proportion of adults without any earnings living in both types of family arrangements was not very large. Nonetheless, although, in the period being looked at, this proportion grew for adults living in *elderly families* and for those in *families with elderly people* it remained approximately the same. This data reinforces the previously raised hypothesis that in *elderly families* descending family support occurs more frequently,

FIGURE 4
BRAZIL: PROPORTION OF FAMILY MEMBERS EARNINGS ON FAMILY INCOME ACCORDING TO THE KIND OF LIVING ARRANGEMENT—1980 AND 2000

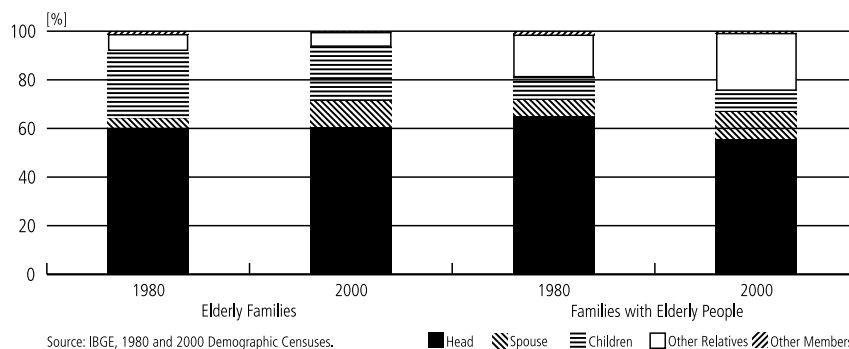


TABLE 4
BRAZIL: SOME CHARACTERISTICS OF ADULTS LIVING IN ELDERLY FAMILIES AND FAMILIES WITH ELDERLY PEOPLE—1980 and 2000

Characteristics	Elderly Families		Families with Elderly People	
	1980	2000	1980	2000
Proportion of Children Aged 21 Years and Over without any Earnings	31.3	35.4		
Proportion of Family Members Aged 21 and 40 Years without any Earnings			32.9	31.9
Proportion of Children Aged 21 Years and Over Working	67.5	55.4		
Proportion of Family Members Aged 21 and 40 Years Working			65.9	61.4
Average income of Children Aged 21 Years and over ^a	328.98	355.7		
Average income of Family Members Aged 21 and 40 Years ^a			468.35	465.8
Proportion of Children Aged 21 Years and over Attending School	10.2	12.5		
Proportion of Family Members Aged 21 and 40 Years Attending School			7.1	11.4
Proportion of Children Aged 21 Years and over Neither Attending School Neither Working	28.1	38.5		
Proportion of Household Members Aged 21 and 40 Years Neither Studying Neither Working			31.5	33.9
Proportion of other Relatives Aged 7 to 14 Years Attending School	64.5	94.1		
Proportion of Children Aged 7 to 14 Years Attending School			74.5	95.0
Proportion of other Relatives Aged 7 to 14 Years Working	5.6	1.5		
Proportion of Children Aged 7 to 14 Years Working			7.0	5.6
Proportion of Grandchildren Attending School		94.4		
Proportion of Grandchildren Working		0.0		

Source: IBGE, 1980 and 2000 Demographic Censuses.

^a To compare 1980 and 2000 earnings the deflators calculated by Corseuil and Foguel were used based on January 2002.

while in *families with elderly people* it is ascending. This seems to be true at least in relation to income.

On the other hand, 12.5% of adult children living in *elderly families* attended school in 2000, a proportion slightly higher than that observed in 1980. It was also higher than the figure for adults living in *families with elderly people*, but the differences between the two have declined over the studied time period. Approximately 38.5% of adult children living in *elderly families* were neither studying nor working in 2000. This proportion was much higher than the figure

of 28.1% found out for 1980. In the later year, the mentioned proportion was higher in *families with elderly people*. In 2000 the situation has become reversed, but the figures were still high in the latter kind of living arrangement. Approximately 1/3 of those aged 21 to 40 years were in this situation. It is possible that a fraction of this figure includes spouses of the family heads.

Also found was a dramatic increase in the proportion of “other relatives” aged between 7 and 14 years¹² living in *elderly families* and attending school. At the same time, there was a reduction in the proportion of workers within the same group. A similar tendency was observed for children aged from 7 to 14 years living in *families with elderly people*. The difference is that in 1980 more children studied and worked in the latter living arrangement in comparison to *elderly families*. In 2000, the differences in the proportion of those studying was practically extinguished and less children worked in *elderly families*.

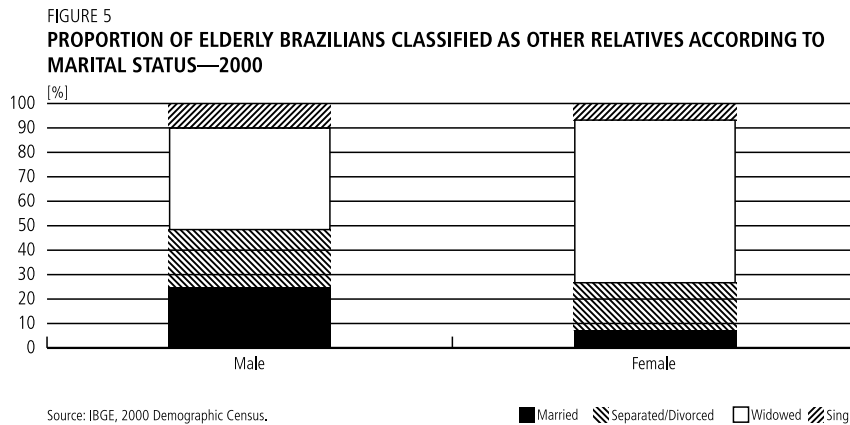
It is assumed that income from benefits can reduce the need for children to work in order to help family subsistence.¹³ The presence of elderly people in the family can stimulate investments in human capital. The above results confirm those of Carvalho (2000). He analysed school enrolments records for Brazilian rural areas and found out that the existence of social security benefits in the family increased the chance of children attending school, especially among girls aged between 12 and 14.

4.2 Ascendant Intergenerational Support Mechanisms for Disabled Elderly People

Although declining in relative terms, *families with elderly people* accounted for 3.2% of Brazilian families in 2000. As seen in Chapter 2, in 2000 16.1% of elderly Brazilians lived in families as parents, parents-in-law, uncles or aunts of the head of household or as other relatives. Parents, parents-in-law and widowed people were most common. Among these heads’ relatives, 41.5% of males ones and 66.6% of females were widows. In addition, 23.6% of elderly men and 19.3% of elderly women living in *families with elderly people* were separated or divorced. Approximately 12% of these elderly people were married (see Figure 5). This result suggests that there are mainly, the single elderly Brazilians who live with their children, pointing to the importance of marital status in determining co-residence.

12. It is assumed that these are grandchildren.

13. Brazil has one of the highest rates of child labour in the world [Carvalho (2000)].



It was also seen in the same chapter, that the greater the age, the higher the chance of an elderly Brazilian being classified as “relatives” of the head of household, in other words living in the *household as an elderly person*. These chances are higher for women than for men. This suggests that men in general, even with the loss of autonomy, remain as the head of the household, unless they become single. On the other hand, elderly women experience greater chance of being widow (single) and consequently to live with children and/or other relatives.

In other papers [see Camarano and El Ghaouri (1999 and 2003)] it has been suggested that the reduction in the proportion of relatives among elderly people in general, and among men in particular, may indicate better health conditions and better functional capacity, suggesting a reduction in the dependence of elderly people on the family. Nonetheless, the existence of a vulnerable segment dependant on care but classified as heads of households cannot be denied. The internal arrangements of elderly families result in this.

It is assumed that the lack of autonomy to deal with daily activities and the lack of income are the main determinants of the “dependency” of elderly people. The aim of this section is to find out whether elderly people with some signs of greater physical or economic dependency live in *families with elderly people*.

Various papers have shown an association between the health of elderly people and living arrangements [Auslander and Litwin (1990), Mor-Barak and Miller (1991), apud Romero (2002)]. It has also been observed that those elderly people who live with relatives (including spouses) are better off in terms of family income and help to carry out family daily life activities [Holden (1988) apud Romero (2002)].

Table 5 shows some of the characteristics of the living arrangements that include elderly Brazilians with some sort of disability¹⁴ that affects their daily life activities, according to type of arrangement. It has already been seen that elderly people living in *families with elderly people* are older than those living in *elderly families* and have a higher chance of having some sort of disability. As expected, among *families with elderly people*, approximately 1/4 included at least one disabled elderly Brazilians. The comparable figure for *elderly families* was 17.4%. Nonetheless, since this kind of arrangement was greater, they included 80.9% of disabled elderly people.

The data from Table 5 shows the presence of elderly people with some sort of vulnerability living in *elderly families*. In other words, these are families with some degree of heterogeneity and the children living in these families may depend on the income of their parents and, at the same time, provide some sort of support. Where male heads of household are disabled, their spouses might be the carers-givers.

One of the differences observed between the types of families is that while in elderly families, 45.4% of disabled people were men, in *families with elderly people*, this figure falls to 27.4%. This can be explained by the fact that men even disabled keep being the heads of households, especially if they have a spouse. Among disabled men, this proportion reached 87.8% (see Table 6). As has already been mentioned, these are most likely cared for by their spouses, who probably have no income.

TABLE 5
CHARACTERISTICS OF FAMILIES WITH DISABLED ELDERLY BRAZILIANS—2000

	Elderly Families	Families with Elderly People
Proportion of Families	17.4	25.3
Family Mean Size	3.3	5.1
Proportion of Elderly Brazilians with Some Disability	80.9	19.1
Proportion of Elderly Men with Some Disability	45.4	27.4
Proportion of Income of Disabled Brazilians to Family Income		
Male	45.2	11.0
Female	47.1	32.2

Source: IBGE, 2000 Demographic Census.

14. Disabled persons are taken to be those who declare themselves completely incapable or having high difficulty in seeing, hearing, or walking up/climbing stairs.

TABLE 6
PROPORTION OF DISABLED ELDERLY BRAZILIANS ACCORDING TO THEIR RELATIONSHIP WITH THE HEAD OF FAMILY—2000

Relationship with the Head of Family	Disabled Elderly Brazilians in Elderly Families		Disabled Elderly Brazilians in Families with Elderly People	
	Male	Female	Male	Female
Head	87.8	53.9	-	-
Spouse	7.6	34.9	-	-
Father, Mother, Parents-in-Law		6.1	76.6	82.6
Brother/Sister			4.5	2.1
Other Relative			13.8	12.7
Other Adult			3.5	1.7
Total	95.4	94.9	98.4	99.1

Source: IBGE, 2000 Demographic Census.

Among the Brazilian elderly spouses, 37.2% did not have any earnings. This leads to the question of who are the dependants in this type of living arrangement.

Table 6 also shows that among the disabled women living in *elderly families*, 53.9% were heads of households, 34.9% spouses and 6.1% are mothers or mothers-in-law. This suggests that these were mothers of non-elderly spouses or that younger elderly Brazilians (heads of spouses) are taking care of older elderly Brazilians. On the other hand, 82.6% of the disabled elderly women who live in *families with elderly people* were mothers or mothers-in-law. The comparable proportion for disabled males was 76.6%. On the other hand, the proportion of brothers and other relatives was higher among disabled men compared to women.

The next step is to analyse the composition of the living arrangements that contain disabled elderly Brazilians living in according to the two types of studied living arrangements. This is shown in Table 7. Around 51.1% of the *elderly families* had children living in, of which approximately half were nuclear families and the other half extended families. Approximately 8.2% were extended families formed of men or women without spouses living with other relatives or domestic employees. These two groups of families added to that composed by single men and women living in extended families accounted for approximately 66% of *elderly families* with disabled members. It can be inferred that they can count on the help of co-residents, whether they are children, spouses, or “other relatives” or domestic employees.

TABLE 7
**PROPORTION OF LIVING ARRANGEMENTS WITH SOME DISABLED ELDERLY BRAZILIANS
 ACCORDING TO THEIR COMPOSITION—2000**

Typology	Elderly Families			Families with Elderly People		
	Nuclear	Extended	Total	Nuclear	Extended	Total
Couple without Children	19.0	6.5	25.5	0.0	6.7	6.7
Couple with Children	16.3	15.3	31.6	0.2	51.1	51.3
Single Woman	10.7	6.8	17.5	0.0	11.9	11.9
Mother with Children	7.2	8.9	16.1	0.0	18.1	18.1
Single Man	4.7	1.4	6.0	0.0	10.4	10.4
Father with Children	1.8	1.6	3.4	0.0	1.5	1.6
Total	59.6	40.4	100.0	0.3	99.7	100.0

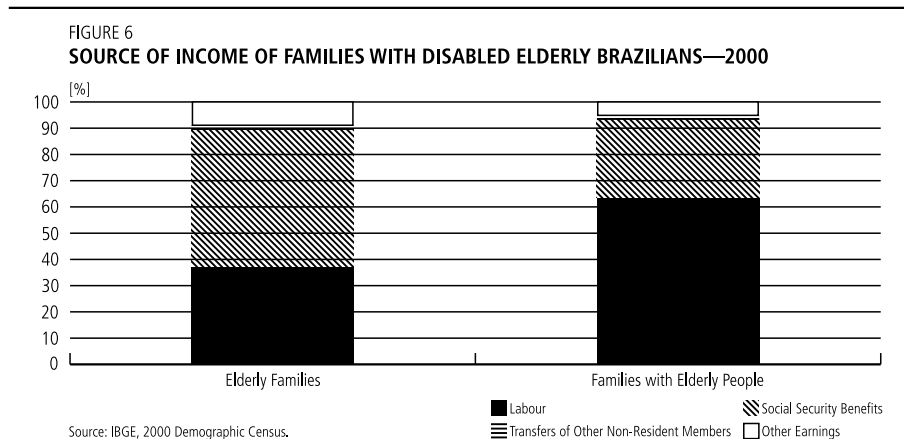
Source: IBGE, 2000 Demographic Census.

About 11% of *elderly families* with disabled members consisted of women living alone and 5% of men living alone. The available data does not permit any inferences to be made about how these disabled people are cared for, nor if their disability affects their autonomy.

As it has been previously mentioned, approximately 3/4 of disabled elderly people who live in *families with elderly people* were women. The composition of these families that include disabled elderly people was quite different from those of *elderly families*. The former were almost all extended families, with approximately half being formed of couples with children and 12.0% were families headed by men without spouses. This proportion was higher than the corresponding figure for *elderly families*.

Although disabled elderly Brazilians probably need help to carry out their daily activities, they also make an important contribution to the income of their families, especially in *elderly families*, as is to be expected. Here, men contributed with 45.2% and women with 47.1% of the total family income. In *families with elderly people*, the contribution was lower, but even so the income of disabled women was equivalent to almost 1/3 of the budget of the families where they lived (see Table 5). These were most probably widows, who had a pension due to their husband's death. Despite living in their children's homes and, probably needing help to carry out daily activities, they make an important contribution to the income of the families where they live.

In fact, only 26.1% of disabled elderly Brazilians had no any income. Two thirds of these were women. It is emphasised that also in this case, as shown in Figure 6, social security benefits were very important for the income of the studied families. Even in *families with elderly people*, where a lower proportion of income from social security benefit could be expected, it reached 30%. As has been seen above, among disabled women living in *families with elderly people*, 82.6% were mothers and mothers-in-law. The proportion of these without any earnings was low, 11.2%. In this way, it can be said that families organise themselves to maximize the use of resources (time available to provide care, income, etc.) to deal with the needs of their dependants. This organisation is intermediated by social policies and by autonomous elderly people's available time.



4.3 Ascendant Intergenerational Support Mechanisms for Elderly Brazilians without any Income

As has already been mentioned, the lack of income due to the loss of labour capacity is one of the important determinant factors in the “dependency” of elderly people. This section analyses the living conditions of elderly Brazilians without any income and to find out whether they live in *families with elderly people*.

Table 8 shows some characteristics of the living arrangements that include elderly people without any earnings. Approximately 2 million elderly Brazilians in other words 14.3% of the elderly population were in this situation in 2000, of which 80% were women. This proportion is lower than that observed in 1980—24% having no any earnings, of whom the vast majority, 92%, were women.

TABLE 8
CHARACTERISTICS OF FAMILIES WITH ELDERLY BRAZILIANS WITHOUT ANY EARNINGS—2000

	Elderly Families	Families with Elderly People
Proportion of Families	16.9	12.7
Family Mean Size	3.6	5.2
% Elderly Brazilians without Earnings	88.5	11.5

Source: IBGE, 2000 Demographic Census.

Among *families with elderly people*, approximately 12.7% contained at least one elderly Brazilian without any earnings. The comparable proportion for *elderly families* was higher, 16.9%. About 90% of elderly Brazilians without any earnings are in these families. This may be due in part to the high number of women spouses. In fact, in *elderly families*, elderly Brazilians without any earnings are predominantly spouses. Among women, this proportion was 84.2%. These were probably supported by their husbands. Among men, 83.2% were heads of households (see Table 9). Table 10 shows the composition of these living arrangements according to the two types of arrangements. In *elderly families*, 57.2% had resident children, most of which were nuclear families. Approximately 1/3 were in families without children, where the large majority were also nuclear ones.

Elderly people without earnings who live in *families with elderly people* were, in the case of female, also predominantly mothers or mothers-in-law (80.9%),

TABLE 9
PROPORTION OF ELDERLY BRAZILIANS WITHOUT ANY EARNINGS ACCORDING TO THEIR RELATIONSHIP WITH THE HEAD OF FAMILY—2000

Relationship with the Head of Family	Elderly Families		Families with Elderly People	
	Male	Female	Male	Female
Head	83.1	12.7	-	-
Spouse	9.2	84.2	-	-
Father, Mother, Parents-in-Law	-	-	55.3	80.9
Brother/Sister	-	-	11.0	4.1
Other Relative	-	-	17.1	9.4
Other Adult	-	-	6.3	1.8
Total	92.3	96.9	89.8	96.2

Source: IBGE, 2000 Demographic Census.

TABLE 10
PROPORTION OF LIVING ARRANGEMENTS WITH ELDERLY BRAZILIANS WITHOUT ANY EARNINGS ACCORDING TO THEIR COMPOSITION BRAZIL—2000

Typology of Family	Elderly Families			Families with Elderly People		
	Nuclear	Extended	Total	Nuclear	Extended	Total
Couple without Children	29.7	6.8	36.5	0.0	5.1	5.1
Couple with Children	28.6	20.8	49.4	2.6	46.4	48.9
Single Woman	1.9	1.8	3.7	0.0	11.5	11.5
Mother with Children	3.0	3.6	6.5	0.6	15.8	16.4
Single Man	1.8	0.7	2.6	0.0	15.4	15.4
Father with Children	0.7	0.6	1.2	0.1	2.5	2.6
Total	65.7	34.3	100.0	3.3	96.7	100.0

Source: IBGE, 2000 Demographic Census.

while 9.4% were other relatives. In the case of males, the proportion of fathers and fathers-in-law was lower, though it was still high, 55.3%. Here, other relatives and brothers/sisters were important (see Table 9). *Families with elderly people* were mainly extended families. Couples with children were the most important arrangement. Approximately 30% of these families were headed by women.

A question that is raised is where does the income of these families come from? For the two types of arrangements, the person responsible for most of the family income was the head of household. This proportion was highest in *families with elderly people*. In elderly families, the children's income was important, as it accounts for 30% of the income of these families. The income of spouses was less than 3% of family income (see Figure 7). Labour was the most important source of income for these families, even in *elderly families* (see Figure 8). Earnings from Social Security benefits accounted for less than 1/3 of the *elderly families* where elderly Brazilian without any earnings lived.

In summary, living arrangements where elderly Brazilians live are complex and heterogeneous. It is not possible to characterise completely dependent arrangements, neither from the point of view of income nor disability. Among elderly Brazilians, only 8.6% were in a situation of total dependence, without autonomy or income, with 2/3 of this segment being made up of women. Of these, 93.6% were married at some stage in their life cycle. Their dependence in relation to the lack of income is rather due to their low participation in the labour market during their adult life. For these women, having been married and had

FIGURE 7
PROPORTION OF FAMILY MEMBERS EARNINGS ON FAMILY INCOME OF LIVING ARRANGEMENTS THAT CONTAIN ELDERLY BRAZILIANS WITHOUT ANY EARNINGS—2000

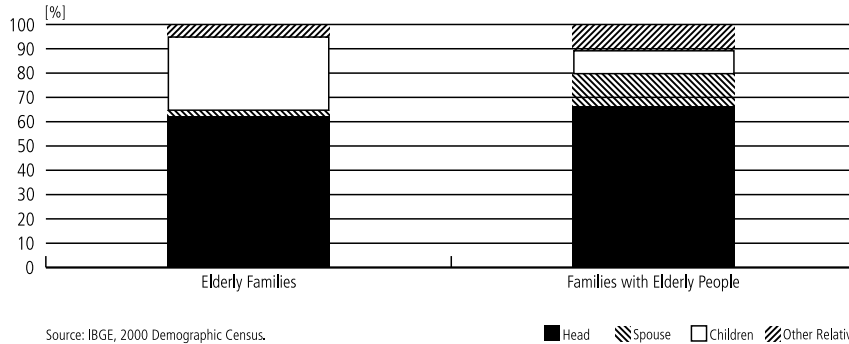
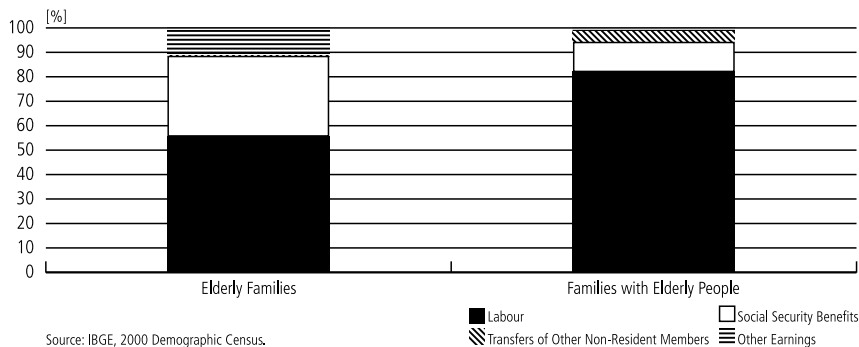


FIGURE 8
SOURCE OF INCOME OF FAMILIES THAT CONTAIN ELDERLY BRAZILIANS WITHOUT ANY EARNINGS—2000



children, in other words having constructed affective ties, became a requirement as important for support in their last stage of life as well as social security contributions.

It can be concluded by saying that family arrangements and ties can be considered as a type of “insurance” in old age and signify differences in their quality of life. However, Goldani in another chapter in this book states that in Brazil solidarity between family members is taken for granted and daily conflicts and contradictions are ignored.

5 SUMMARY OF THE RESULTS

Demographic and social changes are affecting the relations between generations in various parts of the world but their impact has not resulted in the weakening of

family relationships. Families have shown themselves to be a “resilient” institution. Poverty and unemployment together with other demographic shocks, such as the HIV/AIDS epidemic, associated with unexpected results of some social policies, have contributed to the “strengthening of families”. Co-residence between elderly people and children has become generalised in living arrangements. Sometimes the beneficiaries are elderly people while other times they are children and grandchildren and often both.

In the Brazilian case, it has been noted that although *elderly families* are being talked about, it has been found that around 1/3 of their family members are children and approximately 10% are grandchildren. It has been noted that more than 50% of the members of these families are not elderly people. Although most of resident children have a job, the proportion of the income of elderly people in the budget of these families is very clear, especially income from social security benefits.

In *families with elderly people*, at least 1/4 of family members are elderly people. No straight relationship has been found between elderly Brazilians who had some physical or economic dependence and residence in the relatives’ households. In *elderly families* the percentage of disabled persons and persons without any kind of earnings is high. Disabled elderly males were heads of households and their spouses had no income at all. This leads to the question of how dependant this type of family is?

In this case, it can be suggested that “dependant persons” can also be “care-givers” depending on the form in which living arrangements are organised. This means thinking about an association between family arrangements and living conditions, where social policies play an important role.

In accepting the importance of family support for elderly Brazilians in a context of reduction of the role of the state, one of the concerns that comes out is the lower number of family members due to the fertility decline. Also, the large entrance of women into the labour market along with the growing tendency of divorces and separations in almost everywhere in world can weaken family ties and reduce support for dependant elderly people. This can result in alterations in the tradition support function of the family, whether due to the lower number of family members to care for elderly people or the less time women, the tradition care-givers for dependants. Increasing female labour favours material help to elderly and reduces other forms of help. To the extent that an aged person is in good health, this concern can be minimised.

In short, co-residence in Brazil appears to be associated with better living conditions. It offers benefits to elderly people and children. It cannot be denied, though, that the relationship between co-residence and levels of welfare depends on the socioeconomic context of social policies and not just on individual characteristics and preferences.

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INFORMAL SUPPORT TRANSFERS OF THE ELDERLY IN BRAZIL AND LATIN AMERICA*

Paulo Murad Saad

Organização das Nações Unidas (ONU)/Divisão de População

1 INTRODUCTION

Historically, intergenerational assistance and support among family members and kin have been vital and customary to ensure security and survival into old age. While the role of family in providing support to the older family members has been increasingly replaced by the public sector during the twentieth century in the more developed countries, the central role of families in supporting the elderly has in most cases remained constant in many developing countries, including those of Latin America. The lack of capacity of public welfare systems in these countries to provide formal support to the elderly still makes the family the main resource for old age support.

As the ageing process intensifies across the developing regions, thus increasing the demand for informal care of older persons, several factors seem to contribute to constrain the family's ability to provide such support. For instance, the decreasing fertility levels tend to substantially reduce the size of the family network, while the increasing female participation in the labour force tend to significantly reduce women's available time, who traditionally have been the major providers of basic care for older relatives. In addition, the poor economic situation of an increasing portion of the Latin American society tend to prevent younger generations of providing support—especially financial—to older relatives.

Intergenerational support transfer within Latin America is clearly becoming a two-way process. The pernicious consequences of cyclical periods of economic

* The views expressed in this chapter are those of the author and are not necessarily those of the United Nations. This chapter was translated from Portuguese to English by Maurício Brito and reviewed by Paulo Saad.

crisis—in particular the rise in unemployment and the growing number of persons living in poverty—have led to a rising number of adult offspring becoming somehow dependent on the resources of their parents. In such cases, the older person's own home or even his minimal earnings from retirement pensions or survivors' benefits would become valuable, if not the only, familial revenue.¹ Thus, despite the permanence of a situation of dependency of older persons on family assistance—generating intense flow of support from adult children to elderly parents—one should not discard the prevalence of an equally important flow of support in the opposite direction.

The objective of this study is to assess the incidence of informal support transfers to and from elderly people in Brazil and in Latin America, and to identify their main contributing factors. The first part of the study focuses on the cities of São Paulo and Fortaleza,² two of the few places in Brazil for which information of the type required for the proposed analysis exist.³ Because these cities belong to regions—Southeast and Northeast, respectively—that are at different levels of development, the analysis provided an indication of how patterns of support transfers can vary in distinct socioeconomic and demographic contexts.⁴ The second part of the study focuses on four Latin American cities—São Paulo, Buenos Aires, Montevideo and Mexico City. In this case, the analysis is based on recently released data from Health, Well-being and Aging [Salud, Bienestar y Envejecimiento (SABE)], a survey that was carried out in a number of urban centres throughout Latin America and the Caribbean in the late 1990s. Because these cities are located in countries that are in different stages of the demographic transition,⁵ it was

1. Several results presented throughout this book contribute to ratify this tendency in Brazil. It was shown, for example, that home ownership is much more common among older than young heads of household. It was also pointed out the increasing share of social security income within total family income in rural areas as a result of the introduction of the special Rural Social Security regime in 1991, giving older retirees a more relevant role in the Brazilian rural social sphere. With regard to this last topic, see also Souza (1998), Camarano and El Ghaouri (1999), Beltrão, Oliveira and Pinheiro (2000).

2. Since the analysis in this part of the study is focused on support transfers between elderly parents and adult children (18 years and over), a cut-off age of 65 years was used to define older persons—rather than 60 years—in order to assure the inclusion in the sample of a significant number of both older persons in need of some kind of support and adult children in conditions to provide such support.

3. Data of this type cannot be readily found in secondary, public-access sources such as Population Censuses and National Household Surveys. On the contrary, they usually require the use of special questionnaires, as in the case of the surveys conducted in São Paulo and Fortaleza. More specific details on these surveys can be found further in this study.

4. Considered together, the Southeast and Northeast regions comprise approximately three quarters of the Brazilian population above 65 years of age, and present the greatest concentration of this age bracket in the total population—5.8% in the Northeast and 6.4% in the Southeast [IBGE (2000)]. Whereas in the Southeast population aging has resulted mainly from the continual reduction in mortality and fertility rates, in the Northeast it has resulted not only from the accelerated fall in fertility but also from high immigration rates among the younger generations [Saad and Camargo (1990)]. In terms of development, whereas the Southeast is the country's most industrialized region, with the highest levels of agricultural productivity and the best socioeconomic indicators, the Northeast region presents the country's worst economic and social indicators [PNUD, IPEA, FJP and IBGE (1998)].

5. Demographic transition refers to the changing process from a situation of high mortality and fertility rates to a situation in which the rates are significantly reduced. One of the main consequences of this process is population aging. Compared to Brazil and Mexico, the demographic transition in Argentina and Uruguay started earlier and is currently at a later stage.

possible to assess the influence of different demographic contexts on the process of intergenerational support transfers.

The section that follows this introduction provides a general overview of both the theoretical approaches most commonly used to explain the motivation for intergenerational support transfers, and the empirical results most frequently found in the literature on this subject. Then, the next section provides a description of the data sources and the methodology applied in the analysis, including a description of the variables involved and the statistical methods employed. Sections 4 and 5 present the results respectively for Brazil and Latin America, while the concluding section summarizes the main findings of the study. In addition, a technical explanatory note is presented in an annex section.

2 GENERAL ASPECTS

2.1 Motivation for Intergenerational Support Transfers

Several hypotheses have been developed concerning the motivation for the exchange of informal support between generations within the family. In a recent study, Lillard and Willis (1997) presented a brief review of the most frequently mentioned versions of these hypotheses. One of them, which they call the “old age security hypothesis”, emphasized the difficulties in finding a reliable outlet for saving for old age in developing countries. In a context where “financial institutions are primitive, property rights are insecure, currency is subject to inflation, and government social security schemes, private pensions, and health insurance are nonexistent” (p. 115), the theory asserts that children represent the only chance for an average person to have security in old age. This hypothesis suggests that fertility should decline as economic development takes place since parents can rely increasingly on market and public sector mechanisms for old age transfers, decreasing, thus, the economic benefits of having children.

An alternative theory, which the authors call the “parental repayment hypothesis”, emphasizes borrowing rather than saving constraints. Considering the scarce mechanisms available in the market for individuals to borrow against their future income, the theory postulates that “there is an implicit family capital market in which parents finance human capital investments in their children through a combination of grants and loans and, in return, children implicitly repay the loan component by providing old age support for their parents” [Lillard and Willis (1997, p. 116)].

Another hypothesis frequently addressed is the so called “altruism hypothesis” advanced by Becker (1974 and 1991). According to this view, altruistic feelings of

family members toward one another would explain many aspects of family behavior. One aspect would be, for instance, the efficient allocation of family resources by an altruistic “head of household”, providing family members with “the benefits of consumption-smoothing over the life cycle and across uncertain states of the world that otherwise would require actions such as borrowing and lending or the purchase of market insurance” [Lillard and Willis (1997, p. 117)]. In this context, it is assumed that the more altruistic the household head, the greater the investments in children’s education through gifts, i.e., without requiring future repayment. As noted by Lillard and Willis (1997), however, it is hard to empirically distinguish between transfers that arise because of altruism and transfers that reflect, more properly, efficient contracting among family members.

Much of the recent work on family support transfers, however, uses the social exchange theory as the conceptual framework. Rather than consumption-smoothing motives, these alternative models of intra-family transfers are based on exchange. In other words, these studies address, in general, the reciprocity in support relationships between the elderly and their family [Lee (1985) and Antonucci (1990)]. In this context, the dual roles of individuals both as care providers and receivers are emphasized, as it is in the interest of the individuals to assume both roles in their social interaction. This kind of reasoning is assumed to hold in the case of the family support transfers addressed in this study, since the exchange of support between parents and children in most of Latin America seems to continue throughout the life cycle of the family members, as if there existed an intergenerational contract stipulating the respective roles of the family members at various stages. Traditional norms, both internalized and enforced by social pressures, seem to reinforce this situation by serving as a major motivating force for exchange of support between parents and children.

2.2 Empirical Background

Prior studies on support exchanges in Brazil or Latin America are scarce. A significant amount of empirical research, however, has already been developed in other regions, such as the United States and in East and Southeast Asia. In general, these studies have demonstrated the importance of the traits of both the parental and filial generations for family interaction. They also have shown the difficulties that a distance separating parents and children can impose on intergenerational interaction, and that needs increase as resources and health diminish with age. Having a number of children, on the other hand, has provided the elderly more opportunity to help and be helped.

The support given and received by both parents and children is often associated with marital status. In general, research shows that widowed aging parents

tend to receive more assistance from their adult children than do married parents. Rossi and Rossi (1990), in particular, found that widowed parents tend to receive more assistance than they give to their children, while married parents tend to give more assistance than they receive. Married sons, on the other hand, are less likely to be engaged in support exchanges with their elderly parents, while parents are more likely to provide financial assistance to previously married daughters [Hoyert (1991)]. Lang and Brody's (1983) study shows that middle-aged unmarried daughters gave three times more help to their elderly mothers than married daughters.

Besides marital status, other characteristics of the family are often associated with different patterns of support. The number and parental status of adult children are generally found to be important determinants of intergenerational exchange. The number of currently living children is expected to improve the likelihood of assistance exchange [Hoyert (1991)]. Adult children who are parents of small children, on the other hand, are more likely to be receiving help from their parents than adult children at any other life stage, and less likely to give assistance to their parents [Eggebeen and Hogan (1990)].

Gender of both elderly parents and adult children is another dimension which researchers have often linked with the likelihood of intergenerational support exchanges. From the perspective of the children, daughters of older parents have been reported as providing larger, more diverse amounts of assistance than do sons [Spitze and Logan (1990) and Coward and Dwyer (1990)]. Because elderly females are both unmarried more frequently than elderly males and less likely to have any source of income, they are, in general, more in need of assistance, particularly financial assistance, than elderly males [Rossi (1986) and Wolf and Soldo (1998)]. Moreover, women tend to be more emotionally attached to their children and, hence, they are expected to be more frequently involved in intergenerational support exchanges than elderly male [Shi (1993)].

The need for support has been closely related with decreased mobility [Worobey and Angel (1990) and Speare, Avery and Lawton (1991)]. Another common finding in the literature on family support of the elderly is that the balance of support exchange is likely to be affected by declines in resources, which both decrease the ability to provide, and increase the need for receiving assistance [Dowd (1980)]. Support transfers that involve caregiving to the elderly, on the other hand, are often reported as requiring close proximity. In these cases, it is important to take into account not only demographic but also geographic availability of adult children [Lin and Rogerson (1995)]. Several investigators have also reported that the geographic distance between parents and their offspring

is the fundamental determinant not only of the type of interaction but also of the frequency of interaction between them [Crimmins and Ingegneri (1990) and Kivett and Atkinson (1984)].

3 DATA AND METHOD

3.1 Data

The data used in the first part of the study to explore the informal support transfers involving the elderly in the city of São Paulo were drawn from a survey carried out in 1994. It was part of the “Longitudinal Study on an Elderly Population Residing in the Municipality of São Paulo”, a research project carried out by a multi-professional team from the Reference and Training Center of the Geriatrics and Gerontology Sector of the Paulista Medical School (Escola Paulista de Medicina) [Ramos (1992)].⁶

The Longitudinal study consisted in a four year follow-up of the elderly population (65 years and older) living in “Vila Clementino”, a neighborhood of São Paulo city with low levels of internal migration, where the population is mostly concentrated in the middle range of the socioeconomic scale. The project required that all elderly individual previously enumerated in the neighborhood should be interviewed in their homes on two occasions, at the beginning and at the end of the study.

Although the main objectives of the longitudinal study in São Paulo were epidemiological in character—i.e. to follow the biological and functional aging process of individuals living into the community—the instrument used to gather information took the necessary steps to include complimentary data on demographic and socioeconomic characteristics of the elderly, as well as several aspects related to different forms of informal support exchanges. The data used in the present study were drawn from the 1,668 interviews done in 1994 during the first phase of the household survey.

In the case of Fortaleza, the data were taken from a survey carried out between March and May 1997. This survey was part of a PhD dissertation [Saad (1998)],⁷ and consisted in applying a unique questionnaire to a random sample of about 9

6. This project received operational support from both the State Secretariat of Health, and the Social Service Department of the Catholic University [Pontifícia Universidade Católica (PUC)] of São Paulo. The technical support, on the other hand, came from both the Epidemiology of Aging Unit of the London School of Hygiene and Tropical Medicine, and the Center for the Study of Aging of Duke University.

7. Financial support for this survey was provided by both the Population Council and the Mellon Foundation. Operational and logistic support were provided by Faculdade de Saúde Pública do Estado do Ceará (Public Health College of the State of Ceará).

hundred individuals 65 years and older residents in the city of Fortaleza.⁸ An important feature of this questionnaire, besides gathering information related to the elderly themselves, was that it also gathered information related to each one of their living children, whether or not they were co-residents. Thus, in addition to formulating a data set with information about the elderly, the Fortaleza survey also yielded a data set with information about their respective 4,800 adult living children (18 years and older).

This information made it possible to assess the effect of demographic and socioeconomic characteristics of both older parents and adult children on the different dimensions of the informal support transfers between younger and older generations.

Although it has been possible to elaborate some sort of comparative analysis between São Paulo and Fortaleza, there are many factors that limit the feasibility of this kind of examination. The survey undertaken in São Paulo, for instance, was of more limited scope than the survey undertaken in Fortaleza in terms of intergenerational support transfers. For instance, it neither collected information about support given by the elderly nor identified the children who gave support to their parents. Therefore the comparative analysis between the two cities was restricted to the support received by the elderly, looking exclusively at the elderly individual's characteristics.

Another limitation that also imposes a handicap to the comparative analysis was the different sampling design relative to each survey. The surveys were carried out in different time periods, during which important economic changes took place. While the survey in Fortaleza for example was held in a time of economic stability, the survey in São Paulo was held in a time of huge inflation, making it difficult to establish comparable categorizations for income variables.

Finally, it is necessary to be aware of a few important conceptual differences. For instance, in the case of wealth and personal necessities, the survey in São Paulo recorded only exchanges between non co-resident elderly parents and adult children, while in Fortaleza the exchanges were recorded regardless of the residence status of the different generations.

Unlike the first part of this study, which specifically addresses the support transfers between older parents (65 years and over) and adult children, the second part of the study addresses informal support transfers involving persons 60 years

8. The design of the Fortaleza sample used a stratified statistical procedure in two stages, assuring its random nature. For further details, see Saad (1998).

and over with any other individual, regardless of family ties. The data used in the analysis were obtained from the SABE project, a strictly comparable cross-national survey on the health and well-being of older persons carried out simultaneously in seven urban centres in Latin America and the Caribbean—Bridgetown (Barbados); Buenos Aires (Argentina); São Paulo (Brazil); Santiago (Chile); Havana (Cuba); Mexico City (Mexico), and Montevideo (Uruguay). The samples were drawn in each of the seven cities and, thus, do not represent the entire population of their respective countries, in particular their rural populations. Despite this limitation, the data provide extremely useful information on the characteristics of a subpopulation that is growing very rapidly in different socioeconomic, demographic and political contexts within the Latin America and the Caribbean Region.

The survey was conducted during the period from October 1999 to December 2000, under the coordination of the Pan American Health Organization (PAHO) with the support of the Center for Demography and Ecology of the University of Wisconsin.⁹ In the case of the four cities considered in this study—São Paulo, Buenos Aires, Montevideo and Mexico City—the samples are based on the most recent update of either the Population Census or the National Household Survey and are all examples of a classical multistage clustered sampling procedure with stratification of the units at the highest levels of aggregation. The pooled sample size was of 5,873 individuals 60 years and over, being 2,143 living in São Paulo, 1,039 in Buenos Aires, 1,444 in Montevideo and 1,247 in Mexico City. Compared to the samples relative to São Paulo and Mexico City, the samples relative to Buenos Aires and Montevideo are considerably older and with larger proportions of women. It certainly reflects the fact that Argentina and Uruguay are at more advanced stages of the demographic transition than are Mexico and Brazil.

3.2 Method

Informal support in this study is measured by distinguishing three dimensions of exchange—material, functional and instrumental. Whenever possible, giving and receiving support were separately ascertained for each of the three dimensions of exchange. In the first part, material support includes either money or material resources such as food, clothes, and domestic utensils. In the case of Fortaleza, the elderly respondents were classified as exchanging material support if they or their spouses were reported giving or receiving a gift or a loan of any amount in the previous six months, including the payment of bills, medical insurance, education, rent or mortgage. In the case of São Paulo, the elderly respondents were classified

9. See Palloni and Peláez (2002) for further details on the SABE project.

as receiving material support (they were not asked about giving support) if they reported receiving regular (without specifying a previous period of time) amounts of money or material resources exclusively from non-co-resident children. In the second part of the study, where data from the SABE survey are considered, material support is restricted to the monetary assistance received by the older persons from both coresident and non-co-resident people.

The functional support received by the elderly was measured by the assistance they reported receiving in Activities of Daily Living (ADL) which include bathing, dressing, eating, laying down, sitting, standing up, walking, leaving the home, and using the bathroom.¹⁰ The elderly respondents were classified as receiving functional support if they reported receiving at least one of the ADL listed above. The instrumental support received by the elderly, on the other hand, was measured by the assistance they reported receiving in Instrumental Activities of Daily Living (IADL) which include preparing meals, shopping, doing light housework, doing heavy housework, and managing finances.¹¹ The elderly respondents were classified as receiving instrumental support if they reported receiving at least one of the IADL mentioned above.

Not only were the elderly respondents in Fortaleza asked to report any functional and instrumental support received, but they were also asked to report the support they provided. They were classified as giving functional support if they reported giving assistance in at least one activity of daily living (as previously defined) to an ill or impaired person in the previous six months. Similarly, they were classified as giving instrumental support if they reported giving assistance in activities such as taking care of children's or relative's household, shopping for children or relatives, taking care of children's or relative's business, and child-caring at any time during the previous six months.

For each support exchange with adult children reported by the elderly in Fortaleza, the child who gave or received support was identified among the entire kin set as if the children themselves were respondents of a survey reporting their engagement in support exchanges with their elderly parents. Therefore, the involvement (yes/no) of adult children in support transfers—material, functional and instrumental—with elderly parents in Fortaleza could be treated as the response variable in the models fitted to assess the influence of children's characteristics on such exchanges.

10. In the second part of the study, where SABE data is used, ADL exclude leaving home.

11. In the second part of the survey, where SABE survey data is used, IADL also include taking medicine.

The data analysis consisted in adjusting a series of multivariate models intended to identify the main factors associated with the informal support flows considered in the study. In order to estimate the effect of the selected covariates on the probability of involvement of older persons in material, instrumental, or functional support flows, multivariate models were adjusted by means of simple logistic regressions. In order to estimate the effect of selected covariates on the probability of adult children getting involved in support transfer flows with their elderly parents in the specific case of the city of Fortaleza, the multivariate models were adjusted through conditional logistic regressions.

The selection criteria for including covariates into the multivariate analysis were based on both the theoretical foundation and the empirical background discussed earlier. The set of covariates includes socioeconomic and demographic characteristics of the elderly and their adult children as well as indicators of the health status of the elderly and the geographic distance between generations.

The demographic characteristics of the elderly included in the models that estimate their involvement in support exchanges were age, sex, marital status, number of living children, and co-residence. Income, education and working status were selected as socioeconomic characteristics, while physical impairments were taken as an indicator of health status. All other variables, besides the dichotomous variables, were also subdivided into categories and then transformed into dummy variables.

The demographic characteristics of the adult children included in the models fitted for Fortaleza to estimate their involvement in support exchanges with elderly parents were age, sex, marital status and number of living children. The socioeconomic characteristic selected was the working status, while the place of residence relative to the elderly parents (same household, same neighborhood, another part of the city, another city of Ceará State, and outside of Ceará State) was taken as an indicator of the geographic distance between the two generations. Age and number of living children were included as continuous variables. All other characteristics were taken as categorical variables and then transformed into dummy variables.

4 INTERGENERATIONAL SUPPORT TRANSFERS: THE CASES OF SÃO PAULO AND FORTALEZA

The magnitude of support flows involving the elderly in São Paulo and Fortaleza can be assessed in Tables 1 and 2. The results highlight not only the high intensity of the support flow, particularly in the case of Fortaleza, but also the fundamental role adult children play in this process of support exchanges. More than 46% of the elderly in São Paulo reported having received at least one kind of support

TABLE 1
FORTALEZA: PERCENT OF ELDERLY INVOLVED IN SUPPORT EXCHANGES, ACCORDING TO THE TYPE AND DIRECTION OF SUPPORT—1997

Participation in the Support Flow	Transfer to or from		Elderly Involved (1) + (2)	Elderly not Involved (3)	Total (1) + (2) + (3)
	Children (1)	Other (2)			
Received Support					
Any	55.0	13.9	68.9	30.1	100.0
Material	37.8	5.9	43.7	56.3	100.0
Functional	15.4	12.2	27.6	72.4	100.0
Instrumental	26.0	14.9	40.9	59.1	100.0
Gave Support					
Any	34.0	18.5	52.5	47.5	100.0
Material	17.0	20.3	37.3	62.7	100.0
Functional	0.8	5.4	6.2	93.8	100.0
Instrumental	20.8	3.5	24.3	75.7	100.0
Gave and Received					
Any	19.4	15.0	34.4	65.6	100.0
Gave or Received					
Any	69.6	17.4	87.0	13.0	100.0

TABLE 2
SÃO PAULO: PERCENT OF ELDERLY WHO RECEIVED SUPPORT, ACCORDING TO THE TYPE OF SUPPORT—1994

Type of Support	Received from		Elderly Receiving (1) + (2)	Elderly not Receiving (3)	Total (1) + (2) + (3)
	Children (1)	Other (2)			
Any Support	30.0	16.3	46.3	53.7	100.0
Material	19.4	4.7	24.1	75.9	100.0
Functional	6.1	7.5	13.6	86.4	100.0
Instrumental	12.2	17.3	29.5	70.5	100.0

Note: Material support excludes co-resident individuals.

from adult children (Table 2), while in Fortaleza this proportion reaches almost 70% (Table 1). In the specific case of Fortaleza, the parent to children flow also proved to be of extreme importance. The proportion who declared giving support to children surpassed 52%. The proportion of elderly in Fortaleza who both provided and received support was around 34%, while the proportion of those who either provided or received support, totaled 87% (Table 1).

The type of support most frequently received from adult children by elderly parents in both São Paulo and Fortaleza was material, followed by instrumental and then functional. The type of support most frequently given by elderly parents in the specific case of Fortaleza was instrumental, followed by material. The proportion of elderly parents giving functional support to adult children was minimal. Particularly in the case of instrumental support, the proportions of elderly giving and receiving support were quite similar.

Interestingly, higher proportions of elderly in São Paulo declared having difficulty in performing activities of daily living compared to those in Fortaleza, in spite of the significantly higher proportions of elderly who got support from adult children in Fortaleza. Regarding functional activities, 38% of the sample in São Paulo reported some level of difficulty compared to 33% in Fortaleza; regarding instrumental activities the proportions reporting difficulty were of 46% in São Paulo and 44% in Fortaleza. While 47% of those elderly with difficulty in performing functional activities and 60% of those with difficulty in performing instrumental activities received support from at least one child in Fortaleza, only 16% and 26% of the elderly in São Paulo received such support, respectively for functional and instrumental activities.

4.1 Correlation between Dimensions of Support

In order to determine correlation between the different types of support given and received by the elderly parents and adult children, a set of correlation matrixes were calculated and are presented in Tables 3 for São Paulo and 4 for Fortaleza. As expected, receiving instrumental support in both places is highly correlated with receiving functional support, since those with difficulties in performing functional activities of daily living tend also to find difficulties in performing instrumental activities of daily living. In the case of Fortaleza, a slight correlation was also found between receiving material and instrumental support.

An important correlation between giving instrumental support and giving functional support to the elderly was found among the adult children, suggesting that the task of giving support to elderly parents may be concentrated among a

TABLE 3
SÃO PAULO: PEARSON CORRELATION COEFFICIENTS BETWEEN DIFFERENT TYPES OF SUPPORT RECEIVED BY ELDERLY PARENTS FROM ADULT CHILDREN—1994

Support Received by Elderly Parents	Types of Support		
	Material	Functional	Instrumental
Material	1.000		
Functional	0.021	1.000	
Instrumental	0.030	0.658***	1.000

Notes: Material support excludes co-resident individuals. Significance level: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (Prob > |R| under Rho = 0 / N=1,667).

TABLE 4
FORTALEZA: PEARSON CORRELATION COEFFICIENTS BETWEEN DIFFERENT TYPES OF SUPPORT, RELATIVE TO THE EXCHANGE FLOWS BETWEEN ADULT CHILDREN AND ELDERLY PARENTS—1997

Direction of Support	Support Received			Support Given		
	Material	Functional	Instrumental	Material	Functional	Instrumental
Relative to Parents						
Support Received						
Material	1.000					
Functional	0.056	1.000				
Instrumental	0.084*	0.404***	1.000			
Support Given						
Material	-0.037	0.009	0.015	1.000		
Instrumental	0.098**	0.009	-0.027	0.050		1.000
Relative to Children						
Support Received						
Material	1.000					
Instrumental	0.074***		1.000			
Support Given						
Material	-0.065***		0.015	1.000		
Functional	0.020		0.040**	0.034*	1.000	
Instrumental	0.026		0.035*	0.022	0.344***	1.000

Note: Significance level: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (Prob > |R| under Rho = 0 / N = 836 in the case of elderly parents and N = 4,800 in the case of adult children).

few members of the kin set. The high correlation between receiving material support and receiving instrumental support from parents among the children, on the other hand, suggests that also in the opposite direction—from parents to children—the support flow tends to be concentrated among a limited share of the kin set.

The significant negative correlation between giving material support and receiving material support among the children was, of course, expected, since those in a position to provide this kind of support do not in general need to receive support in return from their parents. Surprisingly, however, the lack of significant correlation between giving and receiving support among the elderly suggests that elderly parents get material support from those children in better financial conditions and at the same time give support for those in worse conditions.

Finally, the important positive correlation between giving functional and instrumental support and receiving instrumental support among the adult children not only provides evidence an intense process of intergenerational support exchange takes place in Fortaleza, but also suggests a bargain system exists between older and younger members of the families. Co-residence in this case represents a key factor. As it will be seen further in this analysis, most of the functional and instrumental support exchanges take place between co-resident generations.

4.2 Effects of Elderly Attributes on Support Exchanges with Adult Children in Fortaleza

The effects of select covariates on the propensity of an elderly individual being involved in intergenerational support transfers are estimated by the coefficients presented in Table 5, regarding each dimension of support—material, functional and instrumental—and for both directions of the flow—giving and receiving.¹²

Some of the results in Table 5 are consistent with findings commonly reported in studies on intergenerational transfers. One such result is the case of the inverse effect of income on material support transfers according to the direction of the flow—negative for receiving and positive for giving. The inverse effect of age on instrumental support transfers, which is positive for receiving and negative for giving, is also consistent with previous studies. Finally, similar to other places, females in Fortaleza are significantly more involved than males in functional and instrumental support exchanges.

Both the highly positive effect of physical impairment on receiving functional and instrumental support and the negative effect of education on receiving instrumental support were also expected results. Several other results, however, were not anticipated, and seem to be characteristic of Fortaleza and maybe of the Northeast region in general.

12. The functional dimension was not considered for support given by the elderly due to the rareness of this event.

Although widowhood and number of living children are consistently reported as important contributing factors for receiving support from adult children—especially material support in the case of the kin set size—neither marital status nor kin set size have any significant effect on support transfers between generations in Fortaleza.¹³

BOX 1

DEFINITIONS OF THE VARIABLES RELATED TO THE ELDERLY PARENTS USED IN THE MODELS OF SUPPORT TRANSFERS WITH ADULT CHILDREN

FEMALE	Coded 1 if respondent is a woman
AGE_2	Coded 1 if respondent is in the age group 70-74 years old
AGE_3	Coded 1 if respondent is in the age group 75 and more
MARIT_2	Coded 1 if respondent is widow(ed)
MARIT_3	Coded 1 if respondent is single or divorced
LC_2	Coded 1 if number of living children is 2
LC_3	Coded 1 if number of living children is 3
LC_4	Coded 1 if number of living children is 4 and more
NCHILD_2	Coded 1 if number of living children is 3 to 5
NCHILD_3	Coded 1 if number of living children is 6 and more
ARRANGE_2	Coded 1 if respondent lives with at least 1 unmarried child (but no married child)
ARRANGE_3	Coded 1 if respondent lives with at least 1 married child
INCOME_1	Coded 1 if respondent has no income
INCOME_3	Coded 1 if respondent lives in São Paulo and has an income between Cr\$ 300,001.00 and Cr\$ 1 million or if respondent lives in Fortaleza and has an income between 1 and 3 minimum wages
INCOME_4	Coded 1 if respondent lives in São Paulo and has an income greater than Cr\$ 1 million or if respondent lives in Fortaleza and has an income greater than 3 minimum wages
EDUC_1	Coded 1 if respondent had no formal education
EDUC_3	Coded 1 if respondent has surpassed "primario" level (more than basic education—usually more than 4 years of schooling)
HANDICAP	Coded 1 if respondent declared having any physical impairment
WORK	Coded 1 if respondent is currently working
FORT	Coded 1 if respondent lives in Fortaleza

13. As indicated by the interaction terms involving the variable FEMALE and the variables associated with higher numbers of living children in the first model of Table 5, the kin set size has a slightly significant positive effect on receiving material support only in the case of elderly females.

TABLE 5
FORTALEZA: ESTIMATED COEFFICIENTS FROM LOGISTIC REGRESSIONS OF ELDERLY PARENTS' PROPENSITY TO BE INVOLVED IN SUPPORT TRANSFERS WITH ADULT CHILDREN—1997

Characteristics of Elderly Parents	Support Received			Support Given	
	Material	Functional	Instrumental	Material	Instrumental
INTERCEPT	-0.715	-4.601***	-2.633***	-1.796***	-1.989***
FEMALE	-0.466	0.861***	0.409	-0.128	1.038***
AGE_2	0.161	0.174	0.031	-0.234	-0.232
AGE_3	0.066	0.614	0.988***	-0.241	-1.085***
MARIT_2	-0.134	0.378	0.082	0.154	0.254
MARIT_3	0.086	0.542	0.141	-0.897*	0.389
NCHILD_2	0.037	0.592	0.366	0.643	0.359
NCHILD_3	0.413	0.539	0.550	0.480	0.329
ARRANGE_2	-0.119	0.316	0.582*	-0.277	-0.071
ARRANGE_3	-0.418	1.041**	0.769**	0.138	0.151
INCOME_1	0.224	0.365	-0.625	-0.183	-0.010
INCOME_3	0.171	-0.163	-0.238	0.038	0.359
INCOME_4	-0.720**	-0.079	-0.534	0.577*	-0.117
EDUC_1	-0.428*	0.276	0.273	0.002	-0.550**
EDUC_3	-0.288	0.318	-1.116**	0.373	-0.121
HANDICAP	-0.015	1.414***	0.975***	-0.302	0.265
WORK	-0.370		-1.473**	0.289	-0.001
FEMALE*NCHILD_2	1.246*				
FEMALE*NCHILD_3	1.371*				
AGE_3*ARRANGE_2		1.033*			

Notes: The reference category for age is 65-69; for marital status is "married"; for the number of living children is "1 or 2"; for living arrangement is "not living with children"; for income level is "until 1 minimum wage"; and for education is "complete or incomplete basic education". See Box 1 for variable definitions.

Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001.

Economic activity, on the other hand, which is generally associated with greater financial and physical autonomy of the elderly, did not affect support transfers in the expected way. Although the negative effect of being in the labor force on receiving instrumental support still makes the economic activity a good

predictor of physical autonomy,¹⁴ the lack of a significant effect on receiving material support suggests a lack of association between work and financial autonomy of the elderly in Fortaleza. This result implies that income coming from economic activity does not make the elderly who work any financially better off than those who do not work.¹⁵ In fact, the average income of older persons with paid activities interviewed in this survey—most of them retired or survivors' beneficiaries—was only slightly superior to that of those who did not work.¹⁶ This is likely related to the fact that elderly who work in Fortaleza are mostly engaged in low paid jobs, if not underemployed in the informal sector of the economy.

However, data for Brazil as a whole presented in other chapters of this book,¹⁷ indicates that income from work significantly contributes to increase the total income of older pensioners and retirees. In general, those who work are in better economic situation compared to those who do not work; and furthermore, their income from job plays an important role in the family income.

Another unexpected result found in Table 5 refers to the negative effect of having no education in receiving material and giving instrumental support. Although discrepancies in educational attainment between generations are expected to represent an obstacle for cohabitation, the reasons why it also represents a barrier for intergenerational support exchanges in Fortaleza, particularly material, still remain uncertain.¹⁸

The effect of the elderly's household structure on their propensity to give and receive support from children proved to be of extreme importance in the case of Fortaleza. As stated earlier in this chapter, the number of living children has no significant effect on support transfers, particularly receiving functional and instrumental support. In these cases, what seems to count the most is the co-residence with a child. The probability of receiving instrumental and functional support is significantly greater for those elderly living with children than for those not living with children.

14. The working status of the elderly was not included into the model relative to functional support since receiving this kind of support and being working are practically exclusive categories.

15. A model (not shown) similar to the first one in Table 5 was adjusted, excluding the variables associated to income. Even so, the effect of the variable "WORK" on the probability of receiving support from an adult child remained statistically insignificant.

16. In the case of elderly men with adult children, the average monthly income declared by those who worked was R\$ 424.00, as compared to R\$ 418.00 for those who did not work. In the case of elderly women, these figures were, respectively, R\$ 207.00 and R\$ 199.00.

17. See, for example, the chapters by Wajman, Oliveira and Oliveira and Camarano et al.

18. Unfortunately the available data do not allow to explore explanations for this finding. It would probably demand the use of a more qualitative instrument for collecting data.

In the case of receiving functional support, it is important to notice the differences in the effect of co-residence between married and unmarried children. Co-residence with married children generally implies some sort of functional transfer to the elderly at any age of the elderly (note that age has no significant effect on receiving functional support). The effect of co-residence with unmarried children on receiving functional support, on the other hand, becomes statistically significant only for elderly in the older age groups as indicated by the interaction term between age and household structure in the second model of Table 5. This result is also consistent with the findings of a previous study on older persons' living arrangements in the Northeast region [Saad (1996)], in which co-residence between elderly parents and unmarried children tended to be associated with a specific stage of the normal life cycle rather than preferences or needs of the elderly. Of course, this association becomes weaker as the parent ages, at a time when needs start playing a more decisive role in the configuration of their living arrangements.

4.3 Effects of Children's Attributes on Support Exchanges with Elderly Parents in Fortaleza

The effects of select covariates on the propensity of adult children to be involved in support transfers with elderly parents are estimated by the coefficients presented in Table 6, regarding each dimension of support—material, functional and instrumental—and for both directions of the flow—giving and receiving.¹⁹

As in the case of the elderly, in which females proved to be involved more frequently than males in functional and instrumental support exchanges with adult children, daughters, among the children, were found to be involved more frequently than sons in functional and instrumental support exchanges with elderly parents. Also similar to the case of the elderly, transfers of material support from the stand point of the children were not affected by sex.

The small effect of the age of the children on their engagement in support transfers with their elderly parents suggests that it is a process that lasts for most of their adult life. The only exceptions refer to the chances of giving material support, which slightly increases with the age of the children, and receiving instrumental support which decreases slightly with the age of the children (and consequently with the age of the parent). These effects, however, were expected since, in the first case, the older the children are the greater their chances of having attained better economic conditions and being in a position to give material support. In the second case, they were expected because, as shown in the previous section, the older the elderly the lower their capacity to give instrumental support.

19. The functional dimension was not considered for support received by the children due to the rareness of this event.

TABLE 6
FORTALEZA: ESTIMATED COEFFICIENTS FROM CONDITIONAL LOGISTIC REGRESSIONS OF ADULT CHILDREN'S PROPENSITY TO BE INVOLVED IN SUPPORT TRANSFERS WITH ELDERLY PARENTS—1997

Characteristics of Adult Children	Support Given			Support Received	
	Material	Functional	Instrumental	Material	Instrumental
DAUGHTER	0.107	0.818**	0.858***	-0.139	3.234**
AGE	0.018*	0.005	0.023	-0.017	-0.052*
MARIT_1	-0.055	-0.010	0.322	-1.200***	-3.926**
MARIT_3	-0.391	-0.573	0.137	-0.086	0.522
NCHILD	-0.032	-0.013	-0.094	0.047	0.194*
WORK	1.290***	-0.465	-0.387	-0.445*	0.229
RESID_1	-0.593**	2.055***	1.645***	-0.121	0.576
RESID_3	-0.105	-0.084	-0.454	-0.217	-0.845**
RESID_4	-0.754**			-0.079	
RESID_5	0.020			-1.298**	
DAUGHTER*AGE					-0.064*
MARIT_1*AGE					0.105**
MARIT_1*RESID_5				2.923***	
NCHILD*WORK	-0.153*				
NCHILD*RESID_1					0.539**

Notes: The reference category for marital status is "married"; for residence is "same neighborhood". See Box 2 for variable definitions.

Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001.

**BOX 2
 DEFINITIONS OF THE VARIABLES RELATED TO THE ADULT CHILDREN USED IN THE MODELS OF SUPPORT TRANSFERS WITH THEIR ELDERLY PARENTS**

DAUGHTER	Coded 1 if child is a woman
AGE	Age of the child in single years
MARIT_1	Coded 1 if child is single
MARIT_3	Coded 1 if child is widow(ed) or divorced
NCHILD	Number of child's living children (elderly's grandchildren)
WORK	Coded 1 if child is currently working
RESID_1	Coded 1 child co-resides with elderly parent(s)
RESID_3	Coded 1 if child lives in other neighborhood of Fortaleza
RESID_4	Coded 1 if child lives in other city of Ceará State
RESID_5	Coded 1 if child lives out of Ceará State

Note: Child attributes were coded for each surviving child 18 years and older reported by the elderly respondents.

The lack of a significant effect of marital status of the children on their propensity to give support to parents was a surprising result. Given the availability of single children in Fortaleza—resulting from the high fertility rate prevalent in the past in the Northeast region—and taking into account that married children usually have additional concerns relative to their own families, one would expect a positive effect of being single on the probability of giving support to elderly parents.

Not only do the married children give more support than expected, but they also receive support much more frequently than single children. In the case of instrumental support, this result could be an indication that a great share of this kind of support refers to taking care of grandchildren. This hypothesis is reinforced by the important positive effects of both the number of children and the interaction term between the number of children and co-residence on the chances of getting instrumental support in the last model presented in Table 6. In the case of the material support, on the other hand, the result clearly points toward a situation in which the income of the elderly has become an important asset for their adult children, in spite of the needs and the poor socioeconomic conditions of the elderly themselves.

As expected, children who work are significantly more likely to give material assistance to their parents and slightly less likely to receive material support from them. The chances of the adult children who work providing material support to elderly parents, however, decline substantially for each additional child of their own. It is clearly expressed by the negative effect of the interaction term between economic activity and number of living children on giving material support in the first model presented in Table 6. These results could reflect a form of competition between grandparents and grandchildren for the financial resources of adult individuals.

The residence location of the children have an impact on the probability of giving and receiving support. This idea reinforces the conclusions from the previous section regarding the importance of physical proximity for certain kinds of support to take place. Children who co-reside with elderly parents are significantly more likely to give them functional and instrumental support than those who live apart. If one considers the important negative effect of co-residence on giving material support, one could conclude that material support would represent a substitute for co-residence or, inversely, co-residence would substitute for material support. The effect of co-residence, on the other hand, seems not to affect the children's probability of receiving support, except for the previously mentioned case in which the adult children have children of their own.

A final and surprising result from the models in Table 6 refers to the lack of geographic barriers in the case of intergenerational transfers of material support involving the elderly in Fortaleza. Living out of Ceará State does not decrease the probability of adult children providing material support to their elderly parents. In this case, the support refers to monetary remittances from children who have left the state of Ceará to live and work in other parts of the country, but who still maintain ties with their original families. Also the inverse direction of the flow seems not to face geographic barriers. As indicated by the interaction term in the fourth model of Table 6, the chances of single (but not married) children receiving material support from elderly parents do not decrease substantially because they live out of Ceará State. This result suggests that some of the younger children who leave the state, but have not been successful in their new location, can still count on provisional monetary assistance from their parents left in Fortaleza.

Some of the findings in this section could be seen as reinforcing the idea of decreasing availability of informal support for the elderly in the future, due to the important demographic and socioeconomic transformations currently being experienced by the Brazilian society. In fact, the results show that a substantial share of the support received by the elderly is provided by female co-resident children. The time spent by adult women in caring for their elderly parents, however, is supposed to decline sharply as women become more and more engaged in economic activity outside of home. On the other hand, the sharp and countrywide decline of fertility rates will certainly reduce the availability of children for future generations of elderly people, decreasing the chances of intergenerational co-residence. Since the chances of getting functional and instrumental support proved to be highly associated with co-residence, one could expect a reduction in the availability of this kind of support to the elderly.

However, the same factors described above as inhibitors of intergenerational transfers, i.e. the increasing female participation in the labor force and the decreasing number of children, also tend to favor exchanges between generations through other mechanisms. The probability of giving material support to elderly parents will substantially increase among females because they work. As the results show, material support is positively associated with the economic activity of the children and does not depend on physical proximity. On the other hand, declining fertility will mean further advantages for the elderly in their competition with grandchildren for the financial resources of their adult children.

4.4 Effects of Elderly Attributes on the Probability of Receiving Support from Adult Children in São Paulo

The effects of selected covariates on the probability of an elderly parent to receive support from adult children in São Paulo are estimated by the coefficients presented in Table 7, regarding each one of the support dimensions considered in this study—material, functional and instrumental.

More frequently than was observed in Fortaleza, the effects of the selected covariates on support transfers in São Paulo correspond with the findings commonly reported in previous research. The only unexpected result was the lack

TABLE 7
SÃO PAULO: ESTIMATED COEFFICIENTS FROM LOGISTIC REGRESSIONS OF ELDERLY PARENTS' PROPENSITY TO RECEIVE SUPPORT TRANSFERS FROM ADULT CHILDREN—1994

Characteristics of Elderly Parents	Support Received		
	Material	Functional	Instrumental
INTERCEPT	-1.209***	-7.947***	-4.912***
FEMALE	-0.348	0.906*	0.939***
AGE_2	0.058	0.859	-0.078
AGE_3	0.307	2.868***	1.463***
MARIT_2	0.810***	1.255***	0.752**
MARIT_3	-0.168	0.312	0.358
LC_2	0.769***	0.325	0.036
LC_3	0.955***	1.016**	0.628*
LC_4	1.590***	0.788*	0.452
ARRANGE_2	-1.187***	1.702***	1.684***
ARRANGE_3	-0.993**	1.557***	1.730***
INCOME_1	-0.079	0.559	-0.216
INCOME_3	-0.607**	-0.001	-0.368
INCOME_4	-1.741***	-0.746	-0.448
EDUC_1	0.035	0.114	0.245
EDUC_3	-0.367*	-0.362	-0.527*
WORK	-0.286		-0.150
MARIT_2*ARRANGE_3	-1.163*		

Notes: The reference category for age is "65-69"; for marital status is "married"; for the number of living children is "1"; for living arrangement is "not living with children"; for income level is "until Cr\$ 300,000.00"; and for education is "complete or incomplete basic education". See Box 1 for variable definitions.

Significance level: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

of importance of the economic activity of the elderly on their propensity to receive support. As stated in the case of Fortaleza, economic activity is normally a proxy for physical and financial autonomy and, for this reason one would expect a decrease in the probability of receiving material and instrumental support among the elderly who work. As is the case of Fortaleza, however, most elderly who work in São Paulo are probably engaged in low paid jobs, maybe in the informal sector of the economy.

Consistent with previous findings, on the other hand, elderly females in São Paulo are more likely than males to receive functional and instrumental support, while widows are more likely than married individuals to receive any kind of support. Age has a positive effect on receiving functional and material support, while income has a negative effect on receiving material support. The number of children is positively associated with the probability of receiving support, especially material support, while education is negatively associated with the chances of receiving material and instrumental support.

An important finding in São Paulo refers to the highly significant effect of co-residence on the probability of receiving functional and instrumental support from adult children. This result underscores the crucial importance of physical proximity for the realization of functional and instrumental support transfers from adult children to the elderly, which was also found in the case of Fortaleza. Interestingly, the effect of co-residence on receiving material support in São Paulo is negative. Although inferences cannot be made regarding an eventual substitution effect between material support and co-residence in the case of São Paulo,²⁰ it seems clear that co-residence with a child inhibits material support from other non co-resident children. As indicated by the substantial negative effect of the interaction term included in the model for receiving material support in Table 7, widowed elderly also have reduced chances of receiving material support when co-residing with children.

4.5 Between-City Analysis of the Support Transfers from Adult Children to Elderly Parents in São Paulo and Fortaleza

Taking into account the limitations of the data for comparative purposes previously discussed in this chapter, the net effects of the city variable²¹ on support received by the elderly from adult children are estimated by the coefficients presented in Table 8.

20. Unlike the Fortaleza survey, the survey in São Paulo did not take into account the material support eventually received by the elderly from co-resident children. Only material support received from non co-resident children were taken into consideration.

21. Refers to the variable FORT defined in Box 1.

TABLE 8
ESTIMATED COEFFICIENTS FROM LOGISTIC REGRESSIONS OF ELDERLY PARENTS' PROPENSITY TO RECEIVE SUPPORT TRANSFERS FROM ADULT CHILDREN—SÃO PAULO (1994) AND FORTALEZA (1997), SAMPLES POOLED TOGETHER

Characteristics of Elderly Parents	Support Received		
	Material	Functional	Instrumental
INTERCEPT	-1.891***	-7.172***	-4.698***
FORT	0.556***	2.310***	2.323***
FEMALE	0.161	0.854***	1.039***
AGE_2	0.143	0.382	0.019
AGE_3	0.313*	2.529***	1.549***
MARIT_2	0.700***	1.268***	0.350*
MARIT_3	0.124	0.520	0.201
LC_2	0.893***	0.418	0.147
LC_3	1.010***	0.633*	0.507*
LC_4	1.653***	0.598*	0.445*
ARRANGE_2	-0.678***	1.269***	1.717***
ARRANGE_3	-0.890***	1.327***	1.766***
INCOME_1	0.010	0.484	-0.460*
INCOME_3	-0.242	-0.150	-0.362*
INCOME_4	-1.177***	-0.400	-0.560**
EDUC_1	-0.255*	0.130	0.250*
EDUC_3	-0.331*	-0.189	-0.853***
WORK	-0.193		-1.144**
MARIT_2*ARRANGE_2	-0.473*		
MARIT_2*ARRANGE_3	-0.777*		
FORT*LC_3	0.497*		
FORT*AGE_3		-1.137**	-0.562
FORT*MARIT_2		-0.869*	
EDUC_3*WORK			1.608*
FORT*FEMALE			-0.711*
FORT*ARRANGE_2			-1.172***
FORT*ARRANGE_3			-1.013**

Notes: The reference category for age is "65 to 69"; for marital status is "married"; for the number of living children is "1"; for living arrangement is "not living with children"; for income level is "until Cr\$ 300,000.00" if living in São Paulo or "until 1 minimum wage" if living in Fortaleza; and for education is "complete or incomplete basic education". See Box 1 for variable definitions.

Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001.

According to these results, the probability of receiving support of any kind is significantly higher for the elderly in Fortaleza than in São Paulo, even after controlling for the socioeconomic and demographic covariates. It would suggest that either cultural norms regarding parent-filial obligations are more influential in Fortaleza than in São Paulo or family ties are weaker in São Paulo than Fortaleza.

Of particular interest in Table 8 is the large number of interactions involving the city-variable, which expresses how distinctly some covariates affect intergenerational support transfers in São Paulo and Fortaleza. In general, these interactions translate a situation in which attributes that proved to be important predictors of the elderly's involvement in support transfers with children in São Paulo have practically no effect in Fortaleza. That is the case, for instance, of being older and widowed. While in São Paulo they constitute crucial pre-conditions for receiving functional support, in Fortaleza they have practically no explanatory power.²² The advantage of elderly female over the male in receiving instrumental support, on the other hand, seems to be less accentuated in Fortaleza than in São Paulo.²³ Co-residence with children also has effect significantly greater in São Paulo than Fortaleza on the elderly's probability of receiving instrumental support.²⁴

What all these findings suggest is that support transfers from adult children to elderly parents are much more widely spread within the Fortaleza society than within the São Paulo society. This situation reinforces the idea of the differential effect of cultural norms across the two societies. It also points towards the need for further research on this topic to explore the effect of other factors that were not included in this analysis.

5 INFORMAL SUPPORT TRANSFERS IN LATIN AMERICA: THE CASES OF SÃO PAULO, BUENOS AIRES, MONTEVIDEO AND MEXICO CITY

Based on the considerable number of living children and of co-residents, two of the most important sources of support for the older population, data from SABE surveys indicate that, in general, older persons in Latin America have an extensive support networks [Saad (2003)]. Table 9 outlines the process of informal support transfers involving older individuals who reside in large Latin American urban centres. Besides illustrating the strong intensity of this practice, the data clearly portrays support transfers as a two-way process, where older persons not only

22. See the negative effect of the interaction terms involving the city-variable with age and marital status in the second model of Table 8.

23. See the negative effect of the interaction term between the city-variable and female in the third model of Table 8.

24. See the negative effect of the interaction terms between the city-variable and the variables that indicate co-residence with married and unmarried children in the third model of Table 8.

TABLE 9
**PERCENT OF OLDER PERSONS WHO RECEIVED AND WHO PROVIDED INFORMAL SUPPORT OF
 DIFFERENT KINDS, SELECTED SABE SAMPLES—1999-2000**

Kind of Support	Received Support				Provided Support			
	São Paulo	Buenos Aires	Montevideo	Mexico City	São Paulo	Buenos Aires	Montevideo	Mexico City
Money	61	59	65	74	49	42	62	39
Service	78	68	67	64	64	60	57	50
Goods	65	45	53	54	56	41	50	41
Company	20	29	30	9	7	9	12	2
Child Care	-	-	-	-	23	23	25	18
Other	35	14	15	10	34	18	18	9
Any	93	85	88	90	88	79	86	76

Source: SABE Surveys.

receive but also provide a substantial amount of informal support. Taking into account the different forms of support considered in the SABE survey, the proportion of older persons who claimed to have received at least one type of support varies from 85% in Buenos Aires to 93% in São Paulo. The proportion who declared having provided at least one type of support, on the other hand, varies from 76% in Mexico City to 88% in São Paulo.

The most frequently interchanged kinds of support are those involving money and services. With a few exceptions, in all cities considered in the study, both the proportion of older persons who received these kinds of support is above 60% and the proportion of those who provided this type of support is above 40%. The proportions of older persons who provided and who received support in goods also proved to be important in all contexts, as well as, in a less extent, the proportion of those who received support in the form of companionship (Table 9).

Given the important role that financial support usually plays in the well-being of both older persons and their families, the analysis in this section focuses with particular attention on this dimension of informal support, trying to identify the main factors associated with the exchange of financial support in the different locations covered by the study. The other dimension that deserved special attention in this section refers to support received by older persons in activities of daily living, a factor directly linked to the quality of life of an important segment of the elderly population in Latin America.

5.1 Support in Activities of Daily Living

The Activities of Daily Living (ADL) in this study included: walking across a room, bathing, dressing, eating, and using the toilet. Besides these basic activities, the analysis also considered a group of Instrumental Activities of Daily Living (IADL) which included: preparing a hot meal, managing one's own finances, shopping for groceries, taking medications, and doing light housework.

Table 10 shows that the proportion of older persons who reported having difficulties in performing any ADL is quite similar in all samples, varying from 17% in Buenos Aires and Montevideo to 19% in São Paulo and Mexico City. The proportions are generally larger and more diversified for older persons who reported difficulty in performing any IADL. In this case, the proportions vary from 26% in Montevideo to 40% in São Paulo.

Among older persons who reported having difficulty in performing ADL, the proportion of those who received support is significantly low, especially if compared to the proportion who received support in IADL among those who reported having difficulty in performing that kind of activities. In both cases, there are noticeable differences between cities. For example, the proportion of older persons who received support in ADL in São Paulo (32%) is almost double the corresponding proportion in Montevideo (17%). While 92% of older persons with difficulty in performing IADL received support in São Paulo, only 65% did so in Buenos Aires.

TABLE 10
PERCENT OF OLDER PERSONS WHO REPORTED DIFFICULTY AND WHO RECEIVED SUPPORT IN PERFORMING ACTIVITIES OF DAILY LIVING (ADL) AND INSTRUMENTAL ACTIVITIES OF DAILY LIVING (IADL), SELECTED LATIN AMERICAN CITIES—1999-2000

Activities	São Paulo	Buenos Aires	Montevideo	Mexico City
ADL ^a Reported Difficulty ¹	19	17	17	19
Received Support ²	32	27	17	28
IADL ^b Reported Difficulty ¹	40	32	26	38
Received Support ²	92	65	78	84

Source: SABE Surveys.

¹ Among those in the total sample.

² Among those who reported difficulty.

^a Includes the following activities: walking across a room; dressing; bathing; eating; and using the toilet.

^b Includes the following activities: preparing a hot meal; managing one's own money; shopping for groceries; taking medications; and doing light housework.

The results of the multivariate analysis are summarised in Tables 11 and 12. Table 11 presents, separately for each city and for the set of four samples pooled together,²⁵ the effect of selected demographic and socioeconomic variables on the probability of reporting difficulties in ADL and IADL. Table 12 presents, separately for married and non-married older persons who reported having difficulty in performing ADL and IADL, the effect of the selected demographic and socioeconomic variables on the probability of receiving support. In both tables, odds ratios greater than one indicate a direct net effect of the variable (in the same direction and controlling by the effect of the remaining variables) on the risk of having difficulties in ADL and IADL (Table 11) or on the probability of receiving support in these activities (Table 12). Odds ratios lower than one indicates an inverse net effect of the variable on such risks and probabilities.

Although the risk of having difficulty in performing ADL and specially IADL is significantly higher among older women than among older men (Table 11),²⁶ the likelihood of receiving support among those who reported difficulty does not differ significantly between men and women (Table 12). The only exception refers to the considerably higher probability among older married men than among older married women to receive support in ADL, which seems to reflect the fact that among married older persons, the wife provides support in ADL to the husband much more frequently than the other way around.

For both ADL and IADL the risk of having difficulty as well as the probability of receiving support increases significantly with age. Curiously, though, being married seems to operate as a protection factor against limiting health conditions among older persons, as indicated by the considerable decrease in the likelihood of reporting difficulty in either ADL or IADL among those who are married, particularly in the case of Buenos Aires (Table 11). Among those who have difficulty, being married does not affect significantly the likelihood of receiving those kind of support (Table 12).

As expected, the size of the potential support network (number of living children and of co-residents) only slightly affects the risk of reporting difficulty in ADL and IADL among older persons (Table 11). The availability of a greater support network, however, tends to increase substantially the probability of receiving support among non-married older persons, particularly in IADL. In the

25. In this case, the model includes an additional variable that refers to the city of residence of the older person, in order to identify differences that remain between cities, even after controlling by the effect of the remaining variables.

26. It can be due, in part, to the fact that women tend to report their health conditions more accurately than men.

TABLE 11
ODDS RATIOS FROM LOGISTIC REGRESSIONS OF OLDER PERSONS HAVING DIFFICULTY IN PERFORMING ACTIVITIES OF DAILY LIVING (ADL) AND INSTRUMENTAL ACTIVITIES OF DAILY LIVING (IADL) ON SELECTED COVARIATES, SELECTED LATIN AMERICAN CITIES—1999-2000

Covariants ¹	Difficulty in ADL ²					Difficulty in IADL ³				
	São Paulo	Buenos Aires	Montevideo	Mexico City	Total Sample	São Paulo	Buenos Aires	Montevideo	Mexico City	Total Sample
Sex (Male)										
Female	1.32*	1.29	1.60**	0.91	1.26**	2.22***	1.92***	2.23***	1.97***	2.08***
Marital (Unmarried)										
Married	0.91	0.57**	0.86	0.86	0.83*	0.80	0.53**	0.75	1.03	0.78**
Age Group (60-64)										
65-69	1.05	1.77*	0.99	1.45	1.23*	1.93***	1.57*	1.10	1.77**	1.65***
70+	2.62***	4.51***	2.19***	3.37***	2.89***	5.86***	4.79***	3.22***	5.58***	4.96***
Living Children (1-2)										
None	0.80	0.92	0.91	1.19	0.90	0.78	1.21	1.30	1.11	1.03
3-4	1.16	0.91	1.23	0.74	1.05	1.03	0.99	1.22	0.89	1.05
5+	1.01	0.46*	1.00	1.11	1.02	1.07	1.02	1.29	1.18	1.21*
Co-residents ⁴ (1)										
None	0.88	0.74	1.01	0.79	0.88	0.91	0.67*	1.09	0.75	0.87
2+	1.31*	1.15	1.07	1.09	1.19	1.28	0.94	1.17	1.21	1.18*

(continue)

(continuation)

Covariants ¹	Difficulty in ADL ²				Difficulty in IADL ³					
	São Paulo	Buenos Aires	Montevideo	Mexico City	Total Sample	São Paulo	Buenos Aires	Montevideo	Mexico City	Total Sample
Education (Primary)										
None	1.11	3.96***	1.19	1.11	1.17	1.86***	4.10***	1.95*	1.32	1.76***
Secondary	0.64*	0.73	0.50***	0.56*	0.58***	0.59**	0.85	0.50***	0.59*	0.62***
Income ⁵ (None)										
Has	0.78	0.61*	0.82	0.53***	0.68***	0.68*	0.61*	0.68	0.55***	0.63***
City (São Paulo)										
Buenos Aires					0.96					0.86
Montevideo					0.86					0.40***
Mexico City					0.80*					0.61***
N (Observations)	2114	1030	1426	1202	5772	2114	1030	1426	1202	5772

Source: SABE Survey.

Significance levels: * p < 0.05; ** p < 0.01; *** p < 0.001.

¹ The reference category for each covariate appears between parenthesis.

² An older person was classified as having difficulty in performing Activities of Daily Living (ADL) if reporting difficulty in at least one of the following activities: walking across a room; dressing; bathing; eating; and using the toilet.

³ An older person was classified as having difficulty in performing Instrumental Activities of Daily Living (IADL) if reporting difficulty in at least one of the following activities: preparing a hot meal; managing one's own money; shopping for groceries; taking medications; and doing light housework.

⁴ For unmarried older persons, no co-residents means living alone; for married older persons it means living with spouse only.

⁵ Excludes financial support provided by family or friends.

TABLE 12
ODDS RATIOS FROM LOGISTIC REGRESSIONS OF INFORMAL SUPPORT RECEIVED BY MARRIED AND UNMARRIED OLDER PERSONS IN ACTIVITIES OF DAILY LIVING (ADL)¹ AND INSTRUMENTAL ACTIVITIES OF DAILY LIVING (IADL)² ON SELECTED COVARIATES, SELECTED LATIN AMERICAN CITIES—1999-2000

Covariates ³	Support Received in ADL			Support Received in IADL		
	All	Married	Unmarried	All	Married	Unmarried
Sex (Male)						
Female	0.84	0.49**	1.18	0.95	0.86	1.06
Marital (Unmarried)						
Married	1.21			1.32		
Age Group (60-64)						
65-69	1.53	1.69	1.24	1.41	1.91*	1.17
70+	3.14***	2.45**	3.00***	2.93***	2.82**	2.27**
Living Children (1-2)						
None	0.81	0.99	0.85	0.92	0.57	1.11
3-4	0.97	1.15	0.84	1.47*	1.35	1.34
5+	1.02	0.95	1.18	2.05***	1.19	2.84***
Co-residents ⁴ (1)						
None	0.37***	0.70	0.19***	0.50***	0.56	0.49**
2+		1.05	0.93	1.33	1.16	1.56
Education (Primary)						
None	1.27	1.34	1.03	1.79**	1.22	1.50
Secondary	0.96	0.85	1.14	1.03	1.69	1.12
Income ⁵ (None)						
Has	0.87	0.61	0.77	1.25	1.07	0.97
City (São Paulo)						
Buenos Aires		0.93	0.65		0.17***	0.27***
Montevideo		0.93	0.68		0.26***	0.55*
Mexico City		0.88	0.54*		0.51*	0.27***
N (Observations) ⁶	1153	475	678	1722	661	1061

Source: SABE Survey.

Significance levels: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

¹ Includes the following activities: walking across a room; dressing; bathing; eating; and using the toilet.

² Includes the following activities: preparing a hot meal; managing one's own money; shopping for groceries; taking medications; and doing light housework.

³ The reference category for each covariate appears between parenthesis.

⁴ For unmarried older persons, no co-residents means living alone; for married older persons it means living with spouse only.

⁵ Excludes financial support provided by family or friends.

⁶ Refers to older persons who reported difficulty in performing at least one ADL or IADL.

case of the ADL, co-residence, more than kin size, seems to be the main factor that assures the provision of support, as shown by the considerable decrease in the likelihood of receiving support among non-married older persons who live alone (none co-residents) (Table 12).

Among married older persons, on the contrary, the probability of receiving support in either ADL or IADL is not affected by the magnitude of the potential support network. For example, while having five or more living children increases the odds ratio of receiving support in IADL by almost three times as compared to having one or two among unmarried older persons (odds ratio = 2.84), the corresponding increase among the married ones is of only 19% (odds ratio = 1.19). Likewise, while the absence of co-residents decreases by over 80% the odds ratio of receiving support in ADL among unmarried older persons (odds ratio = 0.19), the corresponding decrease among married ones is of only 30% (odds ratio = 0.70). This fact indicates that spouses, in the case of married older persons, are the main providers of support in ADL and IADL.²⁷

Socioeconomic characteristics proved to somehow affect the health conditions of older individuals, as those who can generate their own income and, especially, those with higher levels of education are at a considerably lower risk of reporting difficulty in performing either ADL or IADL (Table 11). Nonetheless, better socioeconomic conditions among those who reported having difficulty in performing these activities does not significantly change their likelihood of receiving support (Table 12).

Once demographic and socioeconomic variables are statistically controlled in the multivariate models, only a few differences still remain between cities in terms of both the risk of presenting difficulties and the likelihood of receiving support in ADL. The differences among cities, however, seem to be more important in the case of IADL. Taking São Paulo as a reference, the probability of reporting difficulty in performing IADL is practically the same among older persons residing in Buenos Aires, but significantly lower among older persons residing in Montevideo and Mexico City (Table 11). Among those who reported having difficulty in IADL, the likelihood of receiving support was found to be significantly greater in São Paulo than in any other of the remaining cities, for both married and unmarried older persons (Table 12).

27. If one considers that the likelihood of receiving such types of support is significantly higher among married men than among married women (as previously showed in this analysis), this result corroborates the important role that wives play in the provision of basic support for older men.

5.2 Financial Support Transfers

The results of the multivariate analysis involving financial support transfers are presented in Table 13. Similarly to the previous analysis, odds ratios higher than one indicate a direct effect (positive) of the demographic and socioeconomic variables on the probability of receiving or providing financial support, whereas odds ratios lower than one indicate opposite effect (negative) of the variables.

Compared to older men, older women present higher probability of receiving and lower probability of providing financial support. For both men and women, being married tends to increase significantly the participation of older persons in the financial support transfers, as the probability of both receiving and providing financial support is significantly higher among married older persons than among the unmarried. Age has an important effect in only one dimension of the financial transfers. The likelihood of providing financial support tends to decrease at older ages, particularly in the case of Mexico City. The likelihood of receiving financial support, on the other hand, is not affected by the age of the older person (Table 13).

The likelihood of receiving financial support decreases considerably if the older person has no living children. The absence of children, however, does not seem to affect significantly the likelihood of the older person to give financial support. Cohabitation, in contrast, tends to significantly increase the financial support flow, as suggested by the significantly low values of the odds ratios relative to older persons in households without co-residents (Table 13).

Financial support transfers are considerably affected by socioeconomic characteristics of older persons. Both their level of education and their financial conditions are directly associated with their probability of providing financial support and inversely associated with their probability of receiving this kind of support (Table 13). In other words, having attained at least the secondary level of schooling as well as having some sort of non-family source of income, diminishes considerably the likelihood of receiving financial support, at the same time that it increases the likelihood of providing this kind of support.

After controlling for the effect of the demographic and socioeconomic variables, important differences still remained between the cities in relation to the frequency with which older persons took part in the financial support transfers. Taking the older persons residing in São Paulo as a reference, the probability of receiving financial support was only slightly greater in Buenos Aires, but substantially greater in Montevideo and in Mexico City. At the same time, compared to São Paulo, the probability of providing financial support was significantly greater

TABLE 13
 ODDS RATIOS FROM LOGISTIC REGRESSIONS OF FINANCIAL SUPPORT (MONEY) RECEIVED AND GIVEN BY OLDER PERSONS ON SELECTED COVARIATES:
 SELECTED LATIN AMERICAN CITIES—1999-2000

Covariates ¹	Support Received					Support Provided				
	São Paulo	Buenos Aires	Montevideo	Mexico City	Total Sample	São Paulo	Buenos Aires	Montevideo	Mexico City	Total Sample
Sex (Male)										
Female	2.96***	2.10***	3.31***	4.26***	3.00***	0.39***	0.45***	0.42***	0.30***	0.40***
Marital (Unmarried)										
Married	2.91***	2.05***	5.22***	2.75***	3.07***	2.75***	2.96***	4.34***	2.68***	3.03***
Age Group (60-64)										
65-69	1.08	1.17	1.51*	1.29	1.23*	1.26	0.89	1.24	0.74	1.03
70+	0.93	1.30	1.25	1.18	1.10	0.75*	0.73	1.16	0.47***	0.76**
Living Children (1-2)										
None	0.67*	0.41***	0.90	0.31**	0.59***	1.00	0.51**	0.69	1.15	0.77*
3-4	1.12	0.92	1.23	1.28	1.13	1.17	1.04	1.19	1.13	1.11
5+	1.08	1.61	1.61*	1.32	1.23*	1.10	1.29	1.02	1.02	1.04
Co-residents ² (1)										
None	0.51***	0.37***	0.44***	0.52**	0.47***	0.48***	0.45***	0.28***	0.62*	0.43***
2+	1.15	1.24	1.70**	1.68*	1.35***	0.77*	0.81	0.84	0.84	0.82*

(continue)

(continuation)

Covariants ¹	Support Received					Support Provided				
	São Paulo	Buenos Aires	Montevideo	Mexico City	Total Sample	São Paulo	Buenos Aires	Montevideo	Mexico City	Total Sample
Education (Primary)										
None	1.13	1.41	1.32	1.10	1.11	0.85	0.60	0.66	1.03	0.85
Secondary	0.67*	0.70*	0.59***	0.52***	0.61***	1.47*	1.33	1.14	1.47*	1.32***
Income ³ (None)										
Has	0.34***	0.40***	0.73	0.37***	0.40***	4.84***	6.12***	5.15***	3.31***	4.70***
City (São Paulo)										
Buenos Aires					1.26*					0.81*
Montevideo					1.52***					2.04***
Mexico City					1.59***					0.74**
N (Observations)	2114	1030	1426	1202	5772	2114	1030	1426	1202	5772

Source: SABE Survey.

Significance levels: * p < 0.05; ** p < 0.01; *** p < 0.001.

¹ The reference category for each covariate appears between parenthesis.

² For unmarried older persons, no co-residents means living alone; for married older persons it means living with spouse only.

³ Excludes financial support provided by family or friends.

among the elderly in Montevideo, but only slightly higher among the elderly in Buenos Aires and Mexico City (Table 13).

6 CONCLUSION

The study demonstrated that informal support transfers involving older persons in Brazil and in Latin America is a process of reciprocal interchange. In both cases, older persons not only receive but also provide a large amount of support in goods, services and wealth. Attention was especially drawn to the substantial flow of financial support from older parents to adult children in Fortaleza, illustrating a situation in which children keep receiving support from elderly parents well into their adult lives. In fact, several studies on living arrangements of older persons in Brazil suggest that much of the co-residence between generations, particularly in the Northeast, is more directly associated to the needs of adult children than to the needs of their elderly parents [Saad (1996), Camarano (2003) and Delgado and Cardoso Jr. (2000)]. Although extremely modest and often insufficient, the income of the elderly in the Brazilian Northeast—mostly from retirement pensions—has become an important family asset, in spite of the needs and the poor socioeconomic conditions of the elderly themselves.

This situation leads to two important assessments. First, the intense flow of informal support directed to the older population would be replacing a significant part of the support that otherwise should be transferred to the older members of society through formal channels. Second, the flow in the opposite direction would be reflecting the dire consequences for older persons of an adverse socioeconomic context, in which not only their main sources of informal support may vanish, but they themselves become a source of family support.

The results indicate that support transfers between generations are strongly moderated by the characteristics, resources, opportunities and needs of both the parental and filial generations. A larger number of living children increases the likelihood of older persons receiving financial support, but does not affect their probability of providing this kind of support. Being married seems to represent a “protective factor” among older persons, as shown by the lower risk of reporting difficulties in performing activities of daily living among those who are married as compared to those who are unmarried. Married older persons also receive and provide financial support more frequently than unmarried older persons. Mothers and daughters, in general, proved to be involved much more frequently than fathers and sons in intergenerational support exchanges. This may indicate either a greater emotional attachment between mothers and daughters, or the dissemination of

traditional values in which women are more likely to take on the role of caring for parents and children.²⁸

The informal support transfers are strongly affected by the socioeconomic conditions of the older persons. Higher socioeconomic levels both decrease the risk of reporting difficulty in performing activities of daily living and increase the chance of providing financial support. Lower levels of education, on the other hand, significantly increase the probability of receiving support in instrumental activities of daily living among the elderly, particularly in regard to activities that require intellectual skills such as the management of financial resources.

As is the case in most of the less developed regions, co-residence in Latin America usually constitutes a central element in the process of intra-family support transfers. Because a substantial part of the informal transfers occur between members of the same household, co-residence in these regions is normally seen as a driving factor leading to support transfers. The present study highlighted the primary role of co-residence in the exchange process of informal support involving the elderly. More specifically, the results show that co-residence is crucial in the case of unmarried older persons, for obtaining support in activities of daily living that require closer physical proximity. In the case of married older persons, however, neither co-residence nor the number of living children affect the chances of receiving support for activities of daily living, suggesting that spouses are the main providers of this kind of support.

Surprisingly, the results indicated no geographic barriers for intergenerational transfers of material support in Fortaleza. Whereas co-resident children often had primary responsibility for the care of dependent parents and were more likely to get instrumental support from them, there is also ample evidence in this study of economic contributions to households by non-co-resident adult children, including remittances of those who had migrated out from the State of Ceará.

In spite of the unexpectedly high levels of informal support rendered by the elderly in Latin America, the support they receive, particularly from children, still constitutes a crucial dimension of their well-being. As the process of population aging in the region intensifies, however, the availability of informal support to the elderly in the future will become increasingly jeopardized. Parallel to a substantial expansion in life expectancy at birth, fertility in Latin America has been declining,

28. In fact, there seems to be a strong expectation in this direction in the case of Fortaleza. It was asked for the elderly who reported not having any difficulty in performing activities of daily living, the person they expected would eventually give them support if they needed help in the future. Those who reported a daughter instead of a son accounted for 73.2% in the case of instrumental support and 79.2% in the case of functional support.

migration and urbanization have increased, and female labour force participation has risen. These developments, in conjunction with a decline in the economic conditions of the younger generations, have been thought to pose potentially serious problems for older persons requiring support in old age. The findings in this study suggest that such considerations should not be completely dismissed, although they should be taken cautiously. There are many reasons to believe that intergenerational support exchanges will remain important in most of Latin America. Although fertility has declined rapidly in the region in recent decades, the effect on the numbers of children that older women have will be felt with a lag. Moreover, both declining fertility levels and increasing female participation in the labour force can, instead, constitute stimulating factors for financial support transfers to the elderly.

Although informal support transfers are strongly affected by demographic and socioeconomic factors, it is worth noting that even after controlling for such effects, important differences still remain between cities in terms of the intensity in which these transfers occur. Within the Brazilian context, the exchange of support is much more intense and generalised in Fortaleza than in São Paulo. Older persons living in São Paulo, on the other hand, tend both to report difficulty and to receive support in instrumental activities of daily living much more frequently than older persons in other Latin American cities. Even though they tend to receive less financial support, older persons in São Paulo tend to provide more financial support than older persons in Buenos Aires and Mexico City. Older persons in Montevideo, however, are the ones who most frequently provide financial support.

Such differences indicate the need for future investigations aimed at identifying factors such as cultural norms that were absent from this study but could be a reason behind the regional differential in levels of support transfers. In view of the large socioeconomic contrasts that prevail in Latin America, another aspect to be pursued in future analysis refers to the different patterns of population aging within countries. Most specifically, future studies should include rural areas. As urbanisation is mostly resulting from migration of young people from rural to urban areas, the rural population tends to remain proportionally older than the urban population. In this respect, comparative analyses should be devised in order to investigate how distinctly intergenerational support transfers operate within rural and urban contexts.

ANNEX

Explanatory Note on the Logistic Regressions Used in the Study

The multivariate logistic regression models of the involvement of the elderly in informal support exchanges can be expressed by the equation:

$$\text{Log } \Omega = \alpha + \beta X$$

where:

$$\text{Log } \Omega = \text{Ln}[P/(1 - P)] = \textit{logit } P(\text{log odds}) ;$$

$P = P(Y = 1 / X)$ = conditional probability that an elderly who presents the characteristics defined by the vector X is engaged in a particular dimension of support transfer;

α = constant term;

X = vector of the explanatory variables associated with the elderly; and

β = vector of the coefficients associated with the explanatory variables included in X .

The method used for estimating the parameters β was maximum likelihood, which, in a very general sense yields values for the unknown parameters which maximize the probability of obtaining the observed data. The interpretation of the logistic regression coefficients is similar to the interpretation of linear regression coefficients. The estimated coefficients for the independent variables in a linear regression represent the slope or rate of change of the dependent variable per unit of change in the independent variable. The estimated coefficients of the logistic regressions in this study can be viewed as the effect of a one-unit increase in a particular predictor associated with the elderly on their log odds (*logit P*) of being involved in support exchanges, controlling for all other predictors in the model. In other words, the coefficients represent additive effects of the explanatory variables on the *logit P*.

Most of the predictor variables in this study were categorical and were transformed into dummy variables. In these cases, the coefficients measure the increment to the logit associated with each specific category of the original variable. In particular, if one exponentiates a dummy coefficient, one recovers the estimated odds ratio for those in the category of interest versus those in the reference category.

Since Ω is a monotonically increasing function of the odds ratio $[P/(1-P)]$, and the odds ratio in turn is a monotonically increasing function of the probability

P , any change in Ω corresponds to a change in P of the same direction. Thus, one can also interpret the coefficients β as indicators of the effect of predictors directly on the probability P associated with the outcome variable.

The conditional logit regression modeling used to estimate the effects of selected characteristics of adult children on their probability of being involved in support exchanges with elderly parents in the specific case of Fortaleza differs slightly from conventional logistic regression modeling. In this case, the data are stratified and the probability function is calculated relative to each stratum in a choice-model framework. The stratum in this study was defined as the children set for every elderly with at least two children.

The conditional *logit* regression models of the involvement of adult children in support exchanges with their elderly parents can be expressed by the equation:

$$P(Y_i = 1) = \exp\left(\sum_{j=0}^p X_{ij}\beta_j\right) / \sum_{m \in S_i} \exp\left(\sum_{j=0}^p X_{mj}\beta_j\right)$$

where:

- X_{ij} = j^{th} explanatory variable associated to i^{th} child of the S_i stratum;
- β_j = coefficient associated to the j^{th} explanatory variable;
- S_i = i^{th} stratum, i. e., the children set of the i^{th} elderly; and
- m = number of children in the i^{th} stratum.

The numerator in the above equation represents the probability of a particular child being involved in a given dimension of support exchange with elderly parents, while the denominator accounts for the probability of each one of his/her brothers and/or sisters being involved in exchanges of the same nature.

Although the software used to fit the conditional *logit* models (Stata's *clogit*) is suitable to estimate probabilities in situations where only one positive outcome exists per stratum, it also handles cases of strata with multiple positive outcomes—which occurs in this study, especially regarding the material transfer dimension (more than one child giving and/or receiving support from the same parent). In these cases, Stata uses an approximation. The accuracy of this approximation is a function of the proportion of multiple positive outcomes to the number of strata. The index $(a-1)/n$ is suggested, where a is the average number of positive outcomes per stratum, and n is the average stratum size. This index should not exceed 0.2.

In this study, the index was 0.07 for the “receiving support material” dimension, and of 0.10 for the “giving material support” dimension.

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INTERGENERATIONAL RELATIONS AND WELFARE STATE RESTRUCTURING. WHY SHOULD WE RE-THINK THIS RELATIONSHIP IN BRAZIL?*

Ana Maria Goldani

University of California Los Angeles (UCLA)/Department of
Sociology
Instituto Brasileiro de Geografia e Estatística (IBGE)/Escola
Nacional de Ciências Estatísticas (ENCE)

1 INTRODUCTION

During the 1990s, the income of Brazilian families with young children worsened compared to the growing income of elderly families. Relatedly, increasing evidence shows that more and more elderly are providing for their adult children and grandchildren. Moreover, social expenditures by the central government in recent years clearly favoured the elderly. Together, these factors have put the idea of an emerging “generational clash” on the agenda of academics, politicians and experts in social policy.

The “generational bias” is considered critical for the efficiency of Brazilian policy today [Barros and Carvalho (2003)]. This argument seems to most clearly represent the idea of an emerging generational clash. It suggests that although poverty reduction programs have affected all age groups, this reduction is greater for the elderly than children. Simulations of poverty in different age groups, in the absence of governmental income transfer programs, supports this argument. The results demonstrate that poverty among the elderly would be more than 60% among individuals older than 65 years, greater than the poverty rates of 50% to 60% for children. However, after governmental income transfers, poverty levels among children became more than three times greater than poverty among the elderly. Moreover, elderly poverty is lower than that for adults that are 25 to 65

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years old [Barros and Carvalho (2003, p. 8)]. These statistics fuel the emerging debate of an aging bias in the distribution of government resources. The social spending bias towards the elderly is considered paradoxical in a country with a large young population.

Official statistics show that more than 2/3 of central government net revenues are used to finance social programs. However, most social funding is spent on retirement and pensions, which are considered largely regressive. Specifically, 73% of the total monetary transfers from the Central Brazilian Government in 2002 were expenditures on retirement and pensions while only 1.5% were directed to poor families through the Minimum Income Program. These statistics, from the Report of Social Spending of Central Government 2001-2002 [Brasil (2003)],¹ describe the government's revenue sources and its social expenditures in health, education, social security, income transfer programs and other activities of the social area. The report, which clearly addresses a generational bias in social spending, also discusses the distributive impact of social spending and makes comparisons with other countries.

Brazil is one of the world's most unequal countries in terms of income and even after the government transfers, that situation does not change much.² This is revealed by the estimates of the impacts of monetary transfers and direct and indirect taxes on the income distribution in Brazil. The official report notes that the richest 10% of households receive 45.7% of the total gross income, while the poorest 10% receives 1.0% of the gross income.³ Another evaluation notes that despite garnering nearly 36% of the Gross Domestic Product (GDP) in taxes from the private sector and spending more than half of these resources in social programs, the Brazilian State does not contribute in a significant way to diminishing the inequalities [Lisboa and Siqueira (2003, p. 123)].

Other interpretations about the nature of social spending in Brazil do not support the idea of a generational bias. For example, Lavinás and Garson (2003, p. 148) suggest that the high level of spending on social security reveals the deep

1. This document is from the Secretaria de Políticas Econômicas do Ministério da Fazenda, headed by the economist Marcos Lisboa, and report only the social spending of the federal government. Among its criticisms is the fact that states and municipalities were not included.

2. Brazil was in fourth position among the most unequal countries in the world in 2002. The first three are countries from SubSaharan Africa (Namibia, Lesotho and Serra Leoa), continent with the worst social indicators in the world. Although the HDI (Human Development Index) for Brazil improved from 0.644 in 1975 to 0.775 in 2002, Brazil still occupies the 72nd position in the ranking of 177 countries in 2002, based on a US\$ 7,700 yearly per capita income, 68 years of life expectancy, 13% of the population without running water and 86.4% of adults that are literate.

3. Gross income is the sum of salaried income plus governmental transfers (pensions, retirement, unemployment insurance and other types of help).

fragility of the Brazilian social protection system, which doesn't have a family policy covering all Brazilians. They argue that there is not a direct correlation between improvements in elderly condition and children poverty. Similarly, Pochmann (2003) cautions about the inversion of the terms of the debate, claiming that social spending is an important determinant of social inequality in Brazil instead of the opposite. An even stronger criticism is that the official report follows traditional right-wing logics that devalue public social spending. Bresser Pereira (2003, p. 107), the author of this critique, sustains that social spending and its quality has improved since the 1980s and this has been the major success of Brazil's democratic regime.

Therefore, as in other countries, the debate about the "clash of generations" in Brazil whether actual or perceived, real or invented, has come to the centre of policy discussion and also into popular awareness through the mass media. Almost everyday, newspapers print headlines claiming that poverty in Brazil can be identified with children and women.⁴ It is important to keep in mind that in 2001, Brazilian children, age 0-16, represented about 30% of the total population while those over 65 represented 5.6%. Also, children are concentrated in the lowest levels of the income distribution while the elderly are concentrated in the high levels. Children comprise 50 and 54 percent of the population among the two lowest income deciles but only 17% and 20% in the two highest deciles. By contrast, the elderly represent 1 and 2 percent of the lowest income deciles but fully 14 and 12 percent in the two highest deciles [Lavinhas and Garson (2003, p. 151)].

The subject of "intergenerational bias" should be viewed in the broad context of international discussions of rethinking the welfare state and alternative systems of social protection in developing countries [Esping-Andersen et al (2002)]. It is also related to the international demographic concerns with aging, care and poverty. In this perspective, generational solidarity appears as one of the three main principles⁵ of the Madrid International Plan of Action on Ageing 2002, which proposes an "ensuring supportive environment to the elderly". For the Madrid

4. Poverty has a clear face says the newspaper announcing the statistics from the Cadastro Único, official data base of the poor families in a building process in the Ministry of Social Development and Poverty Combat. It notes that is women and children the poorest ones. Also their profile show that one in four poor is at age interval of 7-14; more than half (52%) is women, 56% is illiterate or didn't achieve the fourth grade.

5. The three main principles of The Madrid International Plan of Action on Ageing 2002 are: 1. "Active elderly participation in society and in development as well as in poverty reduction", 2. "Advancing health and well being into old age" and 3. "Ensuring supportive environment".

plan, solidarity between generations at all levels—in families, communities and nations—is fundamental for the achievement of a society for all ages.⁶

My main concern in this chapter is to assess the ongoing discussion about the relationship between intergenerational relations and welfare in Brazil that appears to be based on two questionable assumptions:

I. There is an emerging “generational clash” or a “new” problem of generations marked by the dispute of resources by age groups, particularly among children and the elderly.

II. The social world appears dichotomized into macro and micro spheres in which the macro is associated with the public (male) sphere and is more valued and the micro with the family and women. Solidarity among family members is taken for granted within an idealized family where gender relations are not considered.

To discuss these assumptions I will consider two forms of intergenerational social contracts, which implicitly or explicitly, establish forms of exchange in societies based on dominant values and norms.⁷ Although they are implicitly present in the Brazilian “generational clash” debate, most of the time they are not acknowledged or clearly identified. These contracts are: 1. The formal social policy contract, based on direct intergenerational transfers, through the medium of taxation, social expenditure and public pensions and 2. The informal social contract within the family or kinship group, based on intergenerational norms, obligations and exchanges. Intergenerational relations are those between population age groups in the formal social contract while they are among family members in the informal contract.

This chapter also calls attention for the need to see both the public policy contract and the kinship contract as closely related and that their generational relations are gendered.⁸ In doing this, I will also introduce international experiences—Japan, Brazil and Chile—that show how state policy may reinforce the role of

6. For details and discussion of the Madrid Plan, see chapter of Ana Amélia Camarano in this book.

7. The idea of social contract is at least old as the work of Thomas Hobbes, who in 1651 envisaged it as a covenant by which individuals renounce their own will and submit to the higher authority of the state. In Hobbes ideal state, this contract was the first transition from a “natural” to a “civil state”, which depended for its preservation on the individual’s bending his or her will to the contract [Quadagno, Aschenbaum and Bengston (1993, p. 264)].

8. This chapter continues a discussion about aging and changes in social contracts in Brazil that I began in another article in an earlier IPEA book. In that article, I discussed changes in gender contracts and their significance in terms for elderly care. I also discussed intergenerational relations by showing how women’s life course and family structure are crucial for the likelihood of being cared for at older ages [Goldani (1999)].

the family in the care of older relatives and thus may support the individual-level contract between generations with implications for gender equity.

The nature of intergenerational relations under the formal social policy contract seems to be especially important in the discussions about anti-poverty policies, in which age bias is often pointed out. Economists strongly suggest that policies should favour children because they are social investments [Neri (2003) and Barros and Carvalho (2003)]. Thus, part of the concern with a “generational bias” appears to result from different views of a model of social protection and policy strategies, where universalistic versus targeted income policies to eliminate poverty are at the center of the debate.

A concern with intergenerational relations under the informal family contract seems to appear only in discussions about aging, which acknowledge that families play a major role in elderly support through co-residence and goods, services and money transfers. These exchanges of resources are in both directions, from adult children to aged parents and vice-versa [Saad (1999 and 2002) Camarano et al (2003)]. Framed in terms of potential conflict among family members, these studies are less sanguine about the idea of a “generational clash” occurring in Brazil.

The perception of a “generational clash”, among either age groups or family members is associated with broad uncertainties that accompany the economic and social transformations in Brazil. Groups that once could count on security, like many industrial workers, now face major job risks; families with children are increasingly vulnerable; public pensions systems are being cut back and income inequalities remain the same. All this raises concerns for justice.

The approaches to the generational implications of the social policy contract vary but there is a conventional model, commonly used in the U.S., which seems to underline the Brazilian debate now. It is the “intergenerational equity model”, which in a broad sense means “the distributional justice between age cohorts” and it is inspired by the sociology of age stratification. Throughout the literature using this model there is a relatively uncritical acceptance that there is a “conflict” of interest among age groups and a “demographic imperative” linked to social policy. Another approach, the “political economy of aging”, sharply contrasts with the “equity model”. This approach considers the contract between generations in terms of socially constructed roles, relationships, dependencies, and obligations at both the micro (family and kinship group) and macro (state and public policies) levels [Walker (1993)]. The bulk of the studies on generational relations in both perspectives recognize the existence of some conflict between generations but there is much disagreement about the nature of the conflict depending on the theoretical approaches.

A methodological issue to consider is the traditional “snapshot” policy diagnosis which can easily lead us to conclude that the elderly and the young are on a collision course [Esping-Andersen and Sarasa (2002)]. The identification of problems in need of attention is too often based on a “static methodology of today’s reality” that forget to capture the dynamics of citizen’s life chances. Thus, we have to remember that the “core welfare issue is not so much how many people at any given moment are low-paid or ill housed, but how many are likely to remain persistently low-paid or ill-housed” [Esping-Andersen et al 2002, p. 6)].

Another issue, which is not clearly stated in the Brazilian debate at this stage, is how to allocate welfare responsibilities among markets, families, and government? To answer this question correctly the challenge is to understand that the “real world” of welfare is the product of these three dimensions, markets, families and government, or what is called the “welfare pillars”. If one of them fails there is either a possibility that the two remaining ones will absorb the responsibility or alternatively, that unsolved welfare problems will mount [Esping-Andersen et al (2002, p. 13)].

Concerned with how Brazilians are entering in the debate of generational relations, I suggest that we should pay attention to the competing interpretations and programmatic conceptions of social policies in the context of our large inequalities. How the public articulates needs and conceives of social programs in distinct and often competing ways is a very important dimension of the debate. This involves a political struggle among groups with unequal resources, competing to establish as hegemonic their respective interpretations of legitimate social needs [Fraser (1990)].⁹ For example, analysis about the Brazilian social policy performance in the 1980s noted the presence of key actors (technical elites, unionized sectors and welfare beneficiaries) and the articulation of their interests. The same happened in the 1990s when several authors, analysing the new directions of the Brazilian social security system, pointed out the important roles of collective actions and lobbies in negotiating the future of social security [Vianna (1998)].

Advancing some conclusions of this chapter, I suggest that there is empirical support for the argument of “generational bias” in social expenditure allocation, favouring the elderly. However, I suggest that the youth-elderly divide in Brazil

9. According to Fraser there are three major kinds of needs discourses in late-capitalist societies: 1) “Oppositional” which arise when needs are politicized “from below”. These contribute to the crystallization of new social identities on the part of subordinated social groups; 2) “Reprivatization” discourses, which emerge in response to the first. These articulate entrenched need interpretations that could previously go without saying; 3) “Expert” needs discourses, which link popular movements to the state. These can be best understood in the context of “social problem solving”, institution building and professional class formation. In general it is the polemical interaction of these three strands of needs-talk that structures the politics of needs in late-capitalist societies [Fraser (1990, p. 209)].

becomes far less conflictual when no longer viewed as a zero-sum but rather in the context of so many in need, a continued income, regional and gender inequalities and the lack of a social policy for families.

Regarding the effects of the two questionable assumptions that I have mentioned, mostly present in the current policy discussion, we observe a lack of an integrated analysis of the needs and demands for care of both children and elderly in terms of the services provided by the family, government and the market; no evaluation of the consequences of different governmental social programs for families; little consideration of social inequalities although they are vital to social protection; social policy proposals that appear separated from employment policy; and a compartmentalized view of policies based on gender-neutral terms.

Finally, I suggest that an alternative social policy cannot be simply a defence of an old model of social protection or provisions to satisfy a list of basic needs. Neither, can we equate insecurity and despair of the population with poverty, because it can lead us to an uncritical acceptance of economic growth as the only way to increase individual well-being. We should advance in the process of building our social protection system in the universalistic direction as proposed in our 1988 Constitution and develop an integrated system of policies. Thus, I conclude that we should try to unlock the debate about the future of welfare from the trap of arguments about the managed economy and the scale of public spending. Instead, we should try to restore welfare to its proper place and broaden the conception of well-being to every sphere of social and economic life.

2 SOME ISSUES OF THE DEBATE

2.1 Which Welfare State?

There are various interpretations of Brazil's social protection model during the last half of the twentieth century in Brazil. Draibe (1993) describes a conservative-corporatist model of Welfare State until the 1980s, while Vianna (1998) characterizes it as a neo-corporatist and Americanized model. Yet other analysts conclude that although Brazil has a system of social protection, it never had a Welfare State in the universalistic European model [Pochmann (2003) and Lavinás and Garson (2003)].

According to Draibe (1990), there clearly was a Welfare State in Brazil but it was of the meritocratic-particularist or conservative-corporatist type that was differentiated from the classic residual and universalistic models. This model assumes that people must be able to resolve their own necessities, based on their

own work and productivity. Social policies intervene only partially, correcting the allocation processes of the market and economic institutions, linking employment with access to benefits. In this corporatist and stratified system, there are distinct provisions for different occupational categories [Draibe (1993, p. 8)]. The 1988 Constitution created a change toward a institutional-redistributive or a more universalist and equitable social protection model [Draibe (1993, p. 23)]. The terms of State provisions were redefined and enlarged in the 1988 Federal Constitution and it incorporated into three components: Social Security, Social Assistance and Health. Among the main issues of this new system of social protection are the universalization of coverage; equivalence of benefits for urban and rural workers, a selectivity in the benefits concession, an irreducibility of the value of benefits, equanimities of the costs, a diversification of the financial bases, decentralization and participation of the workers in management.

As a result of the new Constitution, the non-contributive benefits became the novelty of Brazilian social policy in the second half of the 1990s. Today, this is an important part of the social security system in Brazil and plays a key role in terms of guaranteeing better conditions of life for the population in general and the elderly in particular. Examples of this type of benefit are: 1. The Continued Benefit [Benefício de Prestação Continuada (BPC)], which stipulates monthly payments of one minimum wage for the elderly who at 67 years don't receive any other benefit and live in a family with monthly income of less than a quarter of the minimum wage,¹⁰ 2. The rural retirement pension of one minimum monthly wage for men at 60 and women at 55 years, who do not necessarily contribute to the social security system¹¹ (Delgado chapter in this book).

The Brazilian model of social protection is legally very advanced and seems to offer the basis of a wider notion of well-being to most Brazilian citizens. A current discussion about policies, however, calls attention to the difficulties of financing the universal programs of rural pensions and to the fiscal imbalance of the Social Security. Mostly based on market arguments about the need for privatization and selectivity¹² the polemic is not so much in terms of the type of welfare regime but of whether social policy should be universal or targeted. And what seems to happen is a confusion between social policy and anti-poverty policy,

10. The minimum age to receive this benefit was lowered to 65 years in 2004, following the Statute for the Elderly (o Estatuto dos Idosos). This social assistance benefit (BPC), also benefits individuals with a deficiency and with incapacity to work who lives with a family with monthly income less than 1/4 of a minimum wage (Delgado in this book).

11. The rural social security also benefits *garimpeiros* (gold diggers) and *pescadores artesanais* (fishermen) (Delgado in this book).

12. In the current neoliberal version, which only see solutions in the market, privatization is synonymous with profits and selectivity with assistencialism [Vianna (1998, p. 12)].

where politicians and policy makers seem to forget that the latter is a requirement of the first. This is not coincidental but reflects a view that privileges the “securitization of social protection”, according to Lavinás and Garson (2003, p. 147).

Inspired by the so-called Neoliberal model of social protection, social policy was reduced to the single issue of poverty. The central arguments are that promoting economic growth through the principles of competitive markets is the only effective way to raise standards of living to the poor. This generalized model of social policy became attractive because of its apparent logical coherence and simplicity and because it was put forward by the world’s wealthiest nations, where many assumed that this model helped them achieve their pre-eminence. However, as many international experiences have already demonstrated, this conception of social policy is in fact indifferent to the disruption, alienation and despair into which so many developing countries have fallen and even to the homeless, hungry and excluded within the wealthy nations.

Vianna (1998) similarly considers that the Brazilian social protection system becoming “Americanized” gains actuality. By stressing the external conditions that influenced the social protection system in Brazil since the 1960s, this author notes that the relations between the state and society, particularly in terms of the articulation of interests, has been Americanized. Specifically, this occurs through the expansion of social policies influenced by neo-corporativism and lobbies, who mediate specific demands, rather than representing a wide variety of social interests and in the design of social protection that is conceptually universalistic but substantively selective [Vianna (1998)]. Vianna notes two characteristics of Brazilian society that reinforce this model: extreme permeability to particularism or a low power of enforcement and a segmented, heterogeneous and exclusionary labor market.

The nature of the Brazilian social security system is currently at stake. This system has become increasingly residual with a mixture of conditional and highly restricted access, running counter to the universalist-redistributive spirit of social reform that led to the establishment of Social Security in 1988 and which inspires and legitimizes citizen’s basic income proposals [Lavinás (2004, p. 4)]. In the same line of criticism another author suggests that the “accusation that the social cost is high, poorly focused and supposedly satisfies the privileged, seems to be import to Brazil the discourse of liberal Anglo-Saxon economists, which was developed to critique the European Welfare State, supposedly inefficient and overly generous [Pochmann (1993, p. 109)]”. However, this author continues, differently

from the European case, Brazil never had a Welfare State nor constituted a “wage society” with basic collective rights for all workers. Patterns of consumption among the poorest barely permits subsistence and ties to the labor market are often precarious. According to Pochmann (2003, p. 111) Brazil does not have economic nor social citizenship.

2.2 Which Family?

The debate on the “conflict of the generations” and on solidarity within families suffers from an over-idealized image of the family. It takes solidarity within families for granted, forgetting the contradictions and conflicts at the levels of emotional tensions and everyday living conditions. There is a consensus that families are the arenas in which generational relations are acted out and that generational assistance is shaped by values and experiences that evolve or are modified over the entire life course. What seems difficult is to incorporate in the policy debate is the Amartya Sen’s crucial concept, “family is a space of cooperative conflict”, and the fact that it has a diversity of sexual arrangements, in which gender and age largely define life trajectories and stages of family life cycle.

Families are changing in both forms and meanings, expanding beyond the nuclear family structure to involve a variety of kin and non-kin relationships through marriage, divorce and remarriage. The secondary sources of statistics about family are less and less able to offer a good picture of the movement occurring within the families. The diversity of sexual arrangements, the internal organization of gender relations in terms of housework and responsibilities for raising children and several other issues are rarely available in Brazil. All of this has been an excuse for the continued use of the heterosexual couple with (few) children as a model to pursue and as a model in the design social policies.

Changes in households in Brazil are visible, even with traditional statistics, and they show that the type of family and the stage of the life cycle of the family are important features in determining the quality of life for its members. At the same time, it is important to qualify these findings in evaluating the relationship between family composition and poverty. With a total fertility rate of about 2.4 in 2001 and with large segments of the urban population under a regime of below replacement fertility, it is difficult to attribute poverty in Brazilian families today to a large number of children. This argument is reinforced by findings showing that inequalities in earnings are the principal explanation for differences in income among rich and non-rich Brazilian families [Medeiros (2004)].

In 2001, eighty percent of the Brazilian population lives in urban areas and in households organized around the kin group. Of the 39,6 million urban households, about 86% were organized around different types of families and the other 14% were of “non-families”, either persons living alone or groups of individuals without kinship relations in which there is no conjugal nucleus. The growth in the number of households in the last decades is mainly due to the increase in non-families and particularly in persons living alone. While households with families increased about 45% between 1990 and 2001, the “non-family” arrangement increased about 75%.¹³

Among the households organized as families, the nuclear type still predominates (81% and 80%), compared to the extended families (18% and 19%) or the complex families (1.3% and 0.9%) in 1990 and 2001 respectively. In terms of stages of the life cycle, although more than half of the families are either at the stage of expansion or consolidation¹⁴ (55% in 1990 and 52% in 2001), a large proportion of Brazilian families are mature. In other words, about 23% and 29% of the families were organized either by one or two parents without children younger than 19 or by a couple without children in which the women (spouse or the head of the family) was more than 40 years old. By contrast, only 22% and 19% of the families are at the initial phase of formation.

For the purpose of the debate in this chapter, I call attention to the trends and diversity in the households organized as families with children. Families with children represent about 77% and 74% of total households in 1990 and 2001 respectively. According to the national household surveys (PNADs) of 1990 and 2001, some of the trends and changes among families with children are:

1. The majority of children are living in families with the two parents present although there is a growing increase in children living in families with only one of the parents. The distribution of families with children (20,500,000 in 1990 and 29,209,000 in 2001) shows that the nuclear biparental type represents 67% and 63% and the nuclear monoparental represents 12,4% and 15,6%. The other two types of families with children are the extended (19,3% and 20,3%) and “complex” families (1,3% and 1.0%).

13. These findings for Brazilian families are based on special tables generated by Economic Commission for Latin America and the Caribbean (ECLAC/UN) as part of the Project of Change in Families and Needs for Public Policies in Latin America. I am currently working on the ECLAC chapter for Brazil with my colleague Aida Verdugo Lazo.

14. The initial stage of the family life cycle is roughly operationalized as families with children under 5, expansion refers to families in which the only or oldest child is 6-12, consolidation refers to families with one child 13-18 or with multiple children in which one is under 19 but is not in the initial or expansion cycle, the “shrinking” family in which there are no children under 19 and finally, the empty nest.

2. The nuclear biparental families with children have an average number of children of 2.4 and 2.1, respectively, in 1990 and 2001 and they are among the poorest families. More than third of them were poor in 1990, 38% compared to 33% in 2001. This poverty situation was even harder at certain stages of the development of the family. In the life cycle stage of “expansion”, bi-parental families with children experienced the worst situation. About 43% in both years were poor.

3. The lower proportion of poor and indigent nuclear bi-parental families in 2001 suggests some improvement in their conditions in the last decade. However, it is important to note that it didn't change the internal inequalities but rather accentuated them, as the distribution of nuclear bi-parental families with children shows a growing concentration in the two lowest income quintiles in 2001 (24% and 23%) compared to 1990 (20% and 21%).

4. The general income inequality among nuclear bi-parental families also reflects race and regional inequalities. One third of white families with children are concentrated in the highest quintile in 2001 while less than 10% of black and brown (pardo) families are in this situation. Similar comparisons by region show that while 1/4 of the biparental families in São Paulo is concentrated in the highest quintiles of income distribution, only 3% of families in the Northeast are.

5. The inequalities by race and regional income distribution among nuclear bi-parental families with children became worst in the period 1990-2001, particularly through the growing concentration in the lowest quintile of all families but in particular the pardo and the Northeast families. Then, the internal inequalities become worst and the race and regional disparities also it was accentuated in the period.

Growing family diversity and fluidity permit more intergenerational exchanges through more egalitarian and democratic forms of intimacy, although this also brings more insecurity and uncertainty. Some examples from recent decades are: 1. Greater longevity, which also carries the burden of individual disability for a longer period, 2. An increase in marital instability and divorce over the last decades, which weakens the ability of nuclear families to provide support to dependents; 3. The reproductive revolution, in which reproduction has been separated not just from marriage but also from gender, age, and even sex itself, challenges the definitions of parental and children's rights and responsibilities and the traditional notion of kinship. All these redefines the so-called “implicit contract” that exists within families, meaning parents caring for children in their adult years and expecting to be cared in old age by them. The caring relationship within the

family is increasingly important for women, the main caretaker in most societies, because they increased their participation in the labor market and the intensity of their caring activities increased while support services diminished. The implication of these two sets of developments for relations between the generations and also within generations—especially between male and female domestic partners—are likely to be significant not only in terms of the informal generational contract within the family but also for the social policy contract.

In Brazil, the most recent Constitution in Brazil (1988) states that it is responsibility of the family, society and the State to assist the elderly, ensure their participation in the community, defend their dignity and well-being as well as guarantee their right to life (Article 230). In its first paragraph this constitutional article also says that assistance programmes for the elderly should be carried out, preferably, within their homes. Therefore, in the assignment of responsibilities, the family comes first. New laws and several practical measures were also implemented by the Brazilian State to protect the elderly population. The National Policy of the Elderly of 1994 and the Elderly Statutes of 2003 are some examples of laws oriented to protect the Brazilian elderly against discrimination, violence and economic hardship.

The enlargement of the boundaries of the kin network is another important aspect to take into account, in the discussions about intergenerational relations and the demands for resource and care among family members. Partially a result of demographic transformations, particularly longer life and changing marriage, divorce and remarriage patterns the limits of the kin network have been widened to encompass many diverse relationships, including several degrees of step kin and in-laws, single-parent families, adopted and other relatives chosen from outside the family. These relationships form a complex network and at the same time, a “latent matrix of kin”,¹⁵ defined as “a web of continually shifting linkages that provide the potential for activating and intensifying close kin relationships” [Riley and Riley (1993)]. This “latent matrix of kin” can be viewed as a safety net of significant connections to choose from in case of need. But it may also contain unimagined relational structures in the future as a result of the reproductive revolution where an “in vitro” child can have at least five parents, not counting any later changes with remarriage: a donor mother, a birth mother, a social mother (the one who raises the child), a donor father, and a social father.

15. Riley and Riley (1993, p. 170) discuss the emergence of new types of kinship structures that created the concept of latent matrix of kin but they warn us that this matrix is not yet a reality; it is rather, an “ideal type” or model to be analysed. However, they conclude that key elements of the latent matrix may characterize the kinship structure of the future.

Finally, because changes in family and the new potential connections among kin are optional rather than contractual or obligatory, Riley and Riley (1993, p. 188) suggest that “they hold high promise of modulating, rather than exacerbating whatever intergenerational strains, conflicts, or perceived inequalities the future may bring”.

2.3 Concepts and Frameworks

In the debate between intergenerational contracts and welfare, the concepts and theoretical approaches are crucial for understanding the different positions and discourses. A first conceptual aspect has to do with the definition of “generation.” As Thomson reminds us, generation means everything and nothing for a host of concepts lurk behind the single word. It covers things as vague as a long sweep of time, a span of about 25 years, a particular point in the past, and all those alive at some moment. He also claims that the generation debate in the U.S. is too narrowly focused on Social Security and the distribution of public expenditures, and thus it has a decided political bent because, for many, the only interest in generation is if it can help explain current politics. If this fails, the concept is rendered unimportant [Thomson (1993, p. 216)].

Therefore, we need greater clarity of generational concepts. The most common notions refer to familial relations, age groups, and cohorts (defined by sharing a common experience in a particular decade) [Bengston and Aschenbaum (1993)]. However, a more complete reading of the problem of generational concepts suggests that we must distinguish between the term cohort or age group (those individuals who have been born at roughly the same point in chronological time) from the term generation (a ranked-descent ordering of individuals within families). The same study suggests that there are four principal terms used in social and policy analysis today to define generation: 1. Generation as an age cohort which is operationalized as a 5 or 10 year birth group and used for analysis at the macro social level, 2. Generation as kinship lineage descent, operationalized as social/biological succession and used at the micro social level of analysis, 3. Generation as historical generation or age cohort subgroups (elites), operationalized as a social movement led by cohort subgroups at macro social levels of analysis and 4. Generation as an age group operationalized by multiyear cohorts at the macro social level of analysis [Bengston (1993, p. 11)].

Second, there is a variety of theoretical frameworks informing the current debate on the “generational clash” but in this chapter I choose to mention two of them, the sociology of age stratification and the political economy of aging, because they are recurrent in the literature I reviewed. These two approaches share the

assumption that the formal social policy contract is in the process of being renegotiated and modified in most Western societies, though the extent of the changes differs substantially among countries. The same occurs with the informal generational contracts among kin because demographic and normative trends have produced dramatic changes in intergenerational patterns within families. However, it is important to note that the nature of the changes are interpreted in different ways, depending on the approach.

The theory of age stratification has been conventionally used to explain the relationship between intergenerational relations and welfare. It is the foundation of the most common model used in the analysis, the “intergenerational equity model”, which was already mentioned. The theory of age stratification gained prominence when Matilda Riley and her collaborators [cf. Quadagno, Aschenbaum and Bengston (1993)] in the U.S. began to stress the importance of concepts such as stratification and structure in research on aging. This perspective proposes that the age cohort (individuals born in the same period of time) and historical time through which these cohorts move are the primary components of an age stratification system. They also emphasize that the succession of cohorts is a source of historical change because “their particular historical experiences make unique contributions to social structures” [Riley, Foner and Waring (1988, p. 243)].

The “political-economy of aging” perspective arose, in part, as a critique of the analytical limitations of age stratification theory [Walker (1993)]. A basic criticism refers to the excessively narrow concentration on chronological age and birth year, which diverts attention both from individual responses to the aging process and from differences within-age cohorts deriving from macro-structural factors such as class, gender and race. This perspective contends that the “social and economic status of elderly people is defined not by biological age but by the institutions organized wholly or partly on production”. In other words, the many experiences affecting older people are “a product of a particular division of labor and structure of inequality rather than a natural concomitant of the aging process” [Walker (1993, p. 143)].

2.4 Interpretations of the “Generational Clash”

A great majority of studies on the changing contract across generations recognizes some basis for conflict between generations but there remains much disagreement about the nature of the conflict. This debate is exemplified by the competing intergenerational equity and political economy approaches [see Bengston and Aschenbaum (1993)].

The central premise of the “intergenerational-equity” approach is that points of divergence among specific age segments of the population are well marked and that younger, middle and older generations are in competition for scarce resources. This is closely related to the dominant economic concerns of the “public-burden” model of welfare, which lies at the heart of neoclassical economic assumptions concerning the respective economic contributions of the public and private sector. The contention is that the public sector is an unproductive burden on the private sector and the concept of old age stemming from such theories is one of homogeneity, economic dependence and unproductiveness. The public-burden conception of old age in orthodox economics is attributable in part, to the subordination of social policy to economic policy, and to the pre-eminence accorded to the latter in the political sphere [Bengston (1993) and Walker (1993)]. In such a view that fragments age, pensions represent little more than a transfer of resources from the working population to the aged.¹⁶ This view is reflected in the dependency ratio, a measure frequently used by economists and demographers to describe the demands likely to affect the political and economic arrangements of the market and state as a result of population aging.

Informed by the intergenerational-equity approach, several studies began to call attention to the changing demographics of generational succession and expectations as a “new social problem”, which emerged in the last decades of the twentieth century in industrial countries. The debate began around the economic, moral and social obligations of the middle-aged and young to an ever-growing group of elderly; and, in turn, on the elder’s obligations to those younger in an increasingly aged society.¹⁷ These issues have sometime been framed in the U.S. in terms of the “war of generations” and the conflict hypothesis was widely accepted and institutionally stimulated by political interests and age group lobbies such as the American Association for Retired Persons (AARP), the American Association of Boomers (AAB) and the Americans for Generational Equity (AGE).

The “political economy of aging” approach is quite critical of the “intergenerational-equity” view. This perspective sees the welfare state as an intergenerational contract, which is an arrangement negotiated between the

16. Also in this perspective, the pensions that older people receive from the state are regarded economically as a burden, as are the pensioners receiving them, whereas private pensions are not, even though the latter may be heavily subsidized by the state.

17. The rhetoric of the “new” intergenerational confrontation became particularly harsh by the end of the 1980’s in the U.S. In 1988, the business magazine *Forbes* advised Americans that the old were getting richer at the expense of the young and titled its cover story as, “Cry, Baby: The Greedy Geezers Are Taking your Inheritance”. In Europe, a year later, the largest German-language weekly publication, *Der Spiegel* ran a cover story that was titled “The Struggle of Generations: Young Against Old”. This view spilled over into the U.S. elections. The *Washington Post* featured a front-page article under the heading, “Older Voters Drive Budget: Generational Divide Marks Benefits Battle” [see Walker (1993)].

working and the retired over the quality of life in old age. This approach also argues that the concern of policymakers is primarily with the perceived burden of pensions on public expenditures rather than with any manifest concern about intergenerational equity. For Walker, the economic-demographic imperative has been argued in some countries, with the aid of international economic agencies, to facilitate the restructuring of their welfare states. Rather than being rooted in “life-course processes”, the intergenerational-equity debate is thus sometimes regarded as a sociopolitical construct [Walker (1993, p. 165)].

By contrasting the experience of the European Union and the United States, Walker reinforces the argument that rather than the main pressure deriving from demographic change, it is ideological shifts, particularly in economic orthodoxy, that alters assumptions about the role of the state with regard to welfare and that have encouraged some countries to restructure their pension provisions to reduce the role of public pensions and increase private pensions systems.

From the political economy perspective, the ideological and political context cannot be missing from accounts of macro social relations between age cohorts and from accounts of policy responses to demographic change. Also, policies intended to create a new pensions contract must be analysed as just one element of the much broader endeavour on the part of some governments to restructure their welfare provisions; otherwise they may be wrongly interpreted as simply ageist [Walker (1993, p. 152)].

2.5 Understanding Generational Relations Among Kin

A conventional interpretation sustains that the informal contract between kin is maintained by a variety of factors such as bonds of affection, a sense of reciprocity over the lifetime, powerful economic inducements or negative sanctions, and broad cultural values. Sentiments of affection and obligation or the promise of economic benefits are factors that assure the informal contract between generations within families, but the other variables may intervene to upset the balance. Pressures of limited resources and the absence of children are perhaps the most important in explaining why the frail elderly may be neglected, forsaken, or even abandoned. Then, under some conditions, the contract may fail, like having no children which makes people vulnerable in old age. In societies where rights of ownership exist, a lack of property may lead to neglect. But as Foner (1993) reminds us, what may appear to be neglect or abandonment from a Western perspective, may instead be a fulfilment of the societal contract within a given cultural context.

It is also important to remember that the feelings of obligation that cross generations are influenced not only by the unique experiences of individuals within a particular family but also by specific historical circumstances. The pathways they took to old age determine the adaptation of individuals and their families to the social and economic conditions they face in the later years of life. Migration, economic success or difficulties of local economies can affect patterns of support and expectations for receiving and providing assistance in old age [Hareven (1994)]. Thus, the welfare conditions at one stage of the life cycle are often directly linked to events earlier in life and may affect the well-being in later life, as I find happens for elderly Brazilian women [Goldani (1999)].

Studies in the “intergenerational equity” model suggest that what is new about the problem of generations today are issues at the macro level, such as age group reciprocities and equities which become prominent in social policy and economic discussions. At the micro-level, family-based generational obligations and exchanges seem to have remained similar over time in most countries of the world. Findings for the U.S. confirm this and conclude that although we can't take solidarity within families for granted, we can speak of a growing solidarity at the family level, as well as an increasing disparity between generations at the societal level.¹⁸

An alternative interpretation of how intergenerational relations within the family works is based on the “political economy” approach. This approach insists that solidarity between parents and children is not a given, but has to be constructed on the basis of acknowledging differences between cohorts and gender and the consequences of this for affinity [Walker (1993)]. In contrast with the “intergenerational equity” perspective, this approach does not separate social policies from the nature of caring relationship within the family. In this view, which I agree with, public and private domains interact and thus state policy affects family relationships. For example, when the State attempts to minimize its financial commitment to the family, it increases the burden on the frail in general, and women in particular, who subsequently assume responsibility for care.

There is also disagreement between the two perspectives regarding the nature and prevalence of solidarity and tensions within the family. While the intergenerational equity perspective suffers from an over-idealized model of family

18. In fact, a more general conclusion is that intergenerational tensions and friction are limited to less than 10% of the U.S. population in 1990. However, about 15-20 percent of Americans feel some intergenerational tensions and believe that certain age groups are getting more than their fair share of government benefits. An even larger group perceives burdens either for themselves or for others from age-related needs, including almost 30% concerning age-targeted federal government programs and 45%-65% for familial obligations in general [Schlesinger and Kronebush (1994, p. 181 e 183)].

in the discussion of intergenerational family solidarity, the “political economy” approach describes family solidarity as multidimensional phenomena, with complex and sometimes contradictory relations between parents and children, and between grandparents and grandchildren [Lawton et al (1994)]. An example of the latter approach is in the documented difference in the role of women and men in intergenerational relations, particularly the difference in gender roles regarding the relationship between the first and third generation. Since mothers normally have custody of their children after a divorce, maternal grandmothers are more likely to take on familial obligations and duties, which also increases contact with mothers’ relatives compared to contact with the fathers’. Findings for Brazil show that 82 percent of households with co-resident grandparents, in-laws or parents of the head, involved females [Goldani (1999)].

3 KEY ASSUMPTIONS IN THE DEBATE

3.1 Assumption I. The “Generational Clash”

Several analysts claim, directly or indirectly, that there is an emerging conflict among generations, which is marked by the dispute of resources by age groups, particularly between children and the elderly. But, have the particular dimensions of intergenerational conflict in Brazil actually appeared yet in any measurable way?

Most of the claims of a growing age bias in Brazil have focused on the policy contract (social security system, pensions, social expenditures). Those calling attention to the disproportionate social spending on retirement and pensions and its regressive character, claim a consequent injustice for the young, who are a much larger portion of the Brazilian population. Thus, by assuming an equity model among age groups they implicitly also assume that there is conflict [Brasil (2003), Lisboa and Siqueira (2003) and Hoffmann (2003)]. Other analysts clearly mention the generational bias and they call attention to the poor situation of children, especially their high levels of poverty compared to the elderly. For example Barros and Carvalho (2003, p. 9) note:

“The current policy of income transfers, by fixing benefits for staying in school (bolsa escola) to R\$15 per child per month and the benefit of continued benefits (prestação continuada) and rural retirement (previdência rural) to one minimum salary, introduces an important and debatable intergenerational bias in Brazilian social policy, which disproportionately benefits the elderly population at the expense of children.”

Such findings are reinforced by simulations about the impact of the presence or absence of governmental income transfers through the life cycle of the Brazilian

population, which confirms that the elderly are the main beneficiary after all [Barros and Carvalho (2003, p. 8)]. However, there is no evidence that families with children are poor because the governmental funded programs spend too much on the elderly. Supporting my argument is the persistence of national income inequalities, which correlate positively with worsening conditions among families with children and of the population in general.

The “generational clash” is rarely associated with the intergenerational contract within the family. In part because solidarity among family members is taken for granted and only measured through the traditional indicators of resource exchange and also because the flow of generational exchange is in both directions, from adult children to aged parents and vice-versa [Saad (1999 and 2002) Camarano (2002)].

“The widespread coverage of Social Security that took place in Brazil in the 1990s resulted in a general improvement in the situation of elderly people, particularly in rural areas. These improved circumstances contrast with the deteriorating economic situation of other age groups, expressed by increased unemployment, declining average income and the chronic instability of the Brazilian economy. This has increased the economic dependence of children on the elderly generation. Other factors, such as a rise in teenage pregnancy, divorces and separation may have placed additional pressures on support from elderly parents. Consequently, there has been an increase in the time that adult children spend as dependent on their parents. For example, between 1981 and 1999, the proportion of elderly males that headed households, which included at least one adult child (aged 21 or more) increased from 19% to 44%. There has also been a rise in the number of elders living with grandchildren. This is reflected in the direct contributions that older people have made to household budgets. By 1999, elders provided 58% of total household budgets in rural areas and 51% in urban areas” [Camarano (2002)].

Therefore, even recognizing that the shift of priorities from children toward the aged has been apparent in the social security sphere and that there is generational bias in the social programs of income transfers, I found no measures nor qualitative evidence about tensions or conflict in the mentioned processes of exchange among age groups. Assessment of life-long generational fortunes is still hardly considered, making many of the current interpretations about intergenerational conflicts only impressionistic for Brazil. Closer quantitative and qualitative scrutiny of the relationship between old and young people is important and calls for a dynamic analytic data sources and methodologies. Thus, more than a snapshot of income differences is necessary in order to sustain that the elderly and the young are on a collision course. Rather, we should understand current intergenerational relations in Brazil in the context of so many in need, continued regional and gender income inequalities and a lack of a social policy for families.

If there is no evidence of intergenerational conflict, how do we interpret a growing concern with generational bias in Brazil? First, I would repeat that the recognition of potential conflict of interest or dispute for scarce resources among age groups and among family members in Brazil is due to a static view of the reality and indicators of inequality that assume an “equity perspective” model of intergenerational relations.

Second, I would say that the intergenerational bias is closely related with a negative perception of the population aging phenomena. The growing proportion of the elderly has been greeted with pessimism and alarm in Brazil as in other Western countries. This is partially explained by pessimistic attitudes toward population aging prevalent among a wide cross-section of societies. This comes with a long-standing economic pessimism concerning public expenditure on the welfare state, as more and more older people are receiving pensions. It is also a justification of the restructuring of welfare in response to demographic change. The growing elderly population is considered the key element in restructuring the pensions system and has also been blamed for the high costs or failure of public services [Giambiagi et al (2004)].

Regarding this last argument it is important to mention that although some of the negative ideas associated with the elderly population have changed, the design of social policies are still informed by the economic “public burden” model of welfare, which lies at the heart of neoclassical assumptions, as discussed earlier in this chapter.

Finally, it is important to call attention to the modification of the social contract that is now underway, consisting of reforms in the fields of pensions and social care, because they can have far-reaching effects on future age cohorts and gender relations in Brazil. Certainly it will depend on the options of reforms and policies we choose, as the comparisons between the U.S. and Canadian experiences help us to understand.

In the U.S., there is considerable evidence that the conflict among age cohorts has developed over the particular issue of the allocation of resources. However, surprisingly this has not developed in Canada, which is comparable to the U.S. in terms of the proportion of the population that is elderly, the relative degree of poverty between the young and the old, public support programs for older people, and the quality of social security programs [Walker (1993)]. The differences between Canada and the U.S. are attributed to several factors, including the distribution of societal resources and greater emphasis on universality in Canada. Also, the greater balance of benefits between the young and the old and differences

in the political structure between the two countries have been largely responsible for lower levels of rhetoric about generational equity in Canada. Interest group lobbying is relatively unimportant in Canada compared to the U.S. In Canada, the elderly lobby is less organized and less visible whereas the powerful presence of the old-age lobby has generated tensions in the United States [Walker (1993)].

The international experience comes to support the universalistic approach in the debate of social policy in Brazil today, which also perceives intergenerational relations in a different way. For example, Lavinias and Garson (2003, p. 151) argue:

“(...) If poor families, where children are over-represented and are not covered by adequate and permanent programs, but rather transitory programs with very low benefits that amount to only 1.5 percent of federal income transfers, the problem is not Social Security (Previdência) but rather the absence of significant and universal social policies, which should be added to compensatory programs to help those in particularly critical situations. Both types of benefits should provide adequately for the level of destitution of all individuals.”

3.2 Assumption II: Public versus Private

A second assumption, implicit in the discussion of social spending and generational bias, is that the social world is dichotomised into macro-and micro spheres. The macro is associated with the public (policy, government spending, markets) and the micro with the family (free care, solidarity, intimacy). Solidarity among family members is taken for granted within an idealized family where gender relations are considered irrelevant.

3.2.1 How is the intergenerational contract among kin working in Brazil?

Brazilian family members are performing the normative values and feelings of affect and reciprocity that is assumed under the implicit contract across generations. The provision and receipt of care in the Brazilian family follows a balance of affect and reciprocity in a normative structure. Female relatives are preferred to male ones and relatives to non-relatives in the intergenerational relations and provision of care [Debert (1999), Saad (1999) and various chapters in this book].

“(....) co-residence in the process of informal support transfers towards the older population in Brazil and Latin American is particularly important in terms of support that requires physical proximity such as the activities of daily living and the instrumental activities of daily living. For example, 92% of Brazilian and 90% of Mexican elderly receive some type of help from relatives” [Saad (2002)].

“(....) Co-residence can benefit both the older and younger generations. Elderly males usually keep their role and status as major breadwinners. On the other hand, elderly females tend to continue in their established roles as care-givers and home-makers” [Camarano and Pasinato (2003)].

"The increase in co-residency in Brazil responds more to the material needs of children than to the need for caring of older people" [Camarano and El Ghaouri (1999) and Camarano (2002)].

The findings above for Brazil suggest that multigenerational households are held together in part by economic hardship. Older parents and their adult children have to cooperate in order to make ends meet. As they work for the common good, no doubt strong bonds of obligation, loyalty and trust develop. However, given the chance to live separately, older parents and their adult children have chosen to do so as the growing proportion of persons living alone suggests.

Results for other contexts also indicate that elderly people emphasize autonomy and personal satisfaction in their daily lives and their preference is for "intimacy at a distance". The same occurs with grandparents, who systematically emphasize independence over obligation and love over duty. It is important to remember that this is not only cultural and the result of a flood of self-fulfillment that has washed over Western societies, but also a social consequence of the rise in the standard of living, in which older parents and their adult children are less dependent on one another economically.

The Brazilian family is not only an important source of material support but it also is perceived as a main source of happiness for the elderly. Asked about what are some of the good things in their lives, Brazilian elderly point to the family, viewed in different forms, as the most important.

"(...) among the good things in life are, children and grandchildren (20%), family (12.6%), wife or husband (5.0%), the birth of a child (3.2%), the house they owned (5.3%), the house they live in (4.4%). Some other good things mentioned are religion (12.5%), health (9.4%), friends (3.3%), employment (3.2%) and the benefits of social security (2.9%)" (Table 47, of Saboia's chapter in this book).

These findings for Brazil are interpreted in different ways and support different types of social policies. A common view is that the family and intergenerational relations are "natural" and better sources of elderly care than the state. This argument in general comes with the assumptions of a traditional family structure and a sexual division of labor. To this perspective, the maintenance of the role of the family, and female kin in particular, in caring for older people should inform public policies. Another view emphasizes that the amount and quality of care depend only partially on the family and individual level factors but that public resources are vital. This view recognizes that assistance across the generations has been almost exclusively a female domain but that these conventional forms are currently in decline. This leads to a demand for policies that bring

major relief to families, especially women. Institutional solutions that seek to substitute paid labor for the tasks traditionally performed by women, are the new alternative to the growing need for elderly care.

Regarding gender and policy development, there is great concern over women's role in the current income transfers to Brazilian families (e.g. Bolsa Família, food stipend, young agent, etc.). Some feminists note that there are implicit contradictions in the articulation among women, family and the governmental programs that seek to solve socioeconomic problems and promote development. Among the arguments are that women find themselves in a very unjust situation because of their vulnerability in the formal labor market and their roles as caretakers in the family and the community, which transforms them into cheap labor for carrying out social programs at the same time that they receive little direct benefit from government [Portela and Gouveia (1997), Lavinias (1996)].

3.2.2 How far can Brazilian families go in providing care?

The high costs of care along with economic hardships; demographic transformations and changes in gender contracts¹⁹ suggest that Brazilian families can't go to far in performing their traditional role of caring for their dependents without help from the State. The idea that families provide better and cheaper support than the state is widespread and accepted, even outside neoliberal circles. However, as the State is replaced by civil society and its organizations, with particular emphasis on the family, some crucial issues are often overlooked, including: 1. the roles of the State and the family or the difference between public policies and private actions, 2. the women as a "hidden" resource becoming a "scarce resource" between the generations.

The first aspect, of the difference between public policies and private or individual actions refers to the idea that the whole politics of the State is universalistic while the actions taken by the family are particularist in nature.²⁰ The initiative of family members in helping the elderly are voluntary and do not imply any mandatory relationship towards the individual to whom the action is taken. It is by no means simply a matter of love; it often comes from a sense of duty, instilled

19. Gender contracts represent a social consensus about who men and women are, that they think and what they do. The concept "gender contract" was developed in Scandinavia, using the reference to gender developed in Sweden. Such gender contracts (and the terminology is an irony like the so-called social democratic contracts between capital and work), were developed from conflict and are subject to historical and geographic variations [Duncan (1994, p. 268) and Goldani (1999)].

20. My discussion here is inspired in Pinto's work about the role of the State and NGOs in terms of individual social inclusion. She notes that, "the state is committed with the universality of its actions, even when they propose or carry out policies focused on specific segments of the population" [Pinto (2004, p. 180)].

through moral pressure, social expectations and the pangs of conscience. Public policies fulfill the obligation of the State by ensuring its citizens the rights guaranteed by the constitution and the complementary laws (e.g. the Elderly Statute). Therefore the scope of State public policies and family private actions in terms of care and social protection of the elderly are related but unequivocally different. This fact has important implications for the population's well being.

Families and other civil society organizations are necessary for dealing with the growing aging population, but they are not enough. When they intend to replace the State by putting private actions in the place of public policies, they share with the State the failure of the latter in fulfilling its constitutional obligations. However, when Brazilian families through institutions such as "Groups of Third Age", NGO's, and The Elderly Council pressure the State for new policies, they become supervisors of the State and indirectly promoters of fundamental public policies.

The second aspect that is missing in the discussion of the roles of the State and the family in terms of care has to do with women as a "hidden" resource becoming a "scarce resource" between the generations.²¹ This is related to the growing demand for care services in a context of changes in the family, particularly in women's lives, and cuts in social services by the State.

Up until now it has been mainly women who have looked after children and the elderly, carrying out the routine tasks that give cohesion to relations between the generations. This was assumed for most of the family-centered welfare states, like the Brazilian one, until recently. Brazilian men and women have equal rights before the law but with respect to the care of children and other dependents however, our cultural norms still reflect greater expectations for women than men. Despite the Brazilian women's movement's sustained effort to change it, this cultural double standard is still vivid through current statistics [Goldani (2002)]. In fact, the major achievements of feminism in Brazil have been more in terms of women's individual rights than greater obligations for men within the family [Barsted (1999) and Oliveira (1999)].

The situation is changing fast in Brazil because of a massive influx of women into the labor market. This is stimulated by various factors including a rise in their educational levels and a fall in fertility, both of which undoubtedly enhance

21. The expressions of women as a "hidden" and as a "scarce" resource were used before. In the discussion of the relationship between the generational contract and gender relations in Germany, by Beck-Gersnsheim (2002), and also in the Japanese discussion about changes in family and the restructuring of the welfare state. The transformations of the family in Japan were called changes from the "hidden welfare capital", —an expression used by the ruling conservative Liberal Democratic Party (LDP) in the 1990s— or from "caring hell", a more commonly used expression [Peng (2001)].

the ability of women to take decisions in different areas of life.²² Parallel to this, there is evidence that increased labor force participation has taken place amid persistent gender inequities, whose manifestations are both at the household and at the market level, leading to an overburden for women [Leme and Wajnman (2003) and Lavinás (1996)]. Thus, the implicit social contract governing the relationship between parents, children, men and women is now being renegotiated as the structure of family and work life is changing.

Among the implications of these trends, Giddens (1994, p. 13) reminds us that “the demand for freedom and equality reached women in the course of the twentieth century, and it can no longer be arbitrarily rolled back. It is scarcely conceivable that women will give up the new rights they have won”. Then, for how long will Brazilian women be able to play the role of main care-giver for family dependents? Or to what extent will changes in their lives make them an increasingly “scarce resource”? What are the implications of this for the Brazilian State, which currently sees them as invisible resources?

The Japanese case may be instructive to this discussion because it is a very clear example of what happens when the family (women) becomes overburdened by traditional care and welfare responsibilities.²³ Two features that particularly stand out in the welfare restructuring that occurred in Japan in the 1990s are: first, it has been largely driven by factors that relate to the shift in gender relations and demographic patterns; and second, while gender and demographic factors have forced the Japanese state to expand its role in social welfare, this has been coupled with a significant devolution of its responsibilities [Peng (2001, p.191)].²⁴

22. Some indicators of change in Brazilian women’s lives between 1977-1997 show: a female rate of participation in the labor force which increased from 36.9% to 53.3% for women between 18 and 60 years old; an average increase in years of education, from 3.9 to 5.6; a decline in the total fertility rate from 5.1 to 3.6, an increase proportion of women heading families, from 12.9% to 20.3% [Leme and Wajnman (2003, p. 52)].

23. For the Japanese case. I drew mainly from Peng (2001), which addresses issues and makes suggestions that are relevant for Brazilian women.

24. In summarizing the Japanese case, we can observe two crucial movements. One in which the increase in married women’s employment, coupled with the lack of public or market sources of care, transformed the family. Those most affected were middle class women in their forties and fifties, who benefited as children from Japan’s family-centered welfare regime from the 1950s to the 1970s. As their double burden increased, these women began a social and political mobilization to protest against the Liberal Democratic Party (LDP) government’s policy of less government and more individual self-help and family mutual aid in social welfare. The impact of women’s social mobilization was huge. Most of the social policy reforms in elderly care introduced in the 1990s, including the two most important, the Gold Plans and long term care insurance, would not have been possible without women’s political work [Peng (2001)].

The second movement is related more directly to demographics. Unlike the middle-aged housewives, young women took a different route to make their demands heard. Rather than resorting to political mobilization, they simply refused to subscribe to the traditional life course by postponing and, in some cases, even avoiding marriage and/or childbirth in order to pursue their careers and work. The cumulative effect was a decline in fertility to a level well below what the government considers necessary to sustain future economic growth. Thus, Japanese women created a “quiet crisis” that incited the government to respond with massive expansion of child care and other family support services, introducing protective employment legislation to help women reconcile work and family responsibilities, and offer financial incentives for families to have more children [Peng (2001)].

Discussing the combination of welfare expansion with devolution (expanded services to be implemented at the state level), Peng notes that it may come at the cost of a decline in quality of care or may lead to greater regional disparity. He also observes that there are important questions about the effects of welfare state devolution on gender and equality and concludes that "...it is ironic that the system of social care extension in Japan which seeks to encourage women to work by relieving them of the care burden at home seemingly led to a new system of care service that employs women as low-wage, part-time contract workers under devolution and deregulation processes. In the course of deregulating care services, the Japanese state simply excused itself from having to deal with wage negotiations and working conditions and allowed the market to dictate the terms. This has led to an overall decline in the wages and working conditions of care workers (most of them women)" [Peng (2001, p. 198)].

Brazil shares with Japan an historical family-centered welfare society and some demographic trends though at different levels (fertility decline, increasing life expectancy and rates of women in the labor force and gender inequalities),²⁵ which makes the Japanese experience very useful comparatively. Like Peng, I believe that regarding culture or no culture, individuals and families will seek their own solutions if the state continues to expect the family to maintain the burden of care in a society that also expects women to go out and work. There are costs to the states for not supporting the family that Japan has just begun to realize (Peng, 2001, p. 194).

4 THE SOCIAL POLICY CONTRACT AND GENDER: THE EXPERIENCES OF INDIVIDUALIZATION IN CHILE AND UNIVERSALIZATION IN BRAZIL

The international literature suggests that attempts to reform the social security system by "individualizing" benefits and eliminating women's entitlements as wives would adversely affect most female beneficiaries. Such reforms would worsen the social provisions of many women who would not qualify for adequate social security benefits, and they would become dependent upon the assistance programs in the welfare tier. The conflict between the goals of women's independence from their husbands social rights, adequate social provision in old age, and the removal of inequities in women's rights as workers and wives seems far from a resolution even

25. Gender inequality in terms of household work is the highest in Japan. Among dual earn careers couples the average hours that women work more than men at home is estimated in 25 hours per week for Japanese, 15 for Brazilians and 9 hours for Swedish women [Goldani (2002 and the site : www.unmich.edu)].

in countries in advanced stages of welfare restructuring [Gordon (1990) and Orloff (1996)].²⁶

Thus, one important conclusion from different experiences is that welfare restructuring based in gender-neutral terms has generally failed to modify outcomes in any significant way or has been detrimental for women. Gender-neutral reforms have often been cosmetic; the sole change has been to extend formal entitlements for both sexes. The principal flaw of this type of reform is that it does not address the interaction of the gendered division of labor interacts social provision, the root cause of gender differentiation in women's and men's entitlements [Gordon (1990)].

In Latin America, the Chilean and the Brazilian cases serve as good examples of how policy variation creates differences in gender outcomes. Chilean attempts to reform their social security system by "individualizing" benefits and eliminating women's entitlements as wives adversely affect a majority of female beneficiaries. Such reforms worsen the social provision of many women who do not qualify for adequate social security benefits, and they become dependent upon assistance programs in the welfare tier. By contrast, Brazilian women have benefited from a universalization of the social security system where pensions, particularly in rural areas, have become an efficient mechanism of income redistribution and helped to narrow the gap in gender inequality. In this section of the article, I will briefly refer to these two models of social protection to discuss the recent effect of social security on gender in Latin America.

4.1 The Chilean Case

In 1981, the Chilean government changed its approach to old age security. The basis of public pensions changed from collective to individual, in which they went from the widely-used system of pooling the risks of being without the capacity to earn while aged, to a system that relied on mandatory individual savings accounts. With some variations about 11 countries in Latin America adopted this "multi-pillar" model, but all share the project of individualization of social security. Recent evaluation of the results of the reform experiences in Latin America concluded that:

"(...) the merit of the reform is not in the privatisation of schemes of old age income support but in their individualization. And contrary to the claims of proponents of reforms, the strong suit is not in

26. Individualization as a strategy of reform has been easier to pursue when the breadwinner model has focused on the family as the unit of benefits and contributions, as in the Dutch case. However, this approach has more difficulties when the breadwinner model centers on the individual as the beneficiary with supplements for family members, as in the U.S. and Great Britain [various chapters on Gordon (1990)].

arriving at a durable and permanent system, but in breaking with past approaches that demographic and economic changes had made defunct... The disappointments may have been elsewhere, principally in the exclusion of more than half of all workers from even a semblance of a safety net during their old age, even in countries that generally have the fiscal and administrative wherewithal to provide such programs" [World Bank (2004, p. 10)].

Parallel to general evaluations of the new privately managed pension system, Mesa and Montecinos (1999) conclude that the privatization of social security has worsened Chilean women's well-being and even increased gender inequalities.

"(..) worse off than they were under the old pay-as you-go system of social security, in which the calculation of benefits for men and women did not differ and women could obtain a pension with fewer requirements than men. Currently, benefits are calculated according to individuals' contributions and levels of risk. Such factors as women's longer life expectancy, earlier retirement age, lower rates of labor-force participation, lower salaries, and other disadvantages in the labor market directly affect their accumulation of funds in individual retirement accounts, leading to lower pensions, especially for poor women" [Mesa and Montecinos (1999, p. 7)].

The Chilean reform did not modify women's right to retire at age 60, five years earlier than men. However, retiring at age sixty became a disadvantage. With fewer years of contributions, the accumulated funds are smaller and so are the corresponding pensions. The new private pension system also punishes maternity because women pay higher costs for bearing children if it leads them to interrupt their participation in the labor market, and thus to diminish their contributions and to lose productivity and income. Pensions are paid in a monetary unit [Unidade de Fomento (UF)], which maintains benefits in real terms. However, it does not apply to the minimum pensions, which are guaranteed by the state and go primarily to women with insufficient savings. These minimum pensions are not automatically protected against inflation. Persons eligible for minimum pensions must have at least 20 years of contributions (about half of a working life) and many women workers will not qualify even for this benefit. Thus, the rules of the new system make it more difficult for Chileans with jobs that are not stable and protected to receive an adequate income in their old age. Thus, "the economic cost of lower pensions will be added to the solitude and social stigma women already face in their old age" [Mesa and Montecinos (1999, p. 31-32)].

4.2 The Brazilian Case

By contrast with Chile, evaluations for Brazil are optimistic and conclude that higher living standards for elderly women today are due to changes in the social

protection system and in particular to the universalization of social security benefits. They suggest that living alone may be more a reflection of a successful and new way of ageing rather than the abandonment of or solitude for Brazilian women today. The universalization of social security, health policies and improvements in medical technology and certain other technological advances such as telecommunications and transportation facilities help to explain these trends [Debert (1999) and Camarano (2004)].

"(...) It is a recognized fact that elderly Brazilian women are living longer and in better conditions. This is due to three factors: greater social security coverage, greater access to health services and improvements in medical technology. Not long ago ageing brought women poverty and isolation in the social sphere. The greatest change in the last 20 years is that the end of active life and widowhood do not signify the old pattern. The universalization of social security and improvements in health brought a redefinition of the life course. The last stage of life is no longer a residual to be experienced by a minority, but it became a longer phase than childhood and adolescence. There have been relative and absolute improvements, as measured by income, in both their lives and of their families... For that to happen, urban and rural social security has played a vital role and the Organic Law of Social Assistance that assured an income for an important part of the elderly female population (...)" [Camarano (2002 and 2004: author's translation)].

Parallel to the positive effects observed under a larger conception of social protection on the improvement of elderly women's conditions, Camarano also emphasizes that this improvement results in privileges for Brazilian women who benefit from the new legislation of social security without losing some of the old benefits such as receiving both individual retirement and a pension due to widowhood. At the same time, she notes that women live longer and contribute less to the retirement system than men. Other studies sustain that poverty is higher among elderly men in the rural areas. In Brazil, although it has been found that 11% and 20% of rural and urban female elderly, respectively, do not receive any income whatsoever, poverty is higher among elderly men than women. The situation is reversed where the non-elderly population is concerned [Camarano (2002) and Barros, Mendonça and Santos (1999)].

To better understand the Brazilian case it is important to keep in mind that it is mostly rural women who benefit from the universalization of social security. A significant percentage of women who devoted most of their lives to domestic duties still have limited possibilities for becoming financially independent on their own retirement pension. Also, women whose retirement pension results from their own work, receive retirement pensions that reflect the pay discrimination that affected them during their working lives. This gap has tended to narrow, however, in general and especially among professionals.

"(...) Social security analysis reveals that Brazilian women are apparently in worse condition, that is, the conditions in which they receive benefits are less privileged (retirement according to age versus retirement by time of service, for example) and the payments are less than those offered to men. This situation reflects the greater precariousness of women's condition in the labor market compared to males. The ways in which additional benefits were historically created for protecting women in terms of their social security rights (less time worked and lower age for the concession of benefits, right to benefits in better conditions than for men) should not be seen as merely responses to arguments about double-duty (working both inside and outside of the home) but also to the precariousness of women's working lives in relation to men's...The benefits can also represent protection against current conditions in which elderly women need to care of themselves and others and because of their age, they can no longer endure working double-duty." [Beltrão et al (2002: author's translation)].

The Chilean and Brazilian cases serve as an alert to scholars, policy makers and the general public for the need to engage in debates that more adequately incorporate gender variables in designing and implementing policy reforms.²⁷ They also reinforce the idea that the goal of total individualization of benefits and obligation developed in the 1990s, which emphasizes gender as a necessary component, continues to be a challenge. The dependence of women on men's income and the dependence of men on women's domestic services and care must be replaced by financial independence and "care independence". However, a dilemma pervades this sort of restructuring of benefits and obligations. Individualization eliminates women's financial dependence upon their husbands, simultaneously individualization without financial independence worsens women's situation. This raises the question of how realistic assumptions are about women's financial independence and independence in men's care for the next generation.

In Latin America women's working conditions tend to be poorer than men's, with a significant gender gap in pay for equivalent work at all levels of education, but especially at the upper end of the scale. The retirement pensions paid to women further perpetuate the pay discrimination that affects them during their working lives. This gap has tended to narrow both in general and among the categories with professional qualifications [ECLAC (1990)].

In conclusion, individualization is a strategy of social security reform with potential hazards for women. Both developing and developed countries offer lessons and suggestions. The Swedish experience suggests prerequisites for its implementation to be more helpful than harmful to women, including: 1. provision of social benefits based on citizenship or residence, 2. substantial policies that

27. Systematic evaluations of the gender impact of the reform of social security systems should be made in Latin America countries like Peru, 1993; Argentina and Colombia, 1994; Uruguay and Mexico, 1995; Bolivia 1997, and El Salvador, 1998 because they have made changes in their social security systems inspired by the Chilean reform in the years mentioned.

help women to achieve financial independence through their own earnings, and 3. a marginalization of means-tested programs where the family is the unit of benefits [Gordon (1990)].

The Chilean case proposes that gender inequalities introduced by the private pension system can be partially avoided if women individually take three steps:

1. Women make an additional voluntary savings,
2. Women should retire after age sixty in order to increase their accumulated funds and shorten their retirement,
3. Women must select a Pension Fund Administrators' (AFP) in the private pension market, one that does not charge a fixed commission to affiliates and has high and stable real rates of return on investments [Mesa and Montecinos (1999)].

However, these individualistic measures would not reduce gender inequalities such as those in the labor market or the use of different actuarial factors in the calculation of women's pensions and these inequalities need to be addressed through state policies that explicitly consider gender [Mesa and Montecinos (1999, p. 31)].

The current Brazilian policy of universalization and rules favouring women in terms of social security, improve elderly women's lives and narrows the historical economic gap between male and female elderly. Ironically, a common view among experts advocates that the Social Security system should not seek to correct the gender inequalities created in the labor market. Rather, they propose eliminating rules that favor women to help solve fiscal imbalances. These include increasing women's retirement age from 60 to 63 and thus reducing the difference with men to two years, finish with the differences in time of service for retirement among different occupational categories and eliminate the linkage between the minimum wage and the Social Security floor [Giambiagi et al (2004)].

5 FINAL COMMENTS

"I blame no persons or generations. Nor can I find satisfactory explanations in our standard causes—ages or natures of population, electorates, voters, politicians or parties... We must look instead to the problems of sustainable, long term management of a common resource" [Thomson (1991, p. 6)].

The debate over intergenerational relations and welfare restructuring in Brazil takes us to the recurrent conflict over resource distribution. Increased public support for care activities—such as subsidized elderly care, universal health insurance, public education and more generous assistance to poor families—would redistribute income from men to women, from adults to the elderly and most likely, from the rich to the poor. In other words, it would benefit the least powerful groups in the

Brazilian society at the expense of the more powerful. These important aspects are largely obscured by the lack of a coherent picture of the differential costs of care for families and for the State. Indeed, conventional economic analyses considers the high costs of social spending on elderly from the state's side and never bothers to compare these with costs to families. This is partly the result of an implicit assumption that families, and especially their female members, provide free social services.

So far, economists and policy makers have had little to say about who should pay for the costs of elderly care and even less about who should pay the costs of rearing the next generation. The time and money Brazilian families devote to care for their dependents—helping the biological and social reproduction of the population—is ignored in the discussions of the GDP and in policy formulations. Furthermore, the family is often blamed for many social problems, including deficits in the public system. To raise good citizens and maintain a cohesive society appears to be the obligation of families. An idealized small family composed of economically self-sufficient and a heterosexual stable couple appears to be the solution for national problems such as unemployment, violence and poverty.

The current debate about the fiscal crisis of the social security system polarizes and paralyzes efforts to advance the universal social protection system as proposed by the 1988 Federal Constitution. There is increasing evidence of a reverse intergenerational flow in Brazil, where more and more elderly provide for their adult children and grandchildren. In the same line, the improvements in elderly women's conditions only begins to narrow the gender gap among the elderly but this doesn't mean that current inequities of gender are solved. Nor are families doing well enough to continue with their role as primary caregivers. Mistakenly interpreted as a result of elderly women's privileges, this argument may suggest reducing those benefits, which have become a vital part of a life survival strategy among Brazilian families. All these trends about the transfer of resources from the elderly to the young should not be seen as a solution to the problem of resource distribution but instead as a warning of the greater difficulties that new generations face in reproducing themselves. Also, the potential conflict between generations due to scarce resources should be viewed more in the context of so many in need and a broad system of inequalities rather than as a privilege of the elderly.

Consistent with a "social problem solving" discourse, I suggest that in building our social protection system we should emphasize the complexity of an integrated system of policies in a context of high inequality, instead of thinking in a compartmentalized way and trying to disregard responsibility for inequalities in

other sectors. Macro-level policies that share elderly care between the family and the state seem vital for alleviating the strains placed on families, particularly on women, as they respond to fundamental changes in the conception of family and kinship due to sociodemographic and technological change.²⁸ It is also clear that we can't re-think the social welfare policies as separate from employment policy or, in other words, when we discuss what government should or should not do, we need to simultaneously consider its consequences for markets and families" [Esping-Andersen et al (2002, p. 25)].

In practical terms, social policies are oriented both by a technical logic and the capacity of each social group to put pressure on the State. Then, how is it possible to distinguish better from worse interpretations of people needs? In trying to answer this question, I agree that justifying some interpretations of social needs as better than others involves balancing procedural and consequentialist considerations. In other words, it involves balancing democracy, equality and fairness [Fraser (1990, p. 220)].

In concluding this chapter, I would like to call attention to the need to redefine the notion of well-being. The discussions of welfare and public policies are usually concerned with state-provided basic social services and their restricted notion of individual well-being. My suggestion is that parallel to the need for redistributing resources to feed, shelter and care for the health of the individual, we need to broaden the notion of individual well-being. It would be useful to recover the idea that there are multiple spheres in which well-being is distributed, including the welfare of individuals, others and the community as a whole [Jordan (1987) and Titmuss (1958)]. In other words, in the course of a day, we move several times between spheres of life that are equally crucial for our well-being.²⁹ This concept of welfare shares leads to a wider understanding of social policy that integrates family-provided and commercial forms of welfare into the state welfare system. A necessary step in this direction would be to extend the current discussion about the Brazilian model of social protection or the future of the welfare state beyond economic and public expenditures arguments.

28. The idea here is that social policy is not a matter simply of social services or even more narrowly (and perhaps more commonly believed) social services for the poor. Social policy should be viewed as "a deliberate attempt of governments to promote individual and social welfare in certain specific dimensions using any suitable policy instruments" [Weale (1983, p. 5)].

29. For example, in any day, we move from the domestic sphere where we give and receive affection and encouragement and also provide each other with essential services. From our job, we get pay, pensions, perks and prospects. From the commercial sphere, we buy most of the goods that sustain our daily lives. From the state, we get education, health care, part of our income and possibly housing. It is difficult to measure and compare the contributions of each sector to overall well-being, especially in the domestic sphere, where people do a great many services for each other on an unpaid basis [Jordan (1987)].

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PART 4

POLICIES FOR BRAZILIAN POPULATION IN LATER LIFE



POPULATION AGEING IN THE PUBLIC POLICY AGENDA *

Ana Amélia Camarano

Instituto de Pesquisa Econômica Aplicada (IPEA)

Maria Tereza Pasinato

Instituto de Pesquisa Econômica Aplicada (IPEA)

1 INTRODUCTION

Although population ageing is widely acknowledged to be one of the main social conquests in the twentieth century, it is also recognised that has brought about important challenges on public policies. One of the most important is guaranteeing that the economic and social development process is based on principles capable of guaranteeing a minimum economic level for the maintenance of human dignity and also of equality among all age groups in the sharing of resources, rights and social responsibilities.¹

In the developed countries, population ageing occurred in a more favourable socio-economic scenario that allowed the expansion of social protection systems² In developing countries and, more specifically, in the Brazilian case, an accelerated ageing process is taking place within a scenario of economic depression and a fiscal crisis that is inhibiting the expansion of the social protection system to all age groups. The elderly Brazilians are still enjoying some social conquests brought about by the 1988 Constitution, but it is quite sure that the new elderly Brazilians will not be able to enjoy this.

In developed countries, social programs aimed at the aged population first became significant during the 1970s. Their objective was to maintain the social role of elderly people and/or social reinsert them, as well as to prevent the loss of their autonomy. The maintenance of their income had already sorted out through

* This chapter was translated from Portuguese to English by Eoin O'Neill and reviewed by Ana Amélia Camarano.

1. This has actually been a concern since the Plan of Action on Ageing established in 1982 in Vienna.

2. Currently these systems are facing various sorts of restrictions on their long term financial sustainability.

social security systems. In Brazil, as in other developing countries, the question of population ageing was only one in a long list of unresolved social questions, such as poverty, the increasing social exclusion of groups of the population and the high levels of inequality [See Aranibar (2001).]

This chapter describes the evolution of the public policy agenda in relation to the population ageing matter, both at the international and national levels. It is not intended to evaluate the described policies, in part due to the lack of appropriate data. The chapter is divided into five sections, the first of which is this introduction. The second part discusses some points on the international agenda, starting with the first Global Assembly on Ageing held in Vienna in 1982. The third section looks at the legal landmark on which Brazilian policies for elderly people are based. The fourth section deals with specific Brazilian policies. In the last section, it is found a discussion of some challenges that population ageing presents to the Brazilian public policy agenda. The addressed question is: are we heading towards a society for all ages?

2 THE INTERNATIONAL AGENDA: FROM VIENNA TO MADRID

This section discusses the international public policy agenda for elderly people. Two United Nations assemblies, the first in Vienna in 1982 and the other in Madrid in 2002, significantly influenced this agenda.

2.1 The Vienna Plan

The First Global Assembly on Ageing, held in Vienna in 1982, is seen as marking the beginning of the creation of an international public policy agenda for elderly people. This Assembly was the first global inter-governmental forum concerned with the matter of population ageing and resulted in the approval of a global action plan. This plan was a step forward, since previously population ageing had not been the focus of attention of United Nations general assemblies or any of its specialized agencies. The matter received very little attention from the International Labour Organisation (ILO), the World Health Organisation (WHO) and the United Nations Educational, Scientific and Cultural Organisation (Unesco) as it was not an important part of the specialised activities of any of these organisations.

The main objectives of the plan were to guarantee economic and social safety for elderly people as well as to identify opportunities for their inclusion in the development process of their countries. It took as a reference the Conference on Human Rights held in Tehran in 1968. Taking into account the economic and social context, it was assumed that elderly people constitute a vulnerable group,

which would suffer most the consequences of colonialism, neo-colonialism, racism and practices of apartheid. In other words, the concern with elderly people was brought about by the demographic tendencies and a situation of conflict. The international sphere was marked by the tensions of the cold war and in the regional one 'exception' political regimes were predominant.

The First International Action Plan on Ageing made 66 recommendations to the Member States concerned to seven areas: health and nutrition; protection of elderly consumers, housing and environment, family, social welfare, social security, work and education. The majority of the issues were previously dealt with by the United Nations in economic or policy commissions.³ In short, concerns with the social implications of the ageing process were not expressed, even though they existed. According to Alves (1995), social matters did not have the same importance as economic and policy ones within the United Nations. Not even human rights were properly dealt with.

One of the main results of the Vienna Plan was to place individual and population ageing on the international agenda. The background was the living conditions of elderly people in developed countries. It was perceived a need of the "construction" and, more especially, of the recognition of a new social actor—the elderly person—with all his/her needs and particularities. Part of the recommendations was targeted to encourage elderly people to be independent and to have the physical and/or financial means needed for this independence. Therefore, the document also contained a strong bias as it was very much based on policies associated with the world of work.

The plan designed the elderly population as composed by a group of financially independent individuals who, as a result, had purchasing power. This means elderly people in developed countries. Their needs had to be met since they added value to the economy and permitted the development of a new market niche. On the other hand, the plan also had a strong medicalization point of view of the ageing process.

Although at that moment attention was focused on developed countries, after the Assembly the policy agenda of developing countries began to include the matter of population ageing. For example several Latin American governments modified their constitutions in different way creating laws that favoured elderly people. These included Brazil (1988), Peru (1993), Bolivia (1994), Ecuador (1998)

3. These commissions were concerned with policy in the strict sense, in other words, they only dealt with the exercise of state power.

and Venezuela (1999). These countries made important advances in relation to policies and special programs for elderly people [Uriona and Hakkert (2002)].

On the other hand, the Vienna Plan consisted of a set of recommendations whose implementation depended on the allocation of resources that were not available. For example, part of the recommendations aimed at encouraging the independence of elderly people implied on increases in public expenditure, especially in the social area. Among them, the more important were the provision of benefits and health care for elderly people in need.

2.2 Between Vienna and Madrid

The 20 years that elapsed between the first assembly and the second one were marked by profound changes in the economic, social and political spheres. In the 1990s, the ageing matter became much more significant on the agenda of developing countries as population ageing process in these countries was occurring much more quickly than had happened in the more developed ones.

Generally speaking, the political and academic debate saw elderly people as a homogeneous sector with common needs and experiences. This simplistic vision resulted in two polarised perspectives about the experience of population ageing [Llyod-Sherlock (2002)]. The dominant view associated ageing with dependency and social problems. It even believed that population ageing could constitute a threat to the future of economies, to democracy itself etc.⁴ An example of this can be seen in the World Bank document published in 1994, *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth*, which highlighted the “impact” of the increase in the number of elderly people on public policies:

“The world is approaching an old age crisis. As life expectancies increase and birth rates decline, the proportion of the population that is old is expanding rapidly, *swelling the potencial* economic burden on the young” (author’s italics).

In contrast, another approach believed that elderly people could contribute significantly to economic and social development. “Many elderly people are a living source of resources and can contribute to the welfare of their families and communities” [HelpAge International (1999)]. Contributions from elderly people are understood as the continuation of economic activity, even when retired, voluntary work, assisting the family budget, the provision of accommodation, looking after grandchildren, including orphans with AIDS. Policies resulting from

4. See, for example, Petersen (1999), apud by Lloyd-Sherlock (2002).

this perspective are those that try to reinforce the capacities of elderly people and increase their opportunity to contribute to society [Lloyd-Sherlock (2002) e Troisi (1995)].

In 1991, the General Assembly of the United Nations adopted 18 principles in favour of elderly people. These involved five broad themes: independence, participation, care, self-fulfillment and dignity.

The promotion of independence requires public policies that guarantee physical and financial autonomy, in other words, access to the basic rights of all human beings: food, housing, health, work and education. Participation involves the inclusion of elderly people in society. This requires the creation of an environment that allows them to share their knowledge and abilities with younger generations and to socialise. Care refers to the possibilities for elderly people to enjoy all the basic human rights and liberties through family or institutional care. Self-fulfillment means to encourage elderly people to take advantage of opportunities to develop their potential through access to educational, cultural, spiritual and recreational resources. Lastly, dignity means that it must be ensured to elderly people the possibility of a dignified and safe life, free of all and any exploitation or mistreatment.

In 1992, the United Nations General Assembly approved the Declaration on Ageing. This made 1999 the International Year of the Elderly Person and defined the parameters for the preparation of a theoretical framework on the matter of ageing. The slogan of the International Year of the Elderly Person was the promotion of a *society for all ages*. The theoretical framework was prepared in 1995 (United Nations, document 50/114) and, as the declaration on ageing, contained four main aspects to analyse a *society for all ages*: the life conditions of elderly people, continuous individual development, multi-generational relations and the relationship between ageing and social development.

During the 1990s, elderly people came to be the focus of attention of other United Nations forums, such as World Conferences on population, social issues, gender, environment, etc. Little by little, the view of elderly people as a vulnerable and dependent population came to be replaced by one of an active segment of the population who need to be integrated in the search for welfare of society as a whole.

In 1999, the International Year of the Elderly Person was celebrated. The member states of the United Nations were encouraged to implement the five basic principles related to elderly people that had been adopted by the 1991 General Assembly: independence, participation, care, self-fulfillment and dignity.

2.3 The Madrid Plan

The Second Global Assembly was held in Madrid in 2002. The report of the United Nations' Economic and Social Council to the preparatory committee of this assembly called attention to the social, cultural and technological changes ongoing throughout the world that changed values. For example, changes in values of different generations and in their forms of the transmission as well as of knowledge and responsibilities from one generation to another were cited. Younger generations acquired a large part of their values from their peers. For this reason, each generation has different perspectives from their predecessors and are faced with different options [UN (2001)].

The Second Global Assembly took place in a very different context from that of Vienna. First, the collaboration established between state and civil society was emphasised. Under the auspices of the Economic and Social Council of the United Nations, approximately 700 non-governmental institutions were given places on the consultative council. This participation took place on all issues. The reference for human rights became the United Nations Conference on Human Rights held in Vienna in 1993.⁵

During this assembly a new political declaration and an action plan were approved to guide the adoption of normative measures about ageing at the beginning of the twenty-first century. It was expected that the action plan would have a broad influence on policies and programmes for elderly people throughout the world, especially in developing countries.

The political declaration contained the main commitments made by governments to implement the new plan. Special attention was given to problems arising out the ageing process in developing countries.

The action plan was based on three basic principles:

a) the active participation of elderly people in society, in development and in the fight against poverty;

b) development of health and welfare in old age: promotion of healthy ageing; and

c) creation of a suitable and favourable environment to ageing.

The first principle assumes that ageing population is not a process that necessarily exhausts the resources of society. To the contrary, it may bring about the accumulation of human, social and economic capital. When policies are

5. In this conference human rights acquired their own importance and no longer needed to be subordinated to other issues.

considered, institutions should adapt themselves in order to allow the growth of elderly people to become an element that drives societies to the welfare. In relation to this labour, social integration and social security policies are important.

The second principle requires health policies for the entire life course. These can include the promotion of health and universal access to public health services throughout life. It should also take into account the importance of environmental, economic, social, and educational factors, etc., in the emergence of infirmities and incapacities. Also necessary are professional training programs in Geriatrics, Gerontology and Social Services.

Lastly, to ensure a suitable and favourable environment to ageing implies the implementation of policies directed at the family and the community that can guarantee safe ageing and promote intergenerational solidarity. For this, public policies must be designed on the basis of collaboration between state and civil society in order to construct greater access to the physical environment, services and resources, including attention to environmental protection. In this way, elderly people can contribute to the welfare of society and at the same time to be benefited from the right to act as citizens, to receive attention, to be independent, to participate into society and to be treated with dignity [UN (2001)].

One of the greatest advances of the Madrid Plan was related to the contribution of elderly people to society. In the policy declaration, this advance was most strikingly found in article 6:

“When ageing is embraced as an achievement, the reliance on human skills, experiences and resources of the higher age groups is naturally recognized as an asset in the growth of mature, fully integrated, humane societies.”

The Madrid action plan is a broad document that contains 35 objectives and 239 recommendations for the adoption of measures aimed at national governments. Nevertheless, for its implementation, it is required the contribution of the civil society and the private sector. Also emphasised was the importance of international cooperation. Governments were responsible for creating partnerships to implement the plan and to establish the responsibilities of each part and its own.

The establishment of partnerships was an important advance in the plan. Also seen as important was the consideration of the gender issue. Paragraph 8 advocates “the integration of a gender perspective in policies, programs and legislation on ageing”. In this area, suggestions were made, such as in the case of

social security for example, to take into account equality between men and women in the social protection system. However, the same paragraph also states that “the condition of elderly women shall have priority in policy actions”. This makes clear that the concern with gender is restricted to a concern with women.

This vision is shared by Knodel and Ofstedal (2003). These two authors found in the plan more than 40 articles that emphasises the greater vulnerability of women in respect to their welfare conditions and advocate policies and programs directed specifically at them. On the other hand, they find no article that recognises that elderly men have special needs and as a result make no special recommendation about them. Some papers have shown that men experience greater difficulties with retirement than women [Simões (2004)].

The importance of taking the special needs of women into account cannot be denied but a gender approach should look at the differentiated needs of both sexes and recognise that gender does not always signify a disadvantage [Knodel and Ofstedal (2003)]. The concern here is that this vision expressed in a document such as the Madrid Plan could affect policies of developing countries.

Other limitations of the plan also need to be looked at. The strategies proposed by the Madrid Plan, as well as in other United Nations documents, tend to be too vague and do not take into account the regional diversities. In fact, they consist of a single general plan for a much diversified social reality. Some of the recommendations appear to be based on a rather unrealistic model—that of developed countries which count on an advanced social welfare program.

Another point is that although all the proposed measures had been agreed by the signatory countries, their implementation necessarily had to depend on the evaluation of the national priorities, the social policies, etc. The implementation of the Plan of Madrid is a right and a responsibility of each Member State. According to the recommendations of the United Nations, “each country is responsible for developing the mechanisms needed for the promotion of a level of social welfare suited to an additional number of years in the life of elderly people”. In some countries, the aims of the action plan are already being reached. In others, their implementation will still take a while longer—if they will be implemented at all.

Like any other policy, the Madrid Plan essentially depends on the allocation of resources. The plan did not allocate resources for the achievement of the targets, although the political declaration had recognised the difficulties of the poor countries becoming part of the global economy. For example, one of the targets was a reduction of 50% in the number of people living in extreme poverty by

2015. However, the conditions to achieve this were not specified. The same happened with the target for the adoption of a policy that would allow all the workers to obtain a basic social protection covering retirement benefits, survival pensions, benefits for the disabled and health care.

The current social security policies in developed countries contradict the aim of the active participation of elderly people in society in relation to labour market participation, for instance. In European Union countries, the advances in life expectancy and in health conditions have not been accompanied by an increase in the duration of the working life. Between 1950 and 1990, life expectancy at the age of retirement increased by six years, while the retirement age was reduced by 6.3 years.⁶ Benefit coverage is close to 100% [ILO (2001)].

This situation stands in stark contrast with that of the developing world, where in many countries, such as in Africa, retirement seems like a luxury. In some sub-Sahara and Southern African states it is estimated that only between 5% and 10% of the working population is covered by social security [ILO (2001)]. In addition to the low level of coverage, the value of benefits themselves are low. This results in people remaining in the labour market, almost always in agriculture, till the death. While 40.5% of African population aged over 64 were working, in developed countries the comparative figure was 10% [ILO (2001)].

Elderly people's ability and will to work depends on their health, their functional capacity, the labour market conditions and the legislation. Compulsory retirement and discrimination in the workplace linked with low labour force skills are obstacles to a greater participation of elderly people in the labour market. Health and education policy therefore become important in achieving their targets.

In summary, the effectiveness of policies aimed at an aged population depends on the adoption of an approach that brings together the different sectors: health, the economy, the labour market, social security, housing, education, etc.

2.4 Outcomes of the Madrid Plan

Taking into account the regional diversities in the ageing process in socioeconomic and cultural conditions and the high degree of generalization of the Madrid Plan, the regional organizations linked to the United Nations⁷ organized strategies for its implementation, taking into account the specific characteristics of the regions as well as the specific needs of elderly people.

6. Recently some countries, such as Italy and the United Kingdom have increased the minimal age for retirement.

7. These are the Economic Commission for Europe, the Economic and Social Commission for Asia and the Pacific, the Economic Commission for Latin America and the Caribbean, the Economic Commission for West Asia and the Economic Commission for Africa.

The five regional texts highlighted the importance of elderly people's contribution through voluntary work, subsistence and paid labour, caring for other family members etc. The family was seen in all the documents as the natural source of support for elderly people and as the locus where they could find emotional safety and support. This applies to both countries which have a structured long term system of care and does which do not. Some small variations in regional texts about inter-generational solidarity were observed [Tornel (2002)].

Each of the regional documents had its own particular emphasises. For example, the document related to Europe focused on the need to ensure the complete integration and participation of elderly people in society. For Latin America, the principal concern was with the protection of human rights and with the need to provide for the basic needs of elderly people: access to income, full range of health service, education and decent housing conditions.

Access to new technologies that allow elderly people to maintain their independence and autonomy was one of the issues highlighted by the document prepared by the Asia and Pacific region. This document also mentioned the need of a "friendly" urban planning to elderly people and the need to create support mechanisms for care-givers. The question of care-givers was important in all regions, but its importance is higher in the Asia and Pacific region and in Sub-Saharan Africa due to the growing female mortality from AIDS. This has resulted in the growth of families which do not have a middle generation, in other words, families formed of grandchildren and grandparents (skip generation).

An evaluation and revision of the Madrid Plan is currently being undertaken by the United Nations Department of Social and Economic Issues.

3 POPULATION AGEING ON THE BRAZILIAN PUBLIC POLICY AGENDA

3.1 Before the 1988 Constitution

To a certain extent, it can be said that the inclusion of the matter of population ageing in the Brazilian policy agenda, whether public policies or those that arise out of civil society, is not new. In fact, Brazil is one of the pioneers in Latin America in the implementation of an income guarantee policy to the working population. This culminated with the universalisation of the social security system in 1988.

The origins of the social protection system in Brazil date back to the colonial period, when social assistance institutions, such as Santa Casa de Misericórdia de Santos, were created. During the imperial period, other antecedents of the current

system can be found, such as the military and civil servants insurance societies and other benefactor societies. In 1888, the Post Office (Correios) employees were given the right to retirement. It was required 30 working years and a minimum age of 60 (Decree 9912- A, 26 March 1888). The first Government social security policy for private sector workers emerged at the beginning of the twentieth century with the creation of Labour Accident Insurance in 1919 and the first Retirement Benefits and Survival Pensions Fund in 1923 (the Eloy Chaves Law) [see Pasinato (2001) and Oliveira, Beltrão and Médici (1993)]. In the 1930s, Brazil already had a social welfare policy that included social insurance, health, education and housing for those who worked in the formal sector.

Although the aim of this section is to consider the matter of population ageing on the Brazilian public policy agenda, it cannot be denied that these are the results of the influence and pressure of the civil society, scientific associations, political associations, etc. Thus, two initiatives implemented during the 1960s which had an impact on the future development of Brazilian policy for elderly people are looked at.

The first was the creation of the Brazilian Geriatric and Gerontology Society in 1961. One of its objectives was to “encourage initiatives and social projects that provide some kind of support to elderly Brazilians and to cooperate with other organisations interested in educational, social welfare and research activities concerning Geriatrics and Gerontology” (see www.sbgg.com.br).

The second initiative started in 1963 by the Social Services of the Commercial Sector [Serviço Social do Comércio (Sesc)]. It consisted of actions of a small group of shop owners in São Paulo concerned with abandonment and loneliness among elderly people. Sesc’s actions brought about a huge change on the social assistance work among elderly Brazilians. These actions were decisive in the configuration of a social policy for this group. Until then care for elderly Brazilians were restricted to asylums.

The first programme on the part of the federal Government in providing care for elderly Brazilians occurred in 1974.⁸ It consisted of preventative actions carried out in the social centres of the National Social Security Institute [Instituto Nacional de Previdência Social (INPS)] and others of the civil society as well as the custodial care of the INPS beneficiaries aged 60 or over. The custodial care took into account physical and mental conditions of elderly people, the lack of a family or abandonment and/or the family economic needs.

8. Through the edict of the Ministry of Social Welfare and Social Insurance [Ministério da Previdência e Assistência Social (MPAS)] n. 82, 4th July 1974.

During the 1970s, another action of the federal government in favour of the poor elderly Brazilians was the creation of two types of non-contributory benefits: retirement pensions for rural workers and the Lifetime Monthly Income Benefits [Renda Mensal Vitalícia (RMV)] for the urban and rural poor elderly ones. Their values were set at 50% of the minimum wage with the exception of the pension due to disablement, which was 75% of the minimum wage. Rural social insurance benefits were paid to the heads of the households aged 65 and over who could prove they had worked in rural activities.

The Lifetime Monthly Income Benefits, created in 1974, were the first protection measures for the poor disabled and elderly Brazilians. These were created as part of social security policy. The main conditions for their eligibility were: no receive any other benefit; to have contributed to Social Security for at least 12 months or alternatively to have worked for at least five years in activities not covered by social security at the time and not to have an income above the value of the benefit. In 1992, when the different schemes were merged, urban and rural RMVs were grouped together. In 1993, after the General Social Assistance Law [Lei Orgânica da Assistência Social (Loas)] was passed, social assistance benefits in the strict sense were created (amparos assistenciais). These were derived from the lifetime monthly income benefits.

The first federal government document containing some social policy directives for elderly people was published by the Ministry of Social Security and Social Assistance (MPAS) in 1976. This was based on the conclusions of one national and three regional seminars (These were held in São Paulo, Belo Horizonte and Fortaleza). The objectives of the seminars were to identify the living conditions of elderly Brazilians and the existing social support to meet their needs.

The main proposals contained in the document entitled “Social Policy for Elderly People: Basic Guidelines” [see Brazil (2002)] included:

- implementation of a system of community mobilization that looks for the maintenance of elderly people with their families;
- revision of the criteria for the concession of financial support to organizations that housed elderly Brazilians;
- creation of specialized medical services for elderly people, including domiciliary care;
- revision of the social security system and preparation for retirement;
- training of human resources to provide care for elderly people;

- organization, processing and analyses of information about the characteristics of elderly Brazilians by the Data Processing Service for Social Security and Social Assistance [Serviço de Processamento de Dados da Previdência e Assistência Social (Dataprev)] in partnership with the Brazilian Institute of Geography and Statistic [Instituto Brasileiro de Geografia e Estatística (IBGE)].

It should be noted that until this time, the federal government policy for elderly Brazilians consisted of providing income for elderly people who have worked in some way and of social assistance for the poor and disabled elderly persons. The vision that appears to be predominant in these policies is of that of vulnerability and dependency of the population group. Gradual changes in this vision occurred during the 1980s under the influence of the international debate.

3.2 The 1980s and the 1988 Constitution

One of the results of the Assembly of Vienna was that states were made aware of the need to include in their plans proposals for actions that could guarantee healthy ageing. The society needed to be convinced to accept a positive and active concept of ageing, aimed at development. This signifies a change in the vision of the role of elderly people in society.

As a signatory of the 1982 International Plan of Action for Ageing, Brazil began to include this issue in its political agenda in a more assertive way. The moment coincided with the re-democratisation of the country, which allowed a wide debate through the *constituante* process (the drafting of the new constitution), resulting in the inclusion of the matter in the chapter related to social matters in the 1988 constitution.⁹

Brazilian society had already created the conditions to express the demands of elderly people. The first social movement was created in 1977, the Ceara Elderly Association [Associação Cearense Pró-Idosos (Acepi)]. The objective of this organisation was to demand the rights of elderly people, to set up projects in partnership with the federal government as well as organising institutions to help elderly people. Another manifestation of civil society was the creation in 1984 of the Brazilian Confederation of Retired Persons [Confederação Brasileira de Aposentados e Pensionistas (Cobap)]. In fact, this was not a new movement. It dated back to the 1960s when the Union of Retired Brazilians had been created.

In 1985 the Gerontology National Association [Associação Nacional de Gerontologia (ANG)] was created. This is a nationwide scientific and technical

9. According to Uriona and Hakkert (2002), the direct allusion to actions aimed at providing social protection for elderly people in constitutional texts can be interpreted as an indication of the recognition of the importance of the matter by the society.

body concerned with the investigation and scientific practice of actions aimed at elderly people. Its first objective was to “develop political and technical actions with public organisations, private bodies and the community in general, demanding attention for elderly people, giving them voice to express their real needs with dignity and further demanding the adoption of measures to reduce their problems” [Machado (n.d.)].

The great advance in the social protection for elderly Brazilians was achieved with the 1988 Constitution, which included some of the points of the Vienna Plan of Action. It introduced the concept of social security, which means that the social protection network was no longer connected to strictly some working status and/or to elderly needs and began to acquire a connotation of citizenship. The legal text established some basic principles: universalisation; the equivalence of urban and rural benefits; selectivity in the granting of benefits; the prohibition of reduction of the value of any benefit; the setting of the minimum benefit at the value of the minimum wage; the equanimity of cost; the diversification of the sources of resources; decentralisation and the participation of the community, workers, employers and retired people in management (see article 194 of the Constitution). In this way, social security began to be thought of as “a collective contract, part of the right to citizenship, where benefits are granted according to necessity and payments shall be based on the capacity of each person” [see Oliveira, Beltrão and Guerra (1997)].

Access to health and education were also guaranteed by the Constitution for the entire population, as well as social assistance for the population in need.¹⁰ Primary education became obligatory and free. In addition, those who did not have access to it at the right age were assured access.

The 1988 Constitution was the first Brazilian constitution to contain a section on elderly people—in this case “The Social Order: Section VIII”. Here, Chapter VII refers to the family, children, adolescents and elderly people. Article 230, for example, states that support for elderly people is the responsibility of the family, society and the state. They are responsible for ensuring that elderly participate in the community as well as for defending their dignity and welfare and guaranteeing their right to life. In its first subsection, the article states that care programs for elderly people shall be provided in their homes if possible. The second subsection

10. Articles 196 and 203 of Chapter II of Social Security, entitled The Social Order, and article 208 of Chapter III with the same title, contain these decisions.

expands to the whole country an initiative which had been implemented in several municipalities during the 1980s—free public urban transport for those over 65.¹¹

Although the 1988 Constitution made important advances in relation to the role of the state in the protection of elderly Brazilian, the families continued to bear the main responsibility for their care and could be held criminally liable if they did not do so. This is set in Section VII—Crimes against the Family—Chapter III, article 244, of the Criminal Code.

“Not providing, without any proper reason, subsistence to one’s spouse or children under 18 (eighteen) or unable to work, or invalids or aged above 60 (sixty) (...)”

Another constitutional point related to protection for elderly Brazilians, already emphasised by Machado (n.d.), is concerned with the article 227 of the Chapter VII. This specifies the right to life, food, education, etc., of children and adolescents. Nonetheless, although this article is part of the chapter on the family, children, adolescents and elderly people, the latter are not mentioned:

“It is a duty of the family, society and the State to ensure that children and adolescents receive with absolute priority the right to life, health, food, education, leisure, professional training, culture, dignity, respect, liberty and family and community living, as well as preserving them from any form of negligence, discrimination, exploitation, violence, cruelty and oppression.”

Another advance contained in the 1988 Constitution can be found in article 7 of the chapter on social rights. This article forbids differences in salaries, in functions and in admission criteria due to sex, age, colour or marital status. Nonetheless, compulsory retirement is still present in the social security scheme of public servants, representing a form of discrimination in the labour market.

3.3 The 1990s and the National Policy for Elderly Brazilians

During the 1990s, regulations were written for various constitutional provisions related to protection policies for elderly Brazilians. In 1991, the Cost-Benefit Plans for Social Security were approved. The modifications introduced by the new legislation included the creation of rules for the maintenance of the real value of benefits, the uniformity of risks covered by social security, the setting of maximum and minimum values for benefits granted in urban and rural areas, the granting of pensions to men in the case of the death of the insured wife, the

11. The municipalities of São Paulo (Law 9651/83) and Aracaju (Decree 59-83), for example, implemented this in 1983.

introduction of retirement for proportional working time for women, the reduction in the age of retirement due to age for (male) rural workers from 65 to 60 years and the granting of retirement due to age to female rural workers at 55.¹²

In 1993, the constitutional principles referring to social assistance were regulated by the Organic Social Assistance Law [Law 8742, December 1993]. This law establishes programs and projects for elderly people, with the three governmental spheres sharing responsibility. It also regulated the payment of the social assistance benefits to people aged 70 and over living in families with a monthly per capita income less than one quarter of a minimum salary. In 1998, the minimum age for the receipt of benefit was reduced to 67 years and in 2004 to 65.

Giving continuity to the guidelines contained in the Constitution and strongly influenced by the advance of international debates on the matter of ageing, the National Policy for the Elderly Brazilians (Law 8842) was passed in 1994. This policy consisted of a set of government actions that aimed to ensure the social rights of elderly people, based on the fundamental principle that “the elderly person is a subject with rights and should be attended in a differentiated manner according to each one of his necessities—whether physical, social, economic or political”. The responsibility for the coordination and management of this policy was assigned to the Secretariat of Social Assistance of the Ministry of Social Security and Social Assistance, currently the Ministry of Social Development and the Fight against Hunger [Ministério do Desenvolvimento Social e Combate à Fome (MDS)]. The National Council of the Rights of Elderly People [Conselho Nacional dos Direitos do Idoso (CNDI)] was also created, through this would only really start to operate in 2002.

The main principles of the National Policy for Elderly Brazilians [Política Nacional do Idoso (PNI)] were to stimulate alternative forms of intergenerational cooperation and making them feasible, working with civil society organisations that represent the interests of elderly people. This means to formulate, implement and evaluate policies, plans and projects; giving priority in providing care for frail elderly people within their families rather than in institutions. It should also promote the training and re-qualification of human resources in the areas of Geriatrics and Gerontology as well as to stimulate the discussion and development of studies related to the matter of ageing.

12. When this legislation was passed, various questions were raised about its financial and actuarial viability. In January 1992, after much polemical debate about the payment of the increase in the value of benefits (47%) to retired persons, the Chamber of Deputies created a special commission to study the social insurance system, aiming to obtain a diagnosis of the situation and to prepare new proposals. However, the period for the work of this commission coincided with the impeachment process of the then president and economic instability, making implementation impossible [see Oliveira, Beltrão and Guerra (1997)].

The PNI also delimits the powers of public organisations. The implementation of this law encouraged the articulation and inclusion of the ministries involved¹³ in the preparation of a governmental action plan to integrate the Policy for Elderly People at the national level. Its implementation as well as the other social assistance actions is decentralised and articulated with other policies aimed at elderly people at the state and municipality levels and in partnerships with civil society.

Although the plan mentions health, the Ministry of Health only prepared a National Health Policy for Elderly People in 1999 [Edict 1395/ GM from the Ministry of Health], despite the fact that the Organic Health law was passed in 1990 [Law 8080]. This resulted of the understanding that, despite the high costs involved in the medical treatment of elderly patients by the Single Health System [Sistema Único de saúde (SUS)], the health system was not meeting their specific needs. The proposed policy had two basic principles: preventative measures with a special emphasis on the promotion of health and specific multi-disciplinary care for this group.

3.4 The Twenty-First Century: the Elderly People's Statute

Until recently, the legislation related to elderly Brazilians was fragmented and divided among different sections of the legal system or in various policy management instruments. Seven years after being passed by the National Congress, the Elderly People's Statute was signed into law in 2003. This brought together in a single and wide-ranging legal document many of the already approved laws and policies. It incorporated new elements and approaches with integrated treatment and a long-term view of the measures that aimed to increase the quality of life of elderly Brazilians. The identification of elderly people as a subgroup of the population requiring specific rules implied a dual condition in relation to social rights. As emphasised by Velazco and Romero (2000),¹⁴ this represents both an equalising and a differentiation factor to stimulate full equality in relation to social justice, which means equity between unequal parties.

The passing of the Elderly People's Statute is an important step forward in the Brazilian legislation, in the context of the adaptations required by the Madrid Plan. According to Uriona and Hakkert (2002), a general law specifically aimed

13. These are: Social Security, Social Development and the Fight against Hunger, Education, Justice, Culture, Labour and Employment, Sport and Tourism, Planning, Budget and Administration and Ministry of Cities.

14. Apud Uriona and Hakkert (2002).

at elderly people is important for the construction of an environment favourable to people of all ages.¹⁵

This new legal document has 118 articles dealing with several areas of fundamental rights and needs of elderly Brazilians. This aims to reinforce the directives contained in the PNI. The most striking advance was the establishment of administrative crimes and punishments for the non-fulfilment of legal dictates. However, among the proposed actions in the Statute, two are controversial: the prohibition of discrimination against elderly in health insurance plans through the charging of differentiated values for those aged over 60 [see article 15, paragraph 3] and the exclusion of the earnings from social assistance benefits received by other elderly people living in the same household from the calculation of the family income in means test [see article 34, single paragraph].

The elimination of the age based discrimination in health insurance plans will, according to the managers of these plans, raise the price of these plans, since the increase in costs resulting from ageing shall be shared by all members of the plan. The exclusion of the earnings from other member's social assistance benefits from the calculation of family income is seen as a social advance. The ownership of an income is seen as an advance in terms of citizenship and self-esteem for elderly people. On the other hand, the new rule is vague as it does not specify which benefits shall be discounted from the calculation of family income. This has resulted in a variety of different interpretations and a high number of legal cases related to the request for benefits.

The reduction in the age required to obtain the non-contributory pension to the age required by male urban workers to obtain contributory retirement pensions was not well accepted by some public sector economists. They believed that this change could act as a disincentive against contributing to the social security system, especially among low income workers. However, it has to be recognized that the majority of these (low income) workers are in the informal sector. They also do not have a stable income. Thus, it is practically impossible for them to pay 20% of their monthly income in the form of individual social security contributions. The main disincentive that these people face is the lack and/or instability of income.

Lastly, the matter of ageing is also connected to actions related to the Environment and Sustainable Development and Consumer Protection. After the creation of Agenda 21,¹⁶ the environmental question came to be understood in a

15. This is one of the three principles of the Madrid Action Plan for Ageing.

16. Document prepared by governments and civil society institutions from 179 countries and approved in the United Nations Conference on the Environment and Development [Conferência das Nações Unidas para o Meio Ambiente e Desenvolvimento (CNUMAD)] in Rio de Janeiro in 1992.

much broader way, integrated with other strategic questions, such as the creation of employment and income, the reduction of regional and interpersonal disparities in income, changes in patterns of production and consumption, etc. In this context, the socially vulnerable groups, including elderly one, are understood as “partners for sustainable development”.

In relation to the defence of elderly consumers, as well as the Consumer Defence and Protection Code, other initiatives were established specifically for this subgroup. These include federal law 8926, 8 August 1994, which makes the inclusion of specific warnings and recommendations on medicines for people aged 65 and over.

4 SPECIFIC POLICIES

The policies looked at here are income (social security and social assistance),¹⁷ health, long term care and social inclusion policies. There are many interfaces between them. Attention to health together with access to income results in an incentive of greater physical, psychological and/or financial independence for elderly people. Long term care, on the other hand, is required for those who have some sort of physical, mental or economic limitation. Social integration policies intersect with all the other policies. They aim to construct a favourable context in which elderly people can develop their potential and collaborate with the development and the growth of society.

4.1 Income Policies

One of the determinants factors of the quality of life of elderly people is access to monetary resources. As stressed by Guzmán (2002), in addition to guaranteeing minimum living standards, access to income allows elderly people to help younger generations and to adopt a more altruistic position that gives them more meaning in their lives, including a greater valorisation in the family and society.

The main monetary benefits that elderly Brazilians are entitled to are part of the social security policy outlined in the 1988 Constitution. Three social security schemes and one social assistance scheme can be identified. The former consists of contributory benefits for urban workers employed in the private sector [Regime Geral da Previdência Social (RGPS)]¹⁸ and benefits for Government workers

17. These two policies are looked at in various chapters in this book. See, for example, Oliveira et al; Beltrão et al, Delgado and Cardoso Jr., and Saboia.

18. Social Security, Federal Constitution, article 201.

[Regime Próprio de Previdência Social (RPPS)]. When first established, the latter benefits were part of a policy aimed at creating careers in the Government. When conceived, the retirement pensions were non-contributory, only survival pensions were contributory. After 1993, this system became totally contributory.¹⁹

For the rural workers, the condition of eligibility is to have worked in agricultural activities. They are theoretically contributory, but in practice their financing is largely based on urban contributions.²⁰ For the elderly Brazilians in need,²¹ as already mentioned in this chapter and by others in this book, there is a social assistance regime.²²

Various chapters in this book have stressed the unexpected results of the constitutional changes related to income policies on the living conditions of elderly people, their families, and especially the reduction of poverty in the broadest sense.²³ It is estimated that approximately 16.7 million families are benefited from social security. This large number shows these actions to be part of a modern social policy capable of resolving, partially at least, the question of poverty among elderly Brazilians [see Barros, Mendonça and Santos (1999), Camarano (2003), etc.].

Nonetheless, the financing of social security is an unsorted matter. Its prospects for future viability have been the object of intense debates. It seems clear that the traditional ways of funding it will not be capable of effectively dealing with elderly Brazilians in the future, who are increasing at relatively high levels in a context of growing informality in the labour market and low economic growth.

During the 1990s,²⁴ the Brazilian state made a series of successive changes to the social security system. Some of the basic parameters of the schemes have been redefined, both in the private social security scheme (RGPS) and the public one

19. The contributory nature of the RPPS was regulated by Constitutional Amendment 3, (1993). For civil servants, a contribution rate of 11% of the total pay was created. Special schemes were created for the military and for employees of the Legislature and the Judiciary.

20. In fact, a small proportion of rural workers contribute directly to the social insurance system. In addition, a small legal contribution was created, which is a tax on the first sale of agricultural products (2,5%). The purchaser is responsible for paying it. For further details, see Beltrão, Camarano and Mello (2004).

21. Social Assistance, Federal Constitution, article 203.

22. In this book, see the chapter by Saboia. See also Beltrão, Camarano and Mello (2004) and Pasinato (s.d.).

23. For example, see Saboia, Delgado and Cardoso Jr. and Beltrão et al in this book for an analysis of the impact of rural social insurance and social assistance benefits on family income and Camarano et al for an analysis of the other benefits.

24. Actually, adjustments in the system have occurred regularly throughout its History. An example of this is the increase in the rate of contribution paid by employers. This has increased from 3% of employees' pay in 1930 to around 22% (depending on the company activity) currently. Frequent changes result in a loss of credibility in the system because they affect the entire population. Adjustments have to be made due to demographic changes, the structure of the labour market and the rhythm of economic growth, but this should affect only the new participants.

(RPPS). The objective was to restrict the access to benefits, mainly through the postponement of the age of entitlement to benefits and also by tying benefits to contributions.

The 1998 Social Security Reform (Constitutional Amendment 20) modified both systems (RGPS and RPPS) by transforming retirement based on working time into retirement based on contribution time²⁵ and eliminating retirement for proportional working time through the adoption of transition rules for those already in the system. The setting of a minimum age limit, 55 years for women and 60 for men, for pensions based on contribution time was, however, restricted to public employees.²⁶ On the other hand, the Constitutional Amendment 20 removed the rule for calculating retirement benefits based on contribution time and on age for private sector employees. This allowed the calculation of the value of the new benefits to be changed by the Law 9876 in 1999 through the creation of a “social insurance factor”.²⁷

According to Oliveira, Guerra and Cardoso (2000), this formula is an important mechanism that can be used in reducing deficits in the social security system, despite of creating increased inequities, principally in relation to gender. In comparison to the situation at the time of the social security reform, the new formula reduces male benefits by 33.9% and female by 43.9%. In addition, as show in this book by Beltrão et al, the reform has already had some impact on postponing the age at retirement.

The Constitutional Amendment 41 in 2003 intended to bring equity between the public and private systems (RGPS and RPPS). However, the gap between the two systems was actually widened. The main measures approved for the public sector were: the reduction in the value of survivor’s pensions; the introduction of a social security contribution for retired people who receive pensions above R\$ 2,400.00; and a reduction of 5% for each year in the value of proportional retirement pensions for public employees taking early retirement.²⁸ For the private sector employees, the main change was an increase in the contribution ceiling. On the one hand,

25. In the case of public employees this implied in the elimination of fictitious working time. For example, bonus leave not used was counted in double working time for purposes of retirement.

26. The text included transition rules for participants in the system, which consisted of an extra 20% of time left to serve for full retirement at the date of the passing of the amendment or 40% in the case of proportional retirement. A minimum age limit for retirement of 48 years for women and 53 for men was set for the transition period. This limit entered into the private system only for proportional benefits. No age limit was set for full benefits for workers in the private sector.

27. The use of the social insurance factor is optional for retirement based on age.

28. This is valid only for those who were already participating in the system. It alters the EC 20 transition rules, which extinguished the proportional benefit.

this implies a short-term increase in revenues due to the expansion of the basis of contributions.²⁹ On the other hand, it does not sort out the question of a balanced budget in the long-term, since the value of the benefits shall also be higher.

In relation to rural benefits, the legislation has not experienced any changes since the regulation of the constitutional provisions in 1991. At the same time, the implementation of the principles of the Organic Social Assistance Law, as mentioned above, has resulted in a significant increase in the demand for social assistance pensions. The age limit for these benefits was reduced from 70 years to 67 in 1998. As a result the number of pensions increased from 88,085 to 311,177 between 1997 and 1999. In January 2004, the minimum age was reduced to 65. This has already caused an impact in the increase in the rate of awarding of new pensions. Comparing the first four months of 2003 with an equal period in 2004, it can be seen that the volume of new social assistance pensions awarded has increased three-fold [see Beltrão, Camarano and Mello (2004)].

At the same time there has been an attempt to restructure the legal basis of the complementary social security scheme as a way of promoting the sector and allowing the creation of a culture of private insurance. It is assumed that this is necessary for the development and expansion of financial markets and for the creation of incentives to savings to allow productive investments with long-term periods of maturation.

The analysis of the debate about the crisis in the social security system and the measures resulting from it, has been based, and not just in Brazil, on an exclusively accountancy vision of crisis, with the sole motivation being actual or imminent insolvency. The two reforms that took place during the 1990s did not take into account transformations in the labour market, such as the increase in unemployment rates, the generalised informality and precarious working conditions. Nowadays, changes in the situation of being employed to unemployed and vice versa are ever more frequent, making it impossible for individuals to honour their obligations in general—including those regard to social security payments.

Some of the consequences of this can be foreseen—such as the inability to sort out the question of financing and the increase of the demand of non-contributory benefits. The previously mentioned work by Oliveira et al in this book also presents an estimate of system's additional financial needs. Depending

29. In fact, the increase in contribution revenues in the short and long term will not be very significant, since it only involves employee contributions. Companies already pay social insurance on employees' total pay.

on the growth of the Gross Domestic Product (GDP) and the increases in the minimum wage, in 2030 these needs could vary from 1.3% to 3.9% of GDP.

Considering that social assistance benefits are paid out of the social security budget, it is highly unlikely that all these workers lacking the condition to retire will be covered by social assistance. In other words, it is feared that the “reforms” will contribute to an increase in the vulnerability of elderly people in the future.³⁰

It, therefore, seems clear that the traditional manners of funding social security will not be sufficient to effectively deal with future elderly people in a context of the growing informality of the economy. The search for a solution for funding must take into account other ways of raising resources, as well as their distribution. In addition, it is suggested that any attempt to change the current system takes into account the unexpected affects of the social security advances on the living conditions of elderly Brazilians, their families and their environment as widely as possible. This has been well documented in various chapters in this book.

4.2 Health Policies

The morbid-mortality patterns of elderly people differ radically from those of the rest of the population. The result is that they require specific health policies. The most diseases that affect elderly people are chronic ones, which result in higher number of medical consultations, hospitalisations (frequency of hospitalisations and length of stay), routine exams, medicines, etc.³¹ On the other hand, since 1997 the WHO has recommended that ageing and health programs consider ageing as a part of the life cycle, which implies that elderly people should not be considered as a static group, separated from the rest of the population [Sayeg and Mesquita (2002)].

The increase in expenses with health brought about by ageing and the need to promote health to achieve an active ageing is a challenge to health authorities. This requires the implementation of new models and methods of planning, management and provision of health care [Veras (2003)].

This section is divided into two parts. It starts with a description of the Brazilian health system and afterwards presents the main health strategies of the Brazilian government for elderly people.

30. Concern that the impacts of reforms in many Latin America countries can result in an increase in the demand for social assistance benefits has already appeared in a World Bank document (2004). This concern is based on the observation of the growth of the proportion of the occupied population that do not contribute to the system in countries with a long social security tradition, such as Argentina.

31. For an analysis of health costs of Brazilian elderly people, see the chapter by Nunes in this book.

4.2.1 The Brazilian Health System

The current Brazilian health system is based on three forms of services:

- a) public, services provided by the SUS, with universal coverage;
- b) private health plans pre-paid by companies, families and individuals (restricted clientele); and
- c) direct contracting of services by individuals.

The 1988 Constitution made health care universal and of the responsibility of the state. Previously, the Ministry of Health had been responsible for preventative actions for the entire population. Other health services (curative actions) were part of the services offered to people with social security by the Social Security Medical Assistance Institute [Assistência Médica da Previdência Social (Inamps)]. Some charitable institutions provided services to poor families and the indigent [Marques (1999)].

In a general manner, it can be said that Brazilian health policy excluded rural workers and those from the informal urban sector, as well as the poor and indigent. It was especially directed for workers from the formal sector. According to Santos (1979),³² Brazilian social policy at that time could be described as a policy of “regulated citizenship”. The right to health care depended on the possession of formal employment documentation.

The 1988 Constitution reformed the health system through the creation of the SUS. Health came to be defined as a right of all and the responsibility of the state. The principles, directive and framework of health services and actions were established. The main guidelines were: the decentralisation of actions and services with a single source of management in each sphere of government; integral care with priority for preventive actions and the participation of the community as a mechanism for the social control of the system.

According to Marques (1999), in despite of the intention of the Brazilian state in establishing a single health system, what has emerged in practise is two or more separate systems, causing a segmentation of care. One of the results is the institutionalisation of a dual model of social welfare, represented by two poles: workers from the advanced economic sectors covered by the private health system and workers connected to the more economically impoverished sectors and the unemployed, who are dependent on the public health system [Elias (1996)].³³

32. Apud Draibe (1989).

33. Apud Marques (1999).

It is difficult to accurately quantify the proportion of the Brazilian population who use the services of the public health network. The special PNAD supplements of 1981 and 1998 asked people who had been hospitalised in the previous year which hospital network they had been (public or private). The temporal comparison of this information is difficult due to changes in the public health system as well as the spreading of pre-paid health insurance plans since the 1980s, considered here as private expenditure, and also because SUS contracts services in the private network.³⁴

The advances in the Brazilian health policy are not just related to universalisation and decentralisation. Important advances were also made through a change in the model of health. This changed from a specialised model centred on hospital care³⁵ to one more concerned with primary or basic care.

The changes in the paradigm can be seen, for example, in the 1991 adoption of the Community Health Agents Program. In 1994, this became the Family Health Programme [Programa de Saúde das Famílias (PSF)]. It includes community agents and teams consisting of doctors, nurses and nursing auxiliaries. The programme aims to provide full and continuous health care, thereby allowing an improvement in the living conditions of families, a reduction in hospitalisation needs and, consequently, lower health costs.

The PSF assumed that elderly people needed special attention. This can consist of measures involving the promotion of specific protection, the early identification and intervention of the most frequent health problems as well as rehabilitation measures aimed at avoiding the separation from the family [Silvestre and Costa Neto (2003)]. This represents an advance in the terms of health models, since, as already pointed out by Lloyd-Sherlock (2002), elderly people are generally associated to chronic diseases and expensive treatment and the potential contributions that primary health care can have on the reduction of costs are not taken into account.

The “expected” high costs of health care for elderly people are, in part, a result of the health model adopted. The costs of financing elderly people with a high rate of chronic degenerative diseases are much higher than that of financing an active and healthy population. In other words, the way, health services are organised in a society is an important determinant of these costs [Lloyd-Sherlock

34. For a bibliography on the development of health insurance plans, see Oliveira, Beltrão and Médici (1993).

35. “This type of model achieves little for the resolution of the health problems of the majority of the population, due to its high cost, low coverage and its distance from the real nosological scenario” [Oliveira, Beltrão and Médici (1993, p. 52)].

(2002)]. Preventative measures,³⁶ such as, for example, those aimed at healthy aging and the maintenance of functional capacity can improve elderly people's quality of life and postpone the demand for long term care.

4.2.2 The National Health Policy for Elderly Brazilians

As has already been mentioned, the National Health Policy for Elderly Brazilians was created by the Ministry of Health as part of the PNI in 1999. This policy assumes that the “principal problem that can affect elderly people, as a result of the evolution of their infirmities and their style of life, is the loss of their functional capacity, in other words the loss of the physical and mental abilities necessary to carry out basic and instrumental activities of daily life” [MS (2002, p.15)].

Taking this into consideration, the main principles advanced were: the promotion of healthy ageing; maintenance of functional capacity; taking care of elderly peoples' needs; the rehabilitation of damaged functional capacities; training of specialised human resources; support for the development of informal care and support for research and study in the area.

According to the PNI, the health sector is responsible for providing elderly Brazilians with access to services and to actions related to health promotion, protection and recovery; for developing cooperation among the three levels of Government and between centres of reference in Geriatrics and Gerontology; research and studies in the area and for the inclusion of Geriatrics as a clinical speciality in public competitions.

4.3 Long Term Care

Long term care is designed for elderly people who lose part of their physical or mental independence and for families that do not have the financial, physical or emotional means to provide the necessary care. In general, the oldest elderly people are involved. In Brazil, the Government actions in this area present, in general, a social assistance nature. They are drafted at the federal level, but mostly implemented in a decentralised manner in partnerships involving states, municipalities and the civil society. The role of the state consists of providing services to elderly people with low incomes³⁷ and regulating and inspecting the private institutions that provide these services.

36. For example, it is estimated that the reduction in hospitalisations during winter in 2000 and 2001, due to flu vaccination campaigns, was around 77.6%, according to Ministry of Health data [Brasil (2002)].

37. Elderly people aged 65 or over who do not have the means to provide their own subsistence, or whose families cannot provide this subsistence.

Taking care of people with special needs, such as dependent elderly people, is not a new task. What has been observed during the twentieth century is the progressive transfer of an activity traditionally carried out in a private space by families to the public or state space. This can be attributed to the increased role of women in the labour force, which reduced their possibilities to act as natural “care-givers”, the transformations observed in family nuclei, most importantly the breaking of ties of familial solidarity associated with migration and urbanisation, the reduction in the size of families and the emergence of large hospital and/or care institutions to provide full time care services for elderly people, such as asylums, shelters, refuges or retirement homes [Wanderley et al (1998)].

Institutional care is not a generalised practice in Latin societies. However, the demand for this type of care is increasing throughout the world as a result of the transformations mentioned above.³⁸ There are various restrictions on this practice, especially its high social and financial costs and its low efficiency in relation to its benefits. It is agreed by the specialists of the various areas that staying in family and community nuclei contributes to the welfare of elderly people. The 1988 Brazilian constitution states that it is preferential for programmes concerned with elderly people to be carried out in their homes.³⁹ As they age, individuals face various sorts of ruptures, such as retirement, loss of partners, death of friends and proximity to their own death. This scenario can be aggravated, if elderly people are hit by a reduction in their capacity to carry out daily life activities [Atividades da Vida Diária (AVD)], which compromises their independence.

In 2001, under the auspices of the National Policy for Elderly Brazilians, the Federal Secretary for Social Assistance established social service regulations regarding care for elderly people. One of the proposals was the change of paradigms in various types of care, defining partnerships, promoting inter-sector integration and the co-responsibility of the state, society and the family.⁴⁰

The new form of organisation of services for elderly people takes into account their needs, whether they are functional, financial and/or social. According to Diogo and Duarte (2002), they can be classified in three groups, which vary according to the place where they are carried out:

38. In some countries in the developed world policies have been designed to increase the coverage of long term care for elderly people. In Germany (1994) and in Japan (2000), for example, obligatory insurance was created (O’Shaughnessy, 2002). In countries with broader systems of social protection, such as in Scandinavia, as well as the traditional greater availability of social services (crèches, asylums, home care), there is a monetary benefit for carers of elderly people, in order to compensate the losses resulting from their withdrawal from the labour market [Denmark (2002)].

39. Article. 230, paragraph 1 of the 1988 Federal Constitution.

40. Edict 73, 10 May 2001 of the Federal Secretary for Social Welfare, the Ministry of Social Insurance and Social Welfare.

a) The home environment

With the purpose of encouraging elderly Brazilians with some level of dependence to stay on their own families⁴¹ or on families willing to foster elderly people abandoned by their natural family,⁴² the strategy adopted is to offer a supplementary income to those families that lack the resources to maintain elderly people. Also, home visits by specialised care-givers are offered.

Another alternative envisioned by the programme as part of the home care group is “residence in communal homes”. This is an alternative for independent elderly people.

b) Community environment

This group includes residence in sheltered housing, the provision of care during the day in day centres and activities that encourage sociability in “activity centres”. The first case offers residential alternative for small groups of elderly people who are on their own, or are removed from family living and have insufficient income to live on their own.

Day care centres involve the provision of full time care for elderly Brazilians who, due their own personal needs, or those of their families, cannot receive care in their homes. It allows elderly people to receive care during the day and to return at night to their residences, allowing the maintenance of family ties and socialisation. Their financial costs are lower than that of institutional care.

Social activity centres involve activities that aim to strengthen associative and productive activities and to promote sociability. They aim to contribute to independence, active and healthy ageing, the prevention of social isolation and income generation. In partnership with the Federal government, Sesc set up activity in 25 Brazilian states, involving approximately 100,000 elderly Brazilians.⁴³

c) Full institutional environment

Here care is provided through residential institutions, with priority being given to elderly people without families and in vulnerable situations. Biological, psychological and social care services are provided on a full time basis, prioritising family ties and community integration. They are classified in subgroups according to the form of care:

41. This is the “residence in natural family” mode.

42. This is the “residence in foster family” mode.

43. www.sesc.com.br on 30/07/2004.

Subgroup I. Designed for independent elderly Brazilians, allowing them to carry out activities from daily life, even if some self-help equipment is needed.

Subgroup II. Designed for dependent and independent elderly Brazilians who need help and specialised care, with proper monitoring and care by health professionals.

Subgroup III. Designed for dependent elderly Brazilians who need total assistance in at least one daily life activity.

According to the Ministry of Social Development and the Fight Against Hunger, [Ministério do Desenvolvimento Social (MDS)] the ministry currently responsible for the programme the “Care for Elderly People”, programme described above, provided care for 306,703 families of elderly Brazilians in 2002. This corresponded to approximately 2.5% of the total number of families with elderly people. In relation to 2001, a small increase of 5,600 families was observed. According to data from the MDS, 24,964 elderly people are currently institutionalised in networks authorised by the Ministry.

Brazilian legislation on care for elderly people is quite advanced. However, in practice, it has been shown to be rather unsatisfactory. In 2002, the Human Rights Commission of the Chamber of Deputies published a report entitled *Fifth National Human Rights Survey: A Sample of the Reality of Shelters and Asylums for Elderly People in Brazil*. According to the report, there were approximately 19,000 elderly people in institutions throughout the country. This represented approximately 0.14% of the Brazilian elderly population. However, as emphasised by the document, it is estimated that the real number is actually quite higher, since there are many unregistered asylum institutions and, possibly, a large number operating clandestinely. The largest absence of public power is rather in the awful conditions of most of these institutions than in the low number of places. In other words, this means the lack of proper supervision.⁴⁴

An important advance of the Elderly People’s Statute (Article 35) was to make obligatory for a service contract to be signed between organisations (asylums and similar institutions) and the elderly persons to be institutionalized. Institutions were permitted to charge elderly people, but these contributions were limited to 70% of resident’s income.

44. See the introductory paragraph in the aforementioned report by Deputy Marcos Rolim: “Many of these homes are only small and modest businesses from which their owners obtain profits. For this they appropriate the retirement benefits and pensions of the residents; often directly using the bank cards of their ‘clients’ and the generosity of the community involved in fund-raising campaigns. Other institutions showed the result of a ‘philanthropic spirit’ which imagined itself to be self-sufficient. In these cases, good intentions are usually overtaken rapidly by the needs and difficulties of the residents through the complete lack of professionalism, whether in the administration of the home, or in the care provided to the elderly people. In both situations what exists are depots of uncared-for people.”

In the context of the low coverage of institutional care programmes, as in Brazil, the preparation of the family to care for elderly people becomes a more viable alternative, especially due to the shortage of financial resources. Both the PNI and the National Health Policy for Elderly Brazilians emphasise that informal care-givers need to receive basic training related to personal hygiene, routine medication etc. In addition, the need for support groups to be created is also stressed. These groups can facilitate the exchange of experiences between care-givers, as well as preventing the isolation of elderly people and the care-givers themselves.

The preparation of the family to care for elderly Brazilians is supported by the National Conference of Brazilian Bishops [Conferência Nacional dos Bispos do Brasil (CNBB)], through the Pastoral for Elderly Brazilians. In the diocese of Cornélio Procópio, for example, the Pastoral for Elderly Brazilians has been holding a course for informal care-givers of elderly people since 1996. These are, in general, relatives of the dependent elderly people. The Pastoral for Elderly Brazilians has also a monthly home monitoring service, using community leaders, which, when necessary, can send elderly people to the basic health system or to other relevant organisations. The programme seeks to advise elderly Brazilians about the importance of physical activities and basic care with food and health.

In the last quarter of 2003, the programme operated in 1,380 communities in 23 of the 27 Brazilian states, assisting monthly 33,215 elderly people in 25,263 families [CNBB (2004)]. In relation to 2001, there was an increase of 549 communities, 10 states, 12,519 elderly Brazilians and 9,348 families benefiting from the programme. Last year, approximately one third of the personnel who worked on the programme were volunteers older than 60 [Brasil (2002)].

Another pioneering experience of home care in the country took place in the State Employees' Hospital in São Paulo. At the beginning of the 1990s, the Gerontology and Geriatric team of this hospital designed measures to prepare patients and family members during hospitalisation for the release of the patients and for the special care that would be required afterwards. This model has been improved and implemented in various public institutions throughout the country [Yuaso (2002)].

4.4 Social Integration

Public policies aimed at the social integration of elderly Brazilians can also be understood as part of the programme for healthy and active ageing in accordance with the Vienna and Madrid Plans. To consider social integration as strategies in

action plans for elderly people is relatively new [Zuzunegui et al (2003)]. These strategies assume that the last stage of life should be enjoyed in conditions of economic and social stability, through active participation in family and social life and with a good evaluation of one's own health. This vision stands in contrast to the stereotype that advanced age is just a phase of life marked by senility and preparation for death.

Some of these actions are related to associative initiatives and involve a high degree of interaction between the state and the civil society. The experiences can be seen in various areas, from the sphere of labour relation, such as associations of retired persons, to the promotion of inter-generational relations.

This section describes the strategies for action related to the social integration of elderly Brazilians in three areas: education and culture, sport and tourism and associations of retired people and survival pensioners.

4.4.1 Education and culture

The main activities in this sub-section are concerned with complementary education and look for to fill the gaps in the education of elderly Brazilians and those who seek to improve their professional skills and social value.

The first space for elderly Brazilians to carry out cultural and educational activities was opened by the Sesc in São Paulo in 1963. The opening of the first school for elderly Brazilians in 1977 was an initiative of the staff of the same Sesc. This team already had experience with an social activities centre, another of Sesc's pioneering initiatives. It was supported by the Toulouse University—the first Open University for Elderly People in the world [Nunes (2000)].

“Schools and Universities for Elderly People” are spaces designed to bring elderly people together. They aim to valorise elderly people and to create a positive image that sees their experience as a source of knowledge and opens possibilities for elderly people to expand their education in a broad sense. Guerreiro (1993)⁴⁵ states that: “As well as the knowledge taught there and the possibilities of obtaining professional qualifications, the University for Elderly People created what can be called a ‘elderly culture’ (...). The term ‘elderly culture’ is a set of values and practices aimed at demonstrating that it is possible to be young at any age”.

In 2002, according to the Ministry of Education, 85 third level institutions carried out activities for elderly Brazilians. Of these, 52 were public and 33 private. Most of them were located in the south-eastern region of the country [Brasil

45. Apud Debert (1999).

(2002)]. The development of individual income generating abilities, such as handicrafts, is encouraged by the departments of social assistance (and similar public institutions) in states and municipalities in the North-Eastern region.

Recreational activities also present important mechanisms for the inclusion of elderly Brazilians. In 1993, for example, Sesc designed the “Once Upon a Time...” project, which in addition to being socioeducational, also helped to integrate generations—children, adolescents and elderly people—through children’s literature. In 2000, this project had been implemented in 13 of Sesc’s regional departments [CRE (2000)].

The internet also seemed to be an alternative network for social integration for elderly people. The latter have also been called on to respond to technological demands, especially in the digital and computing world. Even though the proportion of the Brazilian population with access to computers is restricted, especially in this age group, there are various information portals for this public. Elderly people’s sites provide information about various subjects: aesthetics, elderly people’s rights (including legal details), social benefits (retirement benefits and survival pensions), tourism, culture, leisure, chat rooms where elderly people can discuss their experiences, etc.

In all the programmes analysed, however, there was a gender bias. Debert (1999, p. 139), referring to the Brazilian experience, emphasises that social integration programmes for elderly people essentially involves the female public. “Male participation rarely rises above 20% and the enthusiasm shown by women while carrying out activities contrasts with the reserved and indifferent attitude of men. This imbalance has concerned those studying the programmes, however, explanations have not gone beyond simply stating that women live longer than men”.

Elderly people also enjoy a series of discounts in cultural and artistic activities. Although this was already the practice in many Brazilian states and municipalities, the Elderly People’s Statute expanded to the entire country a discount of at least 50% on the costs of tickets for artistic, cultural, sporting and leisure events, as well as preferential access to the locations of the events themselves (the Elderly People’s Statute, article 23).

4.4.2 Associations of retired persons and survival pensioners

Work in industrial societies is one of the most important forms of social integration. For this reason, the participation of elderly Brazilians in retired persons’ associations is an important way of keeping connections with the labour market. As emphasised

by Simões (2000), the demonstrations against the social security cutbacks that took place between 1991 and 1992 (the 147% demonstration, as it became known) transformed the retired and survival pensioners into the largest “professional” category in the country.

The associations of retired people and survival pensioners emerged as a result of the separation of the interests of the occupied and non-occupied categories in relation to the unification of the social security system. Nonetheless, its structure follows the Brazilian trade union structure, from where the majority of its directors have emerged. The Brazilian Confederation of Retired People and Pensioners (Cobap) currently brings together approximately 800 member organizations from throughout the country, including federations and grass roots organisations. The main activities of these confederations are related to the provision of information about retirement rights and the progress of legal cases.⁴⁶

The participation of elderly Brazilians in retired persons and survival pensioners associations, to the contrary of what has been observed in social activity centres, elderly people’s clubs and elderly people’s universities is predominantly masculine. As emphasised by Debert (1999), obtaining data about female participation in these movements is not easy, which can be understood as an inheritance of the low participation of women in the labour market in the recent past.

4.4.3 Sport and tourism

The stimulus for physical activities has the objective of promoting health among elderly Brazilians. The Ministry of Sport, in partnership with the civil society, developed the project “Active Life for Elderly Brazilian”. The project is implemented in groups that carry out physical and leisure activities.

The table contains some performance indicators. A growth in the number of these groups and in the number of states and municipalities with them can be observed throughout the time period. The result is an increase in the coverage of elderly people attended by the project. In 2002, a new programme “Sport and Leisure in the City”, aimed at all ages, became part of the project.

In relation to tourism, the Ministry of Tourism, in partnership with the Better Ageing Clubs,⁴⁷ designed the “Better Ageing” Programme. The objective of this programme is to improve the use of tourist infrastructure in the low season.

46. www.cobap.hpg.ig.com.br on 3rd August 2004.

47. Non-profit making organisations which function as activity centres.

BRAZIL: PERFORMANCE INDICATORS: ACTIVE LIFE OF THE THIRD AGE—1999-2002

	1999	2000	2001	2002 ^a
Elderly Persons Attended	3,560	15,611	18,915	30,000
Groups	36	93	116	350
States	4	11	12	17
Municipalities	9	48	43	100

Source: Ministry of Sports (www.esporte.gov.br).

^a The information for 2002 are forecasts.

The programme is implemented by the clubs mentioned above. This presents artistic, cultural, and recreational activities, as well as tours by travel agencies authorised by the Brazilian Tourist Company [Empresa Brasileira de Turismo (Embratur)], at reduced costs. According to the Brazilian Association of Better Ageing Clubs [Associação Brasileira dos Clubes da Melhor Idade (ABCMI)], it has 50,000 members. These members through the annual payment of approximately US\$ 7.0 can buy tourist packages below the market cost [*Folha de São Paulo*, 3rd November 2003].

According to the president of ABCMI, Nadir Parigot, much can still be done to develop this potential market. “While in the US, elderly people account for 80% of domestic tourism, this number falls to 20% in Brazil” [*Folha de São Paulo*, 3 November 2003].

5 FINAL CONSIDERATIONS: A SOCIETY FOR ALL AGES?

In the last two decades, many advances have been made in the matter of population ageing, both in relation to the national and international agendas. An important fraction of the suggestions of international assemblies have been included in the Brazilian legislation. However, these laws have still not impacted on the daily lives of elderly Brazilians.

Until the middle of the last century, old age was associated with the lack of income, due to the incapacity to work and the emergence of physical and mental limitations. In other words, the autonomy of elderly people was compromised by income and/or health restrictions. Even though these are still two of the main determinants of the elderly living conditions, the development of social security systems has played an important role in the quality of life of the individuals in this stage of life.

Elderly people are a very heterogeneous segment, as has been shown in various chapters in this book and in the actual theoretical underpinnings of the United

Nations Action Plans (the 1982 Vienna Plan and the 2002 Madrid Plan). The period called “old age” currently covers up to 30 years of life, resulting in differentiated policy needs.

In a context of increasing fiscal restrictions, part of the literature on policies for elderly people is based on a demographic determinism where an ever smaller part of the population, composed of individuals of an economically active age, are seen to be increasingly burdened with the responsibility for looking after elderly people. A possible inter-generational conflict in relation to the formation of public policies has to be looked at against a broader context of the need to rethink the mechanisms of social protection currently operating in various societies (see the chapter by Goldani in this book). Nor can the main social amalgam—solidarity—be ignored, in any of its modalities—intergenerational, family or social—in developing mechanisms to promote social welfare.

Policies for the elderly population must encourage solidarity between generations. This means balancing the priorities of the needs of elderly people with other population groups.

One of the three targets of the Madrid Plan was the active participation of elderly people in society and in economic development. This means that any policy directed at the elderly population must be part of a national policy of sustainable development aimed at the welfare of the entire population. The first step requires the readjustment of current policies and public institutions—the labour market, social security and poverty reduction policies—bearing in mind the relative increase in the number of elderly people and the possibility of their insertion as a raw material for development. Income maintenance and social protection policies, whether or not they have a contributory aspect, are essential for economic prosperity and social cohesion.

The first point raised is that increasing employment for elderly people means increasing jobs in general. In other words, an employment policy needs to play an important role in macro-economic policy. In addition, in order to stimulate the participation of elderly people, the state needs to introduce strategies to prevent discrimination in the labour market, such as compulsory retirement and updating elderly people’s qualifications, which are generally very low. The participation of elderly people should not compete with the participation of other age groups. It has been suggested by Guzmán (2002) that the increase in the participation of elderly people in the labour market requires a more flexible market. In addition, more flexible jobs need to be combined with more flexible retirement.

To obtain the second principle of the Madrid Plan, policies that result in improvements in health from childhood onwards and last throughout life are needed. These include health promotion, universal access to public health service, all of which take into account environmental, economic, social and educational factors etc., in the development of infirmities and incapacities. Also necessary are personnel training programmes in Geriatrics, Gerontology and Social Services.

In short, for policies aimed at population ageing to be effective, they must adopt an integrated approach in the various specific sectors: health, economics, the labour market, social security and education.

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AGEING AND RURAL SOCIAL SECURITY: THE RECENT EXPERIENCE OF BRAZILIAN UNIVERSALIZATION*

Guilherme C. Delgado

Instituto de Pesquisa Econômica Aplicada (IPEA)

José Celso Cardoso Jr.

Instituto de Pesquisa Econômica Aplicada (IPEA)

1 INTRODUCTION¹

Following the approval of the Eloi Chaves Law in 1923 that created Retirement Pensions and Social Security Benefits [Caixas de Aposentadorias e Pensões (CAP)] for urban workers, it took almost fifty years for a social security system for elderly and disabled persons in rural areas to be established in Brazil. This system, based on Complementary Law 11 sanctioned in 1971, was implemented in the following year through the creation of the Rural Workers' Assistance Program/Rural Workers' Social Security and Assistance Fund [Programa de Assistência ao Trabalhador Rural/Fundo de Assistência e Previdência do Trabalhador Rural (Prorural/Funrural)]. It provided social security benefits to rural workers, fishermen (since 1972) and gold diggers (since 1975), offering a low value retirement benefit of half a minimum wage for those aged 65 or over, if males and restricted to the heads of families.

Over 20 years after the establishment of Prorural/Funrural (1971-1992), a universal social security system was set up for elderly Brazilians and the disabled in rural areas, based on the requirements of the 1988 Constitution. This introduced the principles of universal access to social security for elderly Brazilians and for the disabled of both sexes in a special system. The main characteristic of this scheme was the inclusion of informal rural workers, "farmers, sharecroppers and

* This chapter was translated from Portuguese to English by Barbara Melo and Eoin O'Neill and reviewed by Ana Amélia Camarano.

1. Two other chapters in this book also analyse the impact of the expansion of rural social security benefits on the well-being of elderly Brazilians and their families. One (the chapter by Beltrão et al) makes an aggregated analysis based on data from the National Household Sample Survey (Pesquisa Nacional por Amostra de Domicílios) and the other (by Saboia) is based on fieldwork carried out in Bahia and Rio de Janeiro (see Chapter 11).

tenant farmers, gold diggers and small fishermen, as well as their spouses, who carry out familial economic activities without any permanent employees” (art. 194, § 8º, 1988 Federal Constitution).

This informal sector, part of the familial-economic system, to which can be added a small formal sector, i.e., workers who are formally employed, from whose wages social security contributions were deducted, were benefited only in a very precarious manner from the previous system, Funrural, created during the Military Government in 1971.

The main normative changes brought about by the 1988 Constitution, which only effectively came into existence after 1992 were as follows: *a*) equal access for both men and women (the previous system was specifically designed for heads of households only); *b*) reduction in the minimum age for retirement by age (60 years for men and 55 for women); and *c*) establishment of a minimum value for all kinds of benefits of one minimum wage. In the previous system, the value of the Funrural retirement benefit was half a minimum wage and the survival pensions were 30% of the main benefit.

These new rules, applied to formal workers and family farmers, had an immediate social and economic impact. Within three years (1992-1995) there was a dramatic increase in the coverage of rural households and in the participation of social security benefit in family income.

2 CHANGES IN PROTECTION FOR THE ELDERLY BRAZILIANS: FROM THE STRICTLY PRIVATE TO SOCIAL POLICY

The new social protection system for elderly Brazilians, with the sole requirements of having to be a formal or informal rural worker and, obviously, their age, changed the entire history and concept of human protection for elderly persons in Brazil. The tradition of having numerous offspring in rural families had worked in the past as a protection mechanism for elderly parents. The responsibility of caring for and assisting older parents was often with the firstborn or the youngest child (though not exclusively).

The tradition of having large families was, to a certain extent, encouraged by the social policies of the 1940s and 1950s, especially the Bonus Law (Lei do Abono).² A bonus equivalent to 100,000 réis (or US\$ 5.34)³ was given to each head of household who was a father of eight children, with another 20,000 réis

2. Executive Law 3200, dated 1941.

3. These figures were converted into USA dollars taking into account the rate published in Abreu (1989).

(or US\$ 1.1) being given for each additional child.⁴ This was mainly targeted to residents of rural areas.

There is no need to discuss the extent of changes in Brazilian demographic structure over the last 50 years. On the other hand, significant economic changes in the rural world have undermined the conditions that allowed exclusively familial protection of elderly persons. Furthermore, families had experienced an acute impoverishment and social exclusion process from the so-called “conservative modernisation” of Brazilian agriculture (1950/1980).

Within this context, universal rural social security for elderly Brazilians and for the disabled, even though it occurred late, fulfils the function of modern social protection, essential in a democratic society. It allows, within private familial context, the re-empowerment of elderly persons who, on obtaining a social benefit, also obtain a type of subsistence safeguard for their families. This inverts the social role of the elderly Brazilians from being care-receivers to care-givers, within the context of the survival strategies of poor families.

3 EVALUATION OF THE RESULTS OF RURAL SOCIAL SECURITY IN PROTECTING ELDERLY AND DISABLED BRAZILIANS

We carried out a fieldwork in order to evaluate the impact of rural social security on its target population in two successive stages and using the two distinct methodological viewpoints described below. This population is basically composed of elderly and disabled persons and their legal dependents (entitled to benefits upon the death of the beneficiary), from the so-called rural familial-economic system or from formal rural work. Elderly persons are the most important social group in this system. Nowadays, it is responsible for approximately 2/3 of the total benefits paid by the rural social security system.

By privileging in this study the repercussions of rural social security on elderly persons in rural areas, we are not arbitrarily excluding other social groups from the structure of this social protection system, but merely choosing a widely privileged focus within this very special social security system.

The results of the first evaluation done in 1996 [Delgado (1997)] allowed us to find out some important innovations within the scope of social protection for elderly and disabled Brazilians in the rural environment. It is stressed here: *a*) a marked increase in the coverage of the system, measured by the rate of those receiving benefits in relation to the potential public; *b*) the inclusion of rural

4. Art. 29 of the mentioned law.

women under more favourable conditions, compensating for the exclusionary limits imposed under the previous Funrural; and *c*) the dramatic increase in the household income of beneficiaries. This was in general experienced by the very poor population residing in rural areas or small towns (municipalities with less than 50,000 inhabitants).

These results point to a coverage of social security benefits “more favourable to persons residing in small and poor municipalities, regions or states, elderly women and relatively fragile rural economies” within the context of the familial-economic system [Delgado (1997)].

The need for a second evaluation of Rural Social Security arose when the feedback from the pre-evaluation (first evaluation) showed that we had discovered a great social security subsystem operating within the Brazilian rural environment, very different from the former Funrural system. Nevertheless, little was known about their socioeconomic effects while arguments abounded with regard to its financial cost. If on the one hand the pre-evaluation was useful in highlighting the relevance of the survey object, on the other hand, questions arose that could not be answered without more in-depth research.

The new questions were related and are still related to the various changes that have occurred in the living conditions of the target population of the rural social security. These questions could not be answered based on secondary empirical sources. It was necessary to investigate at closer range the family nucleus of beneficiaries. Also, it was targeted to learn about the new social and economic roles that the new retired play within the rural familial economy, from which they originally came and, at present, over which they have a certain degree of influence.

This new set of questions leads to a new research object—the conditions of reproduction of the familial economy affected by rural social security. The method of analysis was a direct investigation of a significant sample of beneficiaries. The results of this second evaluation provide very important clues to assess the new role of elderly persons in this familial economy where different economic/social reproduction strategies in the households benefited by social security. This includes several roles:

In principle, one imagines benefits for those retired due to old age (or disability) to be a means of subsistence to meet the needs of inactive persons and their direct dependents. This is true in the great majority of households (88%), which are located above a given poverty line, with a per capita household income greater than half a minimum wage.⁵

5. For an analysis of the historical evolution and dimension of the subsistence sector, see Delgado (2004).

A second important role of social security is to facilitate family production where retired persons continue to be responsible for family rural establishments. This is the case of half the households surveyed and occurs in two different ways: *a)* the social security benefit is used as a means of familial production; and *b)* the social security benefit acts as a form of agricultural insurance for specific populations, from whom the inherently high risks involved in agricultural production and income are reduced. It operates not only to ensure subsistence but also as insurance for family production. This social group, who are most numerous (roughly 50% of the sample), obtains surplus income after subsistence consumption and invests this surplus in the reproduction of the family establishment.

A third way of inserting the retired person in the family economy is by means of paid or unpaid employment. In this situation, it was found 35% of the three thousand social security beneficiaries selected at random from the household sample surveyed in the Southern region of Brazil. They are most self employed which earnings complements the family income. Employment in the rural or urban labour market, on the other hand, is just marginal.

3.1 Some Empirical Results

Both in the first and in the second evaluations, as briefly described in the preceding section, we collected relevant empirical indicators both before and after the reform of rural social security, i.e., with and without its effects.

From a macro-social point of view, the impact of the reform can be described based on certain general data summarized in Table 1. One can observe that between 1991 and 2002 the absolute number of benefits due to age in the rural system doubled, whereas the unit value of benefits increased from US\$ 44.1 per month to roughly US\$ 70 over the last three years. The financial impact of the reform more than tripled annual expenditure with permanent benefits (payment of retirement benefits and survival pensions), if calculated in constant reais. Before the reform (1991), public expenditures with rural Social Security were related to slightly over four million paid benefits, each costing half a minimum wage. At the end of 2002, this had increased to 7.36 million benefits; each paid a full minimum wage.

On the other hand, this social expenditure plays a very important distributive role in the social sector at which it is aimed. To measure this, we have to use the results of the fieldwork. Only by doing this, we can isolate and compare our target population to the other rural populations without social security benefits.

TABLE 1
GENERAL INDICATORS OF RURAL SOCIAL SECURITY UNIVERSALIZATION

Years	Number of Benefits	Number of Beneficiaries by Age (In Thousands)	Unitary Value of Rural Benefits (US\$ in December)
1991	4,080.4	2,240.5	44.10
1992	4,976.9	2,912.8	47.10
1993	6,001.0	3,855.9	67.30
1994	6,359.2	4,176.2	82.80
1995	6,332.2	4,126.8	100.70
1996	6,474.4	4,102.2	108.90
1997	6,672.3	4,140.2	108.70
1998	6,913.1	4,305.3	108.50
2000	6,895.3	4,012.1	77.25
2001	7,070.6	4,117.3	77.60
2002	7,363.6	4,287.8	56.62

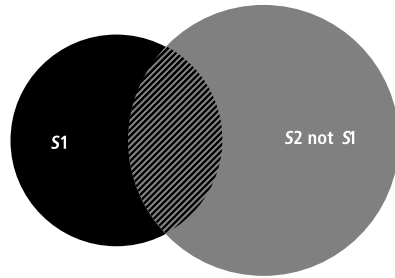
Source: Social Security Statistical Yearbook [Anuário Estatístico da Previdência Social (AEPS)] - 1991 to 2002.

Rural social security benefits together with social assistance benefits amounted to 7.36 million paid benefits monthly. In addition, the household survey of households covered by rural social security reveals that on average 1.78 benefits were paid per household in the Southern region and roughly 1.69 in the Northeastern region. These two regions were responsible for 65% of the (permanent) social security benefits during the year of the survey.

Due to lack of definitive information, we believe it fair to apply the average of these two regional reports (benefits/households = 7.36/1.70) to Brazil as a whole. This indicator shows that roughly 4.3 million households in Brazil constitute a sector socially assisted by rural social security that we shall refer to as *S1*. Taking this information and the other relevant indicators revealed by the survey, we can compare sector *S1* to the information of traditional rural areas gathered by the National Household Sample Survey [Pesquisa Nacional por Amostra de Domicílios (PNAD)]. This allows to find some marked differences for a key-variable in the survey: household income.

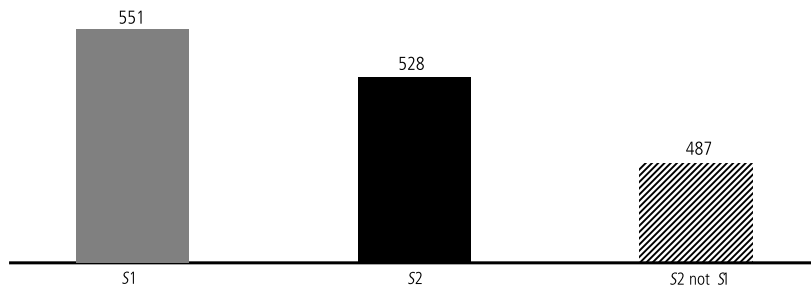
Figure 1, 2 and 3 allows us to look at household income for sector *S1* (social security and social assistance beneficiaries), compare it to *S2* (PNAD rural household sector) and define sector “*S2* but not *S1*”. This for analytical purposes

FIGURE 1
CONFIGURATION OF RURAL SETTING



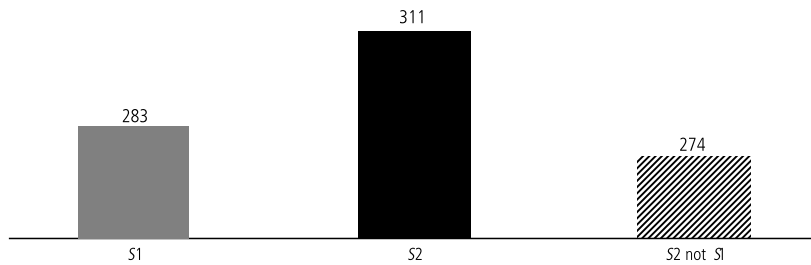
S1 = Social security and social assistance beneficiaries S2 = PNAD rural household sector

FIGURE 2
AVERAGE HOUSEHOLD INCOME SOUTHERN REGION OF BRAZIL



S1 = Social security and social assistance beneficiaries S2 = PNAD rural household sector

FIGURE 3
AVERAGE HOUSEHOLD INCOME NORTHEASTERN REGION OF BRAZIL



S1 = Social security and social assistance beneficiaries S2 = PNAD rural household sector

serves as a “sample witness” (or control sample). In the latter, by definition, there are no rural households with retired persons or social security beneficiaries.⁶

Statistical data about rural social security beneficiaries and pensioners, here called *S1*, were obtained from a sample survey of the Northeastern and Southern regions of Brazil. Social security and social assistance beneficiaries in these two regions received about 65% of the total benefits paid to rural areas within the social security system in Brazil in 2002, according to the Social Security Statistical Yearbook—2003.

The household sample constructed for these two regions has specific regional social research aims and can only be used in a supplementary way to estimate national parameters, as in the case of the “benefits/households” estimate. This was obtained for both regions and then extrapolated to the country as a whole.

The household sample was taken from records of names and addresses kept by the Social Security National Institute [Instituto Nacional de Seguridade Social (INSS)]. All kinds of rural beneficiaries were selected from the rural population entitled to lifetime benefits (social security benefits, survival pensions, monthly lifetime income and social assistance benefits) in March 1998. This registration record, broken down by municipalities, was the object of an initial selection from which 300 municipalities were chosen at random in the two macro-regions, with 20 households being chosen in each municipality. A meso-regionalisation was observed for all the regions, which were divided into three sub-areas.⁷

Regional samples of three thousand households (or three meso-regions of one thousand households each) are significant from a statistical point of view, as the mathematical expectation of sample parameters [$E(p) = P + e$] is very close to the parameters in the universe contained in the record of names and addresses of the social security system. Therefore, we are able to define by statistical inference the size of *S1* for the Southern and Northeastern regions and its socioeconomic characteristics based on the results obtained from the household sample of six thousand households surveyed in the fieldwork.

The *S1* sector is, by definition, made up of persons with rural social security and social assistance benefits. All the interactions with other statistical concepts within rural areas such as, for example, the rural household sector of the Brazilian Institute of Geography and Statistic [Instituto Brasileiro de Geografia e Estatística

6. The *S1* sector for Brazil as a whole includes 4.3 million households. Sector *S2*, according to data from the 2000 Demographic Census, contains roughly 8.0 million households. According to 2002 PNAD, *S2* not *S1* (households in rural areas without retired persons) data corresponds to 67.2% of rural households, whereas $S1 \cap S2$ correspond to 32.8% of the total (approximately 2.6 million rural households).

7. For a detailed description of the Sampling Plan of the Survey, see the methodological report [Delgado et al (1999a)].

(IBGE)], herein referred to as *S2*, is based on information obtained from the fieldwork itself (for example, half those interviewed live in rural areas according to the IBGE and almost half the beneficiaries interviewed stated they were “responsible” for the rural unit).

Given the above, it can be seen that the relationship $S1 \cap S2$, in terms of household location, is a direct inference of the survey in the Southern and Northeastern regions. On the other hand, the set of rural households that according to PNAD 2002 do not receive any kind of social benefit earnings is called here “*S2 not S1*”, which can be applied to both the Northeastern and the Southern regions. They serve as control samples that check the levels of household income in this subgroup (*S2 not S1*) compared to our sector of direct research, *S1*.

In August/September 1998, average household income of *S1* in the Southern region was US\$ 475, while average rural household income in PNAD (September 1998) was US\$ 447.2 and “*S2 not S1*” income was US\$ 410.4. For the Northeastern region, the numbers were, respectively, $S1 = \text{US\$ } 244.9$, $S2 = \text{R\$ } 268.1$ and “*S2 not S1*” = US\$ 236.2.⁸

Household income data illustrates the marked difference between having and not having access to social security system. Households without access to social security, both in the South and the Northeast, gets an income which just in the case of the South is above the poverty line. This is equivalent to a monthly per capita household income greater than US\$ 60.

3.2 The New Socioeconomic Space of Rural Elderly Retired Persons

While the empirical results of the preceding section are very useful in defining the impact of the social security system on family income, they do not completely describe the changes that have occurred in rural family economy brought about by the changes in rural social security.

Table 2 illustrates the demographic structure of the sample of social security beneficiaries that were surveyed in the South and Northeast. The data show a strong concentration of new beneficiaries entering the system after 1992, a fact that results in more than half the sample population being in the 50-to-70-years age group. It can also be seen that in this age composition that women under 55 and men under 60, who must be collecting survival pensions or benefits due to disability, are responsible for less than 10% of the sample in each case. At the other end of the scale, people over 70 years of age, the majority of whom coming

8. These figures were converted into USA dollars according an annual average rate taken from www.ipeadata.gov.br.

TABLE 2
**AGE STRUCTURE OF RURAL SOCIAL SECURITY BENEFICIARIES ACCORDING TO GENDER AND
 REGIONS NORTHEAST AND SOUTH**
 [%]

Age Groups	Northeast			South		
	Total	Male	Female	Total	Male	Female
Under 21	0.5	0.3	0.6	0.1	0.3	0.1
21-54	6.5	4.2	7.8	7.3	5.3	8.4
55-59	8.3	2.0	11.9	10.7	3.2	15.1
60-69	38.2	37.1	38.9	40.1	42.7	38.6
70-79	30.2	36.9	26.3	30.8	36.8	27.2
80-89	14.2	16.8	12.7	9.8	10.6	9.3
90-99	2.0	2.6	1.7	1.0	1.1	1.0
100 and over	0.1	0.1	0.1	0.2	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Socioeconomic and Regional Survey of Rural Social Security - Phase II (*Pesquisa de Avaliação Socioeconômica e Regional da Previdência Rural - Fase II*).

from the former Funrural, are responsible for almost 50% in the case of men and roughly 40% in the case of women.

Combining the data already discussed in this section and that which will be looked at later, it can be concluded that social policy has helped to create a new socioeconomic space with the following characteristics: *a*) a significant demographic dimension (the so-called S1 Sector); *b*) is inserted in the expanded rural space (rural and micro-urban); *c*) has a level of monetary income that in general frees this sector from poverty-line constraints; and *d*) presents the dominance of elderly persons, the social and economic protagonists in this new social setting.

This change in social policy had both expected and unplanned results—the impact on familial income probably being an expected result. On the other hand, the survey also showed an important revitalizing effect on the so-called rural familial economy and on the actual reconstruction of the Brazilian social-rural setting, in which older retired persons begin to play a somewhat more respectable role. The latter results, which we call unplanned results, need to be more evaluated as they are not the typical results of social security policies.

The revitalization of family farming, observed in the results of the survey, is not an entirely unexpected result, considering that the family-economic system is

included in the target population of the special rural social security system (art. 194, §8° of the Brazilian Constitution). Nevertheless, what is novel is the permanence in half of the households surveyed of productive farming units, composing the economic reproduction strategy of these households and having, in general, a retired person as the head of household (the beneficiary or his/her spouse are heads of household in 84% of the situations surveyed). It can also be noted that the results of the 2002 PNAD confirm the significant presence of social security benefits in rural households, corresponding to 1/3 the total of these households.

In this regard, one should consider a further two highly significant aspects. The first is the significance of the combination of the retired person and the person responsible for the productive rural unit, 48% in the sample of the Southern region and 42% in the sample of the Northeastern region. This result, if extrapolated for the country as a whole, would comprise a very large social segment, with around 2.6 million farming establishments receiving social security retirement pensions or benefits, which are converted in various ways into a kind of agricultural insurance.

This conversion of social security into agricultural insurance is, effectively, an unexpected result, because it introduces a new element in social security policy, i.e., its impact on agricultural production within the abundant family farming sector throughout the country. This information is of great relevance because it points to the conversion of social security into the main instrument of agrarian policy used to support family farming and even the vast segment of subsistence agriculture, significantly, but not exclusively, present in the semi-arid region of Brazil. This mechanism of protection results in the formation of a small surplus in the income of S1 type households (the rural social security beneficiaries) which is basically reinvested in their own productive familial activity. This creates conditions for large reproduction of these family economic units.

Another important result confirmed in the fieldwork, and which in a certain way motivated it, is the discovery of a geographic and social setting in which rural social security beneficiaries can live and socialise with characteristics that are somewhat distinct from the traditional rural sector and, to a certain extent, redefining it in social and economic terms. By working with the records of names and addresses of rural social security beneficiaries and by inquiring exhaustively into their lives, work, income, expenditures on consumption and condition of access to the social security system, the survey identified a new rural setting that did not coincide with traditional rural areas as shown in IBGE's farming and rural statistics.

This new geographic setting coincides with the traditional rural area in half of the households surveyed in the two macro-regions. The other half, however, consists of households situated in the urban area of small municipalities (with less than 50 thousand inhabitants). This accounts for an average of 80% of retired persons in the Northeast and 75% in the South [Delgado (1997, p. 19)]. In this setting, called the “rural micro-urban”, which consists of a “new rural setting”, elderly persons differentiate themselves from others by the fact that they enjoy living conditions and social protection in keeping with the minimum vital necessities guaranteed for subsistence and economic reproduction.

The rural micro-urban setting, in the sense we refer to here, mirrors in its half part the traditional concept of rural households; the other half consists of the agglomerations in the urban zones of small municipalities with up to 50 thousand inhabitants. In this sense, this set of households constitutes a new socioeconomic sector of great relevance when defining rural areas nowadays.

The new rural micro-urban setting, called Sector 1 (S1) in our survey, constitutes in reality the main social component of the so-called “new rural area” and can be explained by the massive impact of social policy on the poorest part of the social agrarian pyramid in Brazil.⁹ Since the origin and recent transformation of the S1 sector is a policy result and not a market issue, it depends, therefore, on the continuity of the universal system of protection for elderly and disabled persons in rural areas. So does the reconfiguration of Brazilian rural areas in terms of the revitalization of the family economy and the subsistence sector.

Continuity, in turn, fundamentally depends today on the financial equation of the rural social security subsystem. This, by its characteristics, shall always have deficit and require complementary resources to pay yearly for the majority of the benefits.¹⁰

4 EFFECTIVENESS AND UNIVERSALIZATION OF THE SOCIAL SECURITY SYSTEM FOR ELDERLY AND DISABLED BRAZILIANS

The previous objective of the fieldwork carried out in the Southern and Northeastern regions in the second half of 1998 was an initial socioeconomic evaluation of the rural social security system. This allowed us to investigate the effectiveness and universalization of rural social security aimed at elderly persons (men aged 60 and over and women aged 55 and over) and the disabled. It should

9. The debate over the concept of the “rural world” present in various surveys and recent works [see Silva (1999) and Abramovay (1999)], introduces numerous aspects to the discussion, such as territory, occupation and economic dynamics. Without denying any of these, this text looks at changes in social policy.

10. For an analysis of the financial structure of the rural social security system, see Delgado and Abrahão de Castro (2003).

be noted that all indicators of effectiveness estimated here were collected in the S1—the household sector in the INSS records (see Figure 1)—, except the external indicators of income and of benefit coverage, taken from PNAD data. The latter shows that in 2002 in the country as a whole 81.6% of elderly persons in rural areas received Social Security benefits. At the same time, we collected the following detailed indicators for the retired persons' Sector (S1).

The effectiveness of the system can be verified using three sets of indicators: degree of coverage, of difficulty in obtaining benefit and of satisfaction of beneficiaries with benefits. In turn, the universalization of the system can be measured by its opposite, i.e., by the proportion of excluded persons among those potentially entitled to receive the social security benefit.

Focusing first of all on the degree of effectiveness of the social security benefit in the rural environment, it is taken that the degree of coverage can be measured using four different criteria, which are as follows:

a) the ratio beneficiaries/total sample population ratio gives a coverage rate of 47.6%, i.e., the percentage of persons living in households that are direct beneficiaries of social security;

b) the ratio of beneficiaries by age/population of elderly persons (at retirement age) in the sample points to a benefit rate of 85.2%. This S1 indicator is close to a similar one calculated using PNAD data (81.6%);

c) the benefits/households ratio gives a coverage rate of approximately 1.78 benefits per household surveyed, which reflects the number of benefits paid per household surveyed; and

d) the benefits/beneficiary population ratio gives a coverage rate of approximately 1.17 benefits per person, which can be explained by the possibility of the same person accumulating more than one benefit, such as, for example, a retirement benefit due to age and a survivor's benefit on the death of a spouse.

The effectiveness of social security coverage can also be estimated by the “degree of difficulty” in obtaining benefits, as shown in Table 3. The average degree of difficulty is obtained from a weighting of the five variables that make up the indicator, which are:

a) delay from the time of application for the benefit to the time it is granted. About 72% of the households reported low or very low difficulties;¹¹

11. A delay of up to three months was considered “very low”, between three and six months “low”, six to 12 months “intermediate” and more than 12 months “high”.

TABLE 3
**PROPORTION OF BRAZILIANS WITH DIFFICULTY IN GETTING RURAL SOCIAL SECURITY BENEFITS
 ACCORDING TO THE DEGREE**

Degree of Difficulty	Duration between the Solicitation and the Concession	Problems in Getting the Benefit	Need of Intermediary for Solicitation	Distance to the Social Security Office	Frequency of Delays	Average DD per Household	Average Accumulated DD
Northern Region							
Very Low	45.9	72.3	46.1	41.9	99.2	61.1	61.1
Low	21.8	23.0	50.1	18.4	0.3	22.7	83.8
Medium	19.1	4.4	3.7	13.1	0.2	8.1	91.9
High	9.1	0.3	0.1	26.6	0.3	7.3	99.2
Others	4.1					0.8	100.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Southern Region							
Very Low	50.5	64.5	27.8	24.5	98.3	53.1	53.1
Low	21.2	23.8	65.0	27.7	0.7	27.7	80.8
Medium	15.8	8.7	6.7	17.6	0.1	9.8	90.6
High	10.7	3.0	0.4	30.3	0.3	8.9	99.5
Others							
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Socioeconomic and Regional Survey of Rural Social Security - Phase II (*Pesquisa de Avaliação Socioeconômica e Regional da Previdência Rural - Fase II*).

Note: DD = degree of difficulty.

b) the problems of access to the social security system, to which. Around 89% of the households reported either low or very low degrees of difficulty;¹²

c) the need for outside help to accompany the progress of the requested benefit through the system 92.8% of the households reported low or very low degrees of difficulty;¹³

12. A "very low" degree of difficulty corresponds to no problems being reported in obtaining benefits. "Low" corresponds to one problem being reported, "intermediate" corresponding to two problems and "high" to three problems.

13. The non-existence of help was considered to be a "very low" degree of difficulty. Help being used once was considered a "low" degree of difficulty, twice as "intermediate" and three times as "high".

d) the distance between place of residence and the social security office in which benefits are received 52.2% reported low or very low degrees of difficulty;¹⁴ and

e) the frequency of delays in receiving benefits. No less than 99% of households reported low or very low degrees of difficulty.¹⁵

The degree of difficulty for these five variables as a whole was reported as low or very low by 80.8% of households in the Southern region, which represents a significantly positive result from the point of view of managing a social security system geared to a rural environment.¹⁶

Finally, conditions of effectiveness can also be seen by a third set of indicators, which attempt to measure the degree of satisfaction of beneficiaries with social security benefits, as detailed in Table 4.

Looking at Table 4 it can be seen that:

a) the regularity of payment of benefits is high for 98.8% of households;¹⁷

b) the punctuality of benefits is high for 99% of respondents;¹⁸

c) the proximity to the location where benefits are received was very low for roughly 53% of households, though for 47% it was high;¹⁹ and

d) the length of time that benefits had been received for results in an intermediate degree of satisfaction for 41.6% of households, high for 35.5% and low or very low for 14.4% of respondents.²⁰

The mean degree of satisfaction, obtained from the simple weighting of the four selected variables, showed that 80.5% of households had a high or intermediate indicator and 17.4% low or very low. Thus, it can be state that at the present time the rural social security system is very effective taking into account the overall,

14. A distance of up to one kilometre was classified as "very low", between one and five kilometres as "low", between five and ten kilometres as "intermediate" and over ten kilometres as "high".

15. "Very low" difficulties meant the non-existence of delays, "low" to delays of between one and seven days, "intermediate" to delays from eight to 14 days and "high" to delays greater than 15 days.

16. In his article in this book, Saboia also obtained with similar results. His research confirmed that those interviewed did not report difficulties in receiving benefits, showing the high degree of institutionalisation of the program: 93.1% of all those interviewed claimed that they did not face any type of difficulty whatsoever to receive benefits.

17. This is a "yes-no" type of question.

18. Idem previous footnote.

19. Proximity was considered "very low" whenever the distance between the residence of the beneficiary and the location where the benefit was received was within a five-kilometre radius. "Low" corresponded to a distance of five to ten kilometres, from 10 to 20 kilometres was considered "intermediate", and over 20 kilometres was considered "high".

20. A very low degree of satisfaction was identified with benefits that had been received for one year or less at the date of the survey. "Low" referred to benefits that had been received for between one and two years, "intermediate" between two and seven years and "high" from seven to 27 years.

TABLE 4
PROPORTION OF BRAZILIAN BENEFICIARIES TO THE DEGREE OF SATISFACTION (DOS)

Degree of Use	Regularity in Receiving Benefits	Punctuality of Date	Proximity of Location	Antiguity of Benefits	Mean DOS per Household	Accumulated Mean DOS
Northeastern Region						
Very Low or Negative	0.2	0.7	48.5	4.3	13.4	13.4
Low				5.9	1.5	14.9
Medium				37.1	9.3	24.2
High or positive	99.8	99.3	51.5	51.1	75.4	99.6
Others				1.6	0.4	100.0
Total	100.0	100.0	100.0	100.0	100.0	
Southern Region						
Very Low or Negative	1.2	1.0	53.0	2.0	14.3	14.3
Low				12.4	3.1	17.4
Medium				41.6	10.4	27.8
High or Positive	98.2	99.0	47.0	35.5	70.1	97.9
Others						
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Socioeconomic and Regional Survey of Rural Social Security - Phase II (*Pesquisa de Avaliação Socioeconômica e Regional da Previdência Rural - Fase II*).

generally positive, results related to the degree of coverage, of difficulty in obtaining benefits and beneficiaries satisfaction with benefits.

Before finishing this section, the universalization of the social security system in rural areas should be looked at by examining the exclusion rate of elderly and disabled persons eligible to receive benefits. This indicator is symmetrical to the rate of benefits received by elderly persons (85.1%) in the sample of retired persons (S1), but it contains slight differences in structure. The data in Table 5 show an exclusion rate for elderly persons of 7.1%, though it is almost three times greater for women than for men. The general rate of exclusion among the disabled, however, increases to 42.5%, where again there is higher incidence of exclusion among women than among men—almost twice as much.

TABLE 5
PROPORTION OF BRAZILIANS EXCLUDED FROM RURAL SOCIAL SECURITY

Gender	Elderly Brazilians	Disabled Brazilians
Male	3.4	34.8
Female	9.8	59.3
Total	7.1	42.5

Source: Socioeconomic and Regional Survey of Rural Social Security - Phase II (*Pesquisa de Avaliação Socioeconômica e Regional da Previdência Rural - Fase II*).

5 CONDITIONS OF ECONOMIC REPRODUCTION OF HOUSEHOLD UNITS

The pattern of economic reproduction of household units investigated in the fieldwork depends, to a large extent, on the participation of rural social security beneficiaries in the available strategies to provide their families, whether by using the benefit in its main capacity or as security for agricultural income.

With the aim of examining the central position of elderly Brazilians (rural social security beneficiaries) in the economic reproduction of families residing in the household under their responsibility—whether directly or indirectly—, this section is divided into three parts. It starts looking at household earnings composition, household expenditure composition and, finally, the structure of household economic surplus. It is important to clarify that this study is based on the results of the final consolidation of data from the fieldwork carried out in the Southern and Northeastern regions, but statistically these results may be considered valid for the country as a whole.

5.1 Structure of Household Earnings and Occupational Insertion

It can be seen, from the structure of household earnings composition in Table 6, that monthly household earnings in the Southern region were approximately US\$ 475.9 (or 4.24 minimum wages). In the Northeastern region, the comparable figure was US\$ 243.9 (or 2.11 minimum wages). The greatest contribution to the household average earnings, in the South, comes from the main occupation, which amount to nearly US\$ 247.4 (or 2.21 minimum wages) and represents 52% of total household income. Inversely, in the Northeast, the weight of the income from the main occupation represents only 26.3% of total household income. This reflects the decisive importance of the other main source (social security benefit) in the composition of household income of families in this region, as well as for their economic reproduction strategies.

While in the Southern region the contribution of the social security benefit in the composition of the household budget represents 41.5% of the total, in the

TABLE 6
**INCOME DISTRIBUTION BY BENEFICIARIES HOUSEHOLDS ACCORDING TO THEIR MAIN SOURCES
 MULTIPLES OF MINIMUM WAGE**

Minimum Wages	Total Income		Social Security Benefit		Income from Main Job		Total	
	% of Households	% Accumulated	% on Total Income	US\$ Per Household	% on Total Income	US\$ Per Household	Income in Minimum Wages	US\$ Per Household
Northeastern Region								
0.01 - 1	22.40	22.40	99.92	110,78	0.06	0.07	0.99	111.69
1.01 - 2	39.77	62.18	87.47	172,11	11.43	22.48	1.76	196.78
2.01 - 3	23.02	85.20	74.05	202,09	23.32	63.63	2.44	272.91
3.01 - 6	11.37	96.57	51.05	216,02	45.75	193.58	3.79	423.16
5.01 - 10	3.00	99.57	30.77	218,32	61.48	436.17	6.35	709.48
over 10	0.43	100.00	30.81	575,70	65.91	1,231.52	16.72	1,868.27
Total	100.00		71.24	173,40	26.31	64.03	2.18	243.40
Southern Region								
0.01 - 1	11.03	11.03	99.97	111,53	0.00	0.00	1.00	111.56
1.01 - 2	24.13	35.16	90.00	185,74	8.21	16.95	1.85	206.38
2.01 - 3	20.79	55.95	69.20	195,16	25.93	73.13	2.52	281.99
3.01 - 6	23.06	79.01	48.46	212,94	44.66	196.27	3.93	439.38
5.01 - 10	15.71	94.72	30.78	232,33	61.33	462.86	6.75	754.59
over 10	5.28	100.00	10.27	260,19	81.70	2,069.15	22.67	2,532.60
Total	100.00		41.54	197,03	51.97	246.53	4.25	474.33

Source: Socioeconomic and Regional Survey of Rural Social Security - Phase II (*Pesquisa de Avaliação Socioeconômica e Regional da Previdência Rural - Fase II*).

Northeastern region this accounts for 70.8% on average. Looking at Table 6, in relation to the contribution of each one of the two main components of household income by income brackets (expressed in minimum wages), it can be seen that social security benefit are more important to the configuration of household income the lower the income bracket considered. The inverse is true with earnings from the main occupation of family members.

In other words, social security benefits in the Southern region account for at least 90% of household income for families with total income between 0 and 2 minimum wages, contributing approximately 30% to households located with incomes between 5 and 10 minimum wages. A similar pattern was found for the

Northeastern region. It is worth noting that in this region social security benefits are a very representative component of total income, even in households situated in the higher income brackets, to the contrary of the contributions from main occupation earnings which only become significant for families with household earnings above three minimum wages.

This situation, in itself, demonstrates the important role played by beneficiaries in rural household income, whose pattern of occupational insertion just reinforces the arguments so far developed. Whether operating just as lifetime income security, a situation in which the benefit is equivalent to practically the entire household income or whether serving as well as agricultural insurance, where it appears as a fundamental element in the strategies to increase rural income or merely used to make extra subsistence income feasible, the importance of the existing relationships between the beneficiary and economic activities should be emphasised.

Data for the Southern region shows that 48% of households are responsible for active rural units, with farming being the dominant activity in 72% of these cases. The percentage of households that use the social security benefit in maintaining and financing their rural activities is particularly important: roughly 44.7% in the Southern region and 37% in the Northeastern region.²¹

The relationship of elderly persons and beneficiaries with some type of economic activity is more explicit in Table 7 in which the occupational condition

TABLE 7
PROPORTION OF RURAL SOCIAL SECURITY BENEFICIARIES, MEN OVER 60 AND WOMEN OVER 55, ACCORDING TO OCCUPATION STATUS

Occupational Status	Northeastern Region			Southern Region		
	Total	Male	Female	Total	Male	Female
Without Occupation	70.4	55.1	79.9	64.1	48.1	74.5
With Occupation	29.6	44.9	20.1	34.9	51.9	25.2
Paid	11.2	16.9	7.0	23.1	37.0	12.7
Unpaid	17.0	26.0	12.1	11.8	13.3	12.4
Others	1.4	2.0	1.0	1.0	1.6	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Socioeconomic and Regional Survey of Rural Social Security - Phase II (*Pesquisa de Avaliação Socioeconômica e Regional da Previdência Rural - Fase II*).

Note: It is considered male aged 60 and over and female aged 55 and over.

21. These percentages apply to households responsible for rural units [see data from Delgado and Cardoso Jr. (2003, p. 68)].

of beneficiaries, men over 60 and women over 55, is described. It should be noted that the proportion of social security beneficiaries not occupied is slightly greater in the Northeast than in the South (70.4% against 64.1%). Around 52% of male beneficiaries over 60 were still active in the Southern region, despite the formal retirement pension, as compared to only 25% of female beneficiaries in the same situation. It is interesting to note that not all are in paid employment, which can be partially explained by production work for their own consumption.

5.2 Household Expenditures Composition

The study of household expenditures complements the previous analysis of income and opens a way for the discussion in the next subsection about household surplus. To begin with, Table 8 provides information about average household expenditure in the samples collected in the Southern region (3,000 households) and in the Northeast (3,240 households) and emphasises some important differences. Expenditures on consumption represent almost 79% of expenses in the South and almost 95% in the Northeast. This includes expenditure on food and hygiene (36% in the South and 63% in the Northeast), transport, health, education, clothing and shoes, housing (rent, water and electricity), personal services and recreation.

Expenditure on production, on the other hand, accounts for 18% of total household expenses in the Southern region and only 2% in the Northeastern region. This points to the importance of regional specificities in the delimitation of survival and reproduction strategies of family units.²² In the component “other expenses”, which represents only 3% of total expenditure in the South region and 3.5% in the Northeast, the most important items are “financial help for friends and relatives” and “purchase of household utensils”.

With regard to average values of consumption expenditures, it can be seen that on average the amount spent by households in the South on consumption items corresponds to almost US\$ 232.8 (or two minimum wages), whereas in the Northeast it was approximately US\$ 158.6 (or 1.4 minimum wages). In both cases, food and hygiene consume a little less than one minimum wage (US\$ 112 at the time of the survey). Households in the South that reported having production expenses reported an average value of US\$ 146.6 (or 1.3 minimum wages) as compared to the insignificant US\$ 13.4 (or 12% of the minimum wage) in the Northeastern region.

22. It should be noted that the insignificant weight of production expenditure in the composition of total household expenses in the Northeastern region, as compared to the Southern region, can be partially explained by the fact that the fieldwork was carried out between August and September 1998 during a period of intense and generalized drought in that agricultural former area.

TABLE 8
AVERAGE EXPENSES PER HOUSEHOLD AND CONTRIBUTION OF EACH ITEM TO THE TOTAL EXPENSES

Expenditures	Southern Region		% of Contribution	Northeastern Region		% of Contribution
	Expenses per Household			Expenses per Household		
	In US\$	In Minimum Wages	In US\$	In Minimum Wages		
A - Consumption Expenditures	231.52	2.07	78.9	158.95	1.42	94.7
1. Food and Hygiene	106.28	0.95	36.1	106.60	0.95	63.2
2. Transportation	29.83	0.27	5.2	9.16	0.08	3.0
3. Health	54.13	0.48	16.4	25.96	0.23	13.3
4. Education	26.29	0.24	2.0	7.61	0.07	1.3
5. Clothing and Shoes	22.12	0.20	6.2	8.30	0.07	3.5
6. Housing (Water, Electricity, Rent)	31.20	0.28	9.5	18.87	0.17	9.0
7. Personal Services	12.01	0.11	1.3	6.94	0.06	1.2
8. Leisure	22.24	0.20	1.9	10.96	0.10	0.3
B - Production Expenditures	145.80	1.30	18.0	13.42	0.12	1.9
9. Finance Productive Activities	143.34	1.28	17.6	13.10	0.12	1.8
10. Land Rent	82.68	0.74	0.4	8.04	0.07	0.1
C - Other Expenses	34.98	0.31	3.1	21.03	0.19	3.5
11. Financial Support for Friends and Relatives	40.25	0.36	1.1	19.43	0.17	1.1
12. Household Appliances	27.18	0.24	1.6	16.97	0.15	1.5
13. Trade Union Dues	7.37	0.07	0.0	2.42	0.02	0.0
14. House Renovation	43.52	0.39	0.2	30.37	0.27	0.3
15. Funeral Plan	4.30	0.04	0.0	1.29	0.01	0.0
16. Allowance/Alimony		-	-	59.44	0.53	0.1
17. Payment to Withdraw the Benefit		-	-	9.07	0.08	0.0
18. Church Contribution	9.88	0.09	0.0	13.10	0.12	0.1
19. Taxes in General		-	-	1.31	0.01	0.0
20. Payment of Loans		-	-	25.78	0.23	0.0
21. Payment of Consortium		-	-	300.80	2.69	0.1
22. Others	32.93	0.29	0.3	34.41	0.31	0.4
Total	293.28	2.63	100.0	167.87	1.50	100.0

Source: Socioeconomic and Regional Survey of Rural Social Security - Phase II (*Pesquisa de Avaliação Socioeconômica e Regional da Previdência Rural - Fase II*).

5.3 Brief Analysis of Rural Surplus and Specification of Household Units

A comparison of the income-expenditure relationship by household unit allowed us to establish four great situations of insertion of households in the economic and social structure that we call here the rural family-economic system. As explained in the methodological report of the fieldwork [Delgado et al (1999a)], we established the following taxonomy for household income-expenditure:

a) destitution: total household income is insufficient to cover all family expenditure on food $\Rightarrow Rt < Ga$;

b) poverty without destitution: total household income covers expenditure on food, but is insufficient to cover total consumption expenditure (food and hygiene, transportation, health, education, clothing and shoes, housing, personal services and recreation) $Ga < Rt < Gc$; and

c) increased family economic reproduction: household income is sufficient for full coverage of all consumption expenditure, production, etc., generating, in addition, an excellent variable inside family units $Rt > Gt$.

Table 9 synthesizes these situations. It can be seen that a small percentage of households in the Brazilian Southern region are considered destitute (0.4%), though it should be reminded that we are dealing here with an endogenous line of destitution, obtained from a direct comparison of the income-expenditure relationship for each household surveyed. If, for example, an exogenous line of a per capita household income of half a minimum wage were adopted, then the proportion of households below this line would immediately increase to something like 14.3% of the total number of households in the sample of the Southern region. Likewise, if the exogenous line were set at a per capita household income of one minimum wage, the percentage of households would increase to 51.8%, thus relativising the classification presented in Table 9.

Nonetheless, it is important to highlight that although the monetary standard is exogenous to the income-expenditure relationship of the universe surveyed, the

⇒ TABLE 9
PROPORTION

Regions	Indigent Ho Ti < 1
Northeast	2.1
South	0.4

Source: Socioecon
Previdência Rural -
Abbreviations: Ti: To

result is that roughly half the households remain below a hypothetical poverty line (according to the per capita household minimum wage criteria). However, in relative and endogenous terms this cannot be verified because, as seen in Table 9, a percentage of 90.8% of households where total income is greater than expenditure on consumption was observed. The situation of group “c” is particularly important, as 90% of households in the Southern region appear to have the necessary economic conditions to deal with expenditure, represented by consumption costs and generating a surplus.

Considering the evidence presented in Table 9 to be insufficient for the classification of household units, since it refers exclusively to the income-expenditure relationship, and thus contains the problems stressed in previous paragraphs, we have sought to identify other elements for an ultimate construction of the taxonomy of household units in the Southern region. From among the new elements considered, the following are of particular importance: whether households are connected to rural units; whether people work outside the household; whether there is expenditure on production; and whether households can consume their own agricultural production. Based on these elements, a new classification of household units was constructed, which complements the previous classification (see Table 10).

TABLE 10
PROPORTION OF HOUSEHOLD UNITS ACCORDING TO TYPOLOGY

Typology of Household	Farm or Ranch	Employees	Production Expenses	Northeast		South	
				% of Households	* Self Consumption	% of Households	* Self Consumption
Consumption with Employees and Self Production	yes	yes	yes	40.3	79.8	46.8	92.1
Unit Purely of Consumption	no	no	no	34.8	4.9	28.0	10.1
Consumption with Employees	no	yes	no	21.7	6.1	22.9	8.0
Consumption and Self Production	yes	no	yes	3.2	30.7	2.0	37.7
Total	-	-	-	100.0	-	100.0	-

Source: Socioeconomic and Regional Survey of Rural Social Security - Phase II (*Pesquisa de Avaliação Socioeconômica e Regional da Previdência Rural - Fase II*).

(*) Self consumption refers to households that produces some sort of foodstuff, i.e., cereals and grains, tubers, products derived from animals and sugar. This typology does not include complementary products, such as honey, natural beverages or horticultural produce.

The relevant observation that can be made is that the household unit exclusive of consumption are not the most frequent type, as perhaps could have been expected, it was surveyed beneficiaries of the rural social security system, made up mostly of men aged 60 and over and women of 55 and over, formally retired and apparently inactive. This category represents 28% of the households in the Southern region and 34.8% in the Northeastern region. It is interesting to note, additionally, that only 10.5% of them maintain some type of agricultural activity for their own consumption.

On the other hand, the consumption household units that have outside employment and their own family production are the most frequent and the most active in relation to the selected criteria. In other words, they accounted for 46.8% of households. Also, it is important to note the high rate at which these households are connected to self-consumption activities (roughly 93%) as a strategy of sustenance—often non-mercantile, diversified and complementary to the sources of subsistence.

The last two situations shown in Table 10—household units with consumption and outside employment and household units with consumption and their own family production—are developments of the dominant situation. Together, these categories represent 24.5% of the total number of households. It is interesting to emphasise that in the former cases, marked by the presence of outside employment, it is understandable that there is a reduction in the existence of self-consumption, while in the latter case, characterized by having their own family production, self-consumption appears as an important complementary strategy in sustaining these families. Finally, it needs to be emphasised that having family production as an exclusive strategy for subsistence is of little relevance, accounting for only 2% of the total number of households. Nevertheless, it is important as a multi-occupational strategy as it accounts for 46.8% of households in the Southern region and 40.3% in the Northeastern region.

6 CONCLUSION

The changeover from the precarious Prorural/Funfural social assistance system (1971) to the special rural social security system implemented in 1992 and based on the social security principles contained in the 1988 Constitution brought about marked advances for the social protection of elderly and disabled persons in the rural environment, especially for women. These had been partially excluded from Funrural due policy of exclusively supporting heads of households.

Both in principle and in theory, the concept of strictly family protection for rural elderly persons in force in the 1940s and 1950s has been changed and replaced

by a social policy that recognises the right to retirement, regardless of capacity to contribute to the social security system. In the mid 1970s and 1980s, the restrictive Funrural system was in force, establishing conditions for access to very restricted social security benefits (for example, half a minimum wage as a ceiling for retirement pension) and, even worse, managed in accordance with clientelism and electoral appeal.

After the creation of a real rural social security system in 1992, based on the new social security cost and benefit laws,²³ the rural environment was lately provided with a system to protect informal workers and subsistence farmers, based on the text of the Federal Constitution of 1988 (Art. 194, §8º). These dealt with the generic concept of a familial-economic system. This is actually an innovation in the social security system, which, since being created in 1923, was limited to the formal work contracts of urban occupational categories.

Just a few years after the implementation of rural social security, the evaluations we carried out of its results in 1996 and 1998 revealed situations that were, in general, very positive within the ambit of social protection for elderly persons in traditional rural areas and in the micro-urban zone of small municipalities.

In macro-social terms, the implementation of social security in the rural environment has brought about marked results that can be interpreted in terms of impact indicators, including:

a) A significant increase in the rate of social security benefits provided to elderly persons in rural areas, measured by the beneficiary population as a proportion of the total population of elderly persons (who potentially have the right to a retirement pension). This rate, which reaches 85% of the sample of households surveyed classified as being in rural areas by the INSS, is somewhat lower in traditional rural areas. The 2002 PNAD indicator set the figure at 81.8%, but it is certainly higher than in the general (urban) system of the social security system.

b) The marked inclusion of rural women in the social protection system, which more than compensating for the previous exclusion from Funrural. At present (1998), looking at the household survey of the Southern and Northeastern regions, it can be seen that roughly 63.2% of retired persons and social security beneficiaries in the South and 62.2% in the Northeast are women.

c) A dramatic increase in household income of beneficiaries, with these benefits generally being obtained by the very poor rural or micro-urban population.

23. Laws 8212 and 8213, dated 24 June 1991.

Such macro-social benefits are fiscally burdensome and, as could not be otherwise, have a structural impact on social security and social assistance accounts as the new expenses are not covered by specific contribution. This has generated financial structural needs for the rural subsystem that corresponds today to roughly 90% of expenditures with benefits. This, therefore, makes the problem of financing the system an issue that is yet to be sorted out.

On the other hand, the unplanned benefits of this social security reform have to be considered. These revitalized the rural familial economy and created in the rural environment a social category, or a social group, of retired persons that is effectively differentiated from the universe of households in traditional rural areas. This differentiation is, in turn, translated in subsistence strategies and in family production that play an important function of “agrarian policy” and “agricultural income insurance”, something far outside a strict social security system.

The massive nature of family economic access to social security (7.3 million lifetime benefits), benefiting 1/3 of rural households in 2002, as well as its national inclusion, gives the system an aspect that encourages structural change within the scope of social distribution of income with modifications in the productive structure of the rural family economy that cannot be neglected in any impact assessments and/or by policy makers.

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**THE 1988 CONSTITUTION AND ACCESS TO SOCIAL SECURITY
IN RURAL BRAZIL: TOWARDS UNIVERSALIZATION***

Kaizô Iwakami Beltrão

Instituto Brasileiro de Geografia e Estatística (IBGE)/Escola
Nacional de Ciências Estatísticas (ENCE)

Sonoe Sugahara Pinheiro

Instituto de Pesquisa Econômica Aplicada (IPEA)

Fernanda Paes Leme Peyneau

Instituto de Pesquisa Econômica Aplicada (IPEA)

João Luís Oliveira Mendonça

Instituto de Pesquisa Econômica Aplicada (IPEA)

1 INTRODUCTION

Legislation dealing with Social Security rights of the rural population in Brazil has trodden lengthy and sinuous paths with many ups and downs. In December 1988 there was a total of 3 million rural beneficiaries receiving benefits and in December 2002 this number had grown to 5.4 million. The expansion of the coverage of the rural population has represented a major achievement with respect to universalizing the system, reduction of inequality and eradication of absolute poverty in Brazil. This was mainly due to the fact that the 1988 Constitution softened rules for eligibility to benefits, as well as doubling the value of Social Security and Social Assistance benefits. Parallel to these, the labor force participation also underwent remarkable changes with respect to formalization of work ties as well as the growth of the female work force. This paper is aimed at making a comparative analysis of the situation of the Brazilian rural population with regard to labor participation and Social Security along the 1988-2002 period, i.e., both under the rules prior to the enactment of new constitutional directives and later, when these had been fully deployed. Our intention is to contribute to the debate involving issues of gender equity and poverty alleviation both regarding the labor market and the collection of Social Security pension benefits.

* This chapter was translated from Portuguese to English by Barbara Melo and reviewed by Kaizô Beltrão.

Section 2 presents a historical overview of the Brazilian Social Security legislation with emphasis on those directives pertinent to the coverage of the rural population. Sections 3 to 5 compare the situation of the rural population with regard to the labor force and Social Security benefits from different points of view in the period 1988-2002. Section 3 also briefly discusses the evolution of the Brazilian rural population. Finally, in Section 6, conclusions and comments are presented.

2 EVOLUTION OF SOCIAL SECURITY LEGISLATION WITH EMPHASIS ON RURAL CLIENTELE

Even though Social Security legislation already existed in nineteenth Century Brazil, especially with regard to military personnel and federal government employees, it is the Eloy Chaves Law, passed in 1923 after a ten-year wait in Congress that is considered to be the legal landmark of the Social Security system currently in use in Brazil. Coverage was initially restricted to a segment of urban employees from select companies, and was later extended gradually to include other groups: employees from all other remaining enterprises on the formal labor market, employers, the self-employed, domestic servants, rural workers, and so on.

The first step taken to include rural workers as beneficiaries of the Social Security system occurred in 1945, when Getulio Vargas, the then president of Brazil, signed the Organic Law of the Social Services (Decree Law 7526, May 7, 1945) creating the Brazilian Social Service Institute [Instituto de Serviços Sociais do Brasil (ISSB)] with centralized administration and control. Thus, there was a merging of all social security institutions already in existence and social security benefits were supposed to be extended to the entire active adult population in the country. However, despite the fundamental importance of this initiative—the first attempt ever at universalizing social security in Brazil—the government that took office in 1946 entirely disregarded the budget allocated for the implementation of the new agency, and so it never came into being.

It was only a decade later that new efforts were made to bring social coverage to rural workers: in 1955 the Rural Social Service [Serviço Social Rural (SSR)] was created, an agency basically financed by urban industrial companies to provide social assistance to the rural population. Its activities officially began in 1957, but it was only in 1961 that it picked up momentum. In 1962 (Delegated Law 11 of October 11), the SSR was integrated into the Department for Agrarian Policy [Superintendência de Política Agrária (Supra)].

The inclusion of rural workers into the scope of social security legislation truly became effective in 1963 with the approval of the Rural Worker's Edict

(Estatuto do Trabalhador Rural) that, from amongst other measures, created the Fund for Social Security and Assistance of Rural Workers [Fundo de Assistência e Previdência do Trabalho Rural (Funrural)]. A contribution of 1% over the value of the first sale of rural produce was established to finance the fund, to be paid by the producer himself or, according to prior agreement, by the buyer. One year after collecting contributions benefits would be made available. These contributions were transferred to and administered by the Industrial Workers Pension Institute [Instituto de Aposentadoria e Pensões dos Industriários (IAPI)]. These would consist of disability pensions, old-age pensions, survivors' benefit, maternity care, sick leave, funeral coverage and medical assistance. Responsibility for the paying out of benefits was also handed over to the now extinct IAPI. Although the Rural Workers' Edict presented an ample array of benefits, the practical application of the social security measures was quite limited due to scarcity of financial resources.

The Rural Worker's Edict was reformulated in 1967 in an attempt to adjust it to its budgetary constraints. The contributions collected were transferred to the newly created National Social Security Institute [Instituto Nacional de Previdência Social (INPS)] and the benefit plan was restricted to social and medical assistance, leaving out cash benefits. Decree Law 276 also altered the contribution system. Though it continued to be collected as a percentage over the first sale of rural produce, the obligation to pay now fell to the buyer and not to the producer, unless the latter were to process his own produce. Such a measure aimed at making inspection easier. It was believed that the firm that industrialized the product would already have a link to the Social Security System.

In order to insure that social security services were to reach rural workers effectively, the Basic Plan of the Social Security System (Plano Básico da Previdência Social) was created in 1969. It was initially directed at supporting rural workers in the sugar cane industry and it would be funded by contributions from both employees and employers. In 1969 the Basic Plan was extended to other rural activities. The benefit plan was similar to the Rural Workers' Edict, except for the exclusion of medical coverage and maternity care and the inclusion of a pension for the family of imprisoned workers. Even so, it did not satisfactorily fulfill the primary purpose, compelling the government, therefore, to take other initiatives in the field of rural social security.

In 1971, a Complementary Law extinguished the Basic Plan and replaced it with the Assistance Program for Rural Workers [Programa de Assistência ao Trabalho Rural (Pró-Rural)]. This plan offered old age and disability pensions, survivors' benefit, social and medical assistance to rural workers and their family

members. Responsibility for running the program fell to Funrural, which was given judicial framework as an autarchy. According to Complementary Law 11, a producer working in a rural activity with no hired help would receive the same status as that of a rural worker. Later on, through Decrees 71498 dated December 5, 1972 and 75208 dated January 10, 1975, Pró-Rural benefits were extended, respectively, to fishermen and prospectors alike.

In 1974, the array of Social Security benefits was broadened to include two new categories: *a*) Social Assistance for those 70 years and over and for the permanently disabled for work, who had no alternative source of income (Law 6179 dated December 11); and *b*) Disability Insurance for Rural Workers (Law 6195 dated December 19). It is worthwhile noting that no measures were taken to assure the means to finance these social security benefits. It was incorporated later on to the corresponding urban benefit as social assistance (monthly income for life due to old age and permanent disability). It became extinct, however, with the promulgation of the 1996 Organic Law for Social Assistance [Lei Orgânica de Assistência Social (Loas)]. Rural employees, so far excluded from the system being instated, were then included among beneficiaries of Funrural under Law 6260 dated November 6, 1975, becoming eligible for the following benefits: old-age and disability pensions, survivors' benefit, funeral expenses, medical and social assistance and professional re-adaptation.

Until 1977, the rural and urban clientele were covered, respectively, by two separate agencies: Funrural and INPS. These agencies were responsible not only for providing benefits and medical and social assistance but also for the entire administrative and financial structure of their respective programs. With the institution of the National Social Security and Assistance System [Sistema Nacional de Previdência e Assistência Social (Sinpas)], under Law 6439 dated September 1, 1977, rural and urban clientele were unified and each function became the charge of a specific agency. Consequently, certain agencies were created and other existing ones had their activities redefined.

INPS was placed in charge of maintenance and concession of benefits for beneficiaries of the former INPS as well as for those of the former Funrural, now extinct due to the same law. Medical assistance for both urban and rural workers as well as employers came under the domain of an autarchy created especially for this purpose: the National Social Security Institute for Medical Assistance [Instituto Nacional de Assistência Médica da Previdência Social (Inamps)]. One other autarchy, the Financial Administrative Institute for the Social Security System [Instituto de Administração Financeira da Previdência e Assistência Social (Iapas)]

came into being so as to specifically see to the administration, financing and patrimonial estate of the system. Social assistance to the deprived segment of the population was left up to the Brazilian Social Assistance Foundation [Fundação Legião Brasileira de Assistência (LBA)]. Aside from these organizations, Sinpas was also composed of the National Foundation for the Welfare of Minors [Fundação Nacional do Bem-Estar do Menor (Funabem)], the Social Security Data Processing Company [Empresa de Processamento de Dados da Previdência Social (Dataprev)] and the Medication Center [Central de Medicamentos (Ceme)].

Even with the maintenance of distinct and disparate benefit plans for urban and rural workers, the fact remains that the beginnings of a single social security system arose with the advent of Sinpas, symbolizing a new phase: universal coverage provided by social security programs in Brazil.

Until the 1988 Constitution, eligibility for the rural workers' old age pension benefit was defined at 65 (as was the case for male urban workers), reserved solely for the head of the household. The pension amounted to 1/2 a minimum wage, except for the disability benefit for work-related accidents, which was set as 3/4 of the minimum wage. Survivor's benefit was set at even lower values. In sync with Social Security benefits, there appeared as well social assistance benefits: lifelong monthly income for old age (eligibility at 70), and for disability, also amounting to 1/2 a minimum wage, covering the segment of the rural population that could not otherwise prove their previous occupational activities.

The 1988 Constitution set up new parameters for the rural population: the eligibility age for benefits at 60 for males and 55 for females (five years less than that of their urban counterparts)¹ and the minimum benefit equal to the minimum wage (as well as for survivors' benefit), aside from universalizing in practice the benefit for the entire rural population. Both spouses, males and females, were both given equal access. It is worth noting that after a long period of military regime, the new Constitution included all possible minute detail on every aspect, assuming correctly that changing the Constitution would be a much harder task than changing regular laws. This holds true also with respect to Social Security. The whole Social Security System is detailed in the Constitution, there included, eligibility conditions, minimum and maximum values and so on.

1. This was done under the correct assumption that life expectancy at birth for the rural population is lower than that of the urban population. Actually, though, in each state of the Union, life expectancy for the urban population is equal or lower to that of the rural population. As the majority of rural workers are concentrated in states with the lowest life expectancy, the national average by household situation (urban/rural) inverts the local standard.

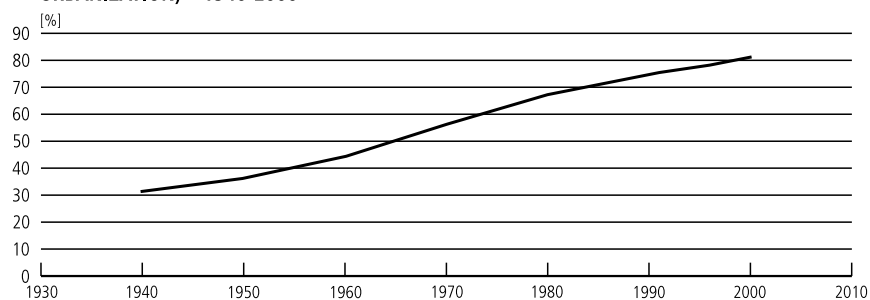
Nevertheless, it was only in 1991 that these modifications became totally binding. The law that “deals with Social Security and Benefit Plans and other provisions” guarantees retirement eligibility by old age in article 48: “(...) reducing these limits to 60 and 55 years of age for rural workers, respectively, for males and females (...)”. Establishing the benefit value in the current legislation equal to that of the minimum wage was deemed unnecessary. Even so, this right was reiterated in article 33 of Law 8213 but the value had been immediately put in practice in 1988. Later on other changes in the Social Security System were introduced by way of Constitutional Amendment 20 in 1998, and Constitutional Amendment 41 in 2003. These changes, though, did not affect the rural population.

3 EVOLUTION OF RURAL POPULATION: ACTIVE AND BENEFICIARIES

The Brazilian population that was mostly rural in the 40’s (see Figure 1) is primarily urban today. The degree of urbanization followed a logistic curve with values close to 30% in 1940 (date of the first Census with information on the rural/urban situation of households) and crossing the 80% mark in the year 2000 (the last available Census count). The rural population, despite its high migration rate to urban areas, managed to keep up a positive rate of increase until 1970; from then on the rural population count declined in absolute values at an annual rate of approximately 0.84%.

The indicators of spatial distribution of the Brazilian population show an increase in the concentration of population in urban areas and in big cities. Approximately 81.2% of the Brazilian population was living in urban areas in 2000 and these were heavily concentrated along the coast. The percentage of the population living in cities with more than 20 thousand inhabitants rose from

FIGURE 1
BRAZIL: PERCENTAGE OF URBAN POPULATION IN TOTAL POPULATION (DEGREE OF URBANIZATION)—1940-2000



Source: IBGE, Demographic Census 1940, 1950, 1960, 1970, 1980, 1991, 1996 and 2000.

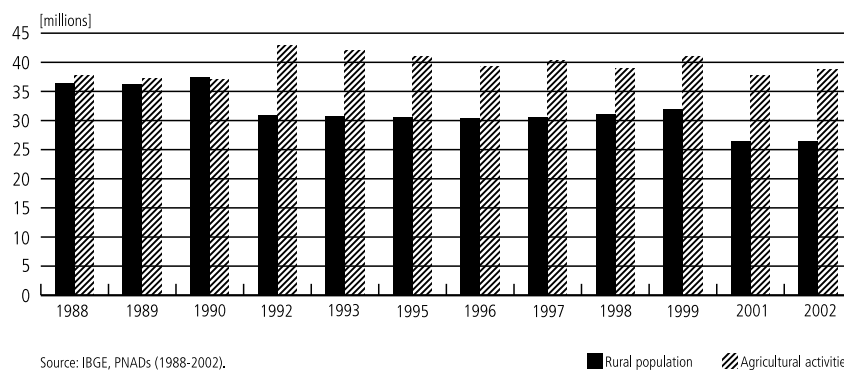
16% in 1940 to 80% in 2000. Around 17% of the Brazilian population was living, in the year 2000, in just two metropolitan areas: São Paulo and Rio de Janeiro.

Even considering the relatively modest position of the rural population in Brazil vis-à-vis the urban population, it is worth noting that given the country's continental dimensions, there were about 31.8 million inhabitants by September 2000. The entire Brazilian population totaled 170 million inhabitants at that same point in time.

The Brazilian Central Statistical Office [Instituto Brasileiro de Geografia e Estatística (IBGE)], with regard to Census and Household Surveys, considers that: "According to the location of the household, the situation can be classified as urban or rural in compliance with municipal laws currently in effect. In the Urban category are classified urbanized and non-urbanized areas corresponding to cities (municipal seats), to villages (districts) or to isolated urban areas. The Rural category encompasses all areas located outside of these limits, including rural clusters of urban extensions, villages and hamlets". This definition overestimates the urban population and, conversely, underestimates the rural one. Therefore, to overcome this drawback, in this study we have worked with the concept of the population involved in agricultural activities, i.e., all families with a majority of members working in agricultural activities and all other families with no members in the active population but who are living in rural areas according to the IBGE definition.

In Figure 2 one can see the evolution of the two population groups: the rural and the one involved with agricultural activities. The population involved in agricultural activities is always larger than the rural one.² We can see that the

FIGURE 2
BRAZIL: POPULATION IN THE RURAL AREA AND IN AGRICULTURAL ACTIVITIES—1988/2002



2. Rural day-workers are tallied in this population, even if they live in urban areas.

opposite holds true for the urban population and the one in other non-agricultural activities, as shown in Figure 3. Part of the increase in discrepancy between the two definitions found from 1992 onwards can be attributed to the change in the concept of active population: from 1992 onwards, the concept has been much more encompassing, including as part of the active population those cultivating crops for their own consumption as well as those working with no direct pay in family businesses. Furthermore, there was a decrease in the working hours used as the lower boundary to define the active population.

Figure 4 shows the evolution of selected segments of the total rural population, namely, the economically active population (EAP) and beneficiaries (social security and social assistance recipients), for the period 1970-2002. Despite the systematic drop in total rural population (9.2 million between 1970 and 2002), the EAP

FIGURE 3
BRAZIL: POPULATION IN THE URBAN AREA AND IN NON AGRICULTURAL ACTIVITIES—1988/2002

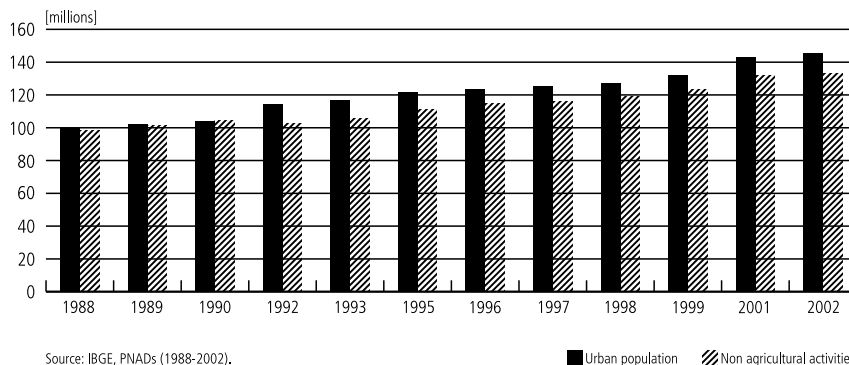
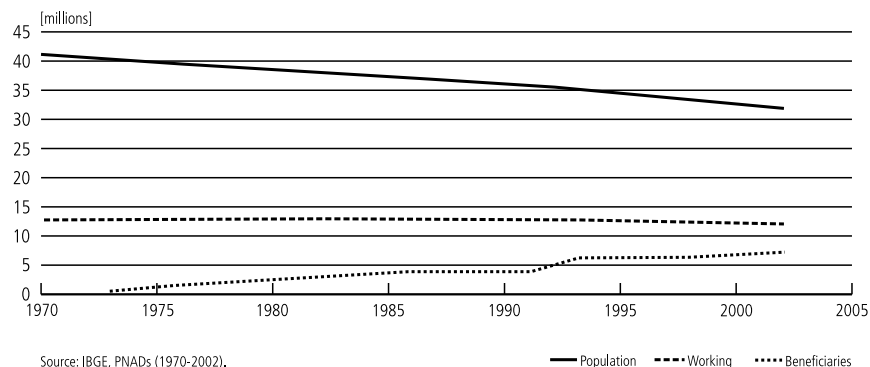


FIGURE 4
BRAZIL: RURAL POPULATION—TOTAL, WORKING AND BENEFICIARIES—1970-2002



remained quite stable (a drop of 0.9 million for the same period—0.25% decrease per annum), the consequence of an older population profile. In tandem, there is vigorous initial growth of the inactive segment vis-à-vis the active workforce. The rising numbers of beneficiaries in the rural social security segment are also in great evidence, the result of the lower age for eligibility established in the 1988 Constitution (considering as well the four-year delay in promulgation of complementary laws).

Figures 5 and 6 present the ten-year-and-over rural population distributed according to age, sex and condition of benefit/activity, respectively, for 1988 (the year the new Constitution was promulgated) and 2002 the most recent Brazilian National Household Sample Survey [Pesquisa Nacional por Amostra de Domicílios (PNAD)] available. PNAD is collected annually by IBGE, except in Census years.

FIGURE 5
RURAL POPULATION DISTRIBUTION—1988

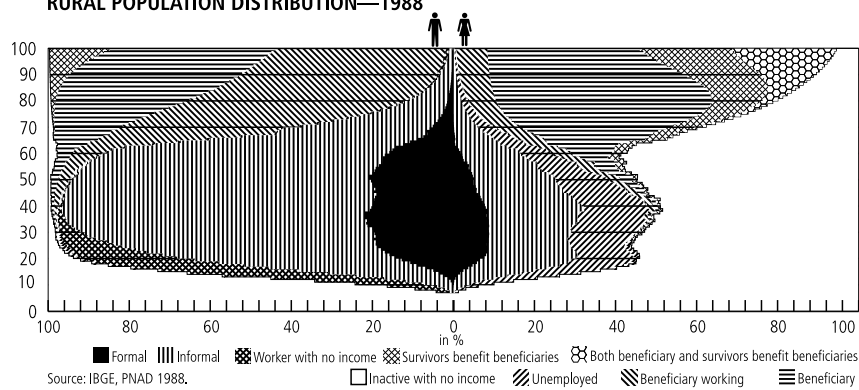
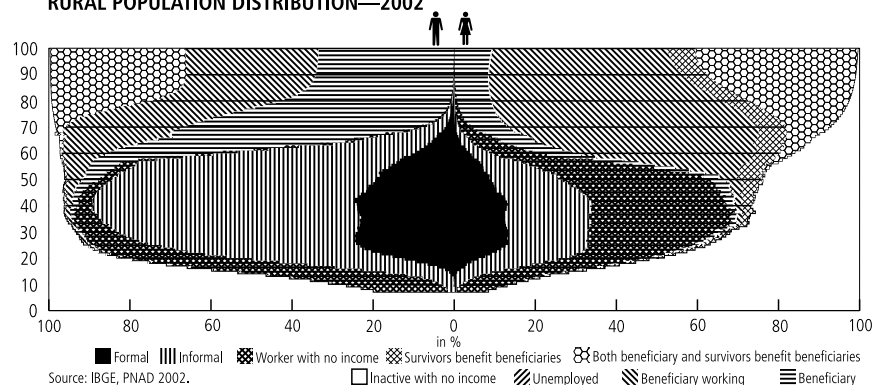


FIGURE 6
RURAL POPULATION DISTRIBUTION—2002



As previously noted, IBGE adopts the administrative definition of areas considered urban and rural depending on the municipal administrative level. On principle, all municipal, district and village seats are considered urban and so are their inhabitants. PNAD does not include rural areas in the Northern Region (except for the State of Tocantins). We have opted for breaking down the population into nine groups: “workers actively working in the formal³ sector”, “workers actively working in the informal sector”, “active individuals with no income”, “the unemployed”, “beneficiaries still in activity”, “beneficiaries not working” “survivor’s benefit beneficiaries”, “individuals accumulating both pensions and survivor’s benefit”, “inactive individuals with no income”.⁴

At first glance one is to a certain extent surprised at the high incidence of male individuals who claimed to keep on working in spite of collecting a pension, even those at later stages in life, this being true mainly in 2002 (see Figure 6). For instance in 1988 approximately 43.6% of males at the age of 70 continued to be active, though on social security benefits. Although the value of benefits increased, i.e., they actually doubled based on the number of minimum wages;⁵ the same pattern is evident in 2002. This fact may be viewed as a social bias, inflected in the information collected, since society in general associates a positive value to the “vigorous” elderly individuals who, despite their years, continue to work.

The age distribution for the rural female working population is bimodal both for the ones declaring to work informally and for those active with no pay, in 1988 and 2002, but more noticeably in 2002. In the latter year, this pattern is also noticeable for the formal market. This is typical in societies where women quit working during the reproductive period and resume working after the children are of school age. For the total female workforce the shape is very similar to the distribution for the male workforce, only on a smaller scale. In both years considered, the male workforce presents a bell-shaped curve. The male population in the formal market presents a bimodal distribution.

There is a problem in Brazil with regard to measuring female activity—mainly in the countryside, though the problem occurs in the city as well. This is

3. In Brazil in spite of the mandatory character of the Social Security, there is a large portion of the labor force that is not covered by the system. We will refer to those workers not covered by the system as “informal workers” or “workers in the informal market”.

4. “Workers actively working” either in the formal or the informal sector collect no pensions; conversely, the “beneficiaries still in activity” were defined as those who had a monthly income from their main occupation and who also collected pensions; the “inactive with no income” were defined as those who had nil monthly income from all possible sources and did not work.

5. The fact remains that using the number of minimum wages as the measurement referential is really inadequate for the purpose of making a deeper assessment. It would be necessary to establish a scale that could reflect the purchasing power of pensioners at both moments under consideration. This is, unfortunately, outside the scope of this work. The actual value, corrected by the Brazilian Consumer’s Index Prices [Índice Nacional de Preços ao Consumidor (INPC)], was used as proxy.

because the work of women is not valued as highly as that of men and is thus not accurately reported during interviews. Besides, more often than not, a woman's work is restricted to the region around the house, therein included the plot of land used for subsistence, which is not commonly associated with economic activity. In the figures, mainly in 2002, the active with no pay are a much more prominent group among women than men.

In what follows, to impart the evolution of any of the rates under study (e.g. activity rates) we will present the information as averages for the period (1988-2002) and the corresponding annual average rate of change in the same period. The former shall impact the level and structure of the rates in question and the latter the dynamic process involved.

Figure 7 shows average age/sex specific activity rates in the time period considered. As expected, males show a higher activity rate than females for all ages. The curves are rather similar: a steep slope at early ages, a plateau in the middle age range and a slow decline at old age, with an earlier start for female decline. Activity rates here include formal workers, informal workers, workers that already receive benefits, the unemployed and workers with no monetary income. On the other hand, Figure 8 shows that there is a major change going on in the rural labor market: women present positive rates of change during the period considered for all ages, and higher rates between 20 and 60 years, implying an increase in activity rates; males present a decrease (negative rates) for all ages.

On the other hand, in the case of benefits, the age of receiving benefits starts earlier for females, as can be seen in Figure 9, which shows average probability of collecting benefits in the period considered. The rates of benefit collection start to

FIGURE 7
RURAL BRAZIL: ACTIVITY RATES—AVERAGE VALUES—1988-2002

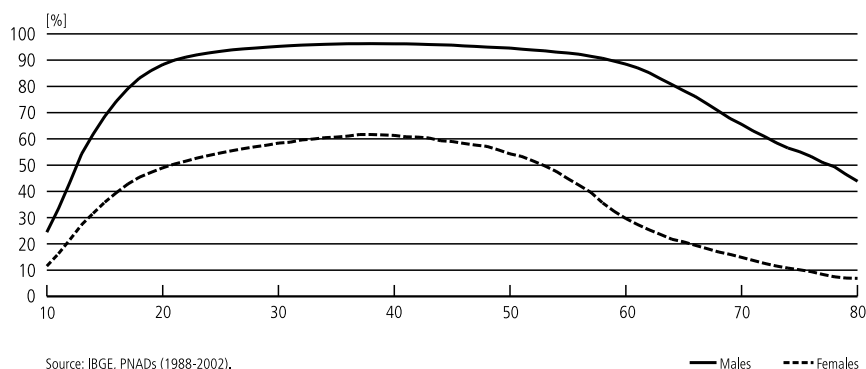


FIGURE 8
RURAL BRAZIL: RATES OF CHANGE IN THE ACTIVITY RATES—AVERAGE VALUES—1988-2002

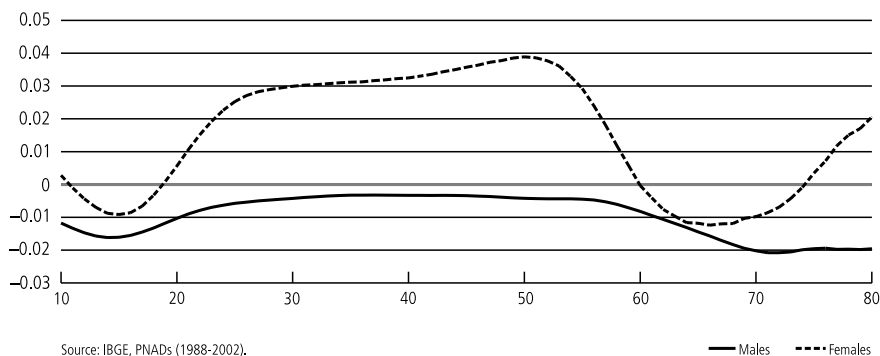
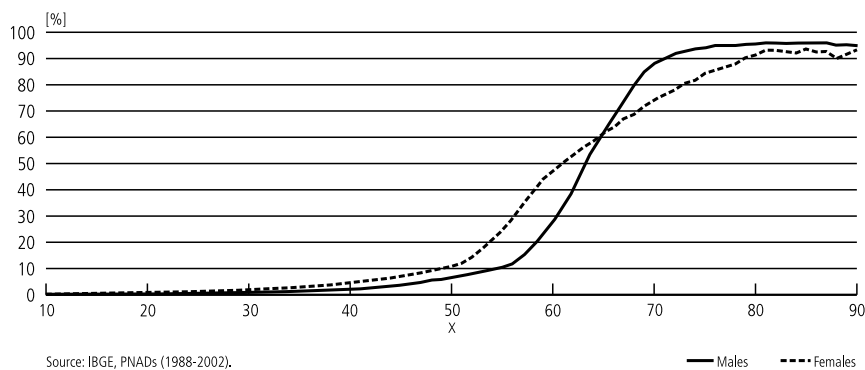


FIGURE 9
RURAL BRAZIL: PROBABILITY OF COLLECTING BENEFITS—AVERAGE VALUES—1988-2002

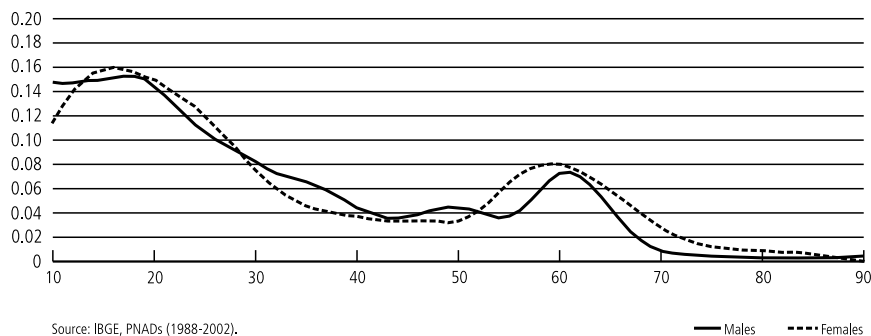


increase rapidly as a function of age around 50 for women and around 55 for men. The slope for females is less steep than that for males.

At 65 there is a crossover and afterwards males have higher coverage than females, up to 80 years of age when both rates are close to 95%. As mentioned in the introduction, there is a possible cohort effect, since up to the 1988 Constitution only the head of the household (usually considered the male) was eligible for the benefit. Data then pointed to a gender gap with respect to collecting benefits. The trend towards universalization of access to benefit, will not only narrow the gap, but also revert it, since women are eligible at an earlier age.

Figure 10 shows the rates of increase in the probability of collecting benefits, which is positive for all age brackets in the period, considered. Yet the rate of increase is higher for younger ages and shows a local maximum at 59 for women

FIGURE 10
**RURAL BRAZIL: RATES OF CHANGE IN THE PROBABILITY OF COLLECTING BENEFITS—
 AVERAGE VALUES—1988-2002**

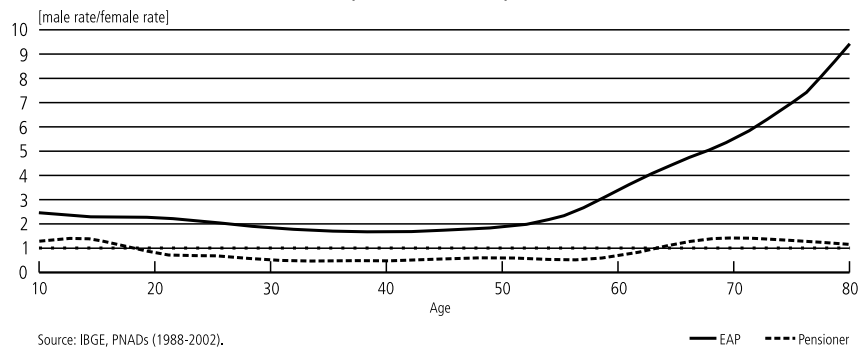


and 61 for men. The bumps are related to the five years reduction in age eligibility implemented in 1992. The high values for young adults are most probably due to the increase in disability benefits among rural dwellers suggesting increasingly better coverage. Though it is difficult to isolate the effects of new constitutional provisions on rural social security and assistance in order to prove them the sole cause of change, it is very likely that they have in fact played a major role. By reducing the eligibility age for retirement, these provisions seem to have provoked a boom in the proportional share of pensioners.

The less steep slope for females in Figure 9 combined with the wider bump in Figure 10 suggests a more diffuse age distribution and more drastic change of pattern in the access to benefits for women.

To estimate the gender gap in the period considered, Figure 11 shows the sex ratio of the activity rate. We find ever-greater ratios according to age, ranging from slightly below 2 for the 27 to 51-age bracket to higher ratio values at more advanced ages. In other words, as previously mentioned, the rural workforce is male to the extreme. However, the same does not hold true for benefits. The figure of the sex ratio regarding the probability of collecting benefits is roughly U-shaped: at early ages (under 19) the incidence is greater among men, perhaps due to disability retirement (not shown in the figure). From then on, the female incidence is ever greater (due to the concession of survivors' benefits), until the ratio hits a low mark (around 40 years of age), at which point it begins to increase again. From then on the gender-gap increases continuously (due to previous legislation that restricted awarding benefits solely to the heads of household) and reaches a relative maximum at age 70, with the male/female ratio decreasing from this age onwards.

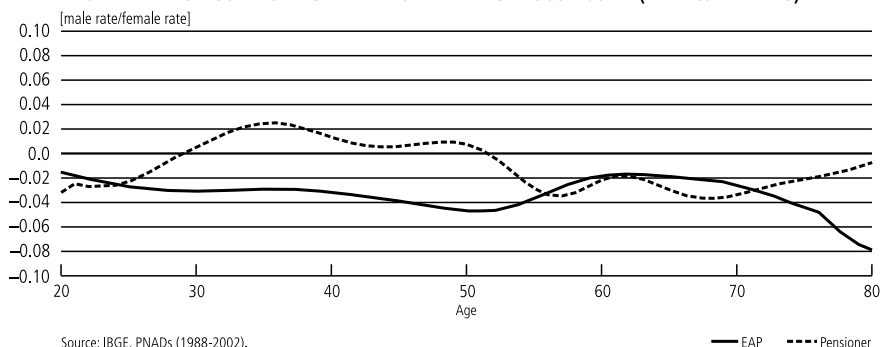
FIGURE 11
RURAL BRAZIL: SEX RATIO OF ACTIVITY RATES AND OF PROBABILITY OF COLLECTING BENEFITS—AVERAGE 1988-2002—(MALES/FEMALES)



When the rates of change in the sex ratios of the activity rate and probability of collecting benefits are analyzed (see Figure 12), it turns out that with regard to the active population, the sex ratio decreases implying that there are proportionally more women than men entering the labor market, and even some male drop-outs. With regard to the population collecting benefits, there are more males than females becoming eligible and collecting benefits in the 28-to-52 year age bracket. The opposite is true, i.e., more females than males for entries above 52. This confirms the initial impression of an increase in disability benefits for younger males and in old-age benefits for females above 55 among rural dwellers.

In order to describe in more details the transformations going on in the labor market we will also discuss the EAP in terms of the relative participation of its components: formal workers, informal workers, workers that already receive

FIGURE 12
RURAL BRAZIL: RATE OF CHANGE OF THE SEX RATIO IN THE ACTIVITY RATE AND IN THE PROBABILITY OF COLLECTING BENEFITS—AVERAGE 1988-2002—(MALES/FEMALES)



benefits, the unemployed and workers with no pay. Figures 13 and 14 show the average relative participation of the five above-mentioned groups for males and females, respectively, during the period considered. Males present a higher participation in the informal labor market and the participation of male workers with no income decreases with age to almost nil. Women present high rates of participation for workers with no income for basically the entire age range, though also decreasing. Both genders present high percentage of working beneficiaries and relatively small unemployment.

Figures 15 and 16 show the rates of increase in the relative participation of the same above-mentioned groups for males and females, respectively, in the period considered. For males, we can see that workers with no income (in the 30-to-80 year old bracket) and working beneficiaries (in the 15-to-30 year old bracket) present the highest rates, implying that these two groups increase their relative

FIGURE 13
RURAL BRAZIL: DISTRIBUTION OF THE ECONOMICALLY ACTIVE POPULATION—AVERAGE VALUES 1988-2002—MALES



FIGURE 14
RURAL BRAZIL: DISTRIBUTION OF THE ECONOMICALLY ACTIVE POPULATION—AVERAGE VALUES 1988-2002—FEMALES



FIGURE 15
RURAL BRAZIL: RATES OF CHANGE IN THE DISTRIBUTION OF ECONOMICALLY ACTIVE POPULATION—AVERAGE VALUES 1988-2002—MALES

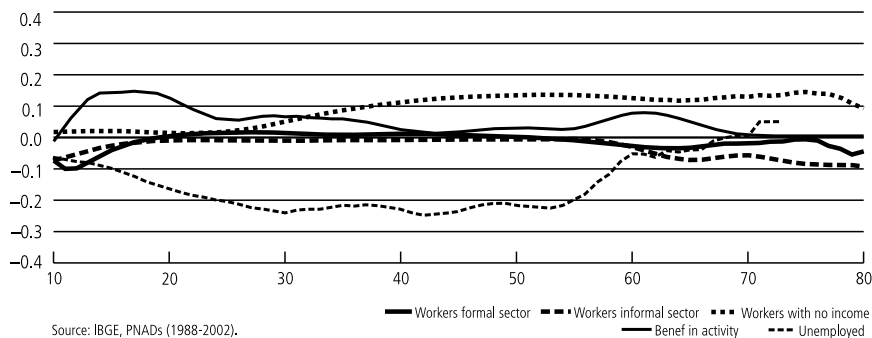
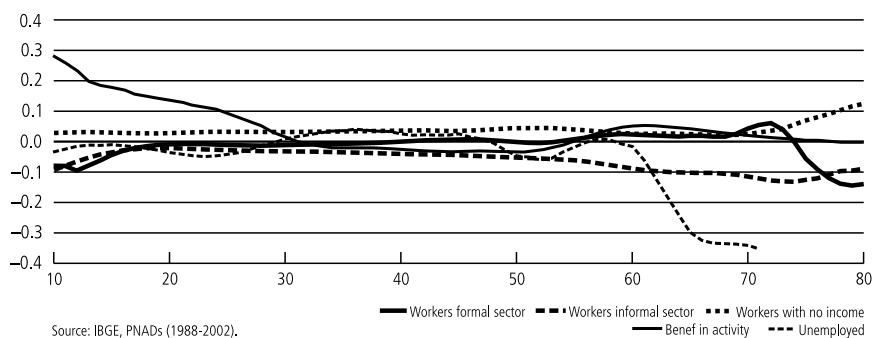


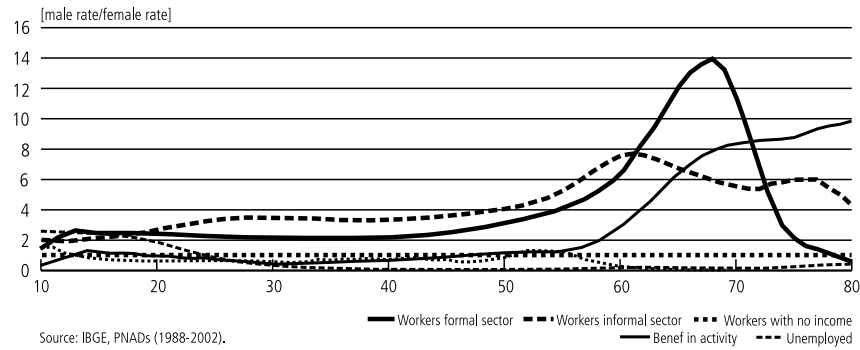
FIGURE 16
RURAL BRAZIL: RATES OF CHANGE IN THE DISTRIBUTION OF THE ECONOMICALLY ACTIVE POPULATION—AVERAGE VALUES 1988-2002—FEMALES



participation in the workforce. Unemployment presents the lowest rates, reflecting the decrease that occurred. The change in concept of working population could explain part of the shift from unemployed to workers with no pay. Females present positive rates in the same two population groups: workers with no pay (all ages) and working beneficiaries (below 30 years of age and above 55 years of age). Increase in activity rates for males and females is due in large part to the increase of work with no income and the work of those already receiving benefits. As already mentioned, these phenomena could be explained by the change in the concept of working population in the data collection of the survey.

In order to help assess the gender gap during this period, Figure 17 presents sex ratios of relative participation in the EAP. The sex ratio is consistently above 1 for almost all ages, except for those workers with no income, which confirms the largely dominant male labor market in rural areas. And if we analyze rates of

FIGURE 17
**RURAL BRAZIL: SEX RATIO OF THE DISTRIBUTION OF THE ECONOMICALLY POPULATION—
 AVERAGE 1988-2002—(MALES/FEMALES)**

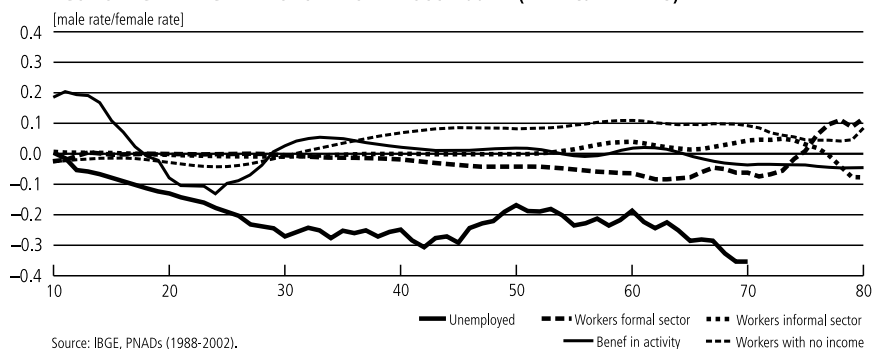


increase in this sex ratio we see significantly positive rates only for activities with no income and at older ages for workers in the formal market. Once again we confirm the fact that increased female participation in the labor market occurred mainly in activities with no direct income.

In other words, the sex ratio in the workforce and in the collection of benefits remained practically unaltered during the period under study, as has already been seen in Figure 18, which shows rates of increase in the activity and collection of benefit participation between sexes in the period considered. Whatever the case may be, the conclusion remains the same: despite slight (declared) participation in the workforce, women have high probability of collecting rural social security benefits.

These observations can lead to certain interesting conclusions about the interrelationship between work and the rural social security system in Brazil. Note

FIGURE 18
**RURAL BRAZIL: RATE OF CHANGE IN THE SEX RATIO OF THE DISTRIBUTION OF THE
 ECONOMICALLY ACTIVE POPULATION—1988-2002—(MALES/FEMALES)**



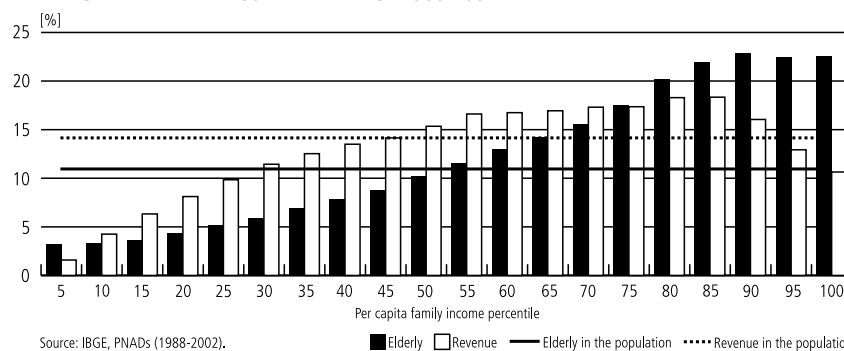
that at first one might suppose that the distribution of benefits between males and females would reflect that of the EAP. As was shown, this is not the case: there is utter male dominance in the labor market, whereas, on the side of benefits, there is a much larger participation of women. This means that rural women, though not declared workers, somehow or other manage to claim and obtain social security benefits.

4 ELDERLY⁶ PARTICIPATION AND INCOME⁷ IN FAMILIES CLASSIFIED BY PER CAPITA⁸ FAMILY INCOME

Figure 19 presents average elderly participation and income in families involved in agricultural activities classified by percentiles of per capita family income for the period 1988 to 2002. There are always fewer elderly within the 50% poorer families than in the population as a whole. This goes to show that elderly people are to be found preferentially in the midst of more affluent families. This may indicate one of two things: either elderly people have the means, or wealthier families take in elderly members more often. The greatest elderly participation appeared in the wealthiest percentile.

Table A.1 in the Annex presents figures for elderly participation in the family by 20 tiles of per capita family income for the years considered (last column) and the average for the period as well as the average for each year considered (last row).

FIGURE 19
RURAL BRAZIL: PARTICIPATION OF THE ELDERLY (POPULATION AND REVENUE) BY 20-TILE OF PER CAPITA FAMILY INCOME—AVERAGE 1988-2002



6. The "elderly" are defined as those over 55 years of age, since the eligibility for the rural benefit is 55 years for females. Although not all beneficiaries of Social Security are necessarily elderly, Figures 5 and 6 show that they stand in absolute majority. Hence the elderly individual will be used as a proxy for the beneficiary concept.

7. When dealing with elderly income we are referring exclusively to pensions.

8. 20-tiles of per capita income for the period between 1988 and 2001 can be found in Table 3 in Annex.

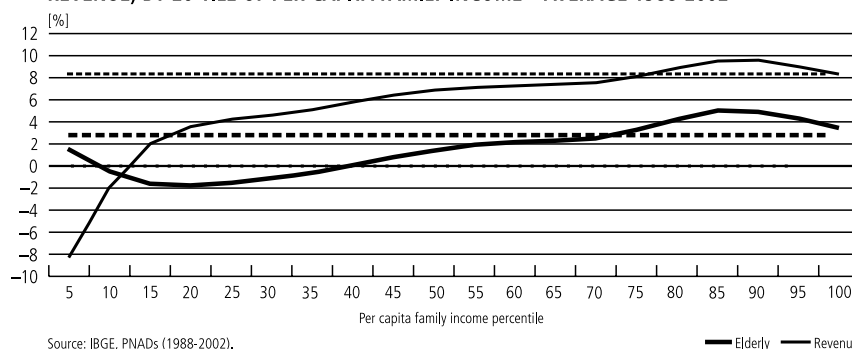
Average elderly participation in families has increased from an average of 9.8% in 1988 to 14.2% in 2002, a result of the population aging in the period in question (lower fertility and mortality, in addition to the migration flow to urban areas in the economically active age bracket). This information broken down by per capita family income shows a marked pattern. In lower income families (up to the 20th percentile in per capita income) we note that average elderly participation has dropped from 4.0% in 1988 to 3.4% in 2002. However, for higher income families (the 80th percentile or over in per capita income) we note that the 14.8% participation in 1988 rose to 28.3% in 2002.

Table A.2 in the Annex presents figures on elderly retirees and pension income participation by 20-tiles of per capita family income for the years considered. The mean for the period for each percentile of per capita family income appears on the right hand side and the average for elderly participation in the family income for each year considered appears at the bottom of the table.

In Figure 20 we can appreciate the rate of change in elderly participation in the per capita family income both in physical terms and in revenue, in the period from 1988 to 2002. An increase in elderly participation is noticeable for the 45th percentile and above, the inverse holding true for families below that percentile (the first two 20-tiles are not statistically significant and not consistent with the overall trend).

Similar to the increase in elderly participation that occurred in the period, there was also a growth in their share in family earnings: from 5.6% in 1988 to 21.4% in 2002. The increase of the elderly share in family income can be broken down into two components: *a*) an increase in the share of the elderly population

FIGURE 20
RURAL BRAZIL: RATE OF CHANGE IN THE PARTICIPATION OF THE ELDERLY (POPULATION AND REVENUE) BY 20-TILE OF PER CAPITA FAMILY INCOME—AVERAGE 1988-2002



(retirees and survivors' beneficiaries) in the nation as a whole and in rural families in particular; and *b*) a rise in average elderly income. The increase in the second component may have been caused by the increase in the individual value of benefits perceived, as can be seen in Figure 20, which shows positive rates of change for all per capita family income brackets, with the exception of the two lowest brackets, which show a decrease in elderly revenue participation in family income, though not statistically significant but consistent with the trend. In other words, even taking into account the aging-of-population component, the rise in elderly participation in rural family income in Brazil may be credited to the 1988 Constitution, which doubled the value of the benefit in terms of minimum wages, lowered the eligibility age and widened the population coverage.

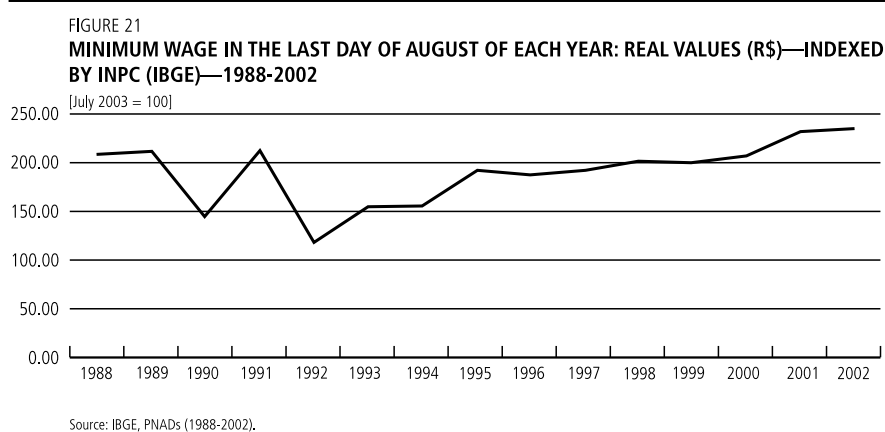
In summary, there is an ever-growing concentration of elderly members in families (in agricultural activities) with higher income levels. It is noticeable that though average elderly participation in rural families for the period 1988-2002 has risen, this growth has been quite lopsided when considering per capita income brackets. This corroborates the fact that it is the elderly member who has been responsible for the economic improvement of the families.

The rate of change of elderly participation in families is higher for wealthier families and is negative for the lowest per capita family income brackets. In terms of economic participation, as occurred with physical presence, the rate of change increases with per capita family income, dropping at the extreme groups: there is less relative contribution in family income derived from elderly members' revenues in extreme percentiles (in the poorer and richer families).

In lower income families (up to the 20th percentile in per capita income) we note that average elderly contribution to family income was around 5.1% of the total income in the period considered (in 1988 this average was 5.8% and it reached to 5.9% in 2002 through a concave curve in time). However, for higher income families (the 80th percentile or over in per capita income) we can see that the average participation for the period was around 15.3% (in 1988 this average was 4.8 and rose to 21.7% in 2002). The increase is quite sizeable and occurs in most 20-tiles as can be seen in Table A.2 in the Annex. In short, the presence of elderly members in the family is associated with improved income despite the fact that the average income participation of elderly members in family income may not always be as high as the income of other family members for the more affluent groups.

Actually the per capita family income for people in agricultural activities was quite stable in the period under study. A decrease occurs though, for other

members of the household but not for the elderly individual, which counterbalances the loss. Note, too, that this decrease in the per capita family income for people in agricultural activities in terms of multiples of minimum wage occurs parallel to an increase in the minimum wage in real terms from 1992 onwards (Figure 21).



5 PER CAPITA FAMILY INCOME WITH AND WITHOUT ELDERLY PARTICIPATION

Figures 22 to 24 merge information already analyzed in the last section. In Section 4, the focus of the assessment was to consider both people in their later years as active members in family expenses and as active providing members in the family budget. In this section an exercise is presented that consists of excluding elderly members from the family group and of figuring per capita income before and after the exclusion. Figure 22 presents the average change in family income with and without elderly participation and the average variation in the population for the period between 1988 and 2002. We can observe that in the period considered, the groups below the 75th percentile threshold had their per capita income diminished on average about 3% with the exclusion of the elderly individual (with the exception of the first 5th percentile). For the percentiles above this threshold the exclusion of elderly people raised the family income.

Figure 23 shows that the period under consideration can actually be broken down into three: the years before the enactment of the Law, 1992; the years between 1992 and 1999; the years in the new century. Though the last years of the second period already heralds the changes better perceived in this century, there is a clear discontinuity in 2001, confirmed by 2002 data. The change between the first two periods can be accounted for the Law and the change between the last two periods

FIGURE 22
RURAL BRAZIL: CHANGES IN THE PER CAPITA FAMILY INCOME WITH THE EXCLUSION OF THE ELDERLY—MEAN VALUES—1988-2002

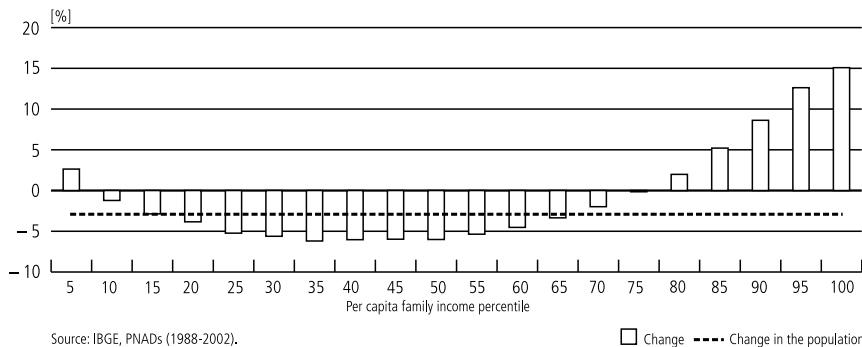


FIGURE 23
RURAL BRAZIL: CHANGES IN THE PER CAPITA FAMILY INCOME WITH THE EXCLUSION OF THE ELDERLY—BY YEAR—1988-2002

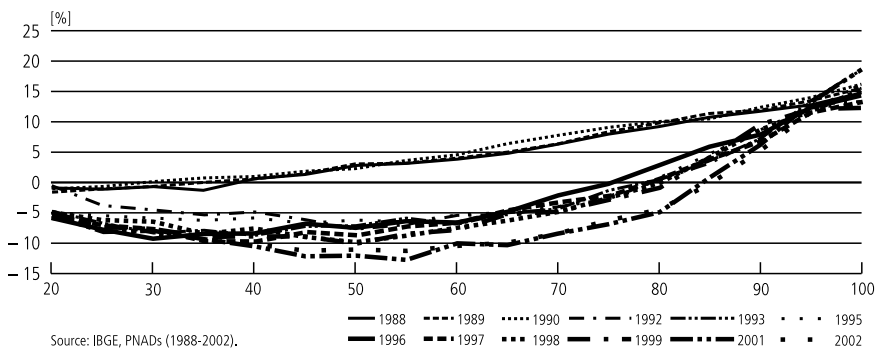
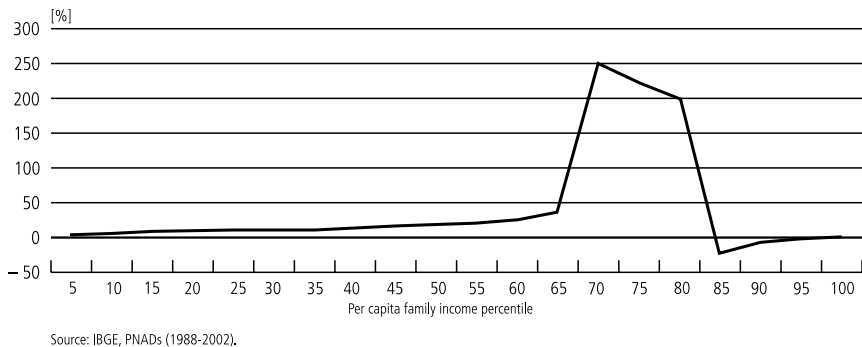


FIGURE 24
RURAL BRAZIL: RATES OF CHANGE IN THE PER CAPITA FAMILY INCOME WITH THE EXCLUSION OF THE ELDERLY—MEAN VALUES—1988-2002



can be attributed to the worsening of the economic situation of the economically active population and the relative bettering off of pensioners.

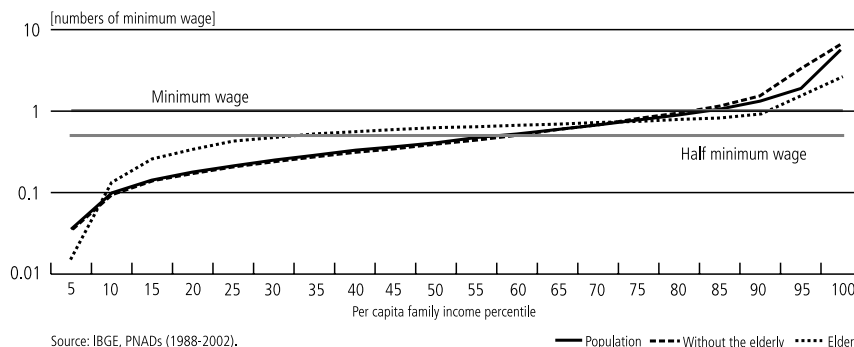
From 1992 onwards the impact and the number of families affected negatively was noticeable: all families, with the exception of those in the 5th percentile and above the 80th percentile, suffered a reduction in family income with the exclusion of elderly members; in 2001 and 2002 another shift was noticeable, changing this upper percentile to 85 (see Figure 24 and Table A.4 in Annex). In Table A.4 there are figures on the change in family income with the exclusion of elderly members by 20-tiles of per capita family income for the years considered. The average for the period for each of the 20-tile per capita family income can be found in the last column. The mean value for elderly participation in the family for each year considered can be found in the last row.

This goes to prove once again the growing economic importance of people in their later years in rural areas, a result not only of demographic aging processes but also of more easily fulfilled eligibility conditions and higher benefit values.

In the period considered, the contribution of elderly members in families above the 85th percentile decreased and increased for all other income brackets. The impact, though, was much more intense for families in the income brackets between the 70th and the 85th percentiles.

Figure 25 presents the average income in each 20-tile of family income for the population as a whole: families with the exclusion of elderly members and elderly members themselves for the period considered in multiples of the minimum wage. Below the 75th percentile, elderly people would be better off income-wise by themselves, with the exception of the lowest 5th percentile. The average income

FIGURE 25
RURAL BRAZIL: AVERAGE PER CAPITA FAMILY INCOME BY 20-TILES OF PER CAPITA FAMILY INCOME—1988-2002



curve for elderly individuals alone is much flatter showing that the cash flow goes both ways, depending on the income bracket. In lower income families, elderly members helped out in the budget whereas in higher income families they probably profited money-wise from being in the specific household. Of course there are many other factors to consider; family ties are far more complex. Different generations can reciprocally help each other out in several ways and the money factor is but one. Mutual helping and caring as well as caring for grandchildren and the bed-ridden are other possibilities. Nevertheless elderly per capita income, regardless of the percentile of family income, is very close to the Social Security benefit for rural workers, suggesting that social security is their main source of income.

Figure 26 shows that the situation shifted dramatically from 1998 to 2002. In all but the poorest 10% of families, the rate of change in elderly income alone vis-à-vis that of the entire family was much greater—with smaller differences for the wealthier income brackets. Besides, elderly income presented growth in the period, as opposed to the decrease experienced by other members of the household.

One could, however, argue that this phenomenon might be the result of change in the Brazilian rural family profile with regard to the proportion of elderly members. This argument does not hold true, though. In the first place, as can be seen in Figure 27 that shows the cumulative distribution of families by size, families got smaller in the period. The average size came down from 6.23 members to 5.22 members, a 16% decrease. The decrease in the median value was more or less the same: from 6 to 5 members. In addition, one can see in Figure 28—that shows the average number of elderly members by family size—an increase in the number of elderly individuals living by themselves (family of one). Parallel to this increase

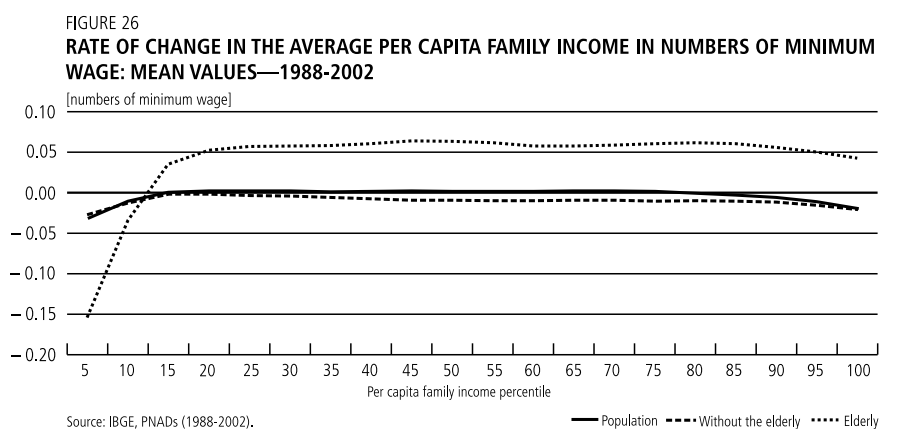
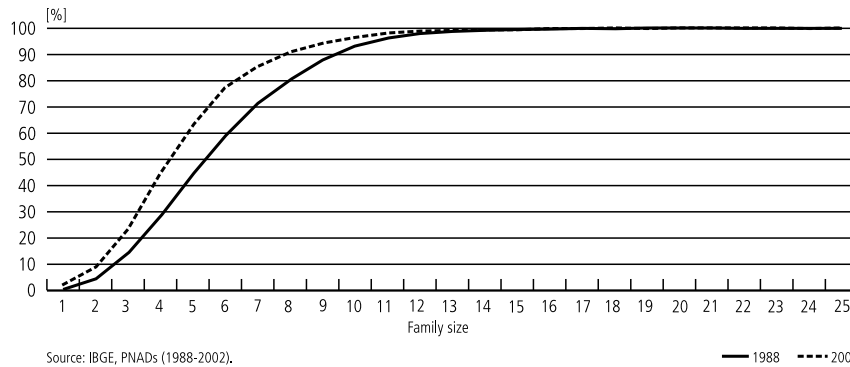
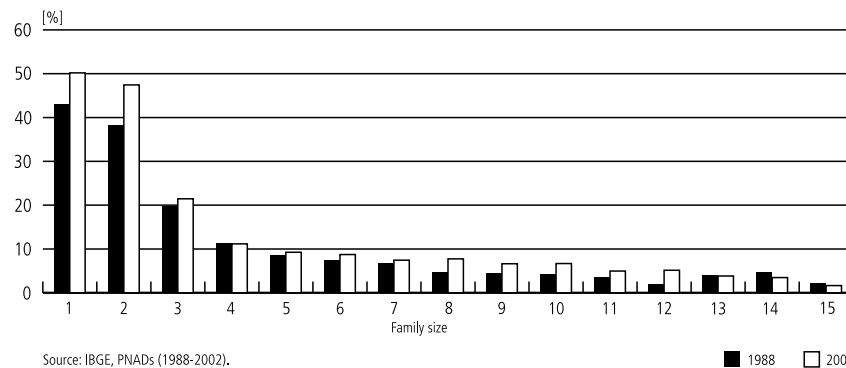


FIGURE 27
RURAL BRAZIL: FAMILY SIZE CUMULATIVE DISTRIBUTION—1988-2002



Source: IBGE, PNADs (1988-2002).

FIGURE 28
RURAL BRAZIL: PERCENTAGE OF ELDERLY BY FAMILY SIZE—1988-2002



Source: IBGE, PNADs (1988-2002).

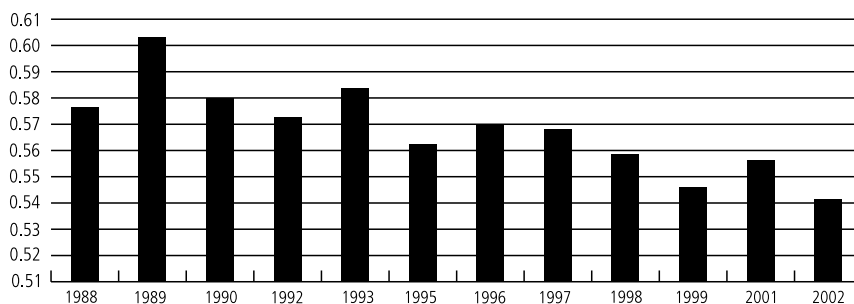
there is an increase in the amount of elderly members in larger families. These data corroborate the impression that with the increase in elderly income more offspring would remain at home to take advantage of this ready revenue. The rural economy in Brazil is not strictly based on currency and, very often, active workers do not even earn as much as one minimum wage in payment for work rendered. Part of the payment is made in goods and most small farmers are actually sharecroppers. Elderly individuals, with their one minimum wage pensions, hold most of the cash in the backlands.

There is evidence that in certain towns and hamlets in the Northeast (one of the poorest Brazilian regions) and even in the South and Southeast (the two most prosperous areas) the income gotten from retirement benefits far surpasses the

Municipal Participation Fund (Fundo de Participação de Municípios),⁹ and this fact seems to have had a major effect on family structure. In other words, we can reject the hypothesis that the main economic importance of elderly members in rural families has been caused by demographic changes and not by new constitutional directives.

Figure 29 presents the Gini index for the Brazilian rural population during the period under study. One can note that figures show a downward trend, although with oscillations in the period, implying that the income distribution is becoming more egalitarian.

FIGURE 29
RURAL BRAZIL: GINI INDEX—1988-2002



Source: IBGE, PNADs (1988-2002).

6 COMMENTS AND CONCLUSIONS

When one considers average income and the rate of change in the period under study one can see that only those in the 20-tiles between the 15th and the 75th had their per capita average family income maintained from 1988 to 2002. It is worthwhile noting as well that the higher the family income the greater the increases between 1988 and 2002. It is precisely in these families that elderly individuals are concentrated. Moreover, it is there, too, that elderly contribution to family income has grown the most. It is quite clear as well that constitutional changes were determining factors in this phenomenon. In addition, the increase in Social Security coverage of the rural population is quite evident, especially among females.

It was shown that the period under consideration could actually be broken down into three: the years before the enactment of the Law, 1991; the years between 1992 and 1999; the years in the new century. Though the last years of the second

9. Federal funds transferred to Municipal Governments mandated by the Constitution.

period already heralds the changes better perceived in this century, there is a clear discontinuity in 2001, confirmed by the 2002 data. The change between the first two periods can be accounted for the Law and the change between the last two periods can be attributed to the worsening of the economic situation of the economically active population and the relative bettering off of pensioners. The Gini index for the Brazilian rural population during the period under study shows a downward trend, although with oscillations, implying that the income distribution is becoming more egalitarian.

Even if Social Security benefits have the specific function of serving as “insurance against loss of working capacity”, the social role that rural social security has played in elevating average income in Brazilian hinterlands is undeniable and, in this way, has collaborated towards mitigating poverty. The 1988 Constitution and the complementary laws that followed were fundamental in determining this new reality.

ANNEXTABLE A.1
ELDERLY PARTICIPATION IN THE FAMILY BY 20-TILES OF PER CAPITA FAMILY INCOME
[%]

20-tiles	1988	1989	1990	1992	1993	1995	1996	1997	1998	1999	2001	2002	Average
5	2.9	2.6	2.9	4.5	2.9	2.7	4.1	3.0	3.9	3.1	3.5	3.3	3.3
10	3.6	3.2	3.7	4.1	2.8	2.9	3.5	3.3	3.5	3.2	3.2	3.1	3.3
15	4.5	3.9	4.5	4.0	3.2	3.1	3.6	3.8	3.5	3.4	3.4	3.2	3.7
20	5.0	4.6	5.3	4.5	3.9	3.8	4.4	4.6	4.2	4.0	3.8	3.7	4.3
25	5.8	5.3	6.1	4.9	4.8	4.4	5.4	5.5	5.4	4.8	4.5	4.8	5.1
30	6.5	6.0	7.2	5.5	5.3	5.5	6.7	6.0	5.8	5.5	4.9	5.8	5.9
35	7.5	6.8	7.9	6.3	6.2	6.4	7.2	7.7	7.2	7.0	6.1	7.1	7.0
40	7.7	8.1	8.2	7.0	7.5	7.7	8.0	8.5	7.6	8.1	7.7	7.7	7.8
45	8.4	9.2	8.6	7.8	8.0	8.6	8.3	9.6	9.7	9.2	8.8	8.6	8.7
50	9.0	10.0	9.5	9.3	9.1	10.8	10.9	11.5	11.9	11.9	9.5	9.6	10.2
55	10.5	10.2	10.6	10.5	9.7	12.2	11.7	13.0	12.7	12.6	12.1	13.0	11.6
60	11.2	10.3	11.4	12.2	12.5	13.3	13.9	14.6	13.4	15.0	13.5	15.0	13.0
65	12.4	11.2	12.2	14.0	13.7	14.5	14.0	14.3	14.9	14.4	17.0	18.1	14.2
70	12.8	12.2	13.5	15.3	16.3	15.8	15.7	15.0	17.0	17.0	17.3	18.8	15.6
75	13.5	13.8	14.0	17.0	16.8	19.5	19.0	20.3	18.1	17.3	20.1	20.4	17.5
80	13.8	14.1	14.5	17.6	21.0	21.2	20.6	22.1	22.9	24.0	25.5	25.6	20.2
85	14.6	14.3	14.2	21.1	21.5	23.4	22.4	24.5	25.0	26.5	28.4	28.0	22.0
90	14.7	14.3	15.3	22.7	22.9	23.1	21.4	22.1	27.6	28.9	30.8	30.7	22.9
95	15.5	15.2	16.6	23.8	21.9	23.7	22.3	22.6	25.2	25.8	29.0	28.3	22.5
100	16.7	16.4	18.2	23.7	22.1	23.6	22.9	22.8	24.8	23.7	28.8	27.4	22.6
Total	9.8	9.6	10.2	11.7	11.7	12.3	12.3	12.7	13.3	13.4	13.9	14.2	12.1

Source: IBGE, PNAD (1988-2002).

TABLE A.2
ELDERLY RETIREE AND PENSION INCOME PARTICIPATION IN FAMILY INCOME BY 20-TILES OF PER CAPITA FAMILY INCOME
 [%]

20-tiles	1988	1989	1990	1992	1993	1995	1996	1997	1998	1999	2001	2002	Average
5	3.7	2.3	4.1	0.2	-0.3	0.4	1.9	0.9	1.9	2.4	1.2	0.3	1.6
10	5.6	4.4	5.2	1.6	1.9	3.7	6.2	4.6	5.4	5.5	3.5	3.3	4.2
15	6.2	5.0	5.8	3.3	4.6	6.6	8.6	8.0	7.5	7.7	6.2	6.5	6.3
20	6.0	5.9	6.4	5.2	8.1	8.7	10.3	10.5	9.1	9.0	9.1	9.2	8.1
25	6.5	6.7	6.6	7.9	11.4	9.6	12.2	11.5	10.9	11.1	12.0	11.7	9.8
30	7.5	6.4	7.0	10.5	13.2	10.8	15.5	13.4	12.4	13.5	13.2	13.9	11.4
35	8.4	6.7	7.4	11.0	13.8	12.5	16.0	16.4	14.2	14.7	13.9	15.4	12.5
40	7.9	7.6	7.2	11.5	15.0	13.1	14.8	18.0	15.8	16.5	17.5	17.2	13.5
45	6.6	7.9	7.0	13.2	15.6	14.2	15.2	16.9	16.6	17.6	20.3	18.8	14.2
50	6.7	7.4	7.2	16.2	14.8	16.8	16.7	18.2	20.6	19.7	20.3	19.7	15.4
55	7.5	7.1	7.6	17.5	15.3	17.8	18.2	20.6	21.7	21.6	22.4	22.1	16.6
60	7.9	7.0	7.3	16.4	17.9	18.0	18.9	19.7	18.7	20.5	23.9	24.8	16.7
65	8.2	6.5	6.7	18.1	19.0	18.6	18.9	18.5	20.0	19.6	23.6	25.6	16.9
70	7.6	6.6	6.6	19.9	18.9	19.3	17.3	17.8	22.0	20.1	25.6	26.0	17.3
75	6.4	6.8	6.4	18.6	19.0	20.9	18.3	20.7	19.8	20.6	25.4	25.4	17.4
80	5.8	5.7	5.8	17.6	19.5	21.5	19.8	23.5	21.7	23.2	27.7	27.7	18.3
85	5.6	4.5	5.3	18.1	19.9	19.3	17.3	20.8	24.0	25.2	30.1	30.0	18.3
90	4.8	4.0	4.8	17.8	17.3	16.8	15.2	17.3	20.5	21.8	25.7	26.5	16.0
95	4.6	3.8	4.9	14.2	11.9	14.2	13.1	13.9	16.8	17.0	20.2	20.5	12.9
100	4.6	3.7	5.1	11.3	7.9	12.4	11.2	11.3	14.2	13.9	16.1	16.0	10.6
Total	5.6	4.8	5.7	14.9	14.0	15.5	14.7	15.9	17.9	18.3	21.3	21.4	14.2

Source: IBGE, PNAD (1988-2002).

TABLE A.3
PER CAPITA FAMILY INCOME IN NUMBER OF MINIMUM WAGE INCOME BY 20-TILES OF PER CAPITA FAMILY INCOME

20-tiles	1988	1989	1990	1992	1993	1995	1996	1997	1998	1999	2001	2002	Average
5	0.05	0.06	0.06	0.01	0.02	0.04	0.02	0.03	0.03	0.04	0.03	0.04	0.04
10	0.10	0.12	0.14	0.05	0.07	0.11	0.10	0.11	0.11	0.11	0.09	0.11	0.10
15	0.14	0.16	0.18	0.09	0.11	0.16	0.15	0.15	0.15	0.16	0.13	0.15	0.14
20	0.17	0.20	0.22	0.12	0.14	0.20	0.19	0.19	0.19	0.19	0.17	0.19	0.18
25	0.20	0.24	0.26	0.14	0.17	0.24	0.23	0.22	0.22	0.23	0.20	0.22	0.21
30	0.23	0.27	0.30	0.17	0.20	0.28	0.27	0.26	0.25	0.26	0.24	0.25	0.25
35	0.27	0.32	0.33	0.20	0.24	0.32	0.31	0.30	0.29	0.31	0.27	0.29	0.29
40	0.30	0.36	0.38	0.24	0.27	0.36	0.36	0.34	0.33	0.35	0.30	0.32	0.33
45	0.33	0.40	0.42	0.27	0.32	0.41	0.40	0.39	0.38	0.39	0.34	0.36	0.37
50	0.38	0.45	0.47	0.31	0.36	0.46	0.46	0.44	0.42	0.44	0.39	0.41	0.42
55	0.42	0.51	0.53	0.35	0.41	0.51	0.52	0.50	0.48	0.49	0.44	0.46	0.47
60	0.47	0.58	0.60	0.40	0.47	0.58	0.59	0.55	0.54	0.55	0.50	0.51	0.53
65	0.53	0.66	0.67	0.47	0.52	0.66	0.67	0.64	0.62	0.63	0.56	0.58	0.60
70	0.60	0.74	0.76	0.53	0.61	0.76	0.76	0.72	0.70	0.71	0.64	0.66	0.68
75	0.69	0.86	0.88	0.61	0.70	0.86	0.88	0.82	0.79	0.81	0.73	0.75	0.78
80	0.81	1.02	1.03	0.71	0.82	0.99	1.01	0.96	0.92	0.93	0.86	0.88	0.91
85	0.98	1.24	1.24	0.85	0.99	1.17	1.20	1.13	1.06	1.07	1.01	1.03	1.08
90	1.25	1.58	1.57	1.04	1.23	1.47	1.49	1.43	1.36	1.35	1.24	1.26	1.35
95	1.80	2.32	2.26	1.41	1.74	2.04	2.07	2.03	1.88	1.88	1.69	1.73	1.90
100	5.68	8.02	7.40	4.05	5.13	6.20	6.20	6.00	5.58	5.31	4.96	4.93	5.79
Total	0.77	1.01	0.99	0.60	0.73	0.89	0.89	0.86	0.82	0.81	0.74	0.76	0.82

Source: IBGE, PNAD (1988-2002).

TABLE A.4
**CHANGE IN THE PER CAPITA FAMILY INCOME WITH THE EXCLUSION OF ELDERLY MEMBERS BY
 20-TILES OF PER CAPITA FAMILY INCOME**
 [%]

20-tiles	1988	1989	1990	1992	1993	1995	1996	1997	1998	1999	2001	2002	Average
5	0.6	1.7	-0.7	4.7	3.5	3.0	4.8	2.6	4.1	1.9	2.3	3.1	2.6
10	-1.9	-1.1	-1.4	2.4	0.3	-1.3	-3.1	-2.0	-2.3	-2.7	-0.6	-0.9	-1.2
15	-1.8	-1.1	-1.6	0.4	-1.5	-3.6	-5.4	-4.7	-4.3	-4.4	-3.2	-3.3	-2.9
20	-0.9	-1.6	-0.9	-0.5	-4.8	-5.0	-5.8	-5.4	-5.0	-5.0	-5.4	-5.7	-3.8
25	-1.1	-1.1	-0.7	-3.8	-6.7	-5.5	-7.8	-7.1	-6.2	-7.4	-8.1	-7.4	-5.2
30	-0.7	-0.6	0.2	-4.6	-8.4	-5.9	-9.3	-7.7	-6.5	-7.7	-7.9	-8.3	-5.6
35	-1.3	-0.1	0.8	-5.3	-7.9	-6.2	-8.5	-9.7	-8.5	-8.9	-9.4	-9.3	-6.2
40	0.6	0.7	1.0	-4.8	-8.7	-5.9	-8.4	-9.7	-7.6	-8.9	-10.5	-10.1	-6.0
45	1.3	1.5	1.9	-6.1	-7.2	-6.7	-6.8	-8.2	-9.0	-8.9	-12.2	-11.2	-6.0
50	2.7	3.0	2.3	-7.7	-7.1	-6.2	-7.5	-8.7	-9.8	-10.1	-12.0	-11.0	-6.0
55	3.2	3.2	3.6	-7.0	-5.9	-6.5	-6.4	-7.3	-8.8	-8.5	-12.8	-11.3	-5.4
60	3.8	4.0	4.6	-5.4	-6.9	-5.4	-6.6	-6.6	-7.5	-7.8	-10.1	-10.4	-4.5
65	4.8	5.0	6.4	-5.3	-5.0	-4.9	-4.9	-4.6	-6.3	-5.2	-10.2	-9.9	-3.4
70	6.3	6.4	7.8	-4.0	-4.4	-4.0	-2.1	-3.3	-4.9	-4.8	-8.4	-8.3	-2.0
75	8.0	8.4	9.1	-2.7	-1.4	-2.3	-0.2	-2.2	-2.5	-2.9	-6.9	-6.2	-0.2
80	9.2	9.8	10.0	0.4	0.5	0.8	2.8	0.6	-0.1	-0.9	-4.9	-4.5	2.0
85	10.7	11.3	10.5	3.2	3.6	4.7	5.9	3.9	4.1	4.1	0.8	-0.2	5.2
90	11.7	11.9	12.4	7.3	7.2	8.6	7.9	6.8	8.7	9.5	6.2	5.2	8.6
95	12.8	13.4	13.9	12.8	13.4	12.4	12.3	11.6	11.7	12.1	13.1	11.8	12.6
100	14.7	15.5	16.2	13.3	18.5	12.7	14.3	13.3	15.3	12.3	18.6	16.1	15.1
Total	4.6	5.3	5.1	-3.5	-2.7	-3.7	-2.7	-3.6	-5.3	-5.7	-8.5	-8.3	-2.4

Source: IBGE, PNAD (1988-2002).

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NON-CONTRIBUTORY PENSIONS AND POVERTY PREVENTION AMONG THE ELDERLY IN BRAZIL *

João Saboia

Universidade Federal do Rio de Janeiro (UFRJ)/Instituto de
Economia (IE)

1 PRESENTATION¹

The aim of this work is to show the main results of fieldwork conducted in households with older persons where, aside from the survey of living conditions of dwellers, the potential of non-contributory benefits was verified to raise income level and reduce poverty among older persons and their families.²

Two types of benefits were considered. In the first place, the Continual Instalment Benefit (CIB) that represents payment of one minimum wage per month for older persons 67 years and over, that do not receive any other benefit and that live in families with a per capita familial income below 1/4 of a minimum wage.³

* This chapter was translated from Portuguese to English by Barbara Melo and reviewed by João Saboia. It is a synthetic version of results obtained by the author in the research work *Benefícios não-contributivos e combate à pobreza de pessoas idosas em países subdesenvolvidos—um estudo comparativo entre o Brasil e a África do Sul* (Non-contributory benefits and combating poverty among older persons in underdeveloped countries—a comparative study between Brazil and South Africa). Aside from the author of this article, Armando Barrientos (coordinator), Peter Lloyd-Sherlock, Helena Legido-Quigley, Amanda Heslop, Mônica Ferreira, Valerie Moller and Maria Lucia Werneck Vianna participated in the referred to research work. Luiz Alberto Matzenbacher and Ari Silva were responsible for the selection of samples, the organization of the databank and data processing. Sonia Nunes and Roberto de Carvalho coordinated the fieldwork. Isabel Zborowski and Juliana Bastos took care of editing the tables. For more information on the survey go to the site www.idpm.man.ac.uk/ncpps.

1. In this book there are two other works that analyse the impacts of social security rural benefits on living conditions of older persons and their families. One is based on aggregated data and refers to Brazil as a whole and the other uses data from fieldwork in the Northeast and in the South. See Beltrão et al and Delgado and Cardoso Jr.

2. Various studies on the living conditions of older persons have been developed in Brazil over the past few years. See, for example, Camarano (1999 and 2002), IBGE (2002) and Saboia (2003a). For a discussion of the role of non-contributory benefits in combating poverty see Schwarzer and Querino (2002). See also Werneck Vianna (2003) for a presentation of existing non-contributory benefits in Brazil.

3. Minimum age for receiving CIB was reduced in 2004 to 65 years of age, according to the Statute of Older Persons. CIB also benefits the disabled incapacitated for work that live with families whose per capita familial income is less than 1/4 MW regardless of age. At the time of the survey the minimum wage was approximately US\$ 55.00.

In the second place, the rural pension that, though theoretically is not a non-contributory benefit, in practice the great majority of beneficiaries of rural retirement never contributed to social security, having acquired the right to a monthly minimum wage as of 55 or 60 years of age, depending on whether females or males, and on having lived in rural areas under a familial economy arrangement.⁴

The main results of the field survey mentioned above will be presented next, showing the important role of these benefits in improving living conditions and in fighting against poverty in the country, highlighting the direct consequences on older persons.

In the following section, information is presented on the sampling process and on the fieldwork. Section 3 is divided up into various subsections, showing diverse results such as characteristics of households, the economic activity of dwellers, earnings received, structure of expenditures, diverse economic information, aside from specific aspects on the quality of life of older persons that point to an increase in their independence and empowerment. The text closes with some general conclusions.⁵

2 THE FIELDWORK AND THE SAMPLING PROCESS AND DATA SURVEY

From the point of view of the territorial extension of Brazil, it becomes extremely complex to define a household sample representative of the country with a relatively small number of households. The alternative used in this work was to try to increase the regional coverage as much as possible keeping within the budget of the survey.

Two great regions were selected for the fieldwork. In the first place, the metropolitan region of Rio de Janeiro (MRRJ), where the greater part of the population of the State of Rio de Janeiro is concentrated. Four municipalities were chosen for the survey from the MRRJ data. Aside from the municipality of Rio de Janeiro itself, three other neighbouring municipalities were selected—Duque de Caxias, Nova Iguaçu and São João de Meriti.⁶

To represent the elderly population in the poorer regions of the country, one state was chosen in the Northeast region. Initially three possibilities were considered

4. Rural Social Security also benefits prospectors and artisan fishermen. Various studies have discussed rural Social Security in Brazil. See, for example, Delgado and Cardoso Jr. (2000) and Schwarzer (2000).

5. The complete results of the fieldwork conducted in Brasil are presented in Saboia (2003b), or can be obtained at the site www.ie.ufrj.br/aparte. For a comparative analysis of the results from Brazil and South Africa see HelpAge/IDPM (2003).

6. According to the Demographic Census of 2000, the population in the State of Rio de Janeiro reached 14,391,282 that year. The municipality of Rio de Janeiro was the most populous with 5,857,904 inhabitants. The population of the remaining municipalities chosen were 920,599 in Nova Iguaçu, 775,456 in Duque de Caxias and 449,476 in São João de Meriti. The four municipalities represented 56% of the total population of the State of Rio de Janeiro.

for the selection of the state to be surveyed—Bahia, Pernambuco and Ceará—, which correspond to the most populous in the Northeastern region. The state of Bahia was chosen due to its greater proximity to Rio de Janeiro, which would make the data survey easier. Given the interest in studying the rural population as well, the greatest municipality in Bahia in terms of rural population was chosen from among the largest municipalities, the one with the largest rural population—Ilhéus.⁷

The goal was to obtain a sample with approximately one thousand households with at least one older person aged 60 years or older for each household. So as to diversify the population under study, the sample was divided into four groups, each one with roughly 1/4 of the sample. Thus, the state of Rio de Janeiro represented half the sample, 1/4 of which was the municipality of Rio de Janeiro itself and the remainder distributed in three selected municipalities of MRRJ. The other half was divided into two parts, one half covering the urban region and the other half the rural region of the municipality of Ilhéus.

In order to select the households within each municipality, data was processed from the census sectors according to the 2000 Demographic Census, whereby sectors were chosen with low income and high head count of older persons, maximizing the probability of finding older persons receiving non-contributory benefits. The criteria used were:

- a) a minimum of 100 households in the sector;
- b) a minimum of 60% of households with an income of the head of household totalling at most two minimum wages (MW);⁸ and
- c) a minimum of 8% of older persons (60 years and over) in the population.

Based on the three criteria used, the sectors for the survey were chosen at random. So as to diversify the selection of households, it was established that a total of between 16 and 20 households with older persons (at least one older person 60 years and over) were to be interviewed in each sector. Thus, researchers visited the chosen sectors from their starting point until the defined quota was reached. It is worth mentioning that it was not always possible to maintain a random selection of sectors, especially due to the high levels of urban violence that afflicted Rio de Janeiro during the data survey. Territorial disputes between

7. According to the 2000 Demographic Census, the population in Ilhéus was 222,127 inhabitants, corresponding to the fourth most populous municipality in Bahia. The rural population represented 27% of the total. The population of Ilhéus reached 9% of the total for the state of Bahia.

8. In the rural area of Ilhéus, where the income level is lower, this percentage was increased to 85%.

different drug gangs impaired access to certain sectors previously chosen, having to be replaced by others reserved for occasional substitutions.

Bearing in mind the fact that the greater part of retirement pensions and benefits in Brazil are of a contributory nature, a random household survey with older persons meant the possibility of inclusion of a very small number of people with non-contributory benefits. So, the selection of households was complemented from the records of non-contributory beneficiaries in the respective municipalities. The records, however, showed themselves to be very imprecise, including deceased beneficiaries, non-existent addresses and various other problems.

Despite the difficulties, the existence of records allowed a satisfactory number of non-contributory beneficiaries to be surveyed. An attempt was made to concentrate the selected addresses obtained from the records in the census sectors previously chosen or in other sectors with similar characteristics. In urban households within the randomly selected sample the percentage of older persons receiving social support destined for older persons varies roughly between 5% and 10%. For those selected from the records, the percentage rises roughly to between 70% and 75%.⁹ The records were used in selected regions so that 20% of households with older persons receiving non-contributory benefits could be reached.

The distribution of households surveyed according to the region and collection procedures are presented in Table 1. As can be seen, 505 households in Rio de Janeiro and 501 in Ilhéus (269 urban and 232 rural) were surveyed. Roughly 10% of the household sample was obtained from the records of non-contributory beneficiaries. As the greater part of older persons in rural areas are beneficiaries of the rural retirement by age plan, there was no need to use records in the rural region of Ilhéus.

The information was obtained based on a questionnaire containing the following information: characteristics of households; of dwellers; of workers; level

TABLE 1
HOUSEHOLD SAMPLE

	Rio de Janeiro Municipality	Metropolitan Region of Rio de Janeiro ^a	Ilhéus Municipality (Urban)	Ilhéus Municipality (Rural)	Total
Official Records	41	47	13	0	101
No Official Records	209	208	256	232	905
Total	250	255	269	232	1.006

^a Duque de Caxias, Nova Iguaçu and São João de Meriti.

9. Even in households selected from the records, there are older persons not receiving the non-contributory benefit for a number of reasons, including that of not having reached the minimum age of 67.

of earnings; other economical information on households; structure of expenditures; information on health, sickness and deaths; quality of life; and detailed information on the older population and benefits received.¹⁰ Bearing in mind the spatial limitations of this text, only the information considered most relevant is presented below.

3 MAIN RESULTS OF FIELDWORK

3.1 Characteristics of Households

3,253 dwellers in 1,006 households were surveyed, corresponding to 3.2 dwellers per household. In 22.3% of households, there is one older person living alone. There are one or two persons living in a little over half the households. Inversely, though, there are a great many dwellers living in many of the remaining households. In roughly 15% there are six people or more and in 5%, eight people or more (Table 2).

Two-thirds of households have only one older person. A little less than 1/3 has two older persons. Three older persons were found in only 17 households. In 375 households, there are only older persons (Table 3).

Households are typically made of brick and coating (86.1%), covered with ceramic tiles (36.1%), with asbestos (37.8%) or cement slab (25.8%). The more

TABLE 2
NUMBER OF PEOPLE PER HOUSEHOLD

No. of People	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
1	224	22.3	128	25.3	96	19.2	176	22.7	48	20.7
2	267	26.5	159	31.5	108	21.6	220	28.4	47	20.3
3	159	15.8	78	15.4	81	16.2	124	16.0	35	15.1
4	121	12.0	57	11.3	64	12.8	91	11.8	30	12.9
5	90	8.9	36	7.1	54	10.8	73	9.4	17	7.3
6/7	94	9.3	31	6.1	63	12.6	58	7.5	36	15.5
8 or more	51	5.1	16	3.2	35	7.0	32	4.1	19	8.2
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

10. In order to make studies conducted in Brazil and South Africa comparable, the structure of both questionnaires is the same, with the inclusion when necessary of only small modifications.

TABLE 3
NUMBER OF OLDER PERSONS PER HOUSEHOLD

No. of Older Persons	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
1	675	67.1	328	65.0	347	69.3	522	67.4	153	65.9
2	314	31.2	170	33.7	144	28.7	239	30.9	75	32.3
3	17	1.7	7	1.4	10	2.0	13	1.7	4	1.7
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

precarious households made of brick with no coating (5.3%) and mud houses (4.3%) are less common. In the latter case, they are found only in Bahia, especially in the rural region, where they represent 15% of households. Eighty percent of households have three to five rooms.¹¹ Thus, average density is 0.8 dweller per room.

Ninety percent of households are privately owned. The remainder can be equally divided up between rented and ceded households. The fact that many households are considered privately owned does not mean that the deeds are in order, as the issue of landed property in the country is quite complex, both in urban and rural regions.

Access to drinking water is relatively favourable. More than 3/4 of households receive water directly from the general water supply network inside the household. There are also 3.7% with access to the general water supply network in the household plot. Among the remaining alternatives, 6.5% were found to have a well on their property, 4.1%, using water from the river and 2.9%, using water from the dam. Other forms of access to water are relatively rare. It is worth mentioning that the situation in Rio de Janeiro is much more favourable than in Bahia, with 94.1% of households having access to the general network inside the household. As was to be expected, the worst situation occurs in the rural regions of Bahia (Table 4).

Few households do not have their own bathroom. Ninety-two percent have a private bathroom, the use of collective bathrooms being rare. Only 7.3% of households do not own a bathroom, almost all located in Bahia, especially in the rural regions, where they make up almost 1/4 of the households.

More than half the households surveyed belong to the general sewage disposal system, the number being almost 80% in Rio de Janeiro. Among the remaining

11. Rooms herein include living rooms, bedrooms and kitchens.

TABLE 4
SOURCE OF HOUSEHOLD WATER

Source	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
System in Countryside	767	76.2	475	94.1	292	58.3	698	90.2	69	29.7
System on Household Plot	37	3.7	4	0.8	33	6.6	13	1.7	24	10.3
Waterspout	6	0.6	0	0.0	6	1.2	1	0.1	5	2.2
Water Truck	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Well on Household Plot	65	6.5	26	5.1	39	7.8	35	4.5	30	12.9
Community Well	19	1.9	0	0.0	19	3.8	2	0.3	17	7.3
Rainwater	8	0.8	0	0.0	8	1.6	0	0.0	8	3.4
River Water	41	4.1	0	0.0	41	8.2	4	0.5	37	15.9
Dam Water	29	2.9	0	0.0	29	5.8	15	1.9	14	6.0
Spring on Household Plot	4	0.4	0	0.0	4	0.8	0	0.0	4	1.7
Community Spring	18	1.8	0	0.0	18	3.6	2	0.3	16	6.9
Other	12	1.2	0	0.0	12	2.4	4	0.5	8	3.4
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

alternatives, one can mention the septic tank connected to the sewage disposal system (8.8%), the septic tank not connected to the system (11.7%), cesspit (7.8%), gully (4.9%) and disposal by means of river/lake/sea (5.8%) (Table 5).

Less than 3% of households surveyed do not have access to electric power. Ownership of certain durable goods has become widespread. Gas or electric stove (95.1%), refrigerator/freezer (84.8%), television (88.3%) and radio or sound system (87.9%) are the main appliances. Sewing machines are found in 28.0% of households, bicycles in 19.8%, and wood or coal stoves in 19.2%. Among relatively rare items one can mention automobiles (5.0%) and motorcycles (0.6%)¹² (Table 6).

TABLE 5
TYPE OF SEWAGE DISPOSAL SYSTEM FOR HOUSEHOLD

Type	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Sewage System	540	53.7	401	79.4	139	27.7	524	67.7	16	6.9
Cesspit/Sewage System	89	8.8	69	13.7	20	4.0	87	11.2	2	0.9
Septic Tank	118	11.7	5	1.0	113	22.6	61	7.9	57	24.6
Cesspit	78	7.8	0	0.0	78	15.6	24	3.1	54	23.3
Gully	49	4.9	23	4.6	26	5.2	37	4.8	12	5.2
River/Lake/Sea	58	5.8	4	0.8	54	10.8	23	3.0	35	15.1
Other	1	0.1	1	0.2	0	0.0	1	0.1	0	0.0
No Bathroom Facility	73	7.3	2	0.4	71	14.2	17	2.2	56	24.1
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

TABLE 6
OWNERSHIP OF DURABLE GOODS AND ACCESS TO PUBLIC SERVICES BY HOUSEHOLD

Presence	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Telephone	367	36.5	247	48.9	120	24.0	339	43.8	28	12.1
Gas Stove	957	95.1	500	99.0	457	91.2	755	97.5	202	87.1
Wood Stove	193	19.2	6	1.2	187	37.3	58	7.5	135	58.2
Electric Power	979	97.3	504	99.8	475	94.8	769	99.4	210	90.5
Television Set	888	88.3	488	96.6	400	79.8	715	92.4	173	74.6
Radio	884	87.9	470	93.1	414	82.6	695	89.8	189	81.5
Refrigerator	853	84.8	477	94.5	376	75.0	693	89.5	160	69.0
Sewing Machine	282	28.0	169	33.5	113	22.6	235	30.4	47	20.3
Car	50	5.0	37	7.3	13	2.6	49	6.3	1	0.4
Bicycle	199	19.8	110	21.8	89	17.8	161	20.8	38	16.4
Motorcycle	6	0.6	2	0.4	4	0.8	6	0.8	0	0.0
Total	1,006		505		501		774		232	

12. Gas stoves are basically used in the cities. In rural regions, it is still common to use wood stoves.

3.2 Characteristics of Dwellers

As already mentioned, 3,253 dwellers were surveyed in 1,006 households. Some families have complex structures, including the most varied type of relatives. Aside from the heads of household that represent 30.9% of dwellers, three other groups stand out—spouses (12.4%), children (27.2%) and grandchildren (19.8%)—totalling more than 90% of dwellers. From among other relatives, mention need be made of fathers/mothers (1.7%), sons and daughters-in-law (2.2%), brothers/sisters (1.4%) and nephews/nieces (1.8%) (Table 7).

Reflecting the greater longevity of women, the majority of dwellers (54.4%) are of the female gender. The average age of the population surveyed is 43.2. Older persons (55 years and over) represent 41.6% of dwellers, a higher percentage than that of adults (39.2%). Youngsters up to 15 years of age correspond to the remaining

TABLE 7
RELATIONSHIP BETWEEN DWELLER AND HEAD OF HOUSEHOLD

Relationship with the Head	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Head	1,006	30.9	505	35.3	501	27.5	774	32.4	232	26.9
Spouse	402	12.4	197	13.8	205	11.2	294	12.3	108	12.5
Children	886	27.2	348	24.4	538	29.5	623	26.0	263	30.5
Father/Mother	56	1.7	38	2.7	18	1.0	47	2.0	9	1.0
Grandson/Great Grandson	643	19.8	232	16.2	411	22.5	450	18.8	193	22.4
Grandfather/Grandmother	3	0.1	1	0.1	2	0.1	3	0.1	0	0.0
Father/Mother-in-Law	23	0.7	11	0.8	12	0.7	19	0.8	4	0.5
Son/Daughter-in-Law	73	2.2	32	2.2	41	2.2	54	2.3	19	2.2
Brother/Sister-in-Law	7	0.2	4	0.3	3	0.2	6	0.3	1	0.1
Uncle/Aunt	2	0.1	1	0.1	1	0.1	1	0.0	1	0.1
Brother/Sister	45	1.4	23	1.6	22	1.2	37	1.5	8	0.9
Nephew/Niece	60	1.8	25	1.7	35	1.9	47	2.0	13	1.5
Cousin	11	0.3	3	0.2	8	0.4	11	0.5	0	0.0
Domestic Servant	2	0.1	0	0.0	2	0.1	2	0.1	0	0.0
Other Relative	17	0.5	6	0.4	11	0.6	10	0.4	7	0.8
Other Person	17	0.5	3	0.2	14	0.8	14	0.6	3	0.3
Total	3,253	100.0	1,429	100.0	1,824	100.0	2,392	100.0	861	100.0

19.2%. Approximately 20% of dwellers are 70 years or over and 5%, 80 years or over. Only 1% are 90 years or over (Tables 8 and 9).

Dwellers are to a great extent mixed race (44.2%) or blacks (25.3%). Whites do not exceed 30.2%. Dwellers can be divided up among bachelors/spinsters (49.6%), the officially married (20.1%), those married by consensual union (10.4%) and the widowed (15.3%). The separated and divorced do not reach the 5% mark.

Given the slight participation of youngsters among the dwellers, only 21.1% attend school. Attendance at school can best be examined by age bracket of dwellers. In the age bracket corresponding to nursery school, attendance is still quite low. Only 7.1% of children up to three years of age attend school. Pre-schooling involves little more than half the children aged four to six. School attendance is quite high from seven to 15 years of age, engaging 95.8%. From then on the attendance drops to 68.1% for the 16-18 year age bracket and to 32.1% for the 19-24 year age bracket, being less common still after the age of 25. No older person was found attending school (Table 10).

TABLE 8
AGE OF DWELLER

Age	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
0-4	146	4.5	54	3.8	92	5.0	105	4.4	41	4.8
5-9	203	6.2	86	6.0	117	6.4	145	6.1	58	6.7
10-14	230	7.1	73	5.1	157	8.6	144	6.0	86	10.0
15-19	252	7.7	69	4.8	183	10.0	152	6.4	100	11.6
20-29	440	13.5	162	11.3	278	15.2	326	13.6	114	13.2
30-54	628	19.3	296	20.7	332	18.2	481	20.1	147	17.1
55-59	80	2.5	36	2.5	44	2.4	58	2.4	22	2.6
60-64	284	8.7	129	9.0	155	8.5	209	8.7	75	8.7
65-69	327	10.1	176	12.3	151	8.3	256	10.7	71	8.2
70-74	262	8.1	136	9.5	126	6.9	202	8.4	60	7.0
75-79	225	6.9	136	9.5	89	4.9	183	7.7	42	4.9
80-89	145	4.5	67	4.7	78	4.3	107	4.5	38	4.4
90 Years and over	31	1.0	9	0.6	22	1.2	24	1.0	7	0.8
Total	3,253	100.0	1,429	100.0	1,824	100.0	2,392	100.0	861	100.0

TABLE 9
AGE BRACKET OF DWELLER

Group	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Youngsters (up to 15 Years)	624	19.2	224	15.7	400	21.9	421	17.6	203	23.6
Adults (16-54 Years)	1,275	39.2	516	36.1	759	41.6	932	39.0	343	39.8
Older Persons (55 Years and over)	1,354	41.6	689	48.2	665	36.5	1,039	43.4	315	36.6
Total	3,253	100.0	1,429	100.0	1,824	100.0	2,392	100.0	861	100.0

TABLE 10
SCHOOL ATTENDANCE BY AGE BRACKET
[%]

Age	Total	Rio de Janeiro	Ilhéus	Urban	Rural
0-3	7.1	15.0	2.7	21.5	0.0
4-6	52.4	66.7	40.0	75.9	34.6
7-15	95.8	94.9	96.3	92.5	97.2
16-18	68.1	68.9	67.8	62.8	65.2
19-24	32.1	22.2	37.8	28.1	33.3
25-54	3.2	3.0	3.3	2.3	2.1
55 Years and over	0.0	0.0	0.0	0.0	0.0
Total	21.1	16.3	24.8	19.5	25.8

Despite the high levels of school attendance of youngsters, the level of schooling of the population surveyed is quite low, reflecting educational policies from the past and the great incidence of older persons. More than 1/5 does not know how to read or write. Another 8.6% have had no schooling whatsoever. Only 1.6% have university-level education, complete or incomplete, 6.1% have completed high school, 5.3% have not finished high school and 6.5% have completed eighth grade in junior high school (Table 11).

TABLE 11
SCHOOLING OF DWELLER

Schooling	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Doesn't Read or Write	713	21.9	204	14.3	509	27.9	445	18.6	268	31.1
No Schooling	279	8.6	120	8.4	159	8.7	197	8.2	82	9.5
Day Care/Pre-School	85	2.6	50	3.5	35	1.9	71	3.0	14	1.6
1 st /2 nd Grades	391	12.0	176	12.3	215	11.8	281	11.7	110	12.8
3 rd /4 th Grades	670	20.6	335	23.4	335	18.4	507	21.2	163	18.9
5 th /7 th Grades	476	14.6	196	13.7	280	15.4	345	14.4	131	15.2
8 th Grade	213	6.5	114	8.0	99	5.4	180	7.5	33	3.8
High School Incomplete	172	5.3	92	6.4	80	4.4	139	5.8	33	3.8
High School Degree	197	6.1	114	8.0	83	4.6	175	7.3	22	2.6
College Incomplete	30	0.9	17	1.2	13	0.7	29	1.2	1	0.1
College Degree	23	0.7	8	0.6	15	0.8	20	0.8	3	0.3
Other	4	0.1	3	0.2	1	0.1	3	0.1	1	0.1
Total	3,253	100.0	1,429	100.0	1,824	100.0	2,392	100.0	861	100.0

3.3 Economic Activity of Dwellers

Little more than one-fourth of the dwellers aged 10 years and over worked during the 30 days preceding the survey—23.4% regularly and 3.5% occasionally. As expected, the activity rate is higher in the 25-54 year age bracket, engaging 53.8% of the individuals. It is also relatively high among young adults aged 19 to 24. The activity rate of older persons (14.7%) is equivalent to that found for youngsters in the 16-18 year age bracket. Reflecting the high level of school attendance of children between the ages of 10 and 15, their activity rate is almost nil (Table 12).

TABLE 12
WORK BY AGE BRACKET OVER THE LAST 30 DAYS
 [%]

Age	Total	Rio de Janeiro	Ilhéus	Urban	Rural
10-15	0.7	0.0	1.0	0.6	1.0
16-18	14.7	13.3	15.3	14.4	15.2
19-24	39.5	50.9	33.0	40.6	36.9
25-54	53.8	60.1	48.8	57.0	43.5
55 Years and over	14.7	15.7	13.7	15.5	12.1
Total	26.9	30.0	24.4	28.8	21.5

Among reasons given for not working the fact was mentioned that the dweller was retired (45.4%), a student (20.3%), caring for children or relatives (11.5%) and was sick or incapacitated (5.3%). On the other hand, 10% of the people that were not working claimed they were looking for work (Table 13).

Of the people that worked the previous year, 70% said they had been active the entire 12 months. The majority work approximately 44 hours per week as stipulated by law. Thus, 45.5% work from 40 to 44 hours per week and 17.8% from 45 to 49 hours. A little over 20% work part time (up to 39 hours), whereas

TABLE 13
REASON FOR NOT WORKING

Reason	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Takes Care of Someone	244	11.5	83	9.2	161	13.2	162	10.6	82	13.7
Illness	113	5.3	68	7.5	45	3.7	97	6.4	16	2.7
Student	432	20.3	115	12.7	317	26.0	270	17.7	162	27.1
Retired	963	45.4	471	52.2	492	40.3	718	47.1	245	41.0
Infrequent Work	18	0.8	0	0.0	18	1.5	12	0.8	6	1.0
Looking for Job	212	10.0	103	11.4	109	8.9	169	11.1	43	7.2
Doesn't Need to	10	0.5	6	0.7	4	0.3	8	0.5	2	0.3
Other	131	6.2	56	6.2	75	6.1	89	5.8	42	7.0
Total	2,123	100.0	902	100.0	1,221	100.0	1,525	100.0	598	100.0

13.9% have workweeks of 50 hours or more. There were even 3.7% with workweeks of 70 hours or more.

Of the 781 dwellers 10 years of age or over that had worked 30 days prior to the survey, only 30.2% were employed with working papers, 29.1% were employed, but had no working papers, whereas 25.6% were self-employed. There were even 12.1% of domestic workers, the great majority without working papers. Employers did not tally above 1.7% (Table 14).

The place of work varies greatly. A large part works in a company/factory (43.0%), roughly representing the formal sector of the economy. Typical places related to informal activities are the employer's house (19.1%), one's own home or no set place (11.9%), the streets (7.2%) and the farm (12.8%).

There is also great variation among the main occupations cited. In the trade sector there are salespersons (owners, employees and travelling salesmen) estimated at around 15% of the total of occupations. In agriculture, farmers (autonomous) and farm workers are responsible for about 12% of the total. Domestic servants

TABLE 14
POSITION PERSON OCCUPIES

Position	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Employed with Papers	236	30.2	133	34.4	103	26.1	199	32.3	37	22.6
Working without Papers	227	29.1	80	20.7	147	37.3	154	25.0	73	44.5
Domestic Worker with Papers	10	1.3	7	1.8	3	0.8	9	1.5	1	0.6
Domestic Worker without Papers	84	10.8	54	14.0	30	7.6	71	11.5	13	7.9
Freelance	200	25.6	106	27.4	94	23.9	167	27.1	33	20.1
Worker for Cooperative	6	0.8	4	1.0	2	0.5	4	0.6	2	1.2
Employer	13	1.7	1	0.3	12	3.0	9	1.5	4	2.4
Non-Remunerated Housework	3	0.4	1	0.3	2	0.5	2	0.3	1	0.6
Other Non-Remunerated Work	1	0.1	0	0.0	1	0.3	1	0.2	0	0.0
Other Position	1	0.1	1	0.3	0	0.0	1	0.2	0	0.0
Total	781	100.0	387	100.0	394	100.0	617	100.0	164	100.0

and nannies correspond to around 12%. In the civil construction sector, bricklayers account for (3.1%) and construction helpers (2.7%). Various occupations of the rendering-of-services type can be highlighted—cooks, security guards, drivers, etc. In the industrial sector, but probably working at home for private employers are 3.5% of seamstresses. There are yet 4.6% of civil servants (Table 15).

The fields of activity reflect the occupation of workers. Domestic service accounts for 13.4% of the people. Planting cocoa, a traditional product of Bahia, occupies 9.2%. Commercial activities such as that of street vender, selling clothes,

TABLE 15
OCCUPATION BY PERSON

Occupation	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Sales-Owner/Independent	28	3.6	25	6.5	3	0.8	27	4.4	1	0.6
Grocery Clerk	15	1.9	7	1.8	8	2.0	12	1.9	3	1.8
Office Assistant	10	1.3	4	1.0	6	1.5	9	1.5	1	0.6
Elementary School Teacher	15	1.9	8	2.1	7	1.8	13	2.1	2	1.2
Farmer	73	9.3	0	0.0	73	18.5	23	3.7	50	30.5
Farm Worker	19	2.4	1	0.3	18	4.6	2	0.3	17	10.4
Fisherman	10	1.3	0	0.0	10	2.5	2	0.3	8	4.9
Seamstress\Clothesmaker	27	3.5	20	5.2	7	1.8	27	4.4	0	0.0
Bricklayer	24	3.1	9	2.3	15	3.8	20	3.2	4	2.4
Construction Worker	21	2.7	11	2.8	10	2.5	17	2.8	4	2.4
Employed Salesperson	61	7.8	31	8.0	30	7.6	56	9.1	5	3.0
Traveling Salesperson	28	3.6	18	4.7	10	2.5	24	3.9	4	2.4
Driver	18	2.3	11	2.8	7	1.8	17	2.8	1	0.6
Nursemaid	10	1.3	8	2.1	2	0.5	9	1.5	1	0.6
House Servant	80	10.2	55	14.2	25	6.3	68	11.0	12	7.3
Cook	34	4.4	13	3.4	21	5.3	27	4.4	7	4.3
Washing\Ironing Maid	13	1.7	4	1.0	9	2.3	10	1.6	3	1.8
Security Guard	18	2.3	10	2.6	8	2.0	18	2.9	0	0.0
Public Servant	36	4.6	21	5.4	15	3.8	29	4.7	7	4.3
Not Identified	24	3.1	2	0.5	22	5.6	20	3.2	4	2.4
Others	217	27.8	129	33.3	88	22.3	187	30.3	30	18.3
Total	781	100.0	387	100.0	394	100.0	617	100.0	164	100.0

working in supermarkets, grocery stores and bars correspond to 17.5%; civil construction work, for 6.9%; education and health, for 6.0%. Other services such as in transportation, vigilance, repair work and cleaning also take up a considerable portion of jobs. Mainly traditional segments, such as the garment trade and the preparation of food products, represent the processing industry.

3.4 Earnings of Dwellers and Households

Of the 3,253 dwellers selected in the survey, 776 receive earnings from work, 742 earn official contributory retirement pensions, 198 receive social assistance for older persons (non-contributory), 78 are beneficiaries of rural retirement pensions for older persons (non-contributory), 44 of support for the disabled (non-contributory), 49 have some sort of school-grant for children/grandchildren (non-contributory), 11 receive other non-contributory benefits, 10 are beneficiaries of unemployment insurance (contributory) and 6 receive retirement pensions from private funds.

The main income source for dwellers in this study is the official contributory retirement pension. On considering the earnings of persons obtained through work or through various existing benefits (excluding only collective household earnings, such as dividends on savings, rentals, money and goods from non-dwellers, etc.), one finds that 44.6% of total earnings of these people are obtained from official contributory retirement pensions and 42.0% from work. The remaining assistance mechanisms play much smaller roles. The social assistance for older persons represents 7.4% of the total, followed by rural old-age retirement pensions (2.9%) and support for the disabled (1.6%). It is worth mentioning, however, that the non-contributory benefits for older persons could be considered even smaller if one bears in mind the bias incorporated in the sample selection of the survey in order to capture such benefits (Table 16).

Curiously, the average value for retirement pensions and official survivors' benefit pensions (R\$ 321) surpasses average earnings from work (R\$ 289). Such results, however, should not be surprising, as earnings from work tend to increase with age, raising the value of retirement pay and contributory survivors' benefit pensions, calculated on the contributory salary at the end of the active life of workers. Even with an occasional drop in the actual value of retirement and survivors' benefit pensions due to the effect of inflation, average income received by older persons as beneficiaries of the official social security institution [Instituto Nacional de Seguridade Social (INSS)] still remains slightly above the one obtained by active workers as seen in the survey.¹³

13. The value of the minimum wage at the time of the survey was R\$ 200.

TABLE 16
DISTRIBUTION OF EARNINGS

	Absolute	Average Earnings (R\$)	%
Work	776	289	42.0
Social Assistance for Older Persons	198	200	7.4
Social Assistance for Disabled	44	200	1.6
Rural Old-age Retirement Pensions	78	200	2.9
Children Benefits	49	36	0.3
Other Benefits	11	116	0.2
Public Retirement Pensions (INSS)	742	321	44.6
Private Retirement Pensions	6	387	0.4
Unemployment Insurance	10	253	0.5
Total	1,914	279	100.0

A fact worth noting is that the value of non-contributory retirement and survivors' benefit pensions (R\$ 200) represent 62% of the average value received by beneficiaries of official retirement and survivors' benefit pensions (R\$ 321). In addition, the value of more than 2/3 of contributory retirement and survivors' benefit pensions correspond to R\$ 200. One is, therefore, dealing with a relatively favourable situation for non-contributory beneficiaries if one considers that the former contributed effectively throughout their lives to receive the benefit.

Among the other benefits received, the largest average value relates to private retirement pensions (R\$ 387). The average value for unemployment-insurance is R\$ 253, while for school-grants it does not surpass R\$ 36. The remaining benefits informed have an average value of R\$ 116.

Total earnings surveyed in the 1.006 households came to R\$ 571,810, i.e., R\$ 568 on average per household. Aside from the personal earnings already mentioned (from work and various benefits) three types of earnings stood out in the survey for the set of household dwellers—earnings from rents, money received from non-dwellers and from merchandise derived from persons outside the household. The average value of these earnings per household is R\$ 17.47 for money received from non-dwellers, R\$ 8.36 for merchandise received and R\$ 7.97 for rents. The remainder have little importance. Added up, such items represent R\$ 36.88 on average per household, i.e., only 6.5% of earnings for the households surveyed.

The distribution of total earnings of households is quite unequal. As a matter of fact, the inequality of earnings is a registered trademark of this country, which includes the relatively poor population living in the countryside. As the greatest part of the population surveyed received at least one R\$ 200 benefit, less than 2% of households surveyed have earnings under this value. On the other hand, 19.9% of households receive exactly R\$ 200 per month. Those that receive from R\$ 201 to R\$ 400 make up 31.5% of households, followed by 24% in the R\$ 401 to R\$ 700 brackets and 10.1% in the R\$ 701 to R\$ 1,000 bracket. There are still 11.3% in the R\$ 1,001 to R\$ 2,500 bracket and 1.3% above this value. Household earnings are clearly higher in Rio de Janeiro than in Ilhéus and in the urban regions rather than in the rural ones (Table 17).

Benefits (contributory and non-contributory) play a very important role only in the maintenance of household earnings for older persons, including those households with older persons living alone. The former case, 35.2% of households have earnings exactly equal to the basic value of benefits (R\$ 200) and 72.5%, in the R\$ 200 to R\$ 400 bracket. In the latter case, half the households have earnings of R\$ 200.

TABLE 17
DISTRIBUTION OF TOTAL HOUSEHOLD EARNINGS

Earnings (R\$)	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
1-50	2	0.2	1	0.2	1	0.2	2	0.3	0	0.0
51-100	6	0.6	0	0.0	6	1.2	2	0.3	4	1.7
101-199	11	1.1	5	1.0	6	1.2	7	0.9	4	1.7
200	200	19.9	74	14.7	126	25.1	133	17.2	67	28.9
201-300	141	14.0	76	15.0	65	13.0	109	14.1	32	13.8
301-400	176	17.5	71	14.1	105	21.0	126	16.3	50	21.6
401-500	109	10.8	63	12.5	46	9.2	92	11.9	17	7.3
501-700	133	13.2	72	14.3	61	12.2	105	13.6	28	12.1
701-1000	102	10.1	56	11.1	46	9.2	80	10.3	22	9.5
1001-1500	76	7.6	51	10.1	25	5.0	71	9.2	5	2.2
1501-2500	37	3.7	30	5.9	7	1.4	34	4.4	3	1.3
2501 or more	13	1.3	6	1.2	7	1.4	13	1.7	0	0.0
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

The personal distribution of income shows once again the importance of benefits. Of the 3,253 dwellers surveyed, 45.2% have no earnings whatsoever and 27.7% receive R\$ 200. Although a parcel of these represent active workers who receive a minimum monthly salary, the majority is made up of older persons receiving basic benefits. There are still 13.2% that receive earnings in the R\$ 201 to R\$ 400 bracket (Table 18).

Per capita earnings of the surveyed population were R\$ 176, i.e., 88% of the value of the standard benefit (contributory or not). Eighty percent of households have a per capita income between R\$ 50 and R\$ 300 and 18.5% are exactly equal to R\$ 200. If one considers the cut usually adopted in Brazil, that of 1/2 a minimum wage per capita as referring to the poverty line, one finds that 26.5% of households could be considered poor. The level of poverty, however, varies greatly between the regions under scrutiny. In Rio de Janeiro it does not exceed 13.3%, whereas in Ilhéus it reaches 39.7%. On the other hand, in urban regions the figure is restricted to 21.2%, whereas in rural areas it has attained 43.9%¹⁴ (Table 19).

A comparison between average earnings of some of the household groups brings important facts. If on the one hand, the average household income of the 1,006 households is R\$ 568, when considering the 375 households with only older persons, the average drops to R\$ 388 and in those 224 households where the older person lives alone, the average income does not surpass R\$ 301. The 657 households where there are dwellers receiving contributory benefits have relatively high earnings, on average of R\$ 652. As was to be expected, average earnings are lower in households where there are non-contributory benefits, not surpassing R\$ 485. If the non-contributory benefit were to be eliminated. The average income of these families would drop to only R\$ 267, which confirms the importance of these benefits for older persons¹⁵ (Table 20).

Based on the fact that the number of persons varies greatly from one household to the next, the comparison of earnings is more interesting when the per capita values are taken into consideration. Per capita earnings in households with only older persons are much higher than in the group of households being analysed—R\$ 301 when the older person lives alone and R\$ 273 when there are two or more older persons. On the other hand, per capita earnings are higher in households where there are persons receiving contributory benefits (R\$ 197) than in those

14. If the value of the basic benefit is used (R\$ 200) as the minimum for a person not to be considered poor, the percentage of impoverished in the sample under examination rises to 47.2%.

15. The drop is greater than R\$ 200 due to the fact that there are certain households with more than one person receiving non-contributory benefits. Very similar findings were made in the chapters by Beltrão et al and Delgado and Cardoso Jr. all in this publication.

TABLE 18
DISTRIBUTION OF TOTAL EARNINGS OF PEOPLE

Earnings (R\$)	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Zero	1,471	45.2	555	38.8	916	50.2	1,026	42.9	445	51.7
1-50	55	1.7	9	0.6	46	2.5	35	1.5	20	2.3
51-100	66	2.0	16	1.1	50	2.7	42	1.8	24	2.8
101-199	72	2.2	22	1.5	50	2.7	39	1.6	33	3.8
200	902	27.7	383	26.8	519	28.5	641	26.8	261	30.3
201-300	250	7.7	155	10.8	95	5.2	212	8.9	38	4.4
301-400	178	5.5	112	7.8	66	3.6	160	6.7	18	2.1
401-500	84	2.6	56	3.9	28	1.5	73	3.1	11	1.3
501-700	69	2.1	48	3.4	21	1.2	65	2.7	4	0.5
701-1000	69	2.1	51	3.6	18	1.0	66	2.8	3	0.3
1001-1500	24	0.7	14	1.0	10	0.5	21	0.9	3	0.3
1501-2500	10	0.3	8	0.6	2	0.1	9	0.4	1	0.1
2501 or more	3	0.1	0	0.0	3	0.2	3	0.1	0	0.0
Total	3,253	100.0	1,429	100.0	1,824	100.0	2,392	100.0	861	100.0

TABLE 19
DISTRIBUTION OF PER CAPITA HOUSEHOLD EARNINGS

Earnings (R\$)	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
1-50	58	5.8	9	1.8	49	9.8	28	3.6	30	12.9
51-100	208	20.7	58	11.5	150	29.9	136	17.6	72	31.0
101-199	208	20.7	101	20.0	107	21.4	158	20.4	50	21.6
200	186	18.5	85	16.8	101	20.2	133	17.2	53	22.8
201-300	203	20.2	148	29.3	55	11.0	185	23.9	18	7.8
301-400	66	6.6	47	9.3	19	3.8	63	8.1	3	1.3
401-500	32	3.2	26	5.1	6	1.2	30	3.9	2	0.9
501-700	24	2.4	17	3.4	7	1.4	23	3.0	1	0.4
701-1000	15	1.5	12	2.4	3	0.6	14	1.8	1	0.4
1001-1500	2	0.2	1	0.2	1	0.2	1	0.1	1	0.4
1501-2500	3	0.3	1	0.2	2	0.4	2	0.3	1	0.4
2501 or more	1	0.1	0	0.0	1	0.2	1	0.1	0	0.0
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

TABLE 20
AVERAGE INCOME AND PER CAPITA INCOME OF HOUSEHOLDS

Type of Household	Number of Households	Average Income of Households	Average Number of Dwellers	Per Capita Income of Households
All Households	1,006	568	3.2	176
Only with Older Persons	375	388	1.4	273
Only with one Dweller (Older Person)	224	301	1.0	301
With Contributory Benefit	657	653	3.3	197
With Non-Contributory Benefit	294	485	3.1	158
With Non-Contributory Benefit (Excluding the Value of the Benefit)	294	267	3.1	87
With Social Assistance for Older Persons	189	464	2.9	163
With Social Assistance for Older Persons (Excluding the Value of the Benefit)	189	255	2.9	89
With Social Assistance for Older Persons (Excluding all Non-Contributory Benefits)	189	249	2.9	87
With Social Assistance for the Disabled	42	574	3.6	159
With Social Assistance for the Disabled (Excluding the Value of the Benefit)	42	365	3.6	101
With Social Assistance for the Disabled (Excluding all Non-Contributory Benefits)	42	336	3.6	93
With Rural Retirement Pay	72	481	3.4	144
With Rural Retirement Pay (Excluding the Value of the Benefit)	72	274	3.4	80
With Rural Retirement Pay (Excluding all Non-Contributory Benefits)	72	252	3.4	74

where people receive non-contributory benefits (R\$ 158). Average per capita earnings vary little in households according to the different types of non-contributory benefits—R\$ 163 where there is aid for older persons, R\$ 159 where there is aid for the disabled and R\$ 144 where there are rural retirement pensions.

When the value of non-contributory benefits is eliminated, per capita earnings of contemplated households drop from R\$ 158 to R\$ 87, showing the importance of non-contributory benefits to reduce the level of poverty in the older population in Brazil. These reductions repeat themselves at the rate that different types of benefits are eliminated. In the case of social assistance for older persons, it declines from R\$ 163 to R\$ 89 upon eliminating the benefit for older persons and R\$ 87 on excluding the rest of the non-contributory benefits occasionally received by the household. In the case of rural retirement pensions, the values are R\$ 144, R\$ 80 and R\$ 74, respectively.

The importance of non-contributory benefits could also be verified through its participation in household income. In 55 of the 189 households receiving social assistance for older persons, the benefit represents 100% of household earnings. In 73 households, it represents 75% or more of earnings and in 118, 50% or more. Upon considering all 294 households that receive some sort of non-contributory benefit, one can note that in 91 the value of the benefit is 100% the value of household earnings, in 116, 75% or more and in 184, 50% or more. The participation of contributory benefits is also high in household income (Table 21).

Another interesting fact is the number of benefits received by households under examination. The general rule is that only one non-contributory benefit is received, but there are various cases of more than one benefit being received by the dwellers in a household. In the case of social assistance for older persons, nine of the 189 households examined receive two benefits. In social assistance to the

TABLE 21
RELATIVE IMPORTANCE OF BENEFIT FOR HOUSEHOLD INCOME

Type of Benefit	100% of Income	75% or more of Income	50% or more of Income	Total no. of Households
Social Assistance for Older Persons	55	73	118	189
All Non-Contributory Benefits	91	116	184	294
Contributory Benefits	208	275	444	657
All Benefits (Contributory or Not)	323	424	632	890

disabled, two of the 42 benefited households are in analogous situation. In rural retirement pensions, where rules for receiving pensions are more generous, there are 72 benefited households and in six there were found to be two such benefits. On reviewing the whole set of non-contributory benefits (assistance for older persons, assistance for the disabled and rural retirement pensions), there were 294 benefited households, 269 of which receive one benefit, 24, two benefits and one receives three benefits. When examining all benefits (contributory and non-contributory), there is even one household receiving four benefits (Table 22).

Though there is no prohibition in receiving multiple benefits, the rigor of rules governing per capita familial earnings that entitle a person to BCP (assistance for older persons and for the disabled) suggests that some households are probably above the maximum allowed earning level for access to the benefit.¹⁶ The rules to estimate income so as to be eligible for assistance for older persons were changed by the Statute for Older Persons. From this year onwards, the income to be used in the calculation should be the older person's income and not that of the household.

TABLE 22
DISTRIBUTION OF BENEFITS PER HOUSEHOLD

Number of Benefits	Assistance for Older Persons	Assistance of the Disabled	Rural Retirement Pensions	All Non-Contributory	Contributory Benefits	All Benefits
Total no. of Households	1,006	1,006	1,006	1,006	1,006	1,006
Zero Benefits	817	964	934	712	349	116
Subtotal	189	42	72	294	657	890
1 Benefit	180	40	66	269	573	723
2 Benefits	9	2	6	24	83	163
3 Benefits	0	0	0	1	1	3
4 Benefits	0	0	0	0	0	1

Note:

- 116 households receive no benefits at all.
- 294 households receive at least 1 type of non-contributory benefit.
- 233 households receive only non-contributory benefits.
- 657 households receive at least 1 contributory benefit.
- 596 households receive only contributory benefits.
- 61 households receive contributory and non-contributory benefits.
- 890 households receive at least 1 type of benefit.

16. Such households can be identified from the databank, but, as this was not one of the aims of the survey, the calculation was not made.

3.5 Other Economic Information on Households

The most common practice among dwellers of households is to use their earnings collectively to meet expenses, which occurs in 69.5% of households. Alternatively, dwellers use a part of their earnings collectively to meet expenses (28.5%). It is quite rare that each one keep his own earnings just for himself. Most of the time the person who declares himself to be the head of household is also responsible for decisions on household expenditures (78.6%). In 10.4% of households, decisions related to expenditures are left up to the spouse, whereas in 7.2% it is the son or daughter that decides. The other members of the family have little participation in decisions on household expenditures (Tables 23 and 24).

At the rate that the largest part of households are urban, the raising of animals is relatively rare. Only in the case of chickens is there some importance, applicable to 11% of households. Only 12 households raise horses, eight, cows and four, pigs. None of the households raise sheep/goats. The households raising animals are located mainly in Ilhéus, and in the rural regions.

Similarly, the production of greens and vegetables is rarely found. Only 4.5% of households surveyed produce their own greens and vegetables, and these are located basically in rural areas. They play a minimal role in the domestic budget. The average estimated value of greens and vegetables grown at home with this type of production does not exceed R\$ 27.

In only one out of every six households could there be found a dweller with a bank account. On the other hand, in not more than one out of every 13 households are there dwellers with savings accounts. This result is particularly unfavourable if one considers the inflationary tradition existing in the Brazilian economy, where remunerated bank accounts and savings accounts are important protection mechanisms to stave off losses due to inflation (Table 25).

TABLE 23
FORM OF UTILISING HOUSEHOLD EARNINGS

Utilisation	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Pool All Earnings Together	699	69.5	307	60.8	392	78.2	517	66.8	182	78.4
Pool Part of Earnings	287	28.5	183	36.2	104	20.8	238	30.7	49	21.1
Don't Pool Earnings	20	2.0	15	3.0	5	1.0	19	2.5	1	0.4
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

TABLE 24
PERSON RESPONSIBLE FOR DECISIONS WITH EXPENDITURES FOR THE HOUSEHOLD

Person Responsible	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Not Living in Household	6	0.6	0	0.0	6	1.2	5	0.6	1	0.4
Head of Household	791	78.6	403	79.8	388	77.4	613	79.2	178	76.7
Spouse	105	10.4	49	9.7	56	11.2	70	9.0	35	15.1
Son/Daughter	72	7.2	35	6.9	37	7.4	58	7.5	14	6.0
Father/Mother	6	0.6	5	1.0	1	0.2	6	0.8	0	0.0
Grandson/Granddaughter	8	0.8	3	0.6	5	1.0	7	0.9	1	0.4
Son/Daughter-in-Law	7	0.7	3	0.6	4	0.8	6	0.8	1	0.4
Brother/Sister-in-Law	1	0.1	0	0.0	1	0.2	1	0.1	0	0.0
Uncle/Aunt	1	0.1	0	0.0	1	0.2	0	0.0	1	0.4
Brother/Sister	6	0.6	4	0.8	2	0.4	5	0.6	1	0.4
Nephew/Niece	2	0.2	2	0.4	0	0.0	2	0.3	0	0.0
Other Person	1	0.1	1	0.2	0	0.0	1	0.1	0	0.0
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

TABLE 25
OWNING A CHECKING OR SAVINGS ACCOUNT PER HOUSEHOLD

Ownership	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Checking Account	165	16.4	98	19.4	67	13.4	145	18.7	20	8.6
Savings Account	75	7.5	40	7.9	35	7.0	64	8.3	11	4.7
Total	1,006		505		501		774		232	

The financial difficulties in households are resolved, mainly, with the help of friends and relatives (44.2%). The remaining alternatives used are reducing expenditures in general (15.8%), reducing expenditures with food in particular (12.2%), borrowing money (8.9%), buying on credit (5.5%) and looking for extra work (4.9%). Up to a certain point it is quite surprising that about 30% of households claim they take no steps whatsoever to overcome financial difficulties (Table 26).

TABLE 26
MANNER OF SOLVING FINANCIAL DIFFICULTIES PER HOUSEHOLD

Manner	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Help of Friends	447	44.4	209	41.4	238	47.5	348	45.0	99	42.7
Help of Employer	12	1.2	9	1.8	3	0.6	11	1.4	1	0.4
Help of the Church	13	1.3	10	2.0	3	0.6	12	1.6	1	0.4
Borrow Money	90	8.9	54	10.7	36	7.2	77	9.9	13	5.6
Reduce Expenditures with Food	123	12.2	57	11.3	66	13.2	85	11.0	38	16.4
Reduce other Expenditures	159	15.8	98	19.4	61	12.2	124	16.0	35	15.1
Look for Extra Work	49	4.9	40	7.9	9	1.8	42	5.4	7	3.0
Buy on Credit	55	5.5	29	5.7	26	5.2	39	5.0	16	6.9
Delay Payments/fail to Pay	30	3.0	19	3.8	11	2.2	26	3.4	4	1.7
Others	31	3.1	22	4.4	9	1.8	26	3.4	5	2.2
Take no Steps	295	29.3	153	30.3	142	28.3	223	28.8	72	31.0
Total	1,006		505		501		774		232	

3.6 Quality of Life

A great number of households consider themselves very satisfied (16.8%), or satisfied (45.2%) with the quality of life the residents are having. Dissatisfaction (12.7%) and great dissatisfaction (2.1%) are relatively small. The remaining 22.4% do not consider themselves either satisfied or unsatisfied. The high levels of satisfaction cause a certain degree of surprise due to the low earnings and to the precarious conditions of a large part of these households (Table 27).

TABLE 27
GENERAL LEVEL OF SATISFACTION PER HOUSEHOLD

Level	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Very Satisfied	169	16.8	108	21.4	61	12.2	141	18.2	28	12.1
Satisfied	455	45.2	185	36.6	270	53.9	339	43.8	116	50.0
Average Satisfaction	225	22.4	122	24.2	103	20.6	169	21.8	56	24.1
Unsatisfied	128	12.7	72	14.3	56	11.2	103	13.3	25	10.8
Very Unsatisfied	29	2.9	18	3.6	11	2.2	22	2.8	7	3.0
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

The picture changes quite a bit when the financial situation of the households comes under scrutiny. Only 1.3% informed that their financial situation was very good, while 16.4% claimed that it was good. In contrast, 8.9% said that it was very bad and 22.2%, that it was bad. The greater part, however, recognized that their financial situation could be regarded as average (Table 28).

For a little more than half the households the financial situation has remained the same over the last three years. Only 11.5% said that the financial situation improved. Then again, 36.8% claimed that their finances got worse over that period. Such a result is not surprising, as the country has faced economic difficulties over the last few years with the return of inflation and the recession it is currently undergoing as well (Table 29).

The main reason for the aggravation has been the rise in cost of living, informed by over half the households where the financial situation suffered modifications over the period. It is worth remembering that throughout the second

TABLE 28
EVALUATION OF FINANCIAL SITUATION PER HOUSEHOLD

Evaluation	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Very Good	13	1.3	4	0.8	9	1.8	9	1.2	4	1.7
Good	165	16.4	76	15.0	89	17.8	125	16.1	40	17.2
Average	515	51.2	270	53.5	245	48.9	394	50.9	121	52.2
Bad	223	22.2	101	20.0	122	24.4	177	22.9	46	19.8
Very Bad	90	8.9	54	10.7	36	7.2	69	8.9	21	9.1
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

TABLE 29
RELATIONSHIP BETWEEN THE CURRENT FINANCIAL SITUATION AND THAT OF THREE YEARS
AGO PER HOUSEHOLD

Comparison	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Better	116	11.5	59	11.7	57	11.4	87	11.2	29	12.5
The Same	520	51.7	254	50.3	266	53.1	411	53.1	109	47.0
Worse	370	36.8	192	38.0	178	35.5	276	35.7	94	40.5
Total	1,006	100.0	505	100.0	501	100.0	774	100.0	232	100.0

half of 2002, when the fieldwork for the survey began, there was a strong inflationary acceleration in the economy. It was also much remarked that unemployment had been the cause of the aggravation that affected the members of households.

Two main causes were pointed out to justify the improvement in finances experienced by some households: in the first place, the fact that some dweller in the household obtained employment. In the second place that dwellers began receiving benefits (contributory or not), showing once again the importance of benefits for the older population (Table 30).

TABLE 30
MAIN CAUSES OF CHANGE IN FINANCIAL SITUATION OF HOUSEHOLD

Causes	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Inflation	264	54.4	125	50.0	139	59.1	191	52.8	73	59.3
Unemployment	53	10.9	30	12.0	23	9.8	46	12.7	7	5.7
Employment	38	7.8	18	7.2	20	8.5	30	8.3	8	6.5
Improved Finances	27	5.6	12	4.8	15	6.4	16	4.4	11	8.9
Pensions and Benefits	20	4.1	15	6.0	5	2.1	17	4.7	3	2.4
Old age or Illness	18	3.7	10	4.0	8	3.4	12	3.3	6	4.9
Low Salary	14	2.9	9	3.6	5	2.1	11	3.0	3	2.4
Less Expenses	11	2.3	4	1.6	7	3.0	6	1.7	5	4.1
Incidental Expenses	8	1.6	3	1.2	5	2.1	6	1.7	2	1.6
Death in the Family	7	1.4	5	2.0	2	0.9	6	1.7	1	0.8
Expenses with Illness	5	1.0	4	1.6	1	0.4	4	1.1	1	0.8
Low Retirement Pension	5	1.0	5	2.0	0	0.0	5	1.4	0	0.0
More Independence	4	0.8	3	1.2	1	0.4	4	1.1	0	0.0
Larger Family	4	0.8	3	1.2	1	0.4	3	0.8	1	0.8
Good Investments	1	0.2	1	0.4	0	0.0	1	0.3	0	0.0
Others	6	1.2	3	1.2	3	1.3	4	1.1	2	1.6
Total	485	100.0	250	100.0	235	100.0	362	100.0	123	100.0

3.7 Social Assistance for Older Persons

Of the 1.354 older persons in the survey 55 years of age and over, 1/4 claim they have the right to social assistance for older persons [Continual Instalment Benefit (CIB)—Benefício de Prestação Continuada (BPC) or Lifelong Monthly Income (LMI)—Renda Mensal Vitalícia (RMV)], whereas 13.0% do not know whether they have a right to the benefit or not. Nevertheless, only 198 (14.6%) declare they are receiving the mentioned benefit. Thus, either the older persons are ill informed, which seems the most probable, or they are not receiving the benefit despite their being entitled to do so. As already mentioned, social assistance for older persons required, at the time of the survey, a minimum of 67 years of age and a familial per capita earnings of 1/4 MW at most, greatly restricting the number of potential beneficiaries (Table 31).

In general, an interested person using his own initiative or the help of relatives or friends has been able to obtain benefits. The mediation of politicians, lawyers or community services has occurred, but is less common.

Approximately 3/4 of the benefits were conceded as of 1995 and 43.0% since 1999. Only 7.6% were obtained before 1990. Less than one third of beneficiaries receive the benefit alone. It is more common, however, to go in the company of a relative or friend (41.4%). There are still those 26.8% who have procurators to receive the benefit for them (Table 32).

TABLE 31
SOCIAL ASSISTANCE BENEFIT FOR OLDER PERSONS

	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Entitled to Benefit	337	24.9	232	33.7	105	15.8	296	28.5	41	13.0
Receiving	198	14.6	120	17.4	78	11.7	165	15.9	33	10.5

TABLE 32
YEAR IN WHICH BEGAN RECEIVING SOCIAL ASSISTANCE BENEFIT FOR OLDER PERSONS

Year	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Up to 1986	4	2.0	3	2.5	1	1.3	4	2.4	0	0.0
1987-1990	11	5.6	2	1.7	9	11.5	8	4.8	3	9.1
1991-1994	22	11.1	12	10.0	10	12.8	16	9.7	6	18.2
1995-1998	76	38.4	45	37.5	31	39.7	63	38.2	13	39.4
1999-2002	75	37.9	51	42.5	24	30.8	66	40.0	9	27.3
Doesn't Know	10	5.1	7	5.8	3	3.8	8	4.8	2	6.1
Total	198	100.0	120	100.0	78	100.0	165	100.0	33	100.0

3.8 Social Assistance for the Disabled

Only a small percentage of older persons (58% or 4.3%) have claimed the right to social assistance for the disabled, whereas 2.1% have reported to be actually receiving the benefit. The value of the benefit is also equal to a minimum wage. Like the social assistance for older persons, the initiative to receive the benefit is to a large degree of the individual himself or of a friend or relative (Table 33).

As it is the disabled, regardless of age, who receive these benefits, they tend to be of longer duration. Thus, 1/4 of the benefits began before 1986 and another fourth, between 1987 and 1994. The rest are more recent. Despite their disabilities, approximately 1/4 of the beneficiaries receive their monthly payments alone. A little more than half ask a third party to go in their place, whereas the remainder go out to receive their respective benefit in the company of another person (Table 34).

TABLE 33
SOCIAL ASSISTANCE BENEFIT FOR THE DISABLED

	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Entitled to Benefit	58	4.3	36	5.2	22	3.3	43	4.1	15	4.8
Receiving	29	2.1	8	1.2	21	3.2	14	1.3	15	4.8

TABLE 34
YEAR IN WHICH BEGAN RECEIVING SOCIAL ASSISTANCE BENEFIT FOR THE DISABLED

Year	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Up to 1986	7	24.1	2	25.0	5	23.8	4	28.6	3	20.0
1987-1990	3	10.3	0	0.0	3	14.3	0	0.0	3	20.0
1991-1994	4	13.8	2	25.0	2	9.5	4	28.6	0	0.0
1995-1998	8	27.6	1	12.5	7	33.3	3	21.4	5	33.3
1999-2002	6	20.7	2	25.0	4	19.0	2	14.3	4	26.7
Doesn't Know	1	3.4	1	12.5	0	0.0	1	7.1	0	0.0
Total	29	100.0	8	100.0	21	100.0	14	100.0	15	100.0

3.9 Rural Retirement Pension

The rural retirement pension by age is the most disseminated non-contributory benefit in the country. It is found not only in rural regions but also in urban areas, representing, in the latter case, persons who migrated to urban areas after the active working period. The minimum age to have access to this type of benefit is much less than in the case of assistance for older persons—55 years for women and 60 years for men. Although less than 1/4 the sample was collected in rural areas in Ilhéus, there were 78 retirement pensions of this type accounted for, 10 in Rio de Janeiro and 68 in Ilhéus, 39 of which in rural regions.

Like the other non-contributory benefits, the percentage of older persons that believe they have a right to this benefit (8.9%) is higher than those that effectively receive the benefit (5.8%) (Table 35).

Beneficiaries have had access to the assistance either on their own initiative or with the help of relatives and friends. Occasionally, it is achieved with the help of politicians and lawyers. As the minimum age to receive this benefit is relatively low, the duration of the benefit has been long. Almost 2/3 were obtained before 1994, whereas 17.9% had begun before 1986. Only 11.9% of the surveyed rural retirement pensions by age have begun as of 1999. Approximately 40% of beneficiaries ask a third person to receive the benefit for them. The remainder are divided among those that go alone (32.1%) and those that need to be accompanied (28.2%) (Table 36).

TABLE 35
RURAL RETIREMENT PENSION BENEFIT

	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Entitled to Benefit	121	8.9	37	5.4	84	12.6	73	7.0	48	15.2
Receiving	78	5.8	10	1.5	68	10.2	39	3.8	39	12.4

TABLE 36
YEAR IN WHICH BEGAN TO RECEIVE RURAL RETIREMENT PENSION BENEFIT

Year	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Up to 1986	14	17.9	2	20.0	12	17.6	9	23.1	5	12.8
1987-1990	14	17.9	2	20.0	12	17.6	6	15.4	8	20.5
1991-1994	22	28.2	3	30.0	19	27.9	10	25.6	12	30.8
1995-1998	14	17.9	2	20.0	12	17.6	7	17.9	7	17.9
1999-2002	9	11.5	1	10.0	8	11.8	6	15.4	3	7.7
Doesn't Know	5	6.4	0	0.0	5	7.4	1	2.6	4	10.3
Total	78	100.0	10	100.0	68	100.0	39	100.0	39	100.0

Various types of possible difficulties were inquired about in connection with receiving the three surveyed types of non-contributory benefits. Surprisingly, almost no difficulties were reported, showing the high level of institutionalisation of the benefit program—93.1% of those interviewed informed that they did not face any type of difficulty whatsoever in receiving the benefits.

3.10 Additional Information about Older Persons

Two-thirds of older persons were born in urban regions. Based on the location of the fieldwork, it is not surprising that the greatest part of the older persons were born in Bahia (46.9%) or in Rio de Janeiro (22.7%). The smaller percentage found in Rio de Janeiro is due to the fact that this region was an important nucleus that attracted migrants from all over the country. Among the remaining states with large numbers of older persons surveyed, one can highlight Minas Gerais and Espírito Santo in the Southeastern region, as well as Paraíba, Pernambuco and Sergipe in the Northeastern region.

Two-thirds of older persons were born in the very states in which they currently live. For the remainder, the time elapsed since their migration to Rio or to Bahia has been quite long, generally speaking, more than 30 years. This result certainly reflects the strong migration that occurred to Rio de Janeiro in past decades.

The main occupation throughout an older person's active life was that of farmer (26.4%) and in second place, domestic servant (14.1%). Among the remainder, the distribution is quite diffuse, including seamstresses (4.8%), bricklayers (3.2%), drivers (2.4%), cooks (2.7%), laundry person to do washing/ironing (2.7%) and civil servants (2.6%). A considerable portion of older persons had no occupation whatsoever in the past (Table 37).

Almost 3/4 of older persons handle their own money. Only 6% regularly transfer money to family member that live in other households. The value donated is relatively low—2/3 up to R\$ 50 and 4/5 up to R\$ 100. For the 75 older persons that dole out money, the average value of the donation is R\$ 107. If all 1,354 older persons in the survey are contemplated, however, the average value drops to only R\$ 6. Eighty percent are unable to save any money for themselves, whereas 1/6 puts away a little money.¹⁷ As a result, it has been quite rare that a part of the

17. This result contradicts Delgado and Cardoso Jr. (2000), who shows that part of the social security benefit is used to fund small agricultural activities (44.7% in the South and 37.0% in the Northeast).

TABLE 37
MAIN OCCUPATION THROUGHOUT LIFE

Occupation	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Sales-Owner/Independent	10	0.7	10	1.5	0	0.0	10	1.0	0	0.0
Grocery Clerk	12	0.9	9	1.3	3	0.5	12	1.2	0	0.0
Office Assistant	5	0.4	2	0.3	3	0.5	5	0.5	0	0.0
Elementary School Teacher	10	0.7	2	0.3	8	1.2	6	0.6	4	1.3
Farmer	357	26.4	35	5.1	322	48.4	162	15.6	195	61.9
Farm worker	16	1.2	2	0.3	14	2.1	9	0.9	7	2.2
Fisherman	16	1.2	1	0.1	15	2.3	12	1.2	4	1.3
Seamstress/Clothesmaker	65	4.8	49	7.1	16	2.4	63	6.1	2	0.6
Bricklayer	44	3.2	28	4.1	16	2.4	39	3.8	5	1.6
Construction Worker	8	0.6	5	0.7	3	0.5	7	0.7	1	0.3
Employed Salesperson	19	1.4	9	1.3	10	1.5	18	1.7	1	0.3
Travelling Salesperson	9	0.7	4	0.6	5	0.8	8	0.8	1	0.3
Driver	32	2.4	23	3.3	9	1.4	29	2.8	3	1.0
Nursemaid	5	0.4	3	0.4	2	0.3	4	0.4	1	0.3

(continue)

(continuation)

Occupation	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
House Servant	191	14.1	159	23.1	32	4.8	173	16.7	18	5.7
Cook	36	2.7	31	4.5	5	0.8	35	3.4	1	0.3
Washing/Ironing Maid	36	2.7	16	2.3	20	3.0	26	2.5	10	3.2
Security Guard	16	1.2	12	1.7	4	0.6	14	1.3	2	0.6
Civil Servant	35	2.6	30	4.4	5	0.8	32	3.1	3	1.0
Others	192	14.2	130	18.9	62	9.3	172	16.6	20	6.3
Not Identified	43	3.2	18	2.6	25	3.8	34	3.3	9	2.9
Had no Occupation	197	14.5	111	16.1	86	12.9	169	16.3	28	8.9
Total	1,354	100.0	689	100.0	665	100.0	1,039	100.0	315	100.0

benefit could be used by older persons to initiate or improve small businesses. Only 5.3% made such a claim (Tables 38 to 41).

The greater part of older persons considers their health to be average (46.2%) or good (30.9%). One-sixth considers it to be bad. Very few claim that it is very good (2.3%) or very bad (3.8%) (Table 42).

TABLE 38
ADMINISTRATION OF OWN MONEY BY OLDER PERSON

	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Yes	998	73.7	515	74.7	483	72.6	772	74.3	226	71.7
No	356	26.3	174	25.3	182	27.4	267	25.7	89	28.3
Total	1,354	100.0	689	100.0	665	100.0	1,039	100.0	315	100.0

TABLE 39
DONATION OF MONEY BY OLDER PERSONS TO FAMILY MEMBERS IN OTHER HOUSEHOLDS

	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Yes	75	5.5	48	7.0	27	4.1	61	5.9	14	4.4
No	1,279	94.5	641	93.0	638	95.9	978	94.1	301	95.6
Total	1,354	100.0	689	100.0	665	100.0	1,039	100.0	315	100.0

TABLE 40
AMOUNT SAVED BY OLDER PERSONS THEMSELVES

Amount	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
None	1,075	79.4	532	77.2	543	81.7	800	77.0	275	87.3
Little	225	16.6	117	17.0	108	16.2	188	18.1	37	11.7
Some	37	2.7	28	4.1	9	1.4	35	3.4	2	0.6
Considerable Amount	9	0.7	6	0.9	3	0.5	8	0.8	1	0.3
Entire Amount	8	0.6	6	0.9	2	0.3	8	0.8	0	0.0
Total	1,354	100.0	689	100.0	665	100.0	1,039	100.0	315	100.0

TABLE 41
UTILISATION OF BENEFIT BY OLDER PERSONS FOR INCOME GENERATION OF BUSINESS PROJECTS

Utilisation	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Yes	72	5.3	29	4.2	43	6.5	58	5.6	14	4.4
No	1,282	94.7	660	95.8	622	93.5	981	94.4	301	95.6
Total	1,354	100.0	689	100.0	665	100.0	1,039	100.0	315	100.0

TABLE 42
EVALUATION OF PRESENT HEALTH STANDING OF OLDER PERSONS

Evaluation	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Very Good	31	2.3	16	2.3	15	2.3	21	2.0	10	3.2
Good	419	30.9	218	31.6	201	30.2	323	31.1	96	30.5
Average	626	46.2	318	46.2	308	46.3	474	45.6	152	48.3
Bad	226	16.7	104	15.1	122	18.3	180	17.3	46	14.6
Very Bad	52	3.8	33	4.8	19	2.9	41	3.9	11	3.5
Total	1,354	100.0	689	100.0	665	100.0	1,039	100.0	315	100.0

The participation of older persons in groups or associations is quite small. It is only the church groups that deserve special mention, being cited by 30.3% of older persons. Over 2/3 simply claim that they don't belong to any group (Table 43).

The majority of older persons (70.2%) admitted that they felt less safe with regard to violence nowadays than they did two years ago. Only 5% stated that they felt safer now. The data is worse for Rio de Janeiro than for Bahia, and for urban regions than for rural ones, but the rule in general has been an increased sense of insecurity. Such figures do not cause any surprise whatsoever owing to the increase in violence in urban regions throughout the country. As already mentioned before, during the fieldwork in Rio de Janeiro, the survey team was obliged to avoid certain previously selected sectors due to the lack of safety in those parts of the city (Table 44).

TABLE 43
PARTICIPATION OF OLDER PERSONS IN GROUPS, ASSOCIATIONS OF ORGANISATIONS

Group	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Senior Citizens	17	1.3	17	2.5	0	0.0	17	1.6	0	0.0
Community Groups	12	0.9	7	1.0	5	0.8	12	1.2	0	0.0
Church Groups	410	30.3	240	34.8	170	25.6	351	33.8	59	18.7
Sports Clubs	3	0.2	2	0.3	1	0.2	3	0.3	0	0.0
School Organisations	2	0.1	2	0.3	0	0.0	2	0.2	0	0.0
Unions	2	0.1	0	0.0	2	0.3	2	0.2	0	0.0
Political Organisations	1	0.1	1	0.1	0	0.0	1	0.1	0	0.0
Others	1	0.1	0	0.0	1	0.2	0	0.0	1	0.3
Non Participant	927	68.5	437	63.4	490	73.7	671	64.6	256	81.3

TABLE 44
POSITION OF OLDER PERSONS WITH REGARD TO VIOLENCE OVER THE LAST TWO YEARS

Position	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Safer	71	5.2	15	2.2	56	8.4	36	3.5	35	11.1
The Same	333	24.6	111	16.1	222	33.4	233	22.4	100	31.7
Less Safe	950	70.2	563	81.7	387	58.2	770	74.1	180	57.1
Total	1,354	100.0	689	100.0	665	100.0	1,039	100.0	315	100.0

Recognition of the importance of education in the life of individuals was made apparent in the fieldwork. More than 3/4 of older persons said that better schooling would have improved their lives. Among the remainder of items being surveyed, 13.0% indicated less inequality and 10.6%, more independence to make their own choices (Table 45).

In the items related to citizenship, it is amazing to verify that more than 90% of older persons did not exercise any one of the four items assessed by the survey during the last 12 months. The greatest participation was seen in community

TABLE 45
FACT THAT IMPROVED LIFE OF OLDER PERSON

Fact	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Greater Independence	144	10.6	61	8.9	83	12.5	112	10.8	32	10.2
More Education	1,034	76.4	529	76.8	505	75.9	799	76.9	235	74.6
Less Inequality	176	13.0	99	14.4	77	11.6	128	12.3	48	15.2
Total	1,354	100.0	689	100.0	665	100.0	1,039	100.0	315	100.0

meetings, though only 4.8% of older persons had the opportunity to participate in this type of activity. Talking over varied themes, complaining to the authorities and getting involved in election work are activities hardly ever engaged in by older persons (Table 46).

TABLE 46
ACTIVITIES ENGAGED IN BY OLDER PERSONS AS CITIZENS OVER THE LAST 12 MONTHS

Activity	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Community Meetings	65	4.8	43	6.2	22	3.3	58	5.6	7	2.2
Discussion of Themes	25	1.8	15	2.2	10	1.5	21	2.0	4	1.3
Complaining to the Authorities	23	1.7	18	2.6	5	0.8	19	1.8	4	1.3
Election Work	5	0.4	5	0.7	0	0.0	5	0.5	0	0.0
None	1,246	92.0	616	89.4	630	94.7	945	91.0	301	95.6

When asked about the good things in life various items came up. The main focus is the family, appearing in diverse forms—children/grandchildren (20.0%), birth of children (3.2%), the family (12.6%), the spouse (5.0%), etc. Religion (12.5%) and health (9.4%) are also much discussed, demonstrating their importance at the end of the life of people. The house where they live (4.4%) and owning ones home (5.3%) are also highlighted. Aside from these, various other items were brought up such as friends (3.3%), job (3.2%), and the benefit (2.9%). The list is quite extensive as can be seen in Table 47.

TABLE 47
GOOD THINGS IN LIFE

Item	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Children and/or Grandchildren	761	20.0	354	18.2	407	22.0	562	19.2	199	22.7
Family	477	12.6	246	12.6	231	12.5	375	12.8	102	11.6
Religion	476	12.5	262	13.5	214	11.6	387	13.2	89	10.2
Health	357	9.4	203	10.4	154	8.3	272	9.3	85	9.7
Owens a Home	203	5.3	111	5.7	92	5.0	148	5.1	55	6.3
Spouse	189	5.0	76	3.9	113	6.1	122	4.2	67	7.6
Has a Home	168	4.4	81	4.2	87	4.7	129	4.4	39	4.5
Friends	125	3.3	59	3.0	66	3.6	88	3.0	37	4.2
Birth of Children	123	3.2	105	5.4	18	1.0	112	3.8	11	1.3
Employment	120	3.2	42	2.2	78	4.2	85	2.9	35	4.0
Benefit	109	2.9	59	3.0	50	2.7	86	2.9	23	2.6
Love, Peace and Tranquility	107	2.8	67	3.4	40	2.2	86	2.9	21	2.4
Being Alive	78	2.1	42	2.2	36	1.9	64	2.2	14	1.6
Marriage	70	1.8	25	1.3	45	2.4	55	1.9	15	1.7

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(continuation)

Item	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Days of Ones' Youth	46	1.2	6	0.3	40	2.2	35	1.2	11	1.3
Radio and TV	29	0.8	16	0.8	13	0.7	26	0.9	3	0.3
Trips and Outings	29	0.8	16	0.8	13	0.7	25	0.9	4	0.5
Finances, Money	27	0.7	22	1.1	5	0.3	26	0.9	1	0.1
Place where Resides	25	0.7	8	0.4	17	0.9	13	0.4	12	1.4
Food	24	0.6	14	0.7	10	0.5	19	0.7	5	0.6
Good Neighbours	23	0.6	15	0.8	8	0.4	18	0.6	5	0.6
Hobbies (Sewing, etc.)	20	0.5	5	0.3	15	0.8	13	0.4	7	0.8
Freedom and Independence	14	0.4	8	0.4	6	0.3	13	0.4	1	0.1
Good Relationships	14	0.4	8	0.4	6	0.3	13	0.4	1	0.1
Stop Drinking	11	0.3	3	0.2	8	0.4	9	0.3	2	0.2
Volunteer Work	9	0.2	6	0.3	3	0.2	7	0.2	2	0.2
Pets	9	0.2	5	0.3	4	0.2	7	0.2	2	0.2
Honesty	9	0.2	4	0.2	5	0.3	6	0.2	3	0.3
Addictions	8	0.2	5	0.3	3	0.2	6	0.2	2	0.2

(continue)

(continuation)

Item	Total		Rio de Janeiro		Ilhéus		Urban		Rural	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Football and Sports	8	0.2	3	0.2	5	0.3	6	0.2	2	0.2
Curing an Illness	8	0.2	6	0.3	2	0.1	6	0.2	2	0.2
Retirement Pension	8	0.2	8	0.4	0	0.0	8	0.3	0	0.0
Happiness	8	0.2	5	0.3	3	0.2	6	0.2	2	0.2
Parties	8	0.2	2	0.1	6	0.3	6	0.2	2	0.2
Raising Animals	7	0.2	1	0.1	6	0.3	4	0.1	3	0.3
Educate Children	7	0.2	3	0.2	4	0.2	6	0.2	1	0.1
Sleep	7	0.2	5	0.3	2	0.1	7	0.2	0	0.0
Old Age	7	0.2	1	0.1	6	0.3	4	0.1	3	0.3
Others	32	0.8	19	1.0	14	0.9	28	0.9	4	0.4
None	13	0.3	7	0.4	6	0.3	10	0.3	3	0.3
No item Informed	24	0.6	15	0.8	9	0.5	23	0.8	1	0.1
Total	3,797	100.0	1,947	100.0	1,850	100.0	2,921	100.0	876	100.0

4 CONCLUSION

The fieldwork clearly shows the importance of benefits (contributory or not) in the process of generating income for the older population in the country. Although contributory benefits are numerically much more important than the non-contributory ones, the latter play an unquestionable role in the reduction of poverty, especially in rural regions.

The rural retirement pension by age, a non-contributory benefit in general, is very important in the sense that it guarantees to those that worked on family lands a minimum remuneration once they become inactive. As the minimum age required for the benefit is 55 years for women and 60 years for men, it has become quite frequent in rural regions, placing higher value on older persons who have actually become assets instead of liabilities for their families. Unlike what happened in the past, today there has been an empowerment of the older population.

Non-contributory urban benefits for poor older persons (CIB and LMI) are much less common. In the first place, the urban population has much greater access to official contributory mechanisms than the rural population. Secondly, due to the demands in maximum levels of very low familial per capita earnings (1/4 MW) and very high minimum age. The recent reduction in minimum access age to the BPC from 67 to 65 years and the change in the calculation of income of older persons to receive the benefit will increase coverage a little for urban workers originally in the informal sector of the economy.

As the minimum value of the official INSS contributory retirement pension is the same as that of non-contributory benefits (1 MW), one can see that the greater part of official retirees receive the same value as that received by non-contributory beneficiaries, which could be considered an incentive for not contributing. At any rate, as millions of workers find themselves outside the formal sector of the economy, there is no other alternative for them but to seek access the non-contributory social security mechanisms at the end of their active lives.

In 2003, the country underwent a wide-ranging social security reform in the public sector. The non-contributory benefits for older persons were preserved. Despite the fiscal crisis of the country, there is no indication that there might be a reduction in such benefits. Although difficulties were seen to exist in a great number of households with older persons visited by the survey, both in the urban and rural regions, the situation would be much worse if such benefits failed to exist, as the findings of this study clearly pointed out.

It is true that the fieldwork found abuse in various cases where the rules for obtaining the right to benefits have not been strictly followed. It also revealed

what appears to be an industry of benefit concession by means of intermediaries who charge money for obtaining benefits for uninformed older persons. Such cases, however, represent distortions that should be curtailed by better inspections and by a broad campaign to disseminate the rights of the population, aside from the simple rules for obtaining benefits.

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OLDER PERSONS AND SOCIAL SECURITY*

Francisco Eduardo Barreto de Oliveira

In memoriam

Kaizô Iwakami Beltrão

Instituto Brasileiro de Geografia e Estatística (IBGE)/Escola
Nacional de Ciências Estatísticas (ENCE)

Sonoe Sugahara Pinheiro

Instituto de Pesquisa Econômica Aplicada (IPEA)

Fernanda Paes Leme Peyneau

Instituto de Pesquisa Econômica Aplicada (IPEA)

João Luís Oliveira Mendonça

Instituto de Pesquisa Econômica Aplicada (IPEA)

1 INTRODUCTION

The present work consists of an update of a homonymous article published in the first edition of this book. We have opted for an update of the article for two main reasons: to demonstrate that many of the dysfunctions pointed out and proved statistically at the end of 1999 endure, despite the two reforms that the Brazilian social security system underwent in the last six years, and to see whether, and to what extent, some of the problems in the system were minimized with the 1998 reform.

The rereading of the article was, unfortunately, an opportunity to verify that the changes implemented over the last years were insufficient to resolve the Brazilian social security system that continues to present financial difficulties and still needs a structural reformulation up to par with the new demographic, social and economic reality of the country.

Social security should be seen as a set of policies and actions articulated with the aim of sustaining the individual and/or familial group faced with events resulting from death, illness, disability, unemployment and economic incapacity

* This chapter was translated from Portuguese to English by Barbara Melo and reviewed by Kaizô Beltrão.

in general. As could not be otherwise, the generic nature of the definition covers a number of variants in the practical sense, depending on political, economic, social, historical and cultural factors that influenced the evolution of each and every system.

Social security, as consecrated in the Brazilian Federal Constitution, has three components: social insurance, social assistance and health. In this text we will focus mainly on the first of these components, always aware, however, that in the collective imaginary the first two are interchangeable. This is due to the fact that one institution alone has always performed the payment of the two components. The non-separation of the two concepts is also reflected in the data collected from the population.

Social insurance is made up of a program of payments in money and/or services rendered to the individual and/or dependents, generally conditioned by a pre-existing contributory link to the system, as partial or total compensation for the loss of working capacity. Such loss can be effective or presumed. Under the current social insurance system, advanced age is one such situation where loss is presumed. Obviously the definition of the age in which loss is presumed is the result of a social agreement, as an actual age does not exist, biologically speaking. The state of health varies enormously as regards cultures, social classes and occupations, through time, and also as regards individuals (see Chapter 1 of this book).

Thus, advanced age, aside from a biological status and as part of the life cycle, is a social construct. Though not compulsory, all cultures define (or defined) age groups according to those acknowledged in Western cultures and these definitions, by no means obligatory, are consistent in their various functions. For example, women have, in various cultures, a minimum age for retirement-by-age inferior to those required of men, even though they present lower mortality and lower morbidity in these age brackets. We can consider this differentiation as a product of a male-dominated society, in which the “weaker sex” deserves milder conditions.¹ The (true) allegation regarding the cost of opportunity versus reproductive functions and regarding familial responsibilities is rarely used.

Historically, considering a cut through all social strata, the idea that advanced age should imply in the absence of working activity is quite recent. Social security in its modern version, guaranteed by the State, was one of the *sine qua non* conditions for the implementation of such a concept. It is obvious that other forms of support for later years have always existed, such as family and social charity, but the scope was quite restricted and did not exclude the collaboration of

1. Though the usual discourse on this subject may include allegation regarding female responsibility with housework in addition to her regular professional occupation, familial responsibilities, compensation for job and salary discrimination, etc.

older persons in various domestic and/or communitarian tasks. In contrast, the existence of social security presumes a reasonable level of wealth in society so that individuals, productive or not, may enjoy a regular income.

Another situation that can theoretically lead to loss in working capacity and, consequently, to eligibility in obtaining a social security benefit is that of arduous work or work under harsh conditions over a long period of time. A typical example is that of miners at the turn of the nineteenth to the twentieth century, that worked in subterranean mines under extremely adverse conditions. In this situation there was an effective loss of working capacity, although the time required for this to become an actual loss varied from one person to another. The Brazilian legislation made this concept broader and defined retirement by length of service (later, by length of contribution) regardless of the type of work involved. Currently this is the benefit that takes the largest chunk out of the social security budget.

In addition, we have an odd situation in Brazil. Even semantically, there is a differentiation with relation to other nations. *Retraite, retiro, retirement, taishoku*, as translations for the word “aposentadoria”, all indicate a departure from the labour force. Culturally, Brazilians do not understand retirement as a cessation of working activity. In other countries, receiving the benefit is legally conditioned to an effective withdrawal from the labour market. Otherwise, in case the beneficiary returns (or continues) to work, the value is reduced in order to discourage such behaviour.

2 BACKGROUND

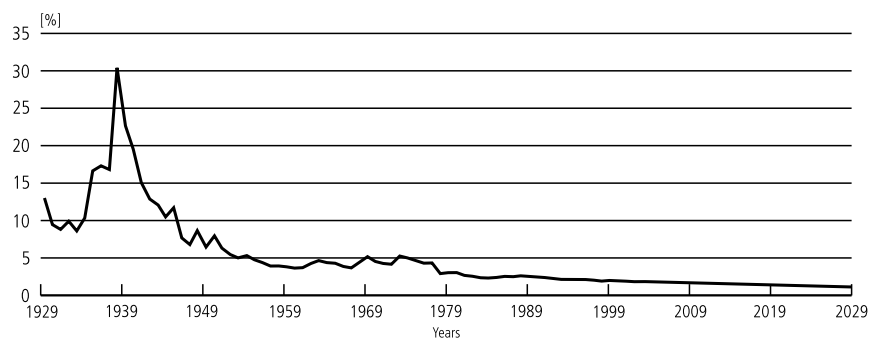
The development of social insurance in Brazil came about with the creation and later fusion of various retirement and survivors' pension funds for specific labour segments, the legal landmark being the 1923 Eloy Chaves Law. The 1988 Constitution represented the last stage in universalisation of social security coverage, in addition to having presented a new concept in social protection—social security with its three components (social insurance, social assistance and health). The constitutional text established as basic principles for the new system the universalization of coverage, the equivalence of urban and rural benefits, selectivity in the concession of benefits, irreducibility in the value of pension benefits, equanimity in costing, diversification of the financing base and decentralisation and participation of workers in management. Thus the concept was advancing in the direction of conceptualising social insurance as a collective social contract, an integral part of the very right to citizenship, where benefits would be conceded according to individual necessity and financing would be made according to individual capacity.

According to the new constitutional precepts, workers from the private sector became part of the General Social Security Regime [Regime Geral de Previdência Social (RGPS)] and civil servants came under the institution of a Single Legal Regime [Regime Jurídico Único (RJU)]. There would also be specific career plans for civil servants directly involved in public administration, in autarchies and in public foundations. In the following analysis we will be focusing on the RGPS system.

The situation of the social security system has deteriorated over time. Actually, the contributor-to-beneficiary ratio² dropped dramatically, as shown in Figure 1. Around 1940, we had roughly 31 contributors per beneficiary; at the beginning of the 80s this ratio was already at 2.9:1 and today we have less than 2 active contributors supporting each beneficiary. Under the current conditions of eligibility, our projection points to a ratio of 1.2:1 in 2030. Obviously this figure should be viewed as a scenario, since such a situation could not occur without breaking down the system first.

Although any international comparison should be interpreted with the appropriate caution, Table 1 presents, for certain selected countries, the dependency ratio of older persons in the population, which can be used as a proxy for the social security system dependency ratio—the latter considering older persons, those over 65 years of age. One can see that, though having a much younger age structure than the majority of selected countries, the Brazilian social security dependency ratio already corresponded in the year 2000 to 0.30. This ratio was higher than that of countries with an older age structure, such as the United States and Argentina.

FIGURE 1
THE CONTRIBUTOR-TO-BENEFICIARY RATIO



Source: Oliveira, Beltrão and Ferreira (1997).

2. This ratio of contributors to beneficiaries is the inverse of what is usually known as the social security dependency ratio, i.e., the number of beneficiaries (dependents) per contributors.

TABLE 1
**DEMOGRAPHIC DEPENDENCY RATIO (POP. 65+ / POP. 15-64) AND SOCIAL SECURITY
 DEPENDENCY RATIO (BENEFICIARIES/CONTRIBUTORS) IN SELECTED COUNTRIES—2000**

Countries	Beneficiaries/Contributors	Population over 65 years of age/Active Age Population
England	0.40	0.24
Brazil	0.30	0.08
United States	0.27	0.19
Japan	0.39	0.25
Canada	0.31	0.18
Germany	0.48	0.24
France	0.50	0.24
Italy	0.71	0.27
Argentina	0.29	0.16

Sources: Bongaarts (2004), World Bank (2004) and Beltrão et al (2000).

So, what could explain this apparent paradox of our having deficient social security in a country with a comparatively young population? The reasons are many, both on the side of beneficiaries and of contributors. The first fact to highlight is that we are retiring not only older persons but young persons as well. Before Constitutional Amendment 20 dated 1998, there was the reduced length of service pension that led to precocious retirements. As shown in Table 2, in 1993, 63% of males retiring according to length of service were under 55; for females, this percentage increases to 74%, constituting an extremely precocious retirement pattern for both sexes. In 2002, the pattern persists, though at 55% and 76%, respectively (only this time for retirement by length of contribution). Part of the postponement that occurred among males has to do with the elimination of the reduced length of service retirement. Insofar as that goes, until quite recently, Brazil was one of the few countries in the world that still offered retirement by length of service/contribution without any age limit.³

Figure 2 shows that in 1993 only 30.5% of urban retirement benefits in number and 17.8% in value were by old age, completely distorting the characteristic image of retirees being a group of older persons. In 2002, urban retirement benefits by age accounted for 24.6% in number and 18.2% in value, which demonstrates that the situation exacerbated for retirement by age.

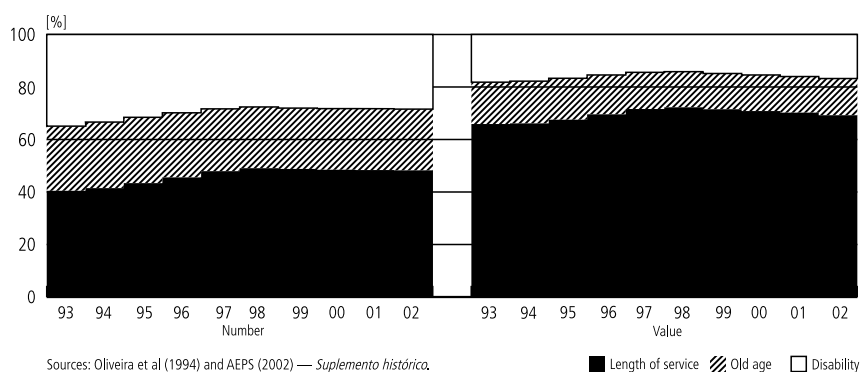
3. This situation was relatively circumvented by a new formula for defining pension benefits (the so called *fator previdenciário*, the social security factor) in the case of private sector workers and prohibited altogether for civil servants, both situations having been changed by Constitutional Amendment 20 dated December 1998 and subsequent laws.

TABLE 2
PERCENTAGE OF PENSIONERS BY LENGTH OF SERVICE/CONTRIBUTION RETIREMENT UP TO THE AGE AT THE DATE THE PENSION STARTED
 [in %]

Age at the date the pension started	1993		1998		2002	
	Men	Women	Men	Women	Men	Women
Until 44	6	14	20	27	6	5
Until 49	29	45	49	60	22	39
Until 54	63	74	75	83	55	76
Until 59	86	94	91	98	84	97
Until 64	98	99	99	99	98	99

Source: AEPS (1995/1996 and 2002).

FIGURE 2
URBAN RETIREMENT PENSIONS



Sources: Oliveira et al (1994) and AEPS (2002) — *Suplemento histórica*.

Figures 3 to 6 present the cumulative distribution of all new beneficiaries (not including survivors' benefits), disaggregated by household condition, urban and rural, and for two years: 1993 and 2002. Even though they are just two points in time, we can have some idea of the evolution of the concession flow. In 1993, the proportion of urban benefit concessions, both for men and women under 50 was 50%. In 2002, this percentage increased to 62% in the case of men and to 67% in the case of women.

Considering the threshold of 65 years of age, there was near stability in the proportion of concessions below that age, from 87% and 93% in 1993, respectively, for men and women, to roughly 88% and 90% in 2002.

FIGURE 3
AGE DISTRIBUTION OF NEW URBAN BENEFICIARIES BY GENDER AT THE DATE THE PENSION STARTED—1993 FLOW

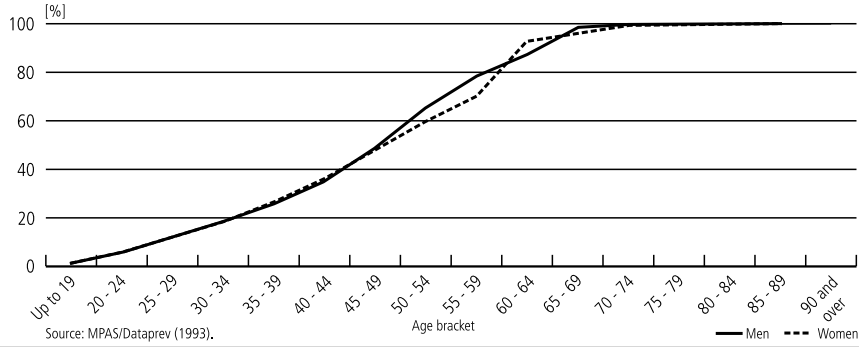


FIGURE 4
AGE DISTRIBUTION OF RURAL BENEFICIARIES BY GENDER OF DIB—CONCESSIONS IN 1993

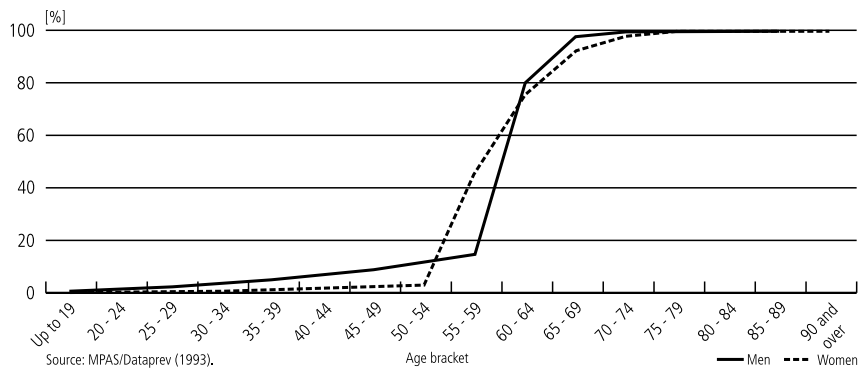


FIGURE 5
AGE DISTRIBUTION OF NEW URBAN BENEFICIARIES BY GENDER AT THE DATE THE PENSION STARTED—2002 FLOW

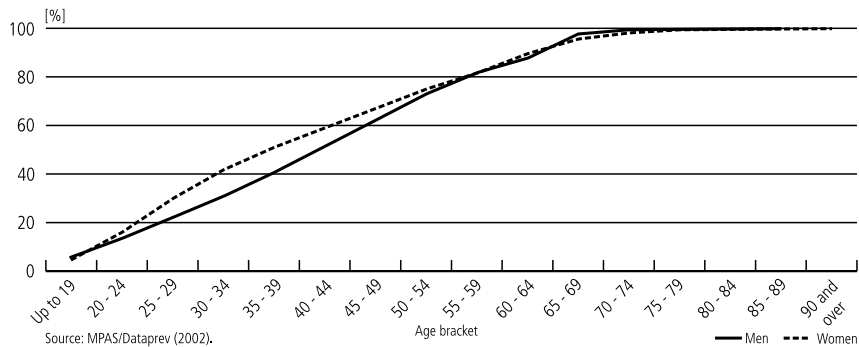
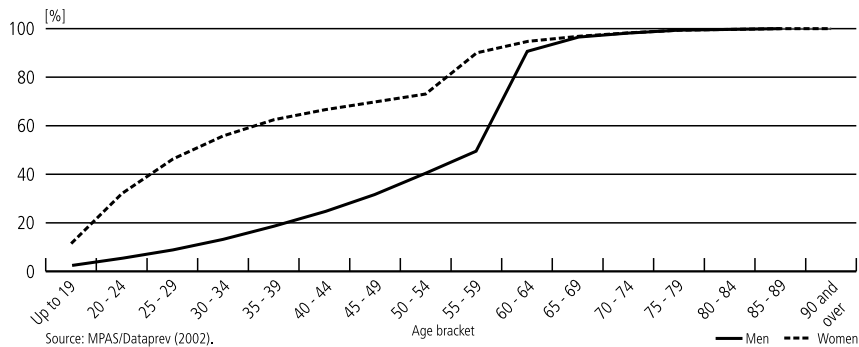


FIGURE 6
AGE DISTRIBUTION OF NEW RURAL BENEFICIARIES BY GENDER OF DIB—CONCESSIONS IN 2002



The difference in time is much greater with regard to the rural clientele. In 1993, with the reduction in eligibility age for retirement by old age among rural workers, women under 60 represented roughly 45% of new concessions and, in 2002, this percentage increased to 90%. Considering the 65-year threshold, there was an approximate 20% increase during the period, from an average for both sexes of around 77% in 1993 to 93% in 2002.

On the side of contributors, there is a breach beginning at the end of the 70s between what is the universe of potential contributors—the Economically Active Population (EAP)—and the group of those that effectively pay their dues (see Figures 7 and 8). There are multiple causes for this, ranging from unemployment and informalisation that have afflicted the labour market, together with the global scale movement of more and more outsourcing, culminating to a certain degree

FIGURE 7
EVOLUTION OF THE URBAN POPULATION, EAP AND POPULATION OF CONTRIBUTORS —1922-2002

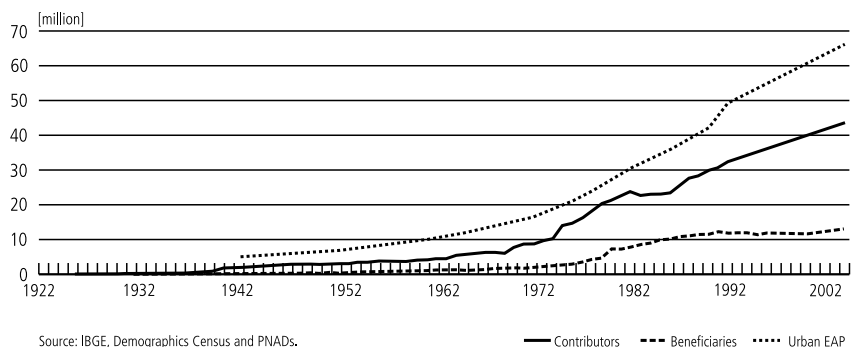
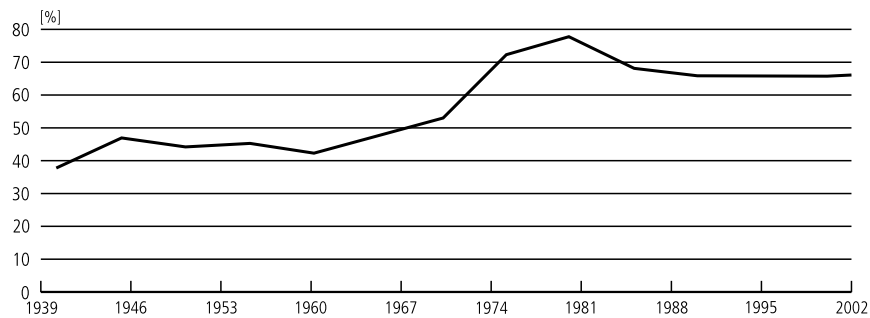


FIGURE 8
CONTRIBUTORS/URBAN EAP—1939-2002



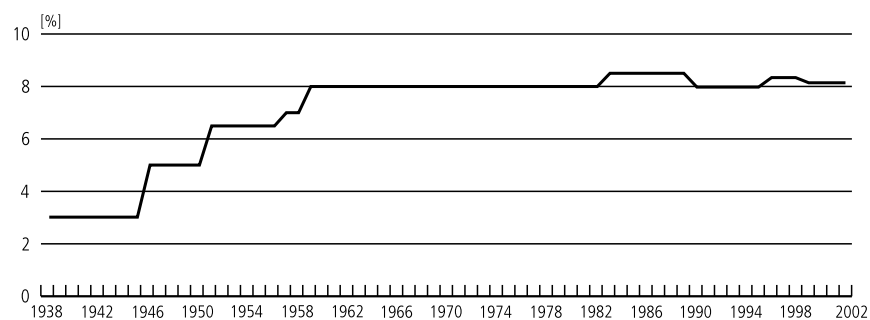
Sources: Oliveira et al (1994) and AEPS (2002) — *Suplemento histórica*.

— Contributors/Urban EAP

in lack of control of social security contributions, reflected in the high level of evasion [see Oliveira, Beltrão and Ferreira (1997)].

There is, however, no way of sidestepping the fact that the so-called “fiscal wedge”, i.e., the differential between the salary paid to workers and the labour cost of these workers for employers on the formal market, plays an important role in this phenomenon. As shown in Figures 9 and 10, the consequence of the drop in the contributor/beneficiary ratio (see Figure 1), since it was expected that a balance be maintained in the system, was a significant rise in contribution rates. Over a period of 60 years, these have practically tripled in the case of employees, and have risen sevenfold in the case of employers! As a result, today we hold the world record in terms of social security contribution rates, with employees and employers totalling, on average, 32%.

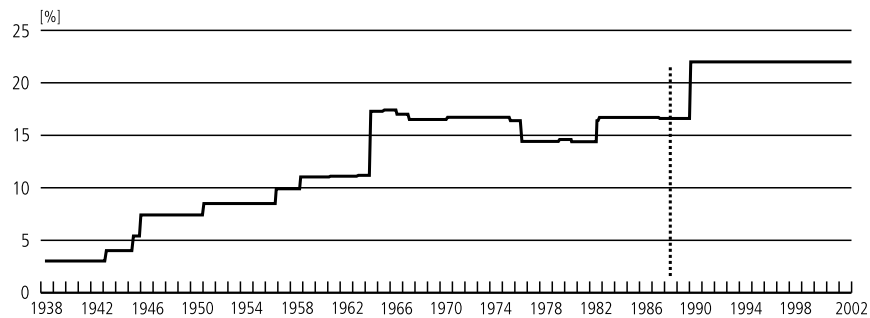
FIGURE 9
EMPLOYEE’S CONTRIBUTION RATES (1-3 MINIMUM WAGES)—1938-2002



Sources: Oliveira et al (1994) and AEPS (2002) — *Suplemento histórica*.

— Tax rate

FIGURE 10
EMPLOYEE'S CONTRIBUTION RATES—1938-2002

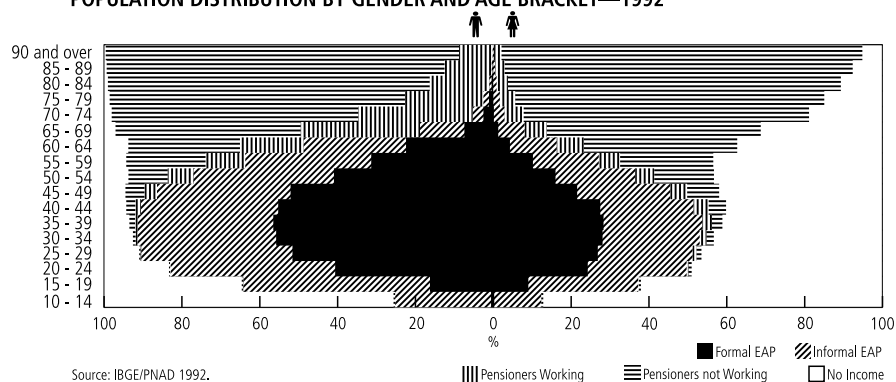


Sources: Oliveira et al (1994) and Sislex (June 1997).
Obs.: After the vertical line in Jan./1987, the employer begins to contribute based on a percentage without ceiling.

Figures 11, 12 and 13 present the population distribution according to its status with respect to labour and pension benefits. The distribution is plotted by gender and age bracket in 1992 and 2002 (data from Brazilian National Household Sample Survey, [Pesquisa Nacional por Amostra de Domicílio (PNAD)]). As defined in the PNAD, the economically active population comprises those who have taken some effective step towards finding work during the reference week or who have worked during all or part of the period. Pensioners are defined as those who, during the reference week, were classified as retirees, or as survivors' pensioners in the RGPS or in the social security regime for civil servants of the Union, states or municipalities, or received some sort of social assistance benefit on a continual basis.

With the concomitant expansion of the beneficiary population (active or otherwise), the contraction of the active population still not receiving benefits in

FIGURE 11
POPULATION DISTRIBUTION BY GENDER AND AGE BRACKET—1992

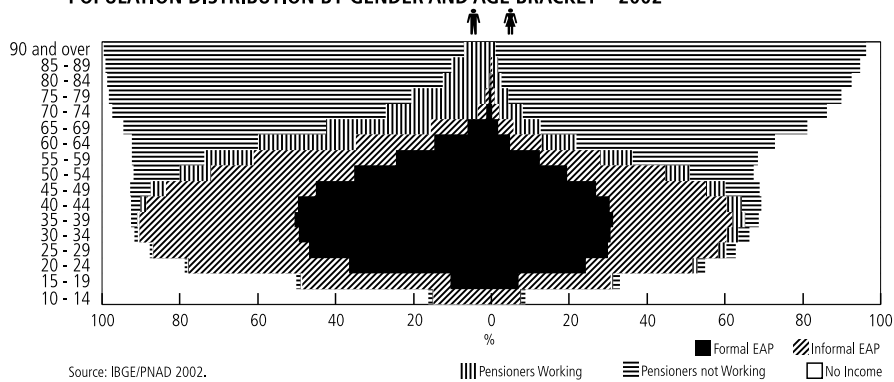


Source: IBGE/PNAD 1992.

FIGURE 12
POPULATION DISTRIBUTION BY GENDER AND AGE BRACKET—1997



FIGURE 13
POPULATION DISTRIBUTION BY GENDER AND AGE BRACKET—2002



later life becomes quite obvious. There was also slight expansion in the beneficiary population still considered EAP, though with a much slighter increase than that felt by the beneficiary population. For men the contraction of formal workers as compared to the growth of the informal sector is quite perceivable. Among women, one can see expansion both in the formal and informal markets, though growth is greater in the informal sector. In the case of the rural population, these movements are described in more detail in other chapters (see articles by Delgado and Cardoso Jr., Saboia, Camarano and Pasinato and Beltrão et al).

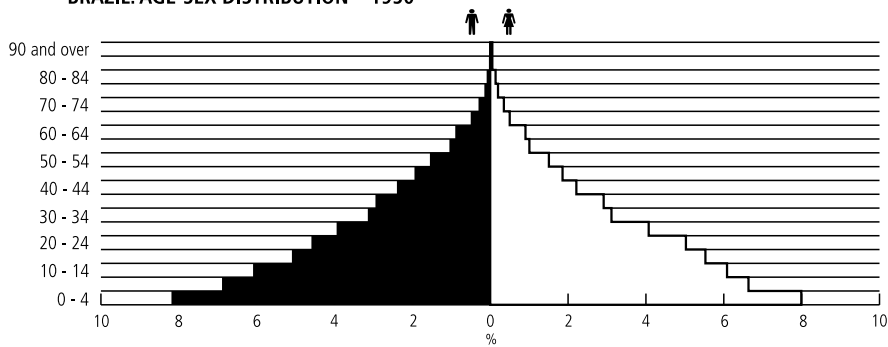
3 FUTURE PERSPECTIVES

If the current social security situation is one of insolvency, its future is absolutely catastrophic since population aging will make its weight felt more strongly then.

The age-sex population distribution illustrated in Figures 14 to 19 demonstrate with much clarity the growth of the older persons contingency as compared to the other population groups. As the graphs demonstrate, the percentage of older persons in the population will have grown from the current 16% to approximately 30% by 2030.

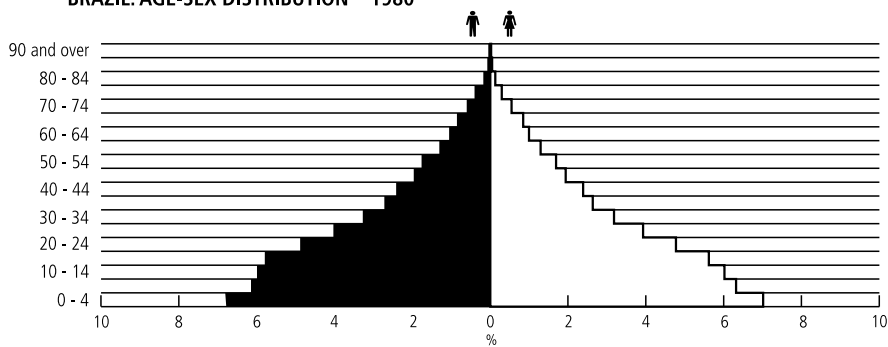
In terms of the contributors-to-pensioners ratio (social security dependency ratio), the actuarial demographic simulation model developed by the Institute of Applied Economic Research (IPEA)/Brazilian Institute of Geography and Statistic [Instituto Brasileiro de Geografia e Estatística (IBGE)] [Beltrão et al (2000)] points to a scenario of 1.2:1 in 2030, as was already mentioned. Clearly, this is not a projection but a scenario since, in this case, *coeteris paribus*, the contribution rate would be almost 100%! Obviously, given the exhaustion of the contributory capacity, this scenario would never come into effect. Figure 21 illustrates a scenario

FIGURE 14
BRAZIL: AGE-SEX DISTRIBUTION—1950



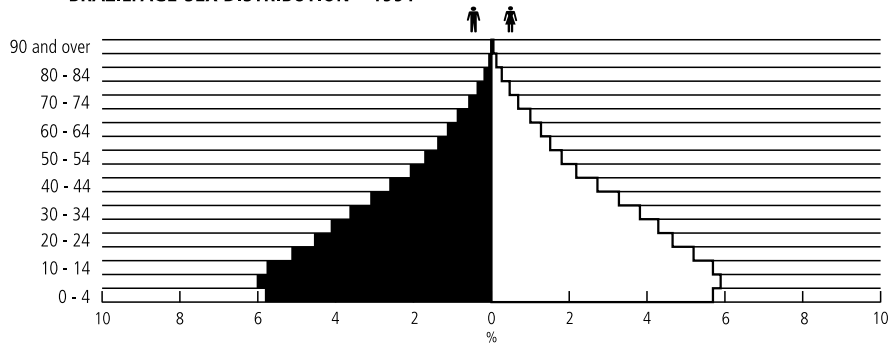
Source: IBGE, 1950 Demographic Census.

FIGURE 15
BRAZIL: AGE-SEX DISTRIBUTION—1980



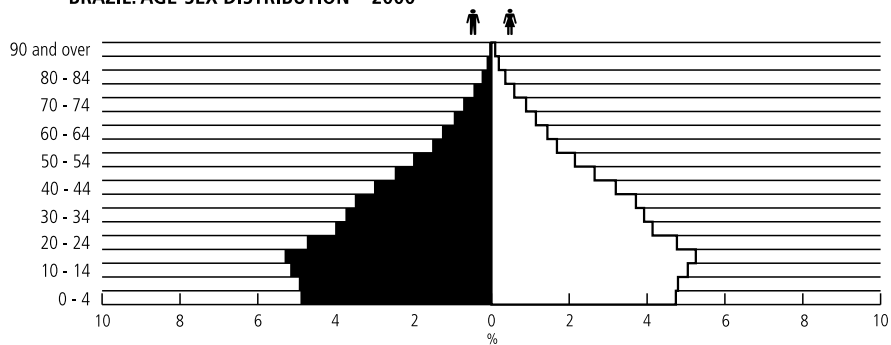
Source: IBGE, 1980 Demographic Census.

FIGURE 16
BRAZIL: AGE-SEX DISTRIBUTION—1991



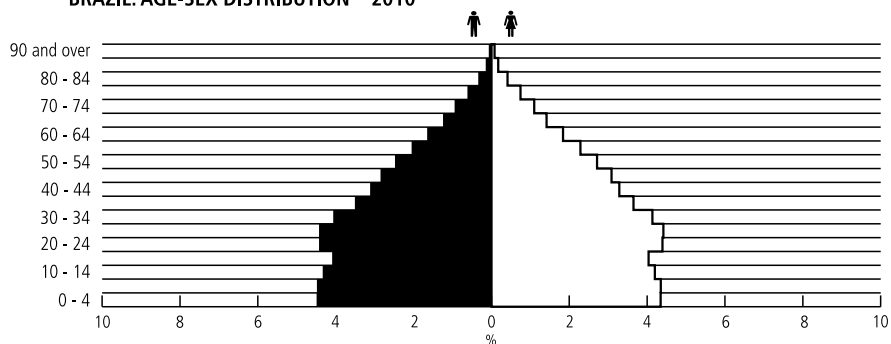
Source: IBGE, 1991 Demographic Census.

FIGURE 17
BRAZIL: AGE-SEX DISTRIBUTION—2000



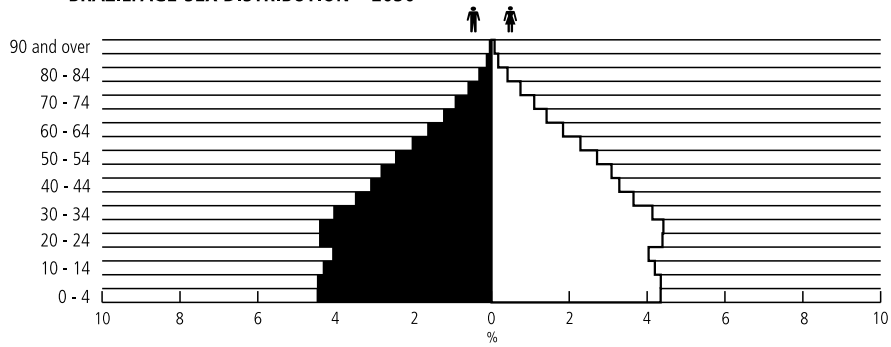
Source: IBGE, 2000 Demographic Census.

FIGURE 18
BRAZIL: AGE-SEX DISTRIBUTION—2010



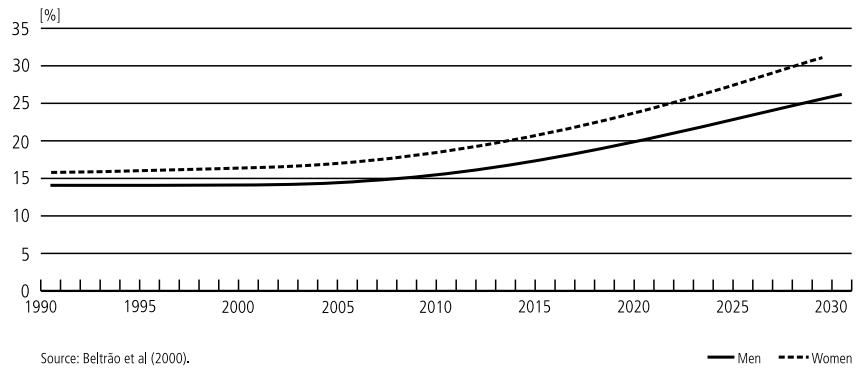
Source: Beltrão et al (2000).

FIGURE 19
BRAZIL: AGE-SEX DISTRIBUTION—2030



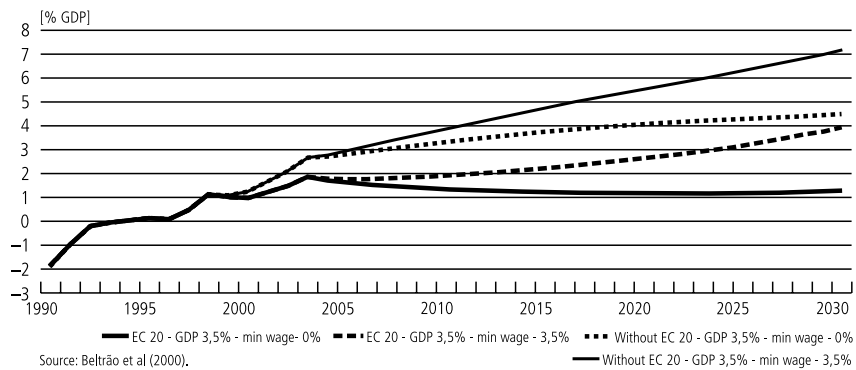
Source: Beltrão et al (2000).

FIGURE 20
DEMOGRAPHIC DEPENDENCY RATIO: OLDER PERSONS—1990-2030



Source: Beltrão et al (2000).

FIGURE 21
FINANCING NEEDS



Source: Beltrão et al (2000).

of the rising financing needs to fund the public system (RGPS), before and after the implementation of all the rules foreseen in Constitutional Amendments 20 and 41 (Social Security Reform). This is another case where the scenario will not occur, as something will necessarily happen first: either the insolvency of the system or a profound reform.

The first “solution”, i.e., insolvency and the consequent indiscriminate rupturing of promises and rights, should be avoided due to the tremendous social costs it would entail. For many older persons, especially those who have lost their working capacity and/or the condition to re-enter the labour market, this would mean simply being condemned to abject poverty. A nation that has the least bit of respect for its citizenry would never accept this type of outcome. Another even more dramatic form of rupture is inflationary recrudescence—actually a dissimulated form of confiscation of rights and degradation of liabilities that cannot be honoured, without the need of holding a great political debate on the matter. As we all know, this “medication” is extremely pernicious and must also be avoided.

The only decent solution left, therefore, is the alternative to re-think the Brazilian social security model, remaking pacts on rights and obligations. Naturally this is a politically challenging subject, much more so because electoral-political damages appear right away, whereas occasional benefits derived from the reparation of the system occur much more gradually over time. Even so, when the total number of promises by far exceeds the possibilities of financing them, there is only this way out. While we persist in the illusion that a wasteful and unjust system as the Brazilian one can be maintained—which even retires young people in the prime of their working years—we will be committing an enormous irresponsible act with regard to the older persons in this country.

The fundamental issue is how to adjust the social security system in the midst of transformations in the economic, political and social spheres and in variable demographics, within societies with serious problems of income inequality, great contingency of workers outside the formal labour market, low schooling and governments seriously afflicted by budgetary concerns. Social security policies cannot be considered separately as they make up a more wide-ranging scenario involving macro and micro issues such as how to elevate growth rates, control inflation and interest rates, control public and private sector debt, increase the level of schooling of the population, raise employment rates, improve income distribution, boost the formal sector of the economy, etc. The pursuit of balance is a continuous process of adjustment, but changes always need to be defined within a reasonable term of transition so as to allow both the population and

institutions time to reformulate their bearings based on new realities and on a nationwide discussion, with the main actors involved ready to shape them.

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POPULATION AGEING AND PUBLIC HEALTH SYSTEM (SISTEMA ÚNICO DE SAÚDE) EXPENDITURES*

André Nunes

Instituto de Pesquisa Econômica Aplicada (IPEA)
Centro Universitário de Brasília (UNICEUB)

It is well-known that the reduction of fertility and mortality rates and their impact on age composition brings about significant improvements in health conditions throughout the country. A reduction in the proportion of the youth population and an absolute and relative increase in elderly people produce demographic and socioeconomic consequences. One important consequence is related to health demands.

The growing number of elderly persons and this implications for the construction of a new epidemiological profile for health care characterises a period of epidemiological transition in which infecto-parasitic diseases coexist with an increase in chronic degenerative diseases [Baer, Campino and Cavalcanti (2000)]. This is reflected in changes in the structure of hospital care and in the increase in hospital costs. This study examines the prevalence of morbidity in the over 60 years of age Brazilians, using hospitalisations in the Single Health System [Sistema Único de Saúde (SUS)] as proxy. This chapter aims to illustrate the pattern of hospital morbidity of elderly Brazilians.

Hospital treatment expenses related to the main causes for hospitalisation in SUS will be examined. Thus, we will outline the profile of hospital morbidity as well as the approximate cost of hospital care for elderly Brazilians. Another objective is to compare the results of this paper with a similar one carried out in December 1999 [Nunes (1999)].

One of the first difficulties when dealing with the concept of elderly people is that individual differences make it difficult, if not impossible, to associate ageing with chronological age. The latter gives an approximation of the ageing process

* This chapter was translated from Portuguese to English by Maurício Brito and Eoin O'Neill and reviewed by Ana Amélia Camarano.

but the human system does not always take chronological age into account. It is often the case that one comes across “older” persons with a “younger” physical and intellectual appearance, whereas others are chronologically younger but have an older “physical and intellectual” appearance.

Ageing is associated with a biological process of declining physical capabilities, related to new psychological and behavioural fragilities. Thus, being healthy is no longer related to chronological age and is now understood as the ability of the human system to respond to the needs of daily life, the physical and psychological capacity and motivation to pursue new objectives as well as personal and familial achievements. Even so, a boundary around the age of 65 is usually accepted. Considering this to be an appropriate cut off point, we will look at the expenditures and morbidity profile of people over 60, for this is the definition of the National Policy for Elderly People (Política Nacional do Idoso).

The clear increase in the number of elderly Brazilians points towards a transformation in financial transfers between generations. It also makes the state take on more responsibility in financing health services for this population. Future projections indicate that in 50 years [UN (1999)] the age composition of the Brazilian population will be similar to that of developed countries with increasing expenses required to attend health care needs. For Reis (1999), the increase in life expectancy brings about a radical restructuring in the concept of social security and health policy.

It is true that health care, understood here as the provision of curative medical and hospital care, has engaged an ever-increasing number of specialists and incorporated more and more expensive technology, making it more costly for all ages. Moreover, people in their later years have a costlier morbidity profile for at least three reasons: *a*) prevalent morbidity in this age group is more expensive (chronic degenerative diseases); *b*) hospital admission rates are higher for more advanced age groups, i.e., elderly people tend to “consume” more health services [Glennerster and Matsaganis (1994)]; and *c*) the average cost of hospitalisation for elderly people is higher than for people in younger age groups [Rubio (1990)]. These three hypotheses will be examined in this study.

Monteiro (1995) called the attention to the fact that changes in morbidity patterns do not occur in the same way as those of mortality patterns. Since the 1930s there has been a constant decline in Brazilian mortality rates for infectious and parasitic diseases, though these have continued to be highly prevalent and responsible for a substantial part of the morbidity of the population. Thus, recent decades have experienced an increase in the number of cases of tuberculosis,

Hansen's disease, malaria and leishmaniasis. The expansion of the area of occurrence of some endemic diseases associated with migration and urbanisation is another important process that is also becoming prevalent in urban centres, as well as in the rural areas where they traditionally occur. This set of changes in the occurrence of transmissible diseases is characterized by an inverse tendency to that seen in mortality indicators. In other words, in Brazil, the sharp mortality decline due to infectious and parasitic diseases is not followed by a corresponding reduction in morbidity by this group of pathologies.

The reduction in the lethality of some diseases—probably induced by a set of joint actions focused on curative health services—has not been able to interfere with the pattern of occurrence of certain diseases, as they do not act upon the determinants. This has caused an increasing dissociation between mortality and morbidity patterns, since not all disease is lethal. Mortality indicators, therefore, reflect only partially the epidemiological profile of the population.

An approximate hospital morbidity profile was produced for the elderly Brazilian population in order to measure the cost of hospitalisations within this context. The best way to come up with information on morbidity would be to make inquiries about specific diseases. In the absence of such data, the information system on hospitalisation compiled by the Ministry of Health (Datusus) was used. In 2003, 7.25 million women were hospitalised as compared to 4.84 million men, totalling 12.09 million hospitalisations in SUS.

A limitation of this study is the need to use frequency of hospitalisations to calculate costs and to serve as a proxy for morbidity, assuming that the groups of health conditions occurring most often are related to the main causes of morbidity for the elderly population. This simplification does not take into account health demands that are resolved by outpatient care within the SUS network or those cared for outside the SUS network through private medical hospital care or health insurance or demands that do not actually result in medical care. Nonetheless, despite such limitations, the proxy seems to be representative of the pattern of cost and of the causes of hospital morbidity of elderly persons, considering that approximately 72% of the Brazilian population uses the health services offered by SUS as their only source of health care.

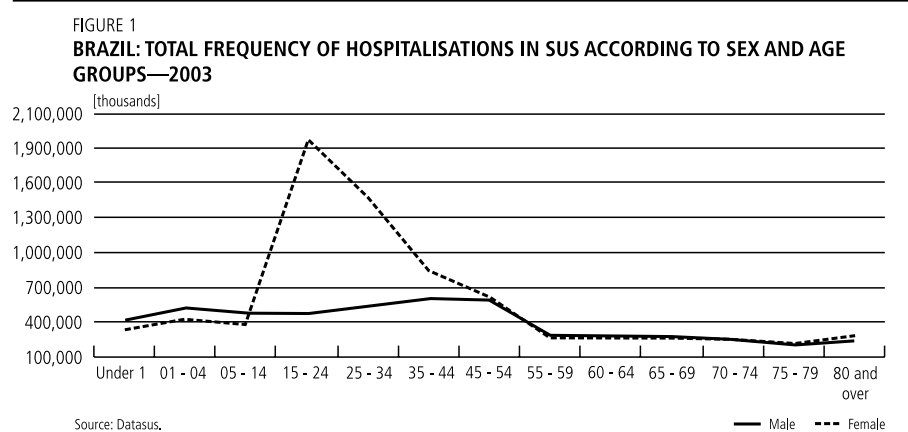
It is believed that knowledge of epidemiological differences by gender and age may help in designing focused public policies. One example is the creation of more intense intervention programmes for high blood pressure that is at the core of a set of problems, mainly affecting the elderly population and generating important costs in curative and rehabilitation services. Intervention should be

present in both prevention and cure policies [Barros, Piola and Solon (1996)]. Measures leading to a reduction in costs through “morbidity compression” [Fries (1983)] are fundamental, considering the current shortage of resources and where knowledge of the power and effectiveness of using public funds is increasingly essential.

1 UTILISATION RATES

Utilisation rates offer a good approximation of “the use of SUS health services”. They are calculated by gender and age and reflect differences in the use of hospitalisation procedures. One supposes that the use of outpatient procedures and of clinical and diagnostic exams conforms by gender and age pretty much to those of hospitalisations.

Figure 1 shows the total frequency of hospitalisations in SUS in 2003. Considering the 0-14 age group, one can see that men are hospitalised 27% more often than women. The mean number of hospital admissions for men in these age groups was 447,000, whereas for women this figure was closer to 352,000. This behavioural pattern is changed in older age groups. Between the ages of 15 and 24 the number of female hospitalisations increases to 1.93 million. This increase is caused by a large number of hospital admissions for normal and Caesarean births. For men in this same age group the number remains close to the previous average, 446,000 hospitalisations. In the next age group, 25 to 34, the frequency of women hospitalised decreases to 1.44 million, a number still affected by delivery procedures. The frequency for men in this age group increases to 515,000 admissions.



From the 45 years of age onwards, the male number of hospitalisations is similar to that of females. However, there are differences in the composition of hospitalisation procedures, which will be examined in part three of this paper. They reveal differences in morbidity patterns for more advanced age groups. The number of men hospitalised is greater than the number of women, with the exception of the final age group, where women present higher absolute numbers. However, the proportion of men hospitalised, considered in relation to the population, is always higher than that of women.

Figure 2 shows the rates of use of health services. This was calculated as the ratio between the frequencies of hospitalisations and the population of a certain age group. The curve of the rate of utilisation by age groups is similar to the curve of frequency of hospitalisations up to the 45-54 age group. From group onwards there is an evident increase in hospitalisations for males and the difference between sexes increases with age. The rate of utilisation in the over-80 age group is four times higher than the 45-54 age group.

The greater utilisation of the SUS network by the male population becomes more evident when the ratios of utilisation of sex rates are analysed, as shown in Figure 3. The differential increases with age. The consensus is that men live less, not only in Brazil, but also in the rest of the world. It is almost consensual that females are less likely to take risks and, maybe for this reason, submit to preventive measures for their health, i.e., they make greater use of preventive health services. This could be part of the explanation for the lower rate of utilisation of SUS by women.

FIGURE 2
BRAZIL: RATES OF USE OF SUS HEALTH SERVICES—2003

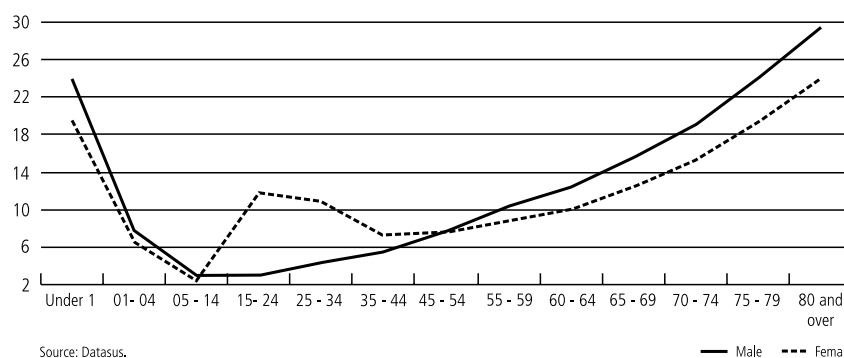
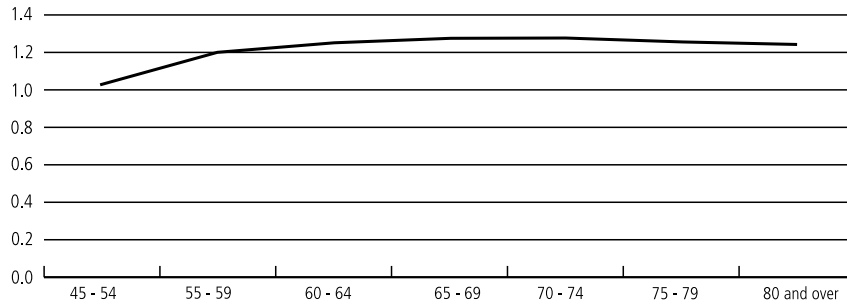


FIGURE 3
BRAZIL: SEX RATIO OF THE RATES OF USE OF SUS HEALTH SERVICES—2003



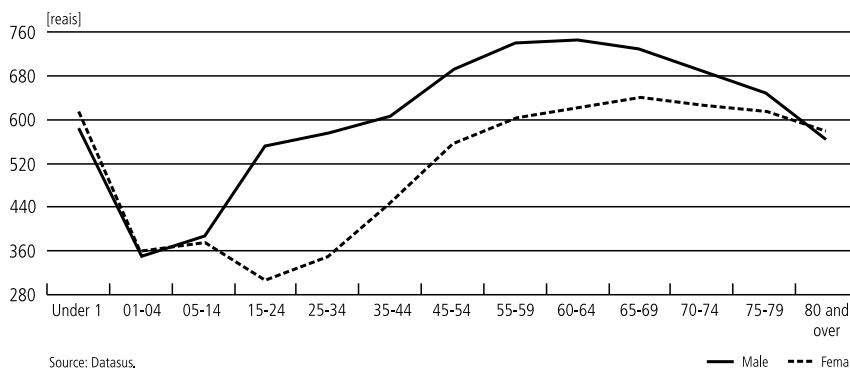
Source: Datasus.

2 SUS HOSPITALISATION EXPENDITURE

Total SUS expenditure on hospitalisations in 2003 was R\$ 5,862 million (or US\$ 1,9 million), of which R\$ 3,064 million (or US\$ 1 million) was spent on female and R\$ 2,798 million (US\$ 900 thousands) on male hospitalisations. Figure 4 shows the mean cost (total expense by age group/number of hospitalisations in each age group) of hospitalisations.¹ In the under 14 age groups there are no striking differences in cost according to sex. In the first age groups, 0 to 1, the average cost is approximately R\$ 600 (or US\$ 195). In the next two age groups the cost declines to approximately R\$ 350 (or US\$ 114).

From the 15-24 age group onwards, the male costs of hospitalisations are higher, except for the over 80 age group. There is a noticeable elevated cost

FIGURE 4
BRAZIL: AVERAGE EXPENSES IN SUS HOSPITALS ACCORDING TO SEX AND AGE GROUPS—2003



Source: Datasus.

1. For the purposes of this paper, we have used cost as a synonym of expenses.

differential in age groups corresponding to the reproductive period in females that can be attributed to the high number of normal deliveries. This is a low-cost procedure, resulting in lower average costs.

The average costs of the male population increase until the 60-64 age groups when it reaches R\$ 737 (or US\$ 239), decreasing from then on. For females, the age group where costs begin to decrease is the 65-69 one (R\$ 634). It is interesting to note that the average cost for the over 80 age group (R\$ 555 or US\$ 180 for men and R\$ 572 or US\$ 186 for women) is significantly lower than the average costs observed for the 55 to 59 age group (R\$ 733 or US\$ 238 for men and R\$ 594 or US\$ 193 for women). A likely explanation for this decline in costs is the reduction in the effectiveness of certain costly procedures for the more advanced age groups. The qualitative response of these groups is probably lower, because their health is more fragile.

This result indicates that, at least in relation to services offered by SUS, it is not the case that average costs of procedures used for elderly persons are more expensive than those for younger age groups. The increase in health expenses for elderly persons cannot be explained by the increase in the costs of procedures but by their frequency, i.e., by the greater use of these. Public health policies aimed at improving the quality of assistance given to elderly persons, without necessarily increasing costs, should focus on reducing the number of hospitalisations. Possible alternatives are policies for promoting health and to improve the quality of medical appointments, so that the patient returns less to the hospital. Concrete alternatives for achieving this aim could be health programmes and home care.

3 HOSPITALISATION COSTS BY AGE GROUPS

The main objective of this chapter is to collect some data that allow some inferences about hospitalisation costs and hospital morbidity profile of elderly Brazilians. Considering that the boundary between ageing and chronological age is difficult to determine, we opted to analyse the main causes of hospitalisations and their respective costs by sex and age groups, starting at 60 years of age.

The methodology adopted was to rank the 12 most frequent procedures, out of the 2,340 procedures listed by SUS. In most cases procedures were recorded individually. However, in other cases it was decided instead of giving just one procedure, to join together two or three procedures, since they were indicative of similar morbidities. For example, cardiac and coronary insufficiency is the sum of hospitalisations for cardiac insufficiency and acute coronary insufficiency; lung disease is the sum of chronic obstructive lung disease, pneumonia in adults and

acute breathing insufficiency and malnutrition, dehydration and anaemia is the sum of malnutrition (medical clinic), acute dehydration (medical clinic) and iron deficiency anaemia. For the purposes of this study procedures resulting in psychiatric hospitalisations were excluded.

3.1 Hospital Care

The most frequent conditions of hospitalisations for women in the 60-64 age group were cardiac and coronary insufficiency, lung diseases and hypertension. The conditions listed in Table 1 represent 44% of all conditions encountered and are responsible for 23% of expenses incurred by the National Health Service (SUS) for this age group.²

Cardiac and coronary insufficiencies are the most expensive conditions, followed by lung diseases. Coronary angiopathy, though not one of the 12 most frequent conditions, results in expenditure of R\$ 8.70 million (or US\$ 2.83 millions), with an average cost of R\$ 5,003 (or US\$ 1,624). The third and fourth most expensive conditions, among the most frequent ones, are acute strokes, with an average cost of R\$ 471 (or US\$ 153) and cholecistectomy, with an average cost of R\$ 586 (or US\$ 190). Other conditions have high average costs, such as pacemaker implants—varying from R\$ 7,000 (US\$ 2,273) to R\$ 30,000 (US\$ 9,740)—and transplants, such as that of the liver. This has a unit cost of R\$ 52,000 (US\$ 16,883). In relation to the incidence of deaths, the most significant conditions are: cardiac and coronary insufficiency, lung diseases and acute strokes, which together account for over 17% of causes of death for this age group.

Table 2 shows the most frequent conditions for the male Brazilians. Those account for 45% of the cases. Again, psychiatric conditions under hospitalisation were excluded, which would be responsible for the third position, with an incidence of 17,693 cases. It should be noted that even though women are the majority of age group, the number of male hospitalisations (260,000) is higher than that of female (239,000). This is quite interesting and shows the opposite of what was observed at adult ages, when female hospitalisations are always more frequent. One could suppose that women, in general, behave more preventively, look for health care at younger ages, unlike men who seem to experience fewer concerns about health prevention.

The two most frequent male health conditions are similar to the ones for females: cardiac and coronary insufficiency and lung diseases. Acute strokes, the

2. As already mentioned, procedures related to psychiatric hospitalisations were excluded from this study; if included, they would have occupied the third position as 13,596 cases were observed.

TABLE 1
BRAZIL: CONDITIONS OF HOSPITALIZED FEMALES AGED 60 TO 64 AND ASSOCIATED EXPENSES AND DEATHS—2003

Conditions	Frequency	%	Value (R\$ Thousand)	Value (US\$ Thousand)	%	Average Expenses (R\$)	Average Expenses (US\$)	Deaths
Cardiac and Coronary Insufficiency	24,431	10.21	12,386.39	4,021.56	8.38	506.99	164.61	1,235
Lung Diseases	23,322	9.75	8,915.60	2,894.67	6.03	382.28	124.12	1,573
Hypertensive Crisis	9,129	3.81	1,406.85	456.77	0.95	154.11	50.04	68
Intestinal Infections	9,101	3.80	1,778.96	577.59	1.20	195.47	63.46	63
Sacarine Diabetes	8,921	3.73	2,640.11	857.18	1.79	295.94	96.09	347
Acute Stroke	8,682	3.63	4,093.65	1,329.11	2.77	471.51	153.09	1,221
Cholecistectomy	6,047	2.53	3,547.42	1,151.76	2.40	586.64	190.47	39
Asthmatic Crisis	5,763	2.41	1,884.59	611.88	1.27	327.02	106.17	39
Malnutrition, Dehydration and Anemia	4,628	1.93	1,094.09	355.22	0.74	236.41	76.76	474
Intercurrent Oncology Patient	4,025	1.68	1,451.19	471.17	0.98	360.54	117.06	947
Diagnosis and/or First Appointment	3,637	1.52	210.09	68.21	0.14	57.76	18.75	182
Colpoperineoplastia	2,987	1.25	985.55	319.98	0.67	329.95	107.13	2
Others	128,840	53.84	107,825.00	35,008.12	72.94	836.89	271.72	5,570
Total	239,297	100.00	147,825.09	47,995.16	100.00	617.75	200.57	11,760

Source: Datasus.

sixth in female ranking, rises to third in the male ranking. In other words, from the third ranking condition onwards frequencies alternate. In addition, there are two conditions in the male group that are not present in the female group: inguinal herniography and digestive haemorrhage.

The group with the most expensive conditions are the cardiac and coronary insufficiencies, resulting in expenditure of R\$ 14.58 million (US\$ 4.73 million) and occurring 27,562 times. Lung diseases and acute stroke are second in terms of total costs for this age group.

TABLE 2
**BRAZIL: CONDITIONS OF HOSPITALIZED MALES AGED 60 TO 64 AND ASSOCIATED EXPENSES
 AND DEATHS—2003**

Conditions	Frequency	%	Value (R\$ Thousands)	Value (US\$ Thousands)	%	Average Expenses (R\$)	Average Expenses (US\$)	Deaths
Cardiac and Coronary Insufficiency	27,562	10.57	14,581.11	4,734.13	7.59	529.03	171.76	1,401
Lung Diseases	26,571	10.19	10,557.48	3,427.75	5.49	397.33	129.00	2,377
Acute Stroke	11,407	4.37	5,666.45	1,839.76	2.95	496.75	161.28	1,661
Inguinal Herniography	8,207	3.15	2,927.28	950.42	1.52	356.68	115.81	7
Hypertensive Crisis	6,248	2.40	1,027.88	333.73	0.53	164.51	53.41	92
Malnutrition, Dehydration and Anemia	6,185	2.37	1,094.09	355.22	0.57	176.89	57.43	474
Intestinal Infections	5,760	2.21	1,143.05	371.12	0.59	198.45	64.43	69
Intercurrent Oncology Patient	5,119	1.96	1,835.92	596.08	0.96	358.65	116.44	1,272
Sacarine Diabetes	5,044	1.93	1,597.09	518.53	0.83	316.63	102.80	263
Diagnosis and/or First Appointment	4,420	1.70	260.39	84.54	0.14	58.91	19.13	283
Asthmatic Crisis	4,279	1.64	1,387.02	450.33	0.72	324.15	105.24	34
Digestive Hemorrhaging	4,214	1.62	1,606.17	521.48	0.84	381.15	123.75	386
Others	145,750	55.89	148,490.36	48,211.16	77.27	1,018.80	330.78	8,085
Total	260,766	100.00	192,174.28	62,394.25	100.00	736.96	239.27	16,404

Source: Datasus.

The four groups of conditions with the highest incidence of deaths are: lung diseases, acute stroke, cardiac and coronary insufficiency and intercurrent oncology patients.

3.2 Hospital Care Conditions for the 65–69 Group

For females in this age group, the twelve most frequent conditions accounted for 50% of the cases of hospitalisations and 30% of the expenditure (Table 3). Cardiac and coronary insufficiencies represented almost 10% of the cases. The two most frequent groups are the same as the ones in the previous age group. The third most common condition is acute strokes followed by hypertensive crisis. The

TABLE 3
BRAZIL: CONDITIONS OF HOSPITALIZED FEMALES AGED 65 TO 69 AND ASSOCIATED EXPENSES AND DEATHS—2003

Conditions	Frequency	%	Value (R\$ Thousand)	Value (US\$ Thousand)	%	Average Expenses (R\$)	Average Expenses (US\$)	Deaths
Cardiac and Coronary Insufficiency	28,430	12.06	14,398.93	4,674.98	9.64	506.47	164.44	1,523
Lung Diseases	26,590	11.28	10,353.95	3,361.67	6.93	389.39	126.43	2,051
Acute Stroke	10,834	4.60	5,247.51	1,703.74	3.51	484.36	157.26	1,643
Hypertensive Crisis	9,158	3.89	1,443.03	468.52	0.97	157.57	51.16	94
Sacarine Diabetes	8,945	3.80	2,729.28	886.13	1.83	305.12	99.06	420
Intestinal Infections	8,910	3.78	1,754.68	569.70	1.17	196.93	63.94	87
Asthmatic Crisis	5,098	2.16	1,668.84	541.83	1.12	327.35	106.28	38
Malnutrition, Dehydration and Anemia	4,814	2.04	1,143.69	371.33	0.77	237.58	77.14	482
Cholecistectomy	4,719	2.00	2,818.95	915.24	1.89	597.36	193.95	964
Intercurrent Oncology Patient	4,052	1.72	1,449.37	470.57	0.97	357.69	116.13	867
Diagnosis and/or First Appointment	3,613	1.53	196.34	63.75	0.13	54.34	17.64	213
Digestive Hemorrhaging	2,849	1.21	1,080.84	350.92	0.72	379.38	123.17	238
Others	117,629	49.92	105,134.69	34,134.64	70.36	893.78	290.19	5,362
Total	235,641	100.00	149,419.89	48,512.95	100.00	634.10	205.88	13,982

Source: Datasus.

remaining conditions are the same, with the only changes being their positions in the ranking. The most expensive conditions are cardiac and coronary insufficiency, lung diseases and acute stroke. Compared to the previous age group, average costs increase from R\$ 617.75 (US\$ 200.38) to R\$ 634.10 (US\$ 205.88), showing a tendency to rise. The absolute number of deaths, compared to that of the previous age group, increases approximately 19%, from 11,760 to 13,982. The three main causes of deaths are: lung diseases, acute strokes and cardiac and coronary insufficiency.

Table 4 shows the 12 most frequent conditions for Brazilian male aged 65 to 69 years. These conditions account for 49% of all occurrences in SUS for this age

TABLE 4
**BRAZIL: CONDITIONS OF HOSPITALIZED MALES AGED 65 TO 69 AND ASSOCIATED EXPENSES
 AND DEATHS—2003**

Conditions	Frequency	%	Value (R\$ Thousand)	Value (US\$ Thousand)	%	Average Expenses (R\$)	Average Expenses (US\$)	Deaths
Lung Diseases	31,456	12.54	12,619.55	4,097.26	6.97	401.18	130.25	3,174
Cardiac and Coronary Insufficiency	29,862	11.90	15,585.33	5,060.17	8.60	521.91	169.45	1,747
Acute Stroke	12,938	5.16	6,499.25	2,110.15	3.59	502.34	163.10	2,013
Inguinal Herniography	7,221	2.88	2,592.25	841.64	1.43	358.99	116.55	3
Hypertensive Crisis	6,134	2.45	981.74	318.75	0.54	160.05	51.96	85
Intestinal Infections	5,531	2.20	1,115.08	362.04	0.62	201.61	65.46	83
Malnutrition, Dehydration and Anemia	5,467	2.18	1,372.33	445.56	0.76	251.02	81.50	708
Intercurrent Oncology Patient	5,147	2.05	1,844.94	599.01	1.02	358.45	116.38	1,278
Sacarine Diabetes	4,637	1.85	1,490.51	483.93	0.82	321.44	104.36	294
Prostrate Endoscopic Resection	4,389	1.75	2,441.38	792.66	1.35	556.25	180.60	10
Diagnosis and/or First Appointment	4,160	1.66	250.20	81.23	0.14	60.14	19.53	283
Asthmatic Crisis	4,112	1.64	1,342.90	436.01	0.74	326.58	106.03	50
Others	129,806	51.74	132,990.06	43,178.59	73.42	1,024.53	332.64	8,772
Total	250,860	100.00	181,125.53	58,806.99	100.00	722.02	234.42	18,500

Source: Datasus.

group. The five first conditions are identical to the ones in the previous age group, the only difference being an alternation between the first and second places. The total incidence of hospitalisations of the male group (250,000) is still higher than those of females (235,000), although in this age group there are more females than males. This fact confirms that males not only die at younger ages than females, but also fall ill proportionately more than females. In other words, we can claim that, in relation to morbidity patterns when ageing, males are the weaker sex.

All together, lung diseases, cardiac and coronary insufficiency and acute strokes account for 19% of total costs in this age group. It is interesting to note that average

costs start decreased from R\$ 736.96 (US\$ 239.27)—in the previous age group—to R\$ 722.02 (US\$ 234.42) in this age group. It is likely that, with advancing age, some costly procedures, such as transplants, will be proportionately less used, which could generate a reduction in mean costs. So it seems that increase in the costs of hospitalisation for elderly persons does not occur, at least not in the SUS. What makes treating elderly persons from a certain age onwards more expensive is the greater frequency of treatment. In other words, health costs for elderly people are higher because the morbidity incidence is higher. Elderly people tend to *consume* more health.

The number of deaths, compared with occurrences in the 60-64 age group, increases approximately 10%, from 16,404 to 18,500. The increase in female deaths was relatively higher. The most frequent causes of death are: lung diseases, acute strokes and cardiac and coronary insufficiency. These are the same overriding causes observed for females.

3.3 Hospital Care Conditions for the 70-74 Age Group

Table 5 shows the 12 most common conditions for Brazilian females aged 70-74. These conditions account for 54% of total hospitalisations of this age group in SUS. The three most frequent conditions are still cardiac and coronary insufficiency—responsible for 14% of occurrences—, lung diseases and acute strokes. Together, these three conditions account for 32% of hospitalisations for this age group. Intestinal infections, the sixth most frequent procedure observed among elderly persons from 65 to 69 years of age, moves up to fourth place among elderly persons in the 70 to 74 age group.

Cardiac and coronary insufficiencies are conditions with the highest total cost—R\$ 15.72 million (US\$ 5.10 million)—for elderly people in this age group. Next are lung diseases and acute strokes. Thus, similar to what occurred from 60 to 64 year old Brazilian males, a reduction in average costs from R\$ 634.10 (US\$ 205.88) to R\$ 618.75 (US\$ 200.89) was observed, confirming the idea of decreasing costs with the increasing age of patients. The absolute incidence of deaths increased by 15% or from 13,982 to 16,131. The most frequent conditions are lung diseases, acute strokes and cardiac and coronary insufficiency.

For males, Table 6 shows that the first three most common causes of hospitalisations are the same as those for the females, the only difference being the inversion of the first and second places. The malnutrition, dehydration and anaemia group moves up to fourth place with 6,136 cases, showing the greater physical fragility

TABLE 5
**BRAZIL: CONDITIONS OF HOSPITALIZED FEMALES AGED 70-74 AND ASSOCIATED EXPENSES
 AND DEATHS—2003**

Conditions	Incidence	%	Value (R\$ Thousand)	Value (US\$ Thousand)	%	Average Expenses (R\$)	Average Expenses (US\$)	Deaths
Cardiac and Coronary Insufficiency	31,205	13.78	15,727.93	5,106.47	11.22	504.02	163.64	1,896
Lung Diseases	28,699	12.67	11,206.53	3,638.49	8.00	390.49	126.78	2,483
Acute Stroke	12,434	5.49	5,995.80	1,946.69	4.28	482.21	156.56	2,084
Intestinal Infections	8,876	3.92	1,773.91	575.94	1.27	199.85	64.89	114
Hypertensive Crisis	8,578	3.79	1,339.18	434.80	0.96	156.12	50.69	108
Sacarine Diabetes	8,323	3.67	2,551.38	828.37	1.82	306.55	99.53	529
Malnutrition, Dehydration and Anemia	5,566	2.46	1,296.30	420.88	0.92	232.90	75.62	600
Asthmatic Crisis	4,880	2.15	1,602.52	520.30	1.14	328.39	106.62	48
Diagnosis and/or First Appointment	3,701	1.63	206.32	66.99	0.15	55.75	18.10	230
Intercurrent Oncology Patient	3,481	1.54	1,233.69	400.55	0.88	354.41	115.07	867
Cholecistectomy	3,200	1.41	1,979.18	642.59	1.41	618.49	200.81	56
Digestive Hemorrhaging	2,979	1.32	1,110.32	360.49	0.79	372.72	121.01	287
Others	104,591	46.17	94,132.55	30,562.52	67.16	900.01	292.21	6,829
Total	226,513	100.00	140,155.61	45,505.07	100.00	618.75	200.89	16,131

Source: Datasus.

of males in this age group. The 12 procedures listed in Table 6 correspond to 53% of total hospitalisations in SUS for Brazilian males in this age group.

The average cost of conditions continues to diminish with age, falling from R\$ 722.02 (US\$ 234.42) to R\$ 682.34 (US\$ 221.54). It is interesting to note that in all age groups average costs for males are higher than those for females. The three most expensive conditions are still cardiac and coronary insufficiency, lung diseases and acute strokes, which together account for 23% of expenses in this age group. It is important to stress that several high cost conditions are not shown in the tables, since it was decided to classify conditions by frequency and not by value. The case of angioplasties is a good example, involving a total expenditure of

TABLE 6
BRAZIL: CONDITIONS OF HOSPITALIZED MALES AGED 65 TO 69 AND ASSOCIATED EXPENSES AND DEATHS — 2003

Conditions	Incidence	%	Value (R\$ Thousand)	Value (US\$ Thousand)	%	Average Expenses (R\$)	Average Expenses (US\$)	Deaths
Lung Diseases	34,172	14.68	13,771.79	4,471.36	8.67	403.01	130.85	3,600
Cardiac and Coronary Insufficiency	30,709	13.19	15,830.59	5,139.80	9.97	515.50	167.37	2,020
Acute Stroke	13,610	5.85	6,595.09	2,141.26	4.15	484.58	157.33	2,302
Malnutrition, Dehydration and Anemia	6,136	2.64	1,533.44	497.87	0.97	249.91	81.14	879
Intestinal Infections	5,833	2.51	1,174.45	381.32	0.74	201.35	65.37	114
Hypertensive Crisis	5,690	2.44	926.75	300.89	0.58	162.87	52.88	93
Inguinal Herniography	5,601	2.41	2,019.25	655.60	1.27	360.52	117.05	11
Intercurrent Oncology Patient	4,621	1.98	1,652.82	536.63	1.04	357.68	116.13	1,174
Prostrate Endoscopic Resection	4,232	1.82	2,365.44	768.00	1.49	558.94	181.47	18
Sacarine Diabetes	4,204	1.81	1,332.51	432.63	0.84	316.96	102.91	300
Diagnosis and/or First Appointment	3,947	1.70	217.66	70.67	0.14	55.15	17.90	312
Asthmatic Crisis	3,863	1.66	1,269.12	412.05	0.80	328.53	106.67	40
Others	110,178	47.33	110,156.40	35,765.06	69.35	999.80	324.61	8,902
Total	232,796	100.00	158,845.34	51,573.16	100.00	682.34	221.54	19,765

Source: Datasus.

R\$ 10.5 million (US\$ 3.41 million) and an average cost of R\$ 4,980 (US\$ 1,617). Another example is myocardial revascularisation with an average cost of R\$ 7,400 (US\$ 2,402).

Among males, once again, the three main causes of death are lung diseases, acute strokes and cardiac and coronary insufficiencies. These three causes account for 40% of total deaths in this age group. This structure of deaths is similar to that for females, with a few slight inversions. The absolute incidence of male deaths is still continually higher than that of females.

3.4 Hospital Care Conditions for the 75-79 Age Group

The most frequent conditions for women aged between 75 and 79, as shown in Table 7, account for 54% of hospitalisations in this age group. The morbidity structure for this age group is very similar to the preceding one. Differences appear only in the tenth most frequent cause of hospitalisation, suggesting a morbidity pattern not much affected by age.

The total cost of the most frequent conditions accounts for 38% of SUS expenditure for this age group. Average costs continue to decline, falling from R\$ 618.75 (US\$ 22.89) to R\$ 607.69 (US\$ 197.30). The three most expensive conditions are also the same as the younger age groups: cardiac and coronary

TABLE 7
BRAZIL: CONDITIONS OF HOSPITALIZED FEMALES AGED 75 TO 79 AND ASSOCIATED EXPENSES AND DEATHS—2003

Conditions	Incidence	%	Value (R\$ Thousand)	Value (US\$ Thousand)	%	Average Expenses (R\$)	Average Expenses (US\$)	Deaths
Cardiac and Coronary Insufficiency	28,681	14.93	14,390.72	4,672.31	12.33	501.75	162.91	4,360
Lung Diseases	26,957	14.03	10,634.59	3,452.79	9.11	394.50	128.09	2,891
Acute Stroke	12,209	6.36	5,839.08	1,895.80	5.00	478.26	155.28	2,268
Intestinal Infections	7,689	4.00	1,543.48	501.13	1.32	200.74	65.17	136
Hypertensive Crisis	6,835	3.56	1,087.48	353.08	0.93	159.10	51.66	108
Sacarine Diabetes	6,461	3.36	2,043.59	663.50	1.75	316.30	102.69	764
Malnutrition, Dehydration and Anemia	5,662	2.95	1,336.85	434.04	1.15	236.11	76.66	629
Asthmatic Crisis	3,694	1.92	1,214.23	394.23	1.04	328.70	106.72	58
Diagnosis and/or First Appointment	3,210	1.67	166.18	53.95	0.14	51.77	16.81	258
Digestive Hemorrhaging	2,702	1.41	1,015.41	329.68	0.87	375.80	122.01	307
Intercurrent Oncology Patient	2,655	1.38	945.41	306.95	0.81	356.09	115.61	719
Extended Care	2,278	1.19	3,857.32	1,252.38	3.30	1,693.29	549.77	149
Others	83,089	43.26	72,655.87	23,589.57	62.24	874.43	283.91	4,190
Total	192,089	100.00	116,730.21	37,899.42	100.00	607.69	197.30	16,837

Source: Datasus.

insufficiency, lung diseases and acute strokes. Total number of deaths increases from 16,131 to 16,837 deaths. The most frequent causes are cardiac insufficiency, respiratory diseases—which now take second place—and acute strokes, falling to third place. The causes of death for the 12 conditions shown in Table 7 are responsible for 75% of deaths in this age group.

Table 8 shows the eight most frequent causes of hospitalisation for the 75-79 year old Brazilian men. These are identical to the previous age group, showing also a certain independence from age to causes of male morbidity. Taken together, these conditions account for 56% of SUS hospitalisations for this age group.

TABLE 8
BRAZIL: CONDITIONS OF HOSPITALIZED MALES AGED 75 TO 79 AND ASSOCIATED EXPENSES AND DEATHS—2003

Conditions	Frequency	%	Value (R\$ Thousand)	Value (US\$ Thousand)	%	Average Expenses (R\$)	Average Expenses (US\$)	Deaths
Lung Diseases	30,512	16.35	12,245.47	3,975.80	10.22	401.33	130.30	3,806
Cardiac and Coronary Insufficiency	26,654	14.28	13,671.92	4,438.94	11.41	512.94	166.54	2,050
Acute Stroke	12,007	6.43	5,843.46	1,897.23	4.88	486.67	158.01	2,203
Malnutrition, Dehydration and Anemia	5,818	3.12	1,444.94	469.13	1.21	248.36	80.64	864
Intestinal Infections	5,428	2.91	1,098.94	356.80	0.92	202.46	65.73	113
Hypertensive Crisis	4,451	2.39	721.52	234.26	0.60	162.10	52.63	86
Inguinal Herniography	3,578	1.92	1,287.56	418.04	1.07	359.86	116.84	8
Intercurrent Oncology Patient	3,330	1.78	1,210.28	392.95	1.01	363.45	118.00	850
Asthmatic Crisis	3,259	1.75	1,066.25	346.18	0.89	327.17	106.22	43
Diagnosis and/or First Appointment	3,216	1.72	173.28	56.26	0.14	53.88	17.49	270
Prostrate Endoscopic Resection	3,172	1.70	1,780.09	577.95	1.49	561.19	182.20	21
Digestive Hemorrhaging	3,165	1.70	1,178.39	382.59	0.98	372.32	120.88	371
Others	82,009	43.95	78,134.37	25,368.30	65.19	952.75	309.34	7,715
Total	186,599	100.00	119,856.48	38,914.44	100.00	642.32	208.55	18,400

Source: Datasus.

Once again, there is observed a reduction in average costs from R\$ 682,34 (US\$ 221.54) to R\$ 642,32 (US\$ 208.55). As in the whole series, average costs for male conditions remain higher than average costs for female conditions. The three most expensive conditions are cardiac and coronary insufficiency, lung diseases and the acute strokes, with total costs of R\$ 13,67 million (US\$ 4.44 million), R\$ 12,24 million (US\$ 3.97 million) and R\$ 5,8 million (US\$ 1.88 million), respectively. Other conditions occurring less frequently are significant in terms of total expenditure, such as angioplasty which, with only 1,257 cases, has a total cost of R\$ 6,3 million (US\$ 2.05 million) and an average cost of R\$ 5.016 (US\$ 1,629).

The conditions that caused most deaths were the same as those of the following age groups. Cardiac and coronary insufficiency, acute strokes and lung diseases were responsible for 26% of all hospital mortality in this age group. The total number of deaths falls in absolute terms from 19,765 to 18,400, yet considering the smaller population in this age group, the relative number rises. The 12 conditions listed account for 58% of the causes of death in this age group.

3.5 Hospital Care Conditions for the Over 80 Age Group

Table 9 shows the most common conditions for women in the over 80 age group. These conditions account for 63% of total hospitalisations in SUS for this age group. The three most frequent conditions remain the same, though the order is inverted—lung diseases take first place, with 16.60% of occurrences, followed by cardiac and coronary insufficiencies with 15.72% and acute strokes with 7.2% of cases.

The malnutrition, dehydration and anaemia group is the fourth in importance with 11,480 occurrences. This suggests the greater weakness of this age group in comparison with the previous one. Transtrochanteric fractures, which tend to increase as patients get older, appears for the first time in this analysis. It is in the ninth place. If thigh-femoral surgical treatments (1,483 cases) are added, this group moves up to seventh place. It is quite likely that a great number of fractures of the lower extremities are caused by osteoporosis, a disease that is common in older women. The absolute number of cases in this age group, when compared to the previous one, increases from 192,000 to 262,000.

Cardiac and coronary insufficiencies are the most expensive conditions, with a total cost of R\$ 20.4 million (US\$ 6.62 million), followed by lung diseases with a cost of R\$ 17,6 million (US\$ 5,71 million). Average cost continues to decrease, falling from R\$ 607.69 (US\$ 197.30) (for the 75-79 age group) to R\$ 571.67

TABLE 9
BRAZIL: CONDITIONS OF HOSPITALIZED FEMALES AGED 80 AND OVER AND ASSOCIATED EXPENSES AND DEATHS—2003

Conditions	Frequency	%	Value (R\$ Thousand)	Value (US\$ Thousand)	%	Average Expenses (R\$)	Average Expenses (US\$)	Deaths
Lung Diseases	43,589	16.60	17,621.30	5,721.20	11.74	404.26	131.25	7,426
Cardiac and Coronary Insufficiency	41,296	15.72	20,418.17	6,629.28	13.60	494.43	160.53	4,360
Acute Stroke	18,898	7.20	8,874.92	2,881.47	5.91	469.62	152.47	4,289
Malnutrition, Dehydration and Anemia	11,480	4.37	2,692.11	874.06	1.79	234.50	76.14	1,744
Intestinal Infections	11,262	4.29	2,289.20	743.25	1.52	203.27	66.00	353
Hypertensive Crisis	7,649	2.91	1,221.61	396.63	0.81	159.71	51.85	197
Sacarine Diabetes	6,348	2.42	2,030.08	659.12	1.35	319.80	103.83	764
Diagnosis and/or First Appointment	4,839	1.84	243.73	79.13	0.16	50.37	16.35	534
Transtrochanteriane Fracture Surgery	4,734	1.80	7,166.02	2,326.63	4.77	1,513.73	491.47	166
Extended Care	4,644	1.77	7,793.37	2,530.32	5.19	1,678.16	544.86	346
Digestive Hemorrhaging	4,442	1.69	1,637.96	531.81	1.09	368.74	119.72	641
Asthmatic Crisis	4,345	1.65	1,433.14	465.31	0.95	329.84	107.09	119
Others	99,106	37.74	76,716.10	24,907.82	51.10	774.08	251.33	12,332
Total	262,632	100.00	150,137.72	48,746.01	100.00	571.67	185.61	33,271

Source: Datasus.

(US\$ 185.61) for this age group. The decline in average cost, which begins with the 55-60 age group, confirms the idea that conditions have a unit cost limit and that the increase in expenditure occurs due to the greater consumption of hospital care by older age groups.

The absolute incidence of deaths increases from 16,837 to 33,271, while the three most frequent causes of death are the same as in the previous age group. The 12 most frequent causes of hospitalisations account for 63% of deaths in this age group, while the three main causes of mortality are still lung diseases, cardiac and respiratory insufficiency and acute strokes.

It is interesting to note the high frequency of the malnutrition, dehydration and anaemia group, with 11,480 occurrences and 1,744 deaths. The high number of deaths from malnutrition shows that many older patients do not get to fulfil their daily caloric needs. Researchers at the University of Arkansas, in the United States of America, observed 500 older patients from 1994 to 1997 [see Sullivan, Sun and Walls (1999)]. The result of the study indicated that about 100 patients (21%) received less than 50% of their energy needs. It was also noted that the risk of intra-hospital mortality of this group, in comparison with the group that received more adequate nutrition, was eight times higher, while their risk of mortality in the three months after discharge was three times as high. As seems to be the case, malnutrition, besides being a relevant cause of death in this age group, may also contribute to the increase in mortality rates. In this case, it seems important that preventive measures be taken to adjust the diet of older patients enabling them to maintain adequate nutritional levels.

For males, the six most common causes of hospitalisation are the same as for females, though the pattern of frequency is roughly similar to the preceding male age group. There are two new causes for hospitalisation: pyelonephritis and urinary tract infections. The 12 conditions listed in Table 10 correspond to 62% of total hospitalisations in SUS for the over 80 age group.

The average costs of conditions continues to decline, falling from R\$ 642 (US\$ 208.44) to R\$ 554.84 (US\$ 180.14). In this age group, the average cost for females is slightly higher than that for males, the first time that this happens for the age groups being looked at. Among the most expensive conditions, the first three are identical to the ones in the previous age group: respiratory diseases, cardiac and coronary diseases and acute strokes account for 38.63% of the costs for this population subgroup. There is continuing high incidence for malnutrition, dehydration and anaemia: accounting for 1,491 deaths out of 9,446 occurrences. The procedures listed in Table 10 account for 42% of the costs of this age group.

For the male group, the three main causes of death are still lung diseases, acute strokes and cardiac and coronary insufficiency. The procedures listed in Table 10 account for 62% of deaths registered in this age group. In other words, 62% of deaths are caused by the 12 listed causes.

TABLE 10
**BRAZIL: CONDITIONS OF HOSPITALIZED MALES AGED 80 AND OVER AND ASSOCIATED
 EXPENSES AND DEATHS—2003**

Conditions	Incidence	%	Value (R\$ Thousand)	Value (US\$ Thousand)	%	Average Expenses (R\$)	Average Expenses (US\$)	Deaths
Lung Diseases	42,116	19.63	16,723.52	5,429.72	14.05	397.08	128.92	6,642
Cardiac and Coronary Insufficiency	33,033	15.39	16,443.66	5,338.85	13.81	497.79	161.62	3,049
Acute Stroke	14,774	6.89	6,870.45	2,230.67	5.77	465.04	150.99	3,211
Malnutrition, Dehydration and Anemia	9,447	4.40	2,249.30	730.29	1.89	238.10	77.30	1,491
Intestinal Infections	8,139	3.79	1,650.06	535.73	1.39	202.74	65.82	234
Hypertensive Crisis	4,536	2.11	713.02	231.50	0.60	157.19	51.04	130
Digestive Hemorrhaging	3,803	1.77	1,444.53	469.00	1.21	379.84	123.32	587
Diagnosis and/or First Appointment	3,789	1.77	194.26	63.07	0.16	51.27	16.65	446
Asthmatic Crisis	3,751	1.75	1,229.18	399.08	1.03	327.69	106.39	95
Pyelonephritis	3,611	1.68	730.58	237.20	0.61	202.32	65.69	160
Sacarine Diabetes	2,932	1.37	924.70	300.23	0.78	315.38	102.40	347
Diseases of the Urinary System	2,874	1.34	606.23	196.83	0.51	210.94	68.49	112
Others	81,765	38.11	69,272.37	22,491.03	58.19	847.21	275.07	10,268
Total	214,570	100.00	119,051.88	38,653.21	100.00	554.84	180.14	26,772

Source: Datasus.

4 FINAL CONSIDERATIONS

The picture of morbidity of the elderly population in Brazil shows different features from that of the younger age groups. The frequency of hospitalisation and the rates of utilization, which are used as a health consumption proxy, show that this consumption is quite distinct among age groups and between sexes. In the 0-14-year age group hospitalisations for males are 27% greater than for females. Average male hospitalisation in these age groups is 447,000, while the average for females the mean is close to 352,000. This pattern of behaviour changes for later age groups. Between 15 and 24 years of age the number of female hospitalisations goes up, while that of males remains relatively constant. In the subsequent female

25-34-year age group the frequency falls, though still inflated by births, whereas that of males rises. From 45 years of age onwards the number of hospitalisations for males and females is similar. However, there are differences that could be relevant. The composition of these conditions under hospitalisation reveals differences in morbidity patterns for the older age groups.

Comparing the incidence of hospitalisations by sex and age from 55 to 80 years and over, it was noted that the number of male hospitalisations is greater than that of females, with the exception of the last age group. The curve of the rate of utilisation of incidence of hospitalisations is similar to the incidence of hospitalisation curve up to the 45-54 age group. From this age group onwards, males have a significantly great number of hospitalisations. One can see that the rate of utilisation of persons aged 80 years and over is three times greater than the comparable for the 55-59-years age group.

Hospitalisation average costs decrease with age. For elderly men, the highest average cost occurs among those aged 60-64-years. For women, the age group with the greatest cost is the 65 to 69 one. This result indicates that, at least in relation to SUS, the hypothesis that average costs of conditions treated in elderly persons are more expensive than those in younger persons is not confirmed. On the contrary, it seems that costs decrease after a certain age group. A possible explanation for this fall in costs is the reduction of efficacy of certain more costly hospital treatments for more advanced age groups. These groups would probably respond qualitatively less, for they have a more fragile health condition.

During the analysis it became clear that, for almost all age groups, males have higher average costs. The only exception is the average cost of the over 80 age group. The analysis of the most frequent conditions in each age group by sex shows peculiarities in the morbidity profile of elderly Brazilians. The two most frequent causes of hospitalisation for both sexes are cardiac and coronary insufficiency and lung diseases, which alternate as the first and second causes. Acute strokes, hypertensive crises, intestinal infections, malnutrition, dehydration and anaemia and the diagnosis and initial appointment are always present as intermediate causes, both for men and women. The other causes of hospitalisation experience a more heterogeneous behaviour.

It is worth noting the similarity between this study and that carried out in 1999 [Nunes (1999)]. Although the applied methodology for both studies is not identical, as the form of grouping conditions underwent modifications, some comparisons can be made. The incidence of hospitalisations has the same characteristics in both periods analysed. Males are more often admitted into

hospitals than females in the age group from 0 to 14 years of age. Between 14 and 54 there is great predominance of female admissions—a fact that can be explained by obstetric reasons. From 55 until 79 hospital admissions for males prevail once again.

Utilisation rates, with the exception of the 14-45 age groups, both in 1999 and in 2003, are always higher for males and show a similar pattern of behaviour in both periods. The average cost curve shows somewhat greater variance in 2003 than in 1999, probably because of the increase in the prices of some high cost hospital treatments.

The average nominal cost increase for the most frequent hospital treatments was 92%. This rate is practically the same as the variation of the General Prices Index [Índice Geral de Preços de Mercado (IGP-M)] for the period (90%). That is to say, prices of payments for conditions in 2003, in real terms, are the same as those in 1999. The cost curve maintains an inverted U shape in both periods looked at, except for the 0-1 age group.

The most frequent procedures observed in all age groups and for both sexes present similar behaviour in the considered time periods, showing that the causes of morbidity have predictable behaviour, thus enabling health policies geared to these segments of the population to be applied.

A public health policy aimed at reducing the morbidity of elderly persons, through “morbidity compression”, would necessarily have to devise programmes for the prevention and control of cardiac insufficiency, hypertension and acute stroke, regardless of sex, although males are proportionally more susceptible to these three types of morbidity.

Programmes for the prevention and control of saccharine diabetes and osteoporosis would also produce improvements in morbidity patterns of elderly persons. In general, the reduction of several chronic diseases may be related to controlled intervention with respect to blood pressure, both preventive (salt ingestion and excess alcohol) and as a curative measure through primary care. In relation to the control of several respiratory diseases and various types of cancer, it is an accepted fact that cigarettes are a very high risk factor.

One of the conclusions of this chapter is that elderly males, considering hospital admissions as an undesirable event and always having a higher rate of utilisation than older females, have a lower-quality aging process than older females. One suggestion is to devise positive discriminatory policies favouring men in order to provide them with more equitable aging.

Another partial conclusion is that the high cost of hospital care for elderly Brazilians is not related to the increase in hospital treatment costs as they have declining average costs with age. The rise in costs is related to the much higher rate of utilisation for older age groups. In other words, the hypothesis that individual treatments applied to elderly Brazilians are more expensive than those for younger age groups is unfounded.

It seems possible then to imagine a certain trade off between frequency of hospitalisations and improvement in the quality of care given. Public health measures that aim at better care for elderly persons do not necessarily need to increase expenses with health. Instead, they should substitute the number of hospitalisation procedures with good quality service, thus reducing the rate of utilisation, so that the patient need return to the hospital fewer times. Actual alternatives for achieving this aim can be home care programmes and in-home hospital care.

Reduction in the number of hospital admissions can be attained through preventive measures, such as the “health at home programme” and programmes that substitute conventional hospital admissions with home care. These may reduce the incidence of hospital admissions and costs by up to 40%. Direct benefits derived from the programmes would be better prevention of cardiac insufficiencies and acute strokes, as well as the prevention and control of hypertension, diabetes, asthma and osteoporosis. It is very likely that these programmes would, taken together, cause a reduction in the incidence of hospital admissions—thus reducing the overall costs of SUS. In addition to a reduction in costs, it can also be supposed that the quality of life of elderly persons would also change for the better, reducing the number of hospital admissions, improving morbidity patterns and producing a reduction in mortality in more advanced age groups.

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PART 5

WELL-BEING IN LATER LIFE



OLDER BRAZILIANS IN THE LABOUR MARKET: TENDENCIES AND CONSEQUENCES*

Simone Wajnman

Universidade Federal de Minas Gerais (UFMG)/Centro de
Desenvolvimento e Planejamento em Economia (CEDEPLAR)

Ana Maria H. C. de Oliveira

Universidade Federal de Minas Gerais (UFMG)/Centro de
Desenvolvimento e Planejamento em Economia (CEDEPLAR)

Elzira Lúcia de Oliveira

Universidade Federal de Minas Gerais (UFMG)/Centro de
Desenvolvimento e Planejamento em Economia (CEDEPLAR)

1 INTRODUCTION

Among the various consequences of the increase in the proportion of elderly persons in the Brazilian population is the increase of their participation in the labour force. This chapter is concerned with this increase. From the demographic point of view, the rising participation of ever more elderly people in the population is undeniable. This demographic effect, coupled with recent relative stability in participation rates of elderly persons, has resulted in the growth in the participation of workers who are over 60 in the Brazilian labour force. Furthermore, as will be shown later, the labour earnings of elderly persons are very important in the composition of their personal and familial income—to such an extent that it will be difficult to expect compensatory mechanisms that could result in a decline in their participation in the labour market.

This chapter aims to illustrate the enormous heterogeneity in the participation of elderly persons in the labour market, highlighting important differences due to place of residence, race, education and forms of occupation, etc. As shall be seen below, although the individuals in the worst positions on the socioeconomic scale participate most in the labour market as they age, the best chances of remaining

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economically active belong to most highly qualified and educated, especially those not involved in manual labour. We will also point to significant differences between the activities of elderly persons in urban and rural settings.

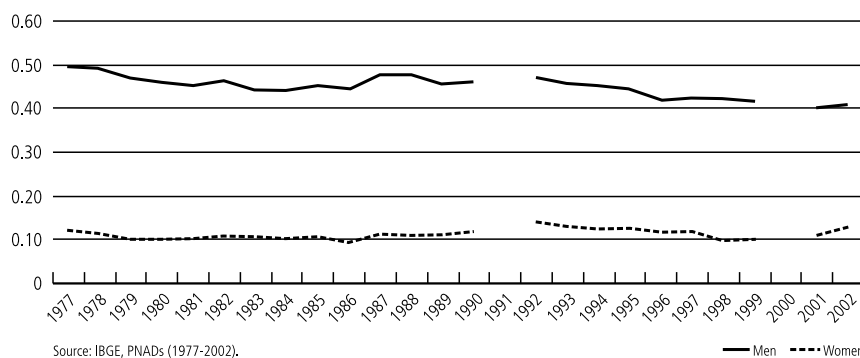
The aim of this chapter is to provide a descriptive framework to capture who the working elderly are, the types of occupation they are engaged in, the income they obtain from these activities, and what this income, in addition to that obtained from other sources (retirement pensions and social security benefit, etc.), represents to the income of their families. To achieve this the chapter is organised as follows: Section 2 discusses future perspectives about the relative weight of elderly persons in the labour force as a whole and the differences in participation according to personal and occupational attributes; Section 3 examines aspects of the composition of earnings of elderly persons, contrasting the income of men and women and whenever relevant compares the urban and rural sectors of the labour market. Finally, in Section 4, we present our final comments.

2 ELDERLY PERSONS IN THE BRAZILIAN LABOUR MARKET

2.1 Temporal Tendencies

National Household Sample Survey [Pesquisa Nacional por Amostra de Domicílios (PNAD)] data allows us to examine the participation rates¹ of those aged sixty and over in Brazil from 1977 to 2002. As can be seen in Figure 1, the tendency for the period shows a relative decline in the participation of men, a tendency that intensified during the 1990s, but which seems to have been reduced in the current

FIGURE 1
PARTICIPATION RATES FOR OLDER PERSONS—PNADs 1977 TO 2002



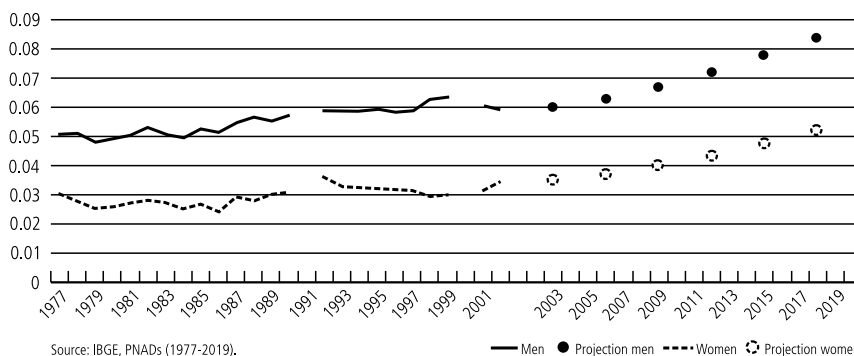
1. The labour force participation rate is the labour force divided by population.

decade.² Female participation appears to have been more stable, with participation rates for older women staying around 10%.³ In this way, evidence for the last three decades shows that levels of economic participation for elderly persons in Brazil have not fallen, in contrast with what the international literature suggests has occurred in other countries.

On the other hand, in relation to more recent demographic tendencies, the age structure of the Brazilian labour force gets older by the year, which means that the relative weight of the older population shall tend to increase for many decades to come. Thus, the final result shown in Figure 2 is a clear increase in the proportion of those aged 60 and over in the labour force. Looking forwards, the tendency seems to be clear. The dotted lines in Figure 2, for both men and women, refer to the projections which consider the effect of the demographic component of population aging and where current levels of male participation are maintained. For female rates, probable growth in the participation of women in the labour market has been taken into account, based on the remaining space for this to occur.⁴

Based on this scenario, we can predict intense growth in the participation of elderly persons in the labour force. Indeed, the projection is that, within two

FIGURE 2
PROPORTION OF OLDER PERSONS IN THE LABOR FORCE: OBSERVED AND PROJECTED VALUES



2. Interruptions in the series of the graph refer to census years (e.g. 1980 and 1991) when PNADs are not usually carried out.

3. The profound methodological reform of PNAD that took place between 1990 and 1992 resulted in increased participation rates, especially for elderly women and women engaged in agricultural activities. Although the rates in this graph were achieved using specific filters that attempt to recompose the pre-1992 concept, in order to preserve the comparability of the series, it has already been demonstrated that it is not possible to eliminate totally the effect of the over-enumeration of the new PNAD [see Barros and Mendonça (1997)] in which 1992 activity rates remain higher than those at the end of the 1980s. The methodological changes of the so-called "new PNAD" are richly documented in the existing literature [see, for example, Bruschini and Lombardi (1996)].

4. The projected labour force used in this scenario are based on projections made within the scope of the project Brazilian Labour Market Demography (*Demografia do Mercado de Trabalho Brasileiro*), a partnership between the Ministry of Labour and Cedeplar/UFMG.

decades, the proportion of older men in the male labour force will be nearly 10% (almost twice the current rate of 5.9%) and that of older women approximately 6% (at present it is 3.4%). More important is the fact that at this time the elderly labour force will be growing at an estimated annual rate of 3.6% a year, whereas for the same period it is estimated that the overall labour force will only grow at near reposition levels, i.e., at about zero.⁵ Thus, in terms of job creation prospects, this will be the group that will put most pressure on the labour market, with approximately 300,000 elderly being added each year to the labour force.⁶

In addition to the difficult prospects of expanded social security coverage, this tendency for the growth of the supply of elderly workers points to the importance of careful planning of specific policies addressed to this segment of potential workers. Most especially, the success of these policies will depend, to a large extent, on previous knowledge of the specificities of elderly persons' activities. It is precisely these specificities that the following section of this chapter looks at.

2.2 The Heterogeneous Economic Participation of Elderly Persons

In this section, differences in the economic participation of elderly persons will be described based on specific participation rates by personal attributes, based on the data obtained from the 2002 PNAD—the most recent one available—and certain temporal tendencies. It is important to note that high activity rates do not always correspond to a greater weight of the subgroup in the labour force since the absolute size of each group also depends on the participation of the attribute in the population. Therefore, differences in participation rates only express the intensity with which each subgroup of elderly persons are disposed to work.

The first two, and most relevant, personal attributes to be considered are gender and age, since men and women have, throughout their entire life cycle, distinctive labour market behaviour, having quite different levels of participation in their later years. In aggregate terms, the labour force participation rate for elderly men in 2002 was 41%, i.e., 41% of Brazilian men aged 60 years and over were working or looking for work. In contrast, only 13% of older women were in the same situation. As a consequence of these distinctive predispositions of men and women towards economic participation, as well as the greater relative weight of women in the elderly population, men accounted for 71% of the elderly labour force in 2002 and women for 29%.

5. See Economically Active Population (EAP) projections in Wajnman and Rios-Neto (1999).

6. For the purposes of comparison, one can consider that between 2001 and 2002 the 10-to-19-year-old Brazilian labour force was reduced in absolute terms (–54,000 individuals), while the 20-24 group, the fastest growing group in the period, increased by 533,000 (data from PNADs).

Breaking down these aggregated numbers according to specific age groups reveals great disparities, as can be seen in Figure 3. As would be expected, the participation rate greatly declines with age, but it is worthwhile highlighting that the level of participation is still quite high for the 60-64 year group: 62% for men, in comparison with the highest rate of 95% for the 30-34 year group; and 24% for women, against 67% for the 35-39 year group. In proportional terms, those aged 60-64 years of age account for 45% of the over 60 labour force, the 65-69 year group, for 25% and those over 70 for the remaining 30%.

In relation to the geographic situation of individuals, in which the methodological difficulties of differentiating between urban and rural sectors in the PNADs are significant, given the incomplete and imprecise coverage of the rural sector, the enormous differences between activity rates for elderly persons by household sector, especially in the case of men, deserve to be highlighted (Figure 4). Such differences

FIGURE 3
LABOR FORCE PARTICIPATION BY SEX AND AGE GROUP—PNAD 2002

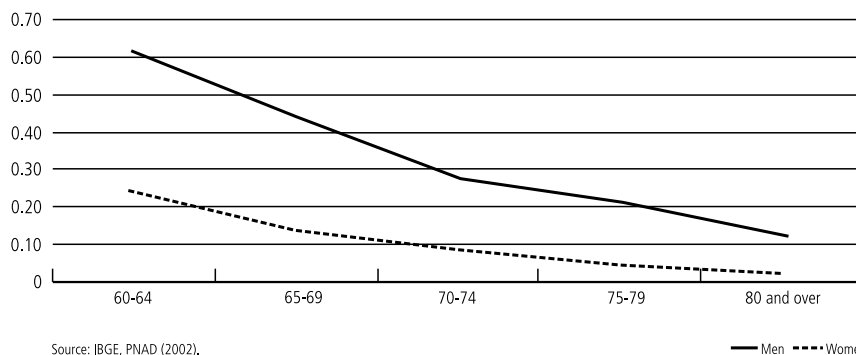
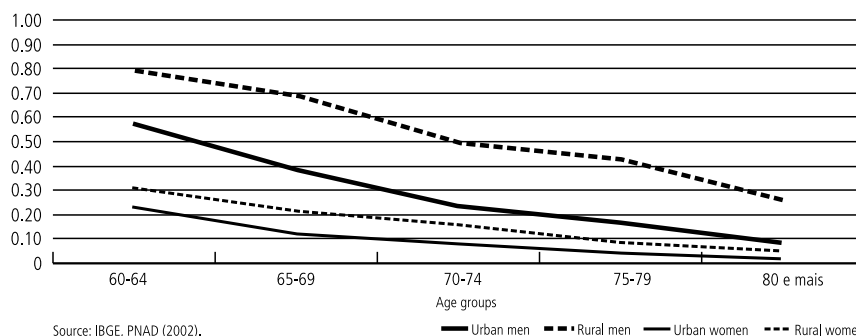


FIGURE 4
LABOR FORCE PARTICIPATION RATE ACCORDING TO HOUSEHOLD SITUATION BY GENDER AND AGE GROUPS—2002



evidently express the greater compatibility of typical rural jobs in farming and ranching activities with the work of elderly persons.⁷ However, despite the fact that rural participation rates are higher, the share of the rural workers in the elderly labour force is quite low—13% for men and 14% for women—reflecting the growing dominance of the urban population in Brazil. For this reason, and to avoid distortions that could be caused by great differences in the pattern of economic participation in urban and rural areas, the following analysis focuses only on urban areas. Certain peculiarities in rural employment will be looked at by way of contrast.

The next set of figures (Figures 5 and 6) show the different behaviour of participation rates according to regions. To a large extent, these differences reveal

FIGURE 5
MALE LABOR FORCE PARTICIPATION RATES OF OLDER PERSONS ACCORDING TO REGIONS—
URBAN—1981-2002

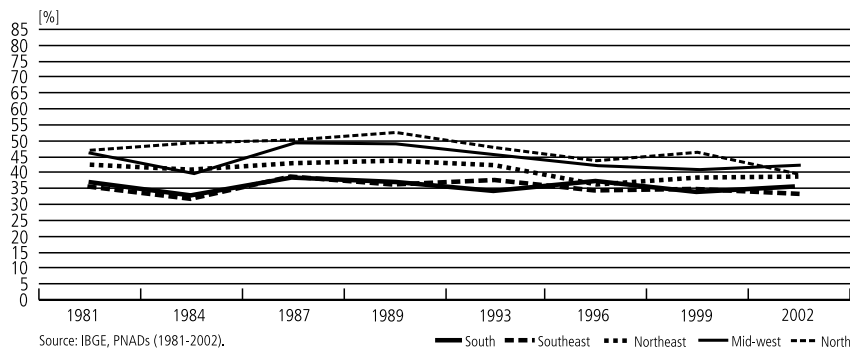
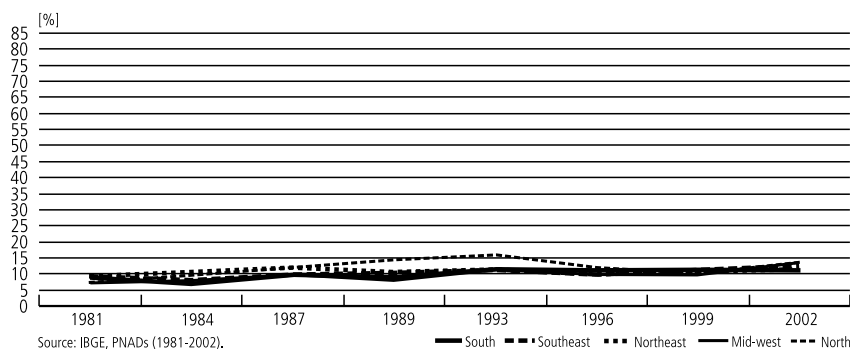


FIGURE 6
FEMALE LABOR FORCE PARTICIPATION RATES OF OLDER PERSONS ACCORDING TO REGIONS
—URBAN—1981-2002



7. However, it should be noted that the household sector refers to the place of residence, which implies that an individual residing in a rural area can carry out typical urban activities and vice-versa. In addition, this capillarity between sectors is increasing in Brazil.

a sectorial structure in regions, in other words, the largest differences in participation rates between regions reflect the proportional weight of the agricultural activity within the urban setting itself. A more adequate perspective with which to deal with these differences is to look at the occupational distribution of elderly persons according to field of activity, in order to indicate the weight of agricultural activities, as shown in the following section.

Figure 7 shows the differences between elderly participation rates according to race. Focusing just on the differences between white and non-white (a category bringing together both black and mixed) it can be seen that non-whites tend to have a higher level of participation for both men and women, which probably covers up differences in education and level of income among these subgroups. Over time, however, these differences seem to be narrowing, especially in the case of men.

In regard to differences in education, shown in Figures 8 and 9, if we focus just on men within the 60-64 and 65-69 year age groups, which account for almost 80% of the elderly labour force in the urban sector, we can see that there is a U-shaped distribution for employment according to education; i.e., it is the illiterate, those with incomplete primary education, and those with 11 years or more of education who have the highest levels of participation. This difference seems to show that, on the one hand, while education qualifications are important for the insertion of elderly persons in the labour market, those with extremely low levels of schooling tend to accept any form of precarious work in order to obtain income. On the other hand, at more advanced ages, it can be noted that education is an essential factor in maintaining economic participation, since qualifications compensate for the loss of working capacity associated with aging. For women,

FIGURE 7
LABOR FORCE PARTICIPATION RATE OF OLDER PERSONS ACCORDING TO RACE—URBAN—
1987 TO 2002

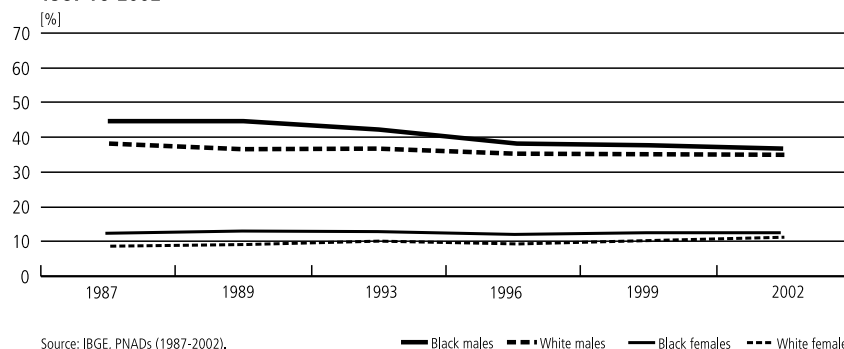


FIGURE 8
MALE LABOR FORCE PARTICIPATION RATES BY YEARS OF SCHOOLING—URBAN—PNAD 2002

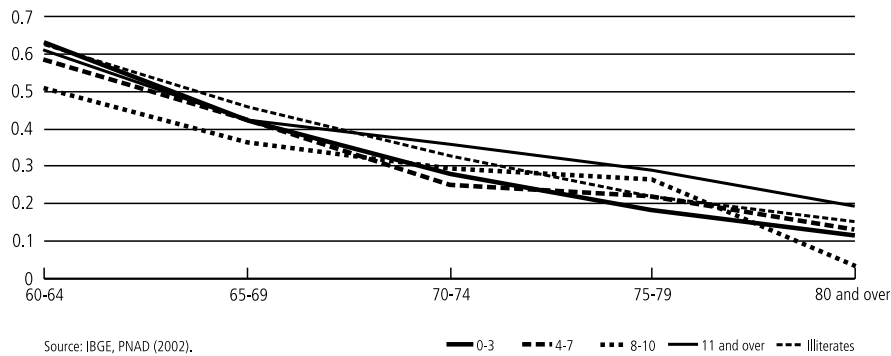
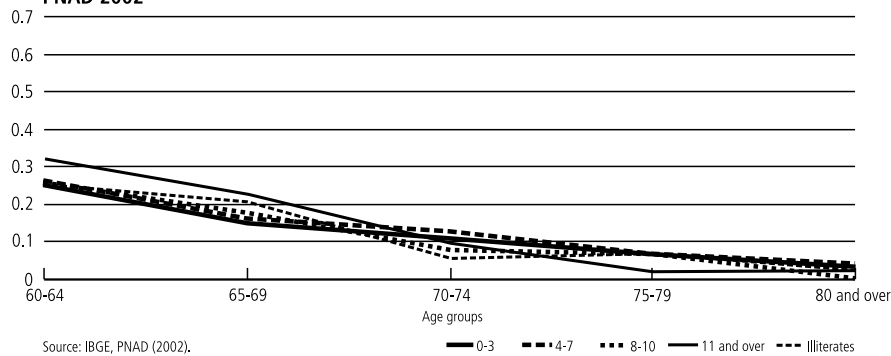


FIGURE 9
FEMALE LABOR FORCE PARTICIPATION RATES BY YEARS OF SCHOOLING—URBAN—PNAD 2002



this is very clearly the case between 60 and 70. However for the oldest groups of women, greater education is not associated with greater participation, probably due to women's participation patterns in older age groups.

Figures 10 and 11 show that the position of elderly persons in the household is a much more important differentiating factor in relation to economic participation for men than for women. As can be seen in these figures, male heads of household (the dominant group, 89% in 2002) have a much higher participation rate than do male spouses (an almost inexpressive portion of older males—3.7%) and even more than other relatives (generally speaking, parents that live with children who are heads of family, representing 7% of older males). For women, being the head of the household (46%) is a less important determinant of participation, probably because elderly women who are heads of households tend to rely on income from

FIGURE 10
LABOR FORCE PARTICIPATION RATES OF OLDER MEN ACCORDING TO POSITION IN HOUSEHOLD—URBAN—1981-2002

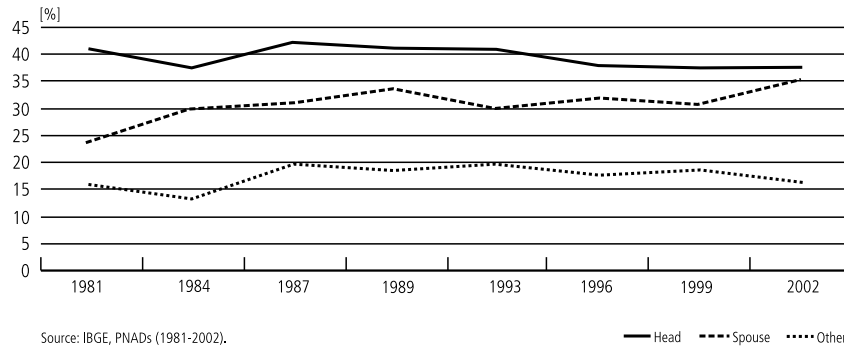
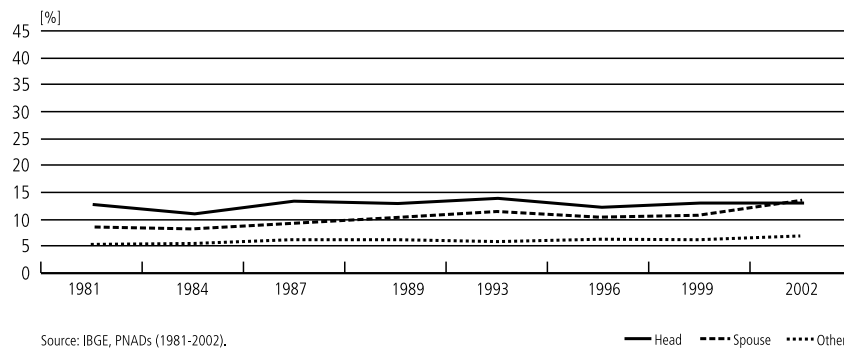


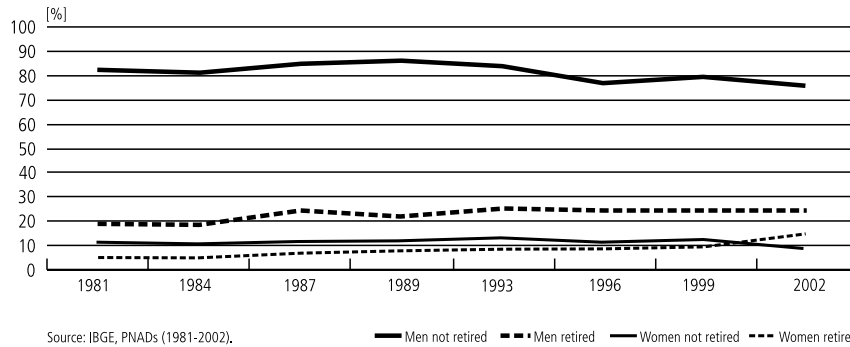
FIGURE 11
LABOR FORCE PARTICIPATION RATES OF OLDER WOMEN ACCORDING TO POSITION IN HOUSEHOLD—URBAN—1981-2002



pensions. It should also be noted that, taking temporal tendencies into account, the rates of heads and spouses have been converging in more recent years, both for males and females.

In relation to the labour force participation of the retired and the non-retired, Figure 12 highlights that retirement is an important determinant for the withdrawal of elderly men from economic activity. While 76% of non-retired elderly were active in 2002, the corresponding figure for the retired elderly was only 24%. It is worthwhile recalling, however, that the retired constitute the greater portion of the older population. In 1981, 70% of older men were retired, a proportion that increased to 78% in 2002. Therefore, the increase in the participation rate of the retired elderly can be explained by the expansion of urban retirement to a greater proportion of economically active elderly. For men living in rural areas, this change

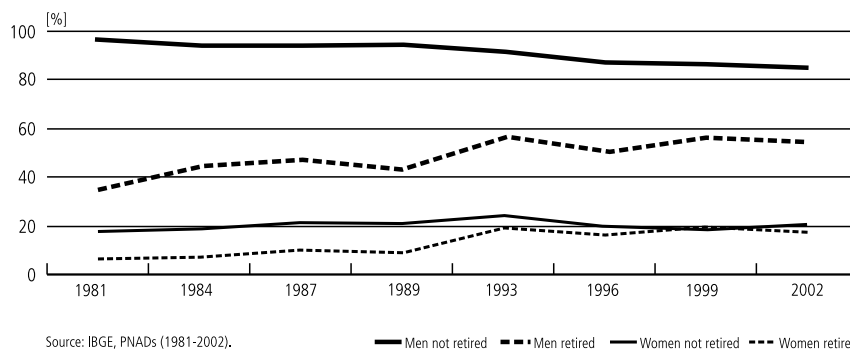
FIGURE 12
LABOR FORCE PARTICIPATION RATES OF OLDER PERSONS ACCORDING TO RETIREMENT
SITUATION—URBAN—1981-2002



was even more marked. Between 1981 and 2002, the proportion of elderly retired men rose from 58% to 83%, due to the expansion of the cover of rural social security, provided for by the 1988 Constitution.⁸ Thus, the significant increase in the labour force participation rates for both elderly retired men and women, shown in Figure 13, reveals the generalisation of retirement, even among the economically active.

It should also be noted that, in the case of women, neither retirement nor the position in the household determine great differences in economic participation. One interpretation for this fact is that retirement indicates, above all, the prior participation of women in the labour market, revealing a preference for market

FIGURE 13
LABOR FORCE PARTICIPATION RATES OF OLDER PERSONS ACCORDING TO RETIREMENT
SITUATION—RURAL—1981-2002

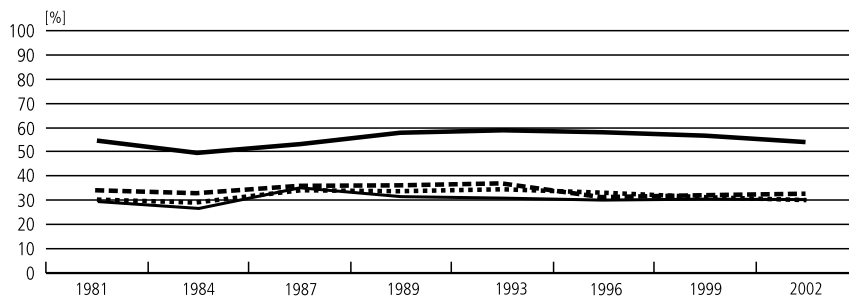


8. For an analysis of the expansion of rural social security benefits, see the chapter in this book by Delgado and Cardoso Jr.

activity as opposed to household work, which would partially compensate the income-effect of retirement.

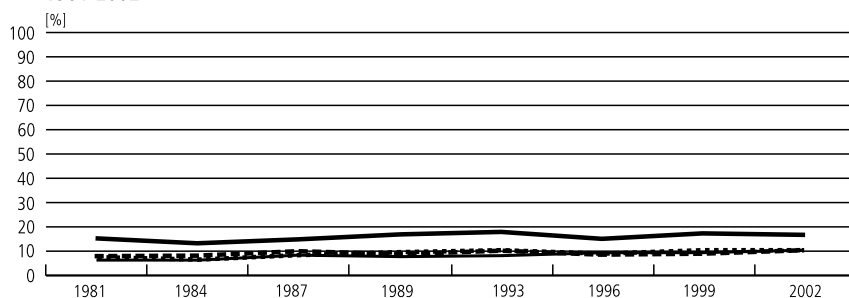
Finally, the intensity with which elderly persons participate in the labour force varies also according to familial income. Figures 14 and 15, as expected, show that the lower the familial income class (including own earnings, but only those not originating from work),⁹ the greater the labour force participation rates. The way in which an elderly person's own income (including that derived from work) contributes to this familial income will be analysed in more detail below.

FIGURE 14
LABOR FORCE PARTICIPATION RATES OF OLDER MEN BY INCOME CLASS—URBAN—
1981-2002



Source: IBGE, PNADs (1981-2002). — Up to 1 MW — Between 1 and 2 MW — Between 2 and 5 MW — More than 5 MW

FIGURE 15
LABOR FORCE PARTICIPATION RATES OF OLDER WOMEN BY INCOME CLASS—URBAN—
1981-2002



Source: IBGE, PNADs (1981-2002). — Up to 1 MW — Between 1 and 2 MW — Between 2 and 5 MW — More than 5 MW

9. The reason for using this net income measure is that, obviously, the income from work of the elderly increases the family income of those who work, resulting in a positive correlation between income and participation rates.

2.3 The Occupational Structure of the Economically Active Elderly

In regard to the occupational structure of elderly persons, the first significant characteristic is related to the industrial distribution of employment, which differs between urban and rural households. For the urban elderly, the dominance of service sector activities is well known, especially for women, as shown in Figures 16 and 17.¹⁰ Looking at the economically active urban elderly in 2001, we can see that 57% of the men and 84% of the women were occupied in the service sector. Nevertheless, it is interesting to observe that, among older males, even among those residing in urban households, a considerable portion were occupied in agricultural activities (22% in 2001), due, without a doubt, to the fact that these activities are quite compatible with the work of elderly persons. In rural households,

FIGURE 16
MALE OCCUPATION OF OLDER PERSONS ACCORDING TO URBAN AND RURAL LINE OF
ACTIVITY—2001

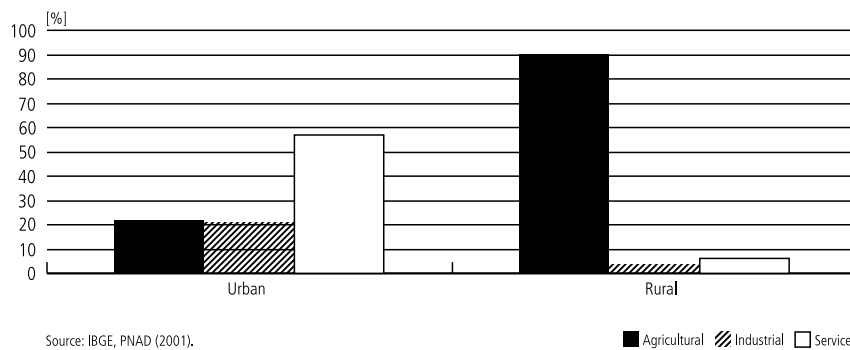
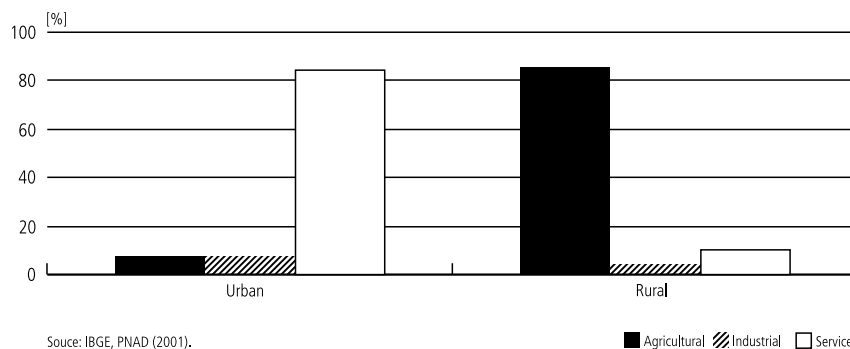


FIGURE 17
FEMALE OCCUPATION OF OLDER PERSONS ACCORDING TO URBAN AND RURAL LINE OF
ACTIVITY—2001



10. Note that in this case, we have used data from the 2001 PNAD, due to the difficulties in the modification of the classification of activities and occupations from the 2002 PNAD and after.

as might be expected, agricultural activities predominated for both men (91%) and women (86%). Therefore, of the total of active elderly, 49%, i.e., the majority, were occupied in the service sector, because the majority of the elder persons are urban. Agricultural activities, nevertheless, come in second place, representing 39% of the activities of elderly persons.

From the point of view of the insertion of elderly persons by occupational situation, including occupational positions (protected and non-protected employees, self-employed, employers, unpaid workers and unemployed), Figures 18 and 19 illustrate the main differences between the male and female elderly working in urban and rural areas. The first point to be noted is the obvious dominance of self-employment among the urban elderly for both men (47%) and women (44%).

FIGURE 18
MALE OCCUPATION OF OLDER PERSONS ACCORDING TO SITUATION IN OCCUPATION—
URBAN AND RURAL—2002

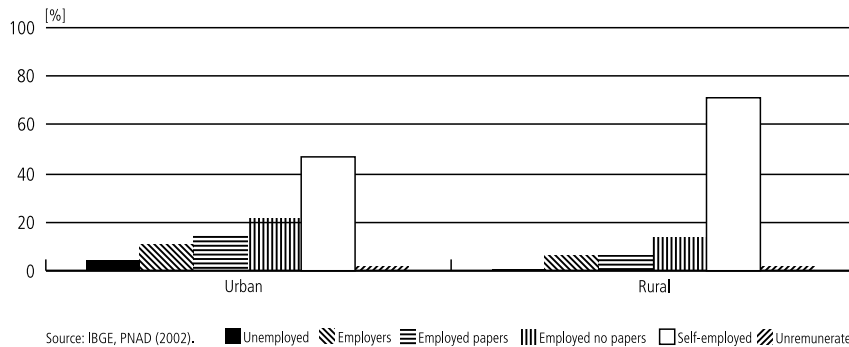
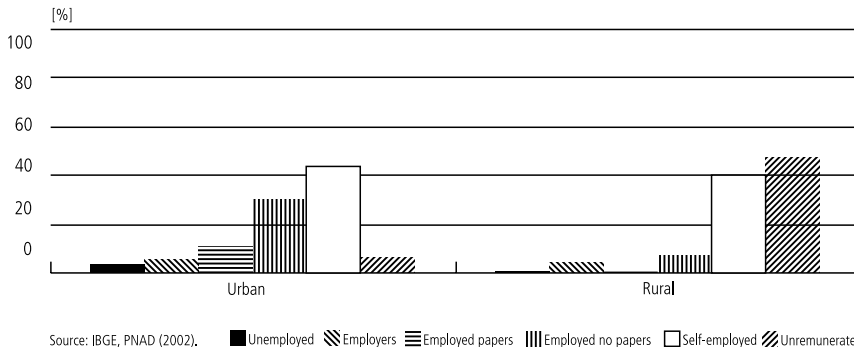


FIGURE 19
FEMALE OCCUPATION OF OLDER PERSONS ACCORDING TO SITUATION IN OCCUPATION—
URBAN AND RURAL—2002



Among older women, however, unpaid positions are also very important (6% among females against only 1% among males), as well as unprotected employment (31%, against 22% for elderly men). In rural areas, self-employment is quite dominant among elderly men (72%). Although self-employment is quite prevalent among women (40%), unpaid elderly female workers represent 47% of the total.¹¹

In Figures 20 and 21, elderly occupations are classified as unskilled, semi-skilled and highly skilled occupations, with unskilled or manual occupations being dominant in urban areas (61% of men and 75% of women) and among rural women (66%). Among rural men, on the other hand, there is great concentration

FIGURE 20
OCCUPATION OF OLDER MEN ACCORDING TO SOCIAL-OCCUPATIONAL CATEGORY—URBAN AND RURAL—2001

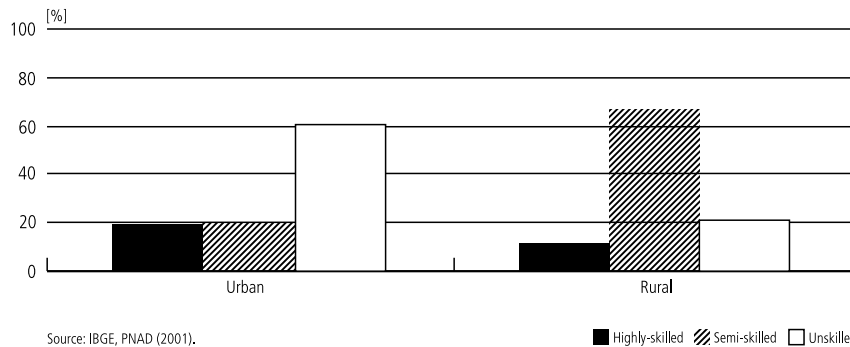
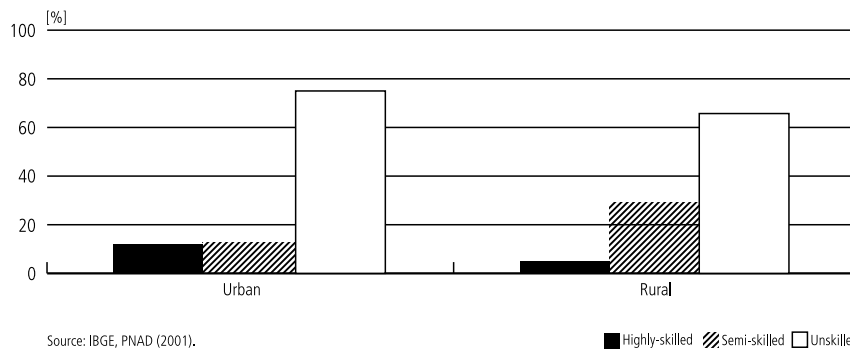


FIGURE 21
OCCUPATION OF OLDER WOMEN ACCORDING TO SOCIAL-OCCUPATIONAL CATEGORY—URBAN AND RURAL—2001



11. It should be noted that the proper filters were applied to PNAD data in order to remove from economic activity workers involved in self-consumption and self-construction.

in semi-skilled occupations (67%), once self-employed producers (typically rural) are included in this category. Examining the distribution by social occupational categories using the 2001 age groups of elderly urban persons (Figures 22 and 23), it can be seen that the dominance of unskilled workers diminishes as they advance in years, leaving more room for workers in semi-skilled and highly-skilled occupations.

This inversion can be explained by the fact that those occupied in more manual labour rely mostly on physical strength, which declines with the passage of years. So, as people age, it is the more qualified workers who are more likely to keep their place in the labour market.

FIGURE 22
OCCUPATION OF OLDER MEN ACCORDING TO SOCIAL-OCCUPATIONAL CATEGORY—URBAN—2001

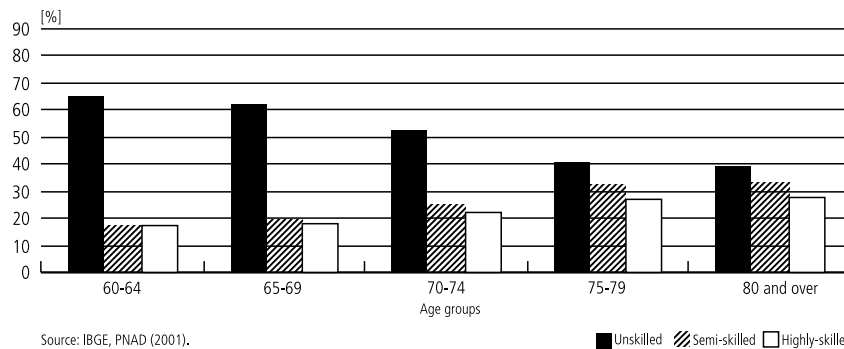
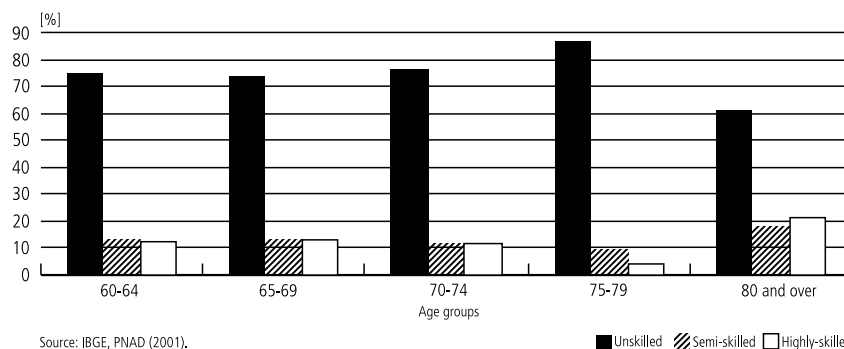


FIGURE 23
OCCUPATION OF OLDER WOMEN ACCORDING TO SOCIAL-OCCUPATIONAL CATEGORY—URBAN—2001



The length of the working week is also an important differentiating factor for the occupation of elderly persons, including between rural and urban areas, and in relation to gender and age. Figures 24 and 25 show, first of all, that older men and women have a longer working week in urban areas than in rural areas: 72% of older men in urban areas have a working week longer than 40 hours, whereas in rural areas only 67% have; the corresponding figures for women are 40% for those in urban areas and 26% for those in rural areas. In addition, as is the case for all other age groups, older men also have longer working weeks than older women. Figure 26, on the other hand, shows that working full time (40 hours or more) is predominant among younger older men, but, as the years advance, this diminishes. For older women (Figure 27), on the contrary, part-time occupations are most common, and, in addition, become more important as people age.

FIGURE 24
OCCUPATION OF OLDER MEN ACCORDING TO HOURS WORKED—URBAN AND RURAL—2002

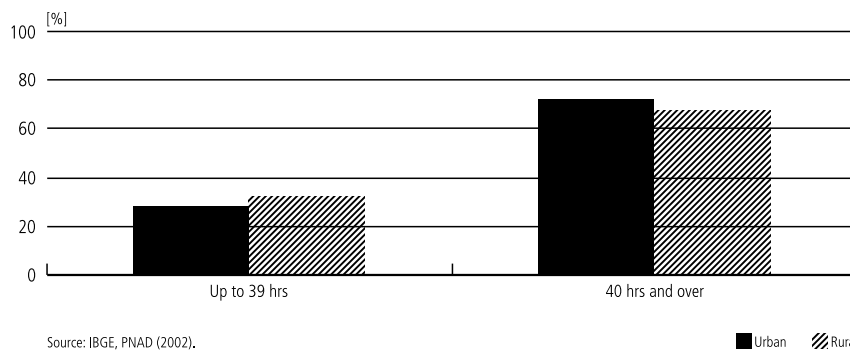


FIGURE 25
OCCUPATION OF OLDER WOMEN ACCORDING TO HOURS WORKED—URBAN AND RURAL—2002

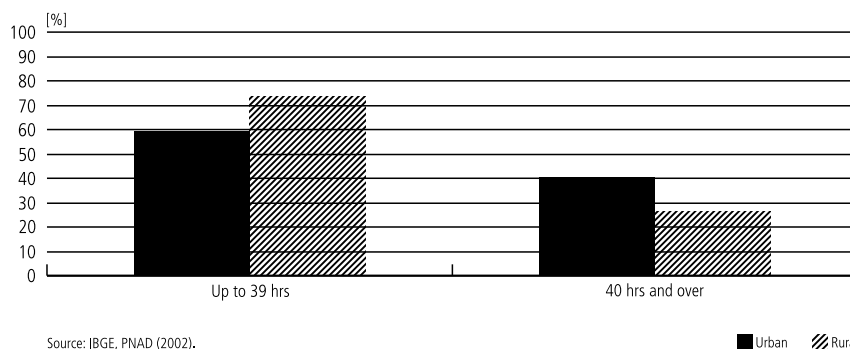


FIGURE 26
OCCUPATION OF OLDER MEN ACCORDING TO HOURS WORKED—URBAN—2002

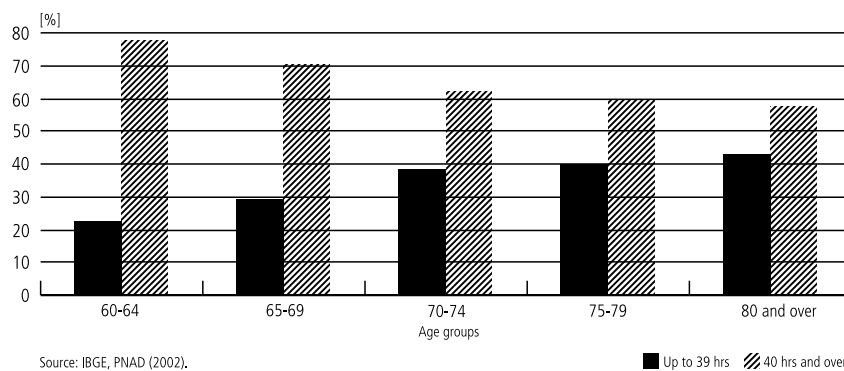
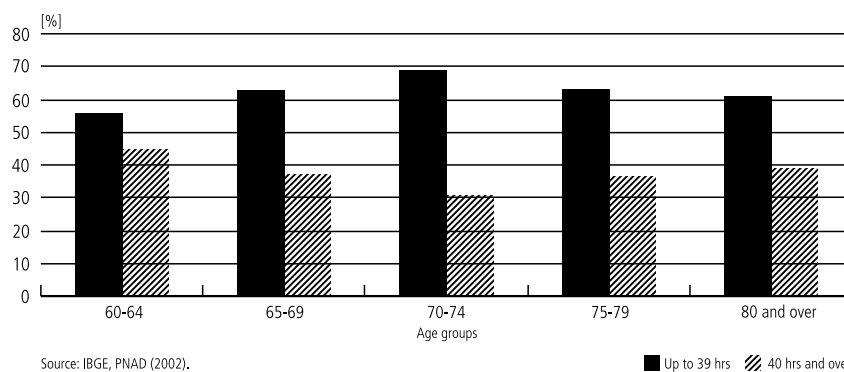


FIGURE 27
OCCUPATION OF OLDER WOMEN ACCORDING TO HOURS WORKED—URBAN—2002



3 THE INCOME OF ELDERLY PERSONS

In this section, the elderly's earnings structure is briefly described, with the emphasis being given to earnings from work. The relative importance of this type of earnings is focused on, both in relation to the composition of income of elderly persons and income of their families.

Table 1 shows the distribution of elderly persons, as well as the mean and standard deviation of earnings, in each income formation category. As shown in Figure 28, the sole earnings of 57% of urban elderly men with positive income comes from retirement pensions, whereas 15% have earnings solely from work and 16% from both. For women, the situation is quite different: only 5% have earnings solely from work, while 44% have income from retirement pensions. In addition, 30% of women are in the category 'other types of earnings'—mainly

TABLE 1
BRAZIL: PROPORTION OF OLDER PERSONS AND AVERAGE EARNINGS IN INCOME CATEGORIES BY GENDER—2002

Types of Earnings	Urban				Rural			
	%	Average	Deviation	No.Obs.	%	Average	Deviation	No.Obs.
Men								
Work	14.88	798.71	1,666.55	792,748	12.81	366.56	587.89	168,079
Work and Retirement	16.02	1,455.31	2,519.77	853,746	40.68	497.14	674.05	533,644
All Sources	1.92	3,124.22	3,897.02	102,500	2.87	1,035.27	1,346.04	37,587
Retirement	57.08	622.22	996.89	3,041,989	38.06	255.33	591.32	499,308
Retirement and Others	6.53	1,590.33	2,223.77	347,931	3.05	705.00	1,210.15	39,960
Other Types of Earnings	2.01	430.35	661.15	107,206	1.20	306.52	432.76	15,759
Work and Others	1.56	1,752.52	2,870.15	83,276	1.34	607.08	721.95	17,559
Total	100.00			5,329,396	100.00			1,311,896
Women								
Work	5.08	493.99	1,655.13	316,542	1.45	226.01	231.46	17,362
Work and Retirement	3.87	829.53	1,162.74	241,177	5.03	349.53	254.38	60,300
All Sources	1.02	1,397.23	1,807.30	63,605	2.25	593.97	247.18	27,023
Retirement	44.42	349.33	529.64	2,767,247	67.12	210.96	112.66	804,392
Retirement and Others	13.32	887.57	1,066.49	829,736	12.87	453.07	435.31	154,247
Other Types of Earnings	29.50	500.24	851.58	1,838,052	9.83	217.52	125.83	117,852
Work and Others	2.79	660.09	972.36	173,717	1.44	447.74	350.55	17,272
Total	100.00			6,230,076	100.00			1,198,448

Source: PNAD 2002.

FIGURE 28
URBAN BRAZIL: PROPORTION OF OLDER PERSONS IN EACH INCOME CATEGORY BY GENDER—2002



social security benefits—and 13% in the category of income from both pensions and other sources. It is, however, very important to emphasise the fact that the high percentage of women solely with retirement earnings (44%) is certainly an overestimate that includes individuals receiving social security benefits, given the common misunderstanding of the differences between *aposentadorias* (retirement pensions) and *pensões* (social security benefits). It is quite common, for example, for widows to regard their social security benefits as being their deceased husbands' retirement pensions. In this way, especially in the case of women, the distinction between social security benefits and retirement pensions needs to be treated very carefully.

The distribution in rural areas is quite different, as can be seen in Figure 29. A smaller number of men than in urban areas have income solely from work (13%) or from retirement (38%), but the majority of them (41%) have income from both retirement and work. Among rural elderly women, the percentage of those receiving only retirement pensions is 67%. It is worth noting that the expansion of rural social security benefits following the enactment of the 1988 Constitution profoundly altered the composition of earnings the rural elderly. Data from the 1984 PNAD shows that in 1984, 33% of elderly men and 11% of elderly women only had earnings from their work. In 2002 these figures had declined to 13% and 1%, respectively, while the proportion of those with income from both work and retirement pensions had increased.

Table 2 represents another type of approach. It shows the distribution of elderly persons receiving the different type of earnings, earnings from work, retirement pensions, social security benefits, other (private) retirement pensions, other (also private) social security benefits, rent and others. Figure 30 contrasts the percentages of men and women receiving each type of earnings and their

FIGURE 29
RURAL BRAZIL: PROPORTION OF OLDER PERSONS IN EACH INCOME CATEGORY BY GENDER—2002

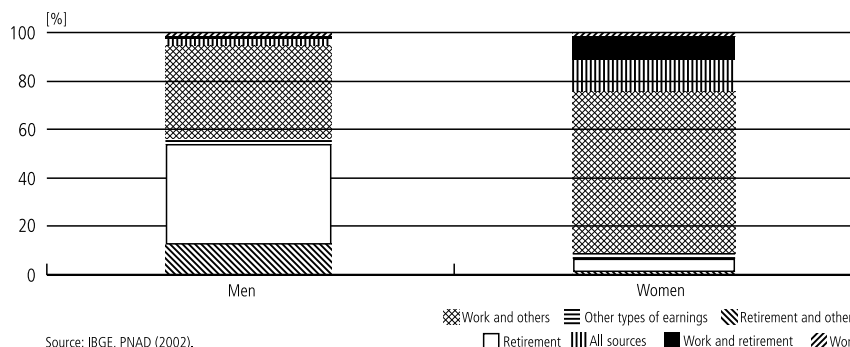
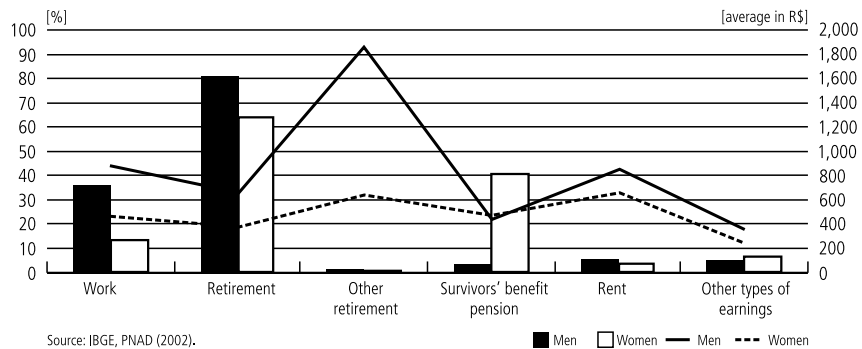


TABLE 2
BRAZIL: PROPORTION OF OLDER PERSONS BY EACH TYPE OF EARNINGS AND AVERAGE OF EACH TYPE OF EARNINGS BY GENDER—2002

Types of Earnings	Urban				Rural			
	%	Average	Deviation	No.Obs.	%	Average	Deviation	No.Obs.
Men								
Work	35.38	879.30	1,837.87	4,010	58.43	314.63	641.1	1,536
Retirement	81.07	653.59	1,094.63	9,189	84.29	239.69	441.45	2,216
Other Retirement	1.11	1,859.29	2,935.88	126	0.19	1,493.00	1,508.69	5
Survivors' Benefit Pension	2.74	441.31	727.04	311	1.79	212.87	65.72	47
Rent	5.13	844.81	1,432.97	581	2.13	549.71	963.54	56
Other Types of Earnings	4.69	350.54	958.38	532	4.94	139.40	251.41	130
Women								
Work	13.37	453.87	1,120.46	1,791	10.39	179.88	257.08	245
Retirement	63.98	372.26	578.89	8,573	88.72	211.92	134.63	2,092
Other Retirement	0.57	632.18	716.52	76	0.04	195.00	---	1
Survivors' Benefit Pension	40.34	466.85	753.89	5,405	22.60	234.30	232.15	533
Rent	3.30	652.53	1,091.75	442	0.72	518.53	1,175.05	17
Other Types of Earnings	6.51	232.70	454.85	872	4.54	97.72	104.56	107

Source: PNAD 2002.

FIGURE 30
URBAN BRAZIL: PROPORTION OF OLDER PERSONS BY EACH TYPE OF EARNINGS AND AVERAGE OF EACH TYPE OF EARNINGS BY GENDER—2002



Source: IBGE, PNAD (2002).

average values, and shows that the highest average values come from privileged income sources: rents (received by 5.13% of men and 3.3% of women) and private retirement pensions (received by 1.1% of men and 0.6% of women).

Figures 31 and 32 show the differences, as well as the tendencies, for the female and male age-earnings profiles, for elderly persons in urban and rural areas. The fact that the tendency for earnings to decline with age is much more striking among men can be explained by the evidence presented in the subsequent Figures (33 and 34) in which income from work, the type of earnings in which a decline at the end of active life is most common, is only significant for male earnings (46% of urban elderly males and 52% of rural elderly males in the 60-64 age group). For 60-64 year old women, earnings from work are still a relevant part of their income (20% of urban women and 8% of rural women), but at more advanced

FIGURE 31
BRAZIL: AVERAGE EARNINGS BY AGE—ALL SOURCES—URBAN—2002

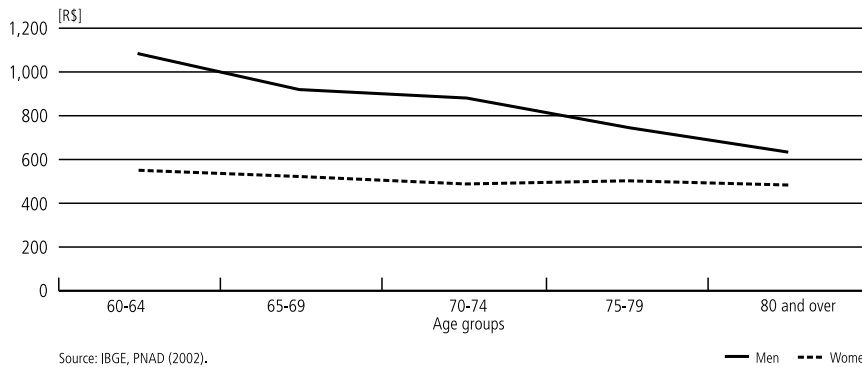


FIGURE 32
BRAZIL: AVERAGE BY AGE—ALL SOURCES—RURAL—2002

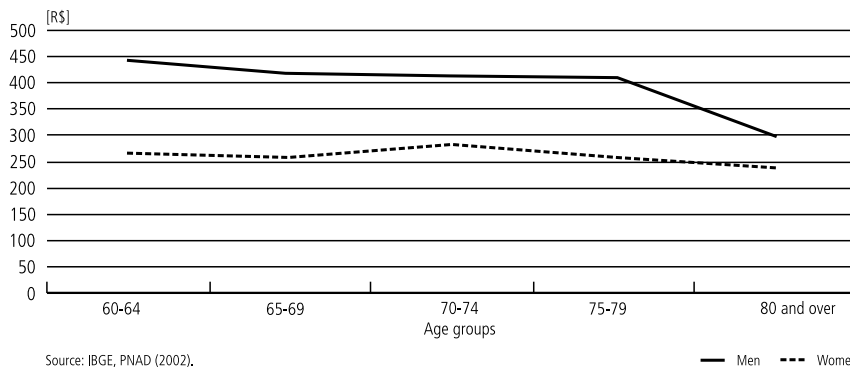


FIGURE 33
URBAN BRAZIL: INCOME COMPOSITION OF OLDER PERSONS BY SOURCES ACCORDING TO GENDER AND AGE GROUPS—2002

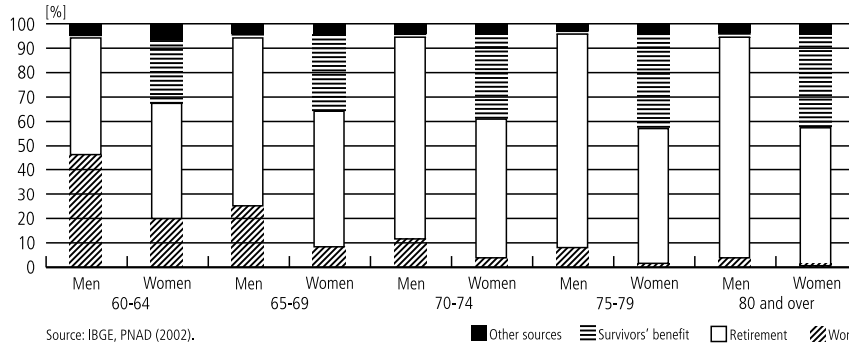
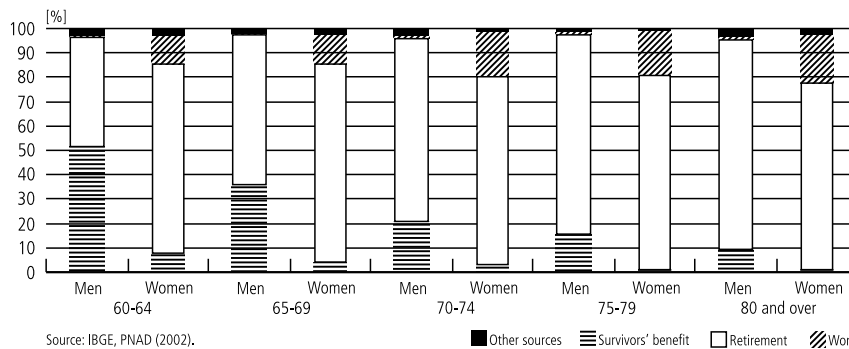


FIGURE 34
RURAL BRAZIL: INCOME COMPOSITION OF OLDER PERSONS BY SOURCES ACCORDING TO GENDER AND AGE GROUPS—2002



ages this source of earnings very quickly gives way to earnings from retirement and social security benefits.

Finally, turning to the relative participation of the earnings of elderly persons in the composition of family income, it is clear that income from these sources is far from negligible for their families. To the contrary, in the 60-64 year age group, where one finds the largest proportion of economically active elderly, male earnings correspond to no less than 67% of familial income in urban areas and 69% in rural, of which 31% corresponds to the earnings of the urban elderly and 37% to the rural elderly. It should also be noted that, to the opposite of what might be expected, as these elderly age, their relative participation in family income does not decrease (with the exception of the 80 and over group, where comparisons are less precise as this is an open age group); rather the sources of earnings change,

with earnings from work giving way to retirement pensions. In relation to older women, their participation in family income is also quite high, around 55% in urban area for all ages, whereas, in regard to rural women, their participation in family income increases as they age, probably due to the increased in likelihood of being widowed (Figures 35 and 36).

Nevertheless, it is necessary to remember that elderly persons' high participation rates in family income refer to averages in which households are mixed, with elderly persons cohabitating with children, as well as for households consisting just of elderly persons (either those living alone or with their spouses). Looking just at elderly persons who cohabit with other family members, not including spouses, as shown in Figures 37 and 38, it can be seen that the overall situation changes little, i.e., elderly persons still account for a significant portion

FIGURE 35
URBAN BRAZIL: INCOME PARTICIPATION OF OLDER PERSONS IN FAMILIAL INCOME BY TYPE OF EARNINGS ACCORDING TO GENDER AND AGE BRACKET—2002

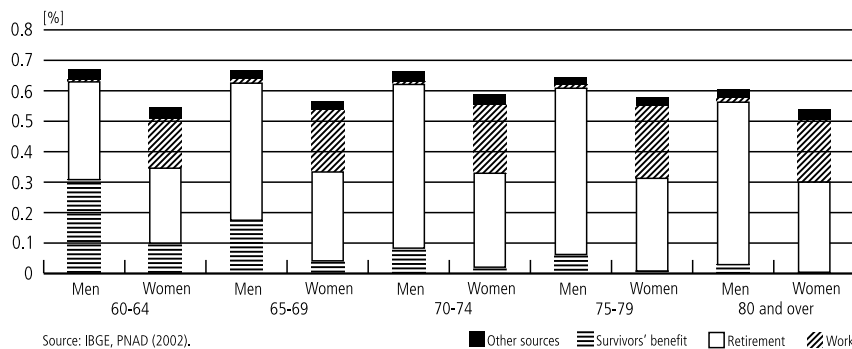


FIGURE 36
RURAL BRAZIL: INCOME PARTICIPATION OF OLDER PERSONS IN FAMILIAL INCOME BY TYPE OF EARNINGS ACCORDING TO GENDER AND AGE BRACKET—2002

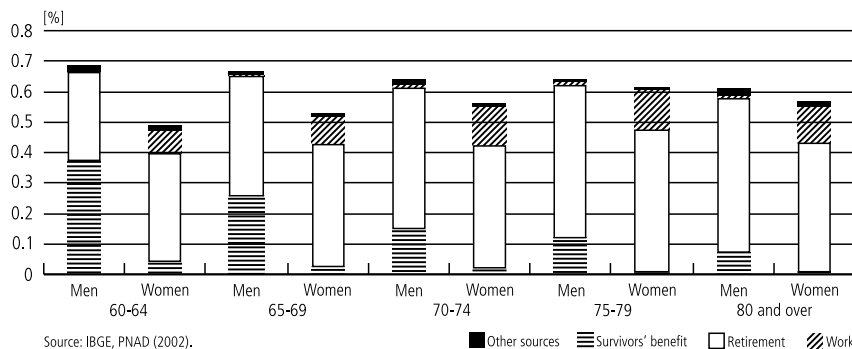


FIGURE 37
URBAN BRAZIL: INCOME PARTICIPATION OF OLDER PERSONS IN FAMILIAL INCOME BY TYPE EARNINGS ACCORDING TO GENDER AND AGE BRACKET (ONLY OLDER PERSONS WHO COHABITATE WITH OTHER FAMILY MEMBERS)—2002

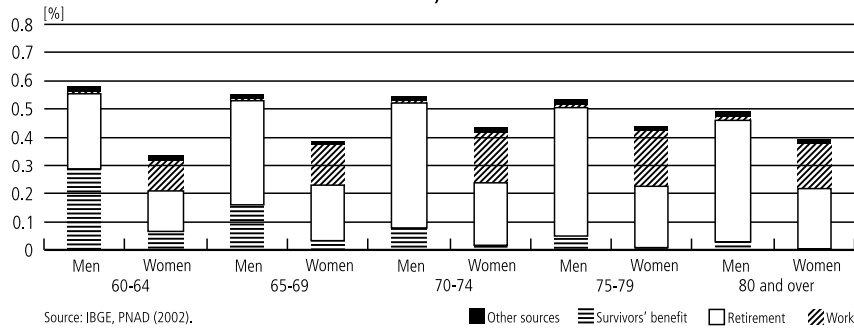
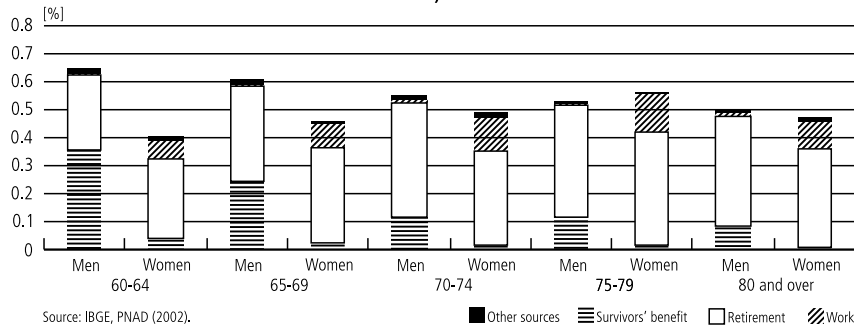


FIGURE 38
RURAL BRAZIL: INCOME PARTICIPATION OF OLDER PERSONS IN FAMILIAL INCOME BY TYPE EARNINGS ACCORDING TO GENDER AND AGE BRACKET (ONLY OLDER PERSONS WHO COHABITATE WITH OTHER FAMILY MEMBERS)—2002



of family income, a proportion that is more significant among elderly persons living in rural households.¹² It is worth noting, though, that this data does not prove any relationship of financial dependency that might go beyond the limits of familial cohabitation.

4 FINAL COMMENTS

In this chapter, we have highlighted the increasing tendency of elderly persons to participate in the Brazilian labour market and as a result, the growing need to carefully think through labour policies aimed at this population group whose level of qualification, below that of the average adult population, can hardly be

12. For other evaluations of the income contribution of the elderly to familial income, see in this book the chapters by Camarano, Kanso and Leitão, Delgado and Cardoso Jr. and Beltrão et al.

modified in any significant way. In order to identify correctly the targets of such policies, we have tried to describe the economic activity of elderly persons, indicating both the subgroups with greater economic participation and the types of activities where elderly persons tend to concentrate.

Thus, we were able to show that elderly persons most available for work (reflected in greater labour force participation rates) are those more dependent on earnings from economic activity: men, non-whites, heads of family, those with lower family incomes, those who are not retired and workers in manual occupations. However, workers with higher education levels have greater chances of remaining occupied in later years. In relation to the occupational structure of the elderly labour market, agricultural activities and services were seen to be dominant in self-employed or unpaid positions (especially for women in rural areas) and in manual occupations. Nonetheless, as people age, manual occupations tend to give way to higher skilled occupations, just as full-time work gives way to part-time work.

Looking at recent tendencies, the significant growth in the proportion of retired among the elderly labour force can be noted as a result of the expansion of social security coverage following the 1988 Constitution. Indeed, as can be seen in other chapters in this book, between 1981 and 2001 the proportion of retired aged 60 or over increased from 49% to 68% in urban areas and from 59% to 92% (!) in rural areas. Among women, this increase was from 39% to 49% in urban areas and from 43% to 79% in rural areas. Nonetheless, this stupendous growth in social security coverage, most especially in the rural areas, did not have the impact that might have been expected on economic participation, in other words although retirement benefits became an important tool in family income generation and in combating poverty, they did not apparently generate any incentive to withdraw from the labour market. As a matter of fact, in this same period, male activity rates remained practically constant (increasing from 36% to 38% in urban areas and remaining at 60% in rural areas), while female rates increased (from 9% to 12% in urban and from 13% to 19% in rural areas).

Therefore, the tendency for the participation of elderly persons to remain at the same level, shown in the second part of this chapter, is reinforced by the evidence that the expansion of the main financial incentive for withdrawal from work, the retirement pension, does not appear to be producing its intended effect. The most plausible explanation for this is that the impact of the income of elderly (both that derived from retirement pensions and from work) on family income, taking into account only elderly persons cohabitating with other family members, represents almost 60% of the total income for urban families and almost 70% for rural families.

Given the inexorable growth in the share of elderly persons in the Brazilian labour force, we would like to emphasise once again the need, neglected up to now, to ensure that a significant number of new job positions in Brazil are absorbed by the increasing contingent of the elderly labour force, with lower average education levels than the population in general, with often outdated and difficult to update qualifications, who, on the other hand, offer comparative advantages due to their maturity.

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FINANCIAL MOTIVATIONS FOR THE OLD AGE*

Marcelo Neri

Fundação Getulio Vargas (FGV)/Instituto Brasileiro de
Economia (IBRE)/Centro de Políticas Sociais (CPS)/Escola de
Pós-Graduação em Economia (EPGE)

Kátia Carvalho

Instituto Brasileiro de Geografia e Estatística (IBGE)

Alessandra Corsi

Fundação Getulio Vargas (FGV)/Instituto Brasileiro de
Economia (IBRE)/Centro de Políticas Sociais (CPS)

1 INTRODUCTION

The following chapter, *The Capital for the Old Age*, looked at the access of elderly persons to stocks of various types of resources. This study aims to complement this, detailing the reasons for accumulation and depletion of financial resources during the life cycle, emphasising the old age.

All individuals have their own financial motivations to acquire or get rid of assets, credits or specific insurance policies, always aiming at improving their welfare. For example, real state can be purchased to live in, to rent or to be used a reserve value. In the same way that we classify assets as physical capital, human capital and social capital, or that we think about the traditional trilogy of return, risk and liquidity of assets as their defining characteristics, we initially propose a triad of types of effects that assets may have on the level of welfare.

First, individuals extract utility directly from the possession of certain types of assets, such as in the example of property used as a residence, whilst the greater the assets accumulated during the life cycle the higher the level of welfare that can be enjoyed. The second effect is that a high level of assets can increase the income generation capacity of individuals and their families. Although this effect is least relevant in the case of the return from human capital for elderly age groups, because

* This chapter was translated from Portuguese to English by Eoin O'Neill and reviewed by the authors.

at some point they leave the labour market, it is extremely important in terms of alternative real or financial assets accumulated.

The final effect is that the increase in the resources possessed improves the ability of individuals to deal with adverse income shocks. The role of consumption smoothing assumed by assets depends on the importance of these shocks and the extent to which the different segments of the financial sectors are developed, so that they can allow the impacts of these shocks on the level of welfare to be smoothed. In this case, public and private social security coverage and health insurance are of special importance during the old age.

Besides this introduction, this paper is divided into other four sections. In Section 2, we review the literature about the motivations behind the demand for long-term assets in family units. In Section 3, we use data from a survey carried out by the Brazilian Credit and Savings Association [Associação Brasileira de Crédito e Poupança (Abecip)], to evaluate the relevance of these motivations in the Brazilian context. In Section 4, we analyse, using microdata from a series of household surveys, the life cycle trajectories of some specific resources in regard to the theoretical review and the qualitative results previously discussed. These assets include small businesses and housing, most subject to credit market constraints, as well as social security benefits and health insurance which play a central role as the source of savings and insurance amongst elderly people. Finally, in the Section 5, the main results are summed up.

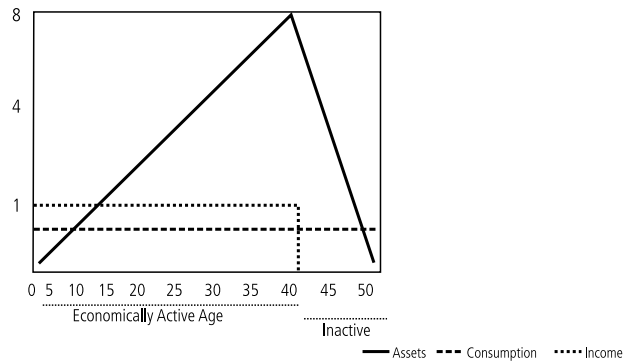
2 DEMAND FOR ASSETS: MOTIVATIONS

The objective of this section is to summarise the main reasons for the accumulation of financial assets in the various stages of individual's life cycle.

2.1 Life Cycle Model

Saving for old age comes from an individual desire to keep a stable pattern of consumption throughout the life cycle. As a result, individuals forego a part of consumption during economically active life to ensure the permanence of a standard of consumption in old age, when in general there is a fall in labour earnings. Savings, therefore, involve the accumulation of assets until retirement, after which the stock of assets begins to be used to complement retirement earnings. The simplest version of the life cycle model is that consumption is constant over the life cycle, there is no uncertainty, the interest rate is null, and the only change in income occurs when the consumer retires.

FIGURE 1
STRIPPED-DOWN VERSION OF THE LIFE CYCLE MODEL



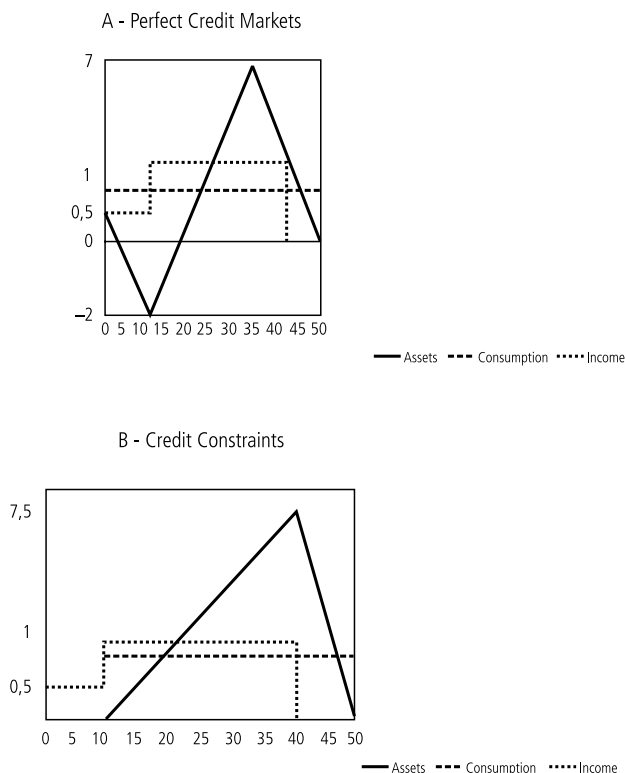
In Figure 1 shown the case which Modigliani (1986) calls the stripped down model of the life cycle. Income is constant for L years of working life (i.e., $L = 40$ years) and is equal to 1 unit and falls to 0 in R years of retirement (i.e., $R = 10$ years). Consumption is constant at the level $L/(L + R)$ per period, or 80% of income during working life, in such a way that savings are equal to 20% of income per period, $R/(R + L)$, reaching the maximum of eight times income immediately prior to retirement.

2.1.1 A complementary perspective

The acceptance of the possibility of contracting debts during the initial period of the life cycle in the simple scheme presented by Modigliani in his Nobel Lecture provides us with an alternative analysis of the life cycle. The indebtedness of younger groups represents an alternative mechanism for the consumption smoothing and welfare throughout the life cycle. What occurs is that during the initial stages of the life cycle, individuals are entering the labour market and their income is generally low. Since they expect to go through a period of professional ascending, they try to use future resources through credit to finance a consumption level above their current income levels.

Figure 2 includes these characteristics and the possibility of obtaining loans in two alternative ways in Modigliani scheme. In the first, young people are able to contract debts, in the second they are constrained in the credit market. The diagram divides the life cycle into three distinct stages: the first ten years of an individual's active life (J), when income is low (equal to 0.5 of a monetary unit), the following 30 years (L) (a period of professional maturity, prime-age, when individual's average income is one monetary unit) and the final ten years of the

FIGURE 2
LIFE CYCLE INCLUDING THE POSSIBILITY OF THE INDEBTMENT OF THE YOUNG



life cycle (R), in which the individual retires and finances consumption only with assets saved during the previous period.

Figure 2A illustrates the case when individuals manage to contract loans when young. In this case, the average consumption of an individual is 0.7 ($((0.5 \times J + 1 \times L)/J + L + R)$). Thus in the initial phase, since the consumption of individuals is greater than their income, they will get loans, accumulate debts (negative assets). In the second phase of the cycle, the initial increase in income will initially be used to pay for previously contracted debts and only after a certain point will it be possible to accumulate net assets for retirement.

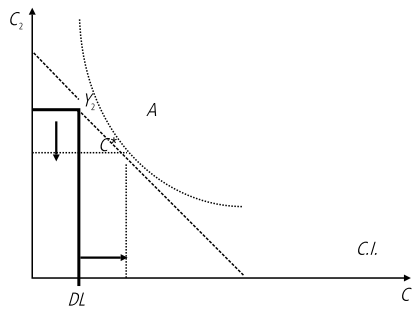
In the second case, Figure 2B, the young people do not manage to contract loans. In this case, liquidity constraints force individuals to consume their entire income (i.e., 0.5 of a monetary unit). The initial stage of the accumulation of assets will be null. It will only be possible to accumulate assets and smooth

consumption in the second phase. From this phase on, consumption will be equal to $0.75(L/L + R)$.

2.2 Liquidity and Indivisibility Constraints

In more general terms than the simplified life cycle concept presented above, agents with liquidity constraints are those whose desire for consumption goes beyond their liquid assets availability. As shown in the scenario outlined in Figure 3, consumers prefer to be at point C^* , where they smooth consumption between periods 1 and 2. Nonetheless, since the available liquidity is inferior to the desired consumption level, the individual is stuck in a corner solution represented by point A . In this case, the individual consumes all his income.

FIGURE 3
LIQUIDITY CONSTRAINTS AND TEMPORAL CHOICE



Where:

C_1 and C_2 represent consumption in periods 1 and 2, respectively;

DL are the available liquidity in period 1, i.e., assets inherited from the past plus current income ($A_0 + Y_1$);

Y_2 is income from period 2; and

CI is the agent indifference curve.

Normally it is expected that individuals with liquidity constraints not to save, since savings are seen as excess income in relation to consumption. Nonetheless, some of the saving motives can be reinforced by the existence of liquidity constraints. Individuals with liquidity constraints are induced to accumulate financial assets as a “buffer-stock” against uncertainties.

In the usual empirical tests, liquidity constraints are evaluated on the basis of the amount of assets that individuals have. According to Runkle (1991), people who have few liquid assets have difficulties in obtaining loans and therefore encounter liquidity constraints. Nonetheless, the inability to obtain loans does not imply an inability to save; there can be good reasons for consumers with liquidity constraints to accumulate even more financial assets.

For example, financial accumulation for the acquisition of indivisible goods can result in the lack of access to credit when monthly income flows taken individually are not sufficient to buy indivisible goods with a high unit value, such as property¹ or physical assets linked to small business production. This situation is caused by the existence of imperfections in the credit market. As a result, liquidity constraints can result in higher, and not lower accumulation of assets.

Saving to acquire goods is, therefore, the result of the interaction of two factors: the indivisibility of goods and imperfections in the credit market. Individuals in an autarchic situation have to accumulate resources by themselves at certain times until they obtain the indivisible good. Similarly, people wanting to start a new business are frequently frustrated by lack of access to the capital market, and are forced to accumulate assets in advance.²

2.3 Precautionary Motives

The demand for assets due to precautionary reasons arises from uncertainties about the future that can affect welfare levels and financial behaviour. Since savings provide resources that will be available in the future, when these uncertainties are resolved, the decision to save is also related to the nature and size of these uncertainties.

As well as the level of uncertainty, the specification of the utility function is a key to establish the need to save for precautionary reasons. The convexity of the marginal utility function is a necessary condition to create a precautionary reason to save. The idea is that in bad times, when the level of consumption is low, the consequences are much worse than in good times when the level of consumption is high. Therefore, the marginal disutility of losses in consumption close to subsistence levels is higher than the marginal utility of earnings in times of relative abundance. As a result, individuals give up higher levels of consumption, when possible, in order to prepare for possible needs. The more uncertain future income is, the greater savings are and the lower present consumption is.

1. Italy and Japan are examples cited in the literature of countries with high rates of savings due to credit rationing.

2. The existence of consortiums allows saving and the period for the acquisition of goods in the absence of credit to be reduced by half.

One case that can be explicitly solved is one with a utility function with constant absolute risk aversions, known in the literature as CRRA.

Suppose that the consumer maximizes:

$$\max Et[\Sigma(-1/\alpha)\exp(-\alpha Ct)/0]$$

subject to:

$$At+1 = (At + Yt - Ct)$$

and:

$$Yt = Yt-1 + et \quad et \sim N(0, \sigma)$$

The consumer has constant absolute risk aversion, with the coefficient α and lives for T periods. The subjective discounted rate is equal to the interest rate without risk, and both are equal to 0. Income from work follows a random path with normally distributed innovations.

In the first order condition of the problem, it can be seen that optimal consumption satisfies the following Euler equation.

$$Ct+1 = Ct + (\alpha\sigma)/2 + et \quad (1)$$

Savings will be equal to:

$$St = -[1/(T-t)]At + \alpha(T-t-1)\sigma/4 \quad (2)$$

The equation (1) shows the impact of income uncertainty on the slope of the consumption path (Euler's Equation). Greater uncertainty in income and greater prudence lead to a steeper slope in the consumption trajectory over time. Equation (2) shows the flow of savings as a function of wealth, income and uncertainty. In the case of certainty equivalence the solution is given just by the first term. Prudence is reflected in the second term: the greater the uncertainty, the higher the level of savings for given levels of income and wealth.³

This motive is also strengthened by the existence of credit constraints, as shown by Deaton (1991 and 1994). The possibility of obtaining loans in bad times is an alternative that transmits security. However, if this alternative cannot

3. It should be noted that the argument is a derivative of the impact of risk aversion that affects the composition of stocks of wealth. Prudence affects the decision to consume, which is related to the marginal utility curve, in other words, to the third derivative of the utility function.

be used, provisions for savings have to be made for these possibilities. Without access to credit (or insurance) contracts, consumers have to provide resources for insurance purposes through the accumulation of additional assets.

2.4 Inheritance

Much of the current debate about savings behaviour in developed countries centers around the relative importance of life cycle motives (i.e., hump saving to finance consumption during old age) versus inheritance (i.e., saving to finance the consumption of descendants). These motivations are particularly important in understanding the demand for assets among the elderly population.

Individuals leave inheritance for at least three reasons:

a) Altruism. There is a legitimate concern with the welfare of next generations, thus savings are made to smooth the level of consumption between generations.

b) Control. The donor saves to leave goods to compensate his heirs for services provided by them during the life of the potential donor.

c) Accident. Since individuals do not know when they will die, they are unable to prepare an exact plan of the resources they will need until the end of their lives. They need to keep a certain amount that will allow them to live more than they have really lived, and leaving a certain amount when they die.

A polar vision of “altruistic” families was discussed in Barro (1974). In this vision, families derive utility not just from present consumption levels, but also from the future consumption of their children. This means that they extract welfare from the consumption of their descendants. Kotlikoff and Summers (1981) note that a substantial proportion of American savings is related to inheritance. Other evidence that points to the importance of intergenerational transfers are presented by Mirer (1979).

Barro assumes that parents leave inheritance for their children because they are truly concerned about them. Bernheim, Shleifer and Summers (1985) discusses the second reason mentioned above for individuals to leave inheritances, and suggests that parents use inheritance to control their children. Parents want their children attention and use the threat of cutting off inheritance as a way of getting the desired attention.

To test this strategic motivation for inheritance, data related to the frequency parents are visited is examined. This data shows that the richer the parents, the more diligent the visits were. Moreover, only wealth that can be left as inheritance induces

a greater number of visits. Wealth that cannot be left as inheritance, such as pensions that will stop upon the death of the pensioner, does not encourage sons and daughters to visit their parents. This evidence suggests that there can be other reasons for intra-generational transfers of wealth apart from altruism.

An important source of uncertainty in consumption is related to the moment of death and individuals' health expenses. The lower the expectations of life, the lower the post-retirement consumption. Therefore, saving for retirement and for inheritance, whether for altruistic or for strategic reasons, also depend on a degree of uncertainty related to death and morbidity.

3 EMPIRICAL ANALYSIS

3.1 Life Cycle and Income Flows

As seen above, the Modigliani life cycle is often presented as the main motivation for the long-term demand of financial assets. The idea is that individuals save during their lives in order to smooth out their consumption and guarantee their welfare during the final stages of the life cycle when income from work tends to diminish.

We present here a series of charts (Figure 4A to 4F) based on the 1996 National Household Sample Survey [Pesquisa Nacional por Amostra de Domicílios (PNAD)] with the trajectories of individual incomes divided by groups with different education levels that can be seen as a proxy for individuals' permanent income levels. First, the increase in other income sources alternative to labour can be interpreted as evidence of a prior accumulation of financial resources

FIGURE 4A
LESS THAN 1 COMPLETED YEAR OF SCHOOLING

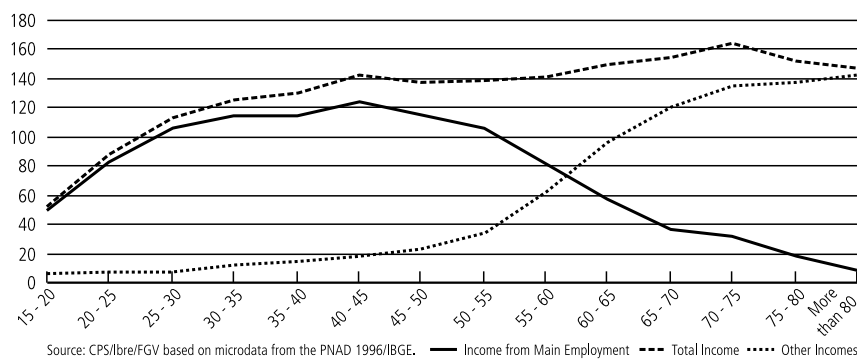


FIGURE 4B
BETWEEN 1 AND 4 COMPLETED YEARS OF SCHOOLING

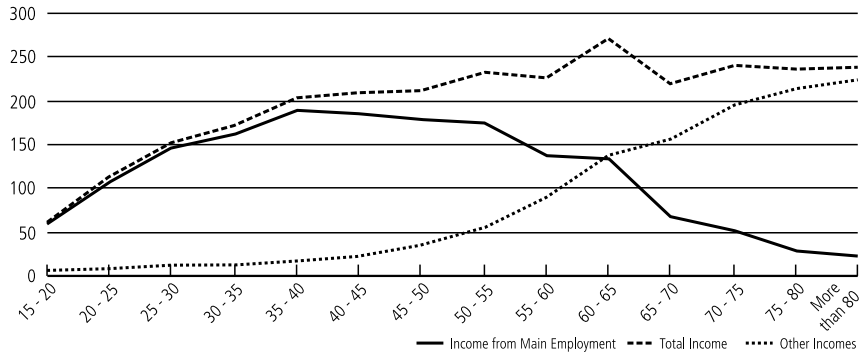


FIGURE 4C
BETWEEN 4 AND 8 COMPLETED YEARS OF SCHOOLING

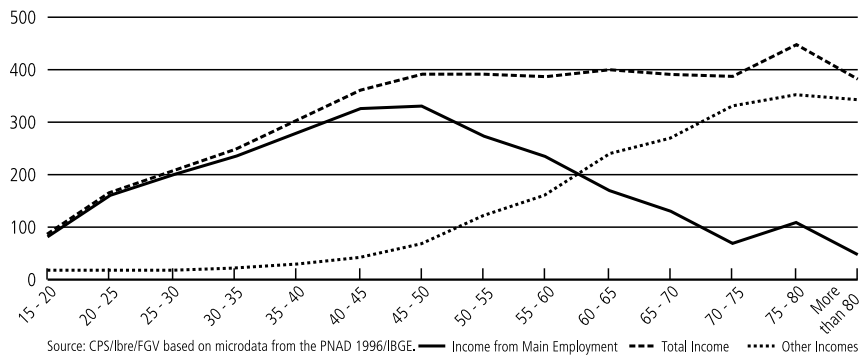


FIGURE 4D
BETWEEN 8 AND 12 COMPLETED YEARS OF SCHOOLING

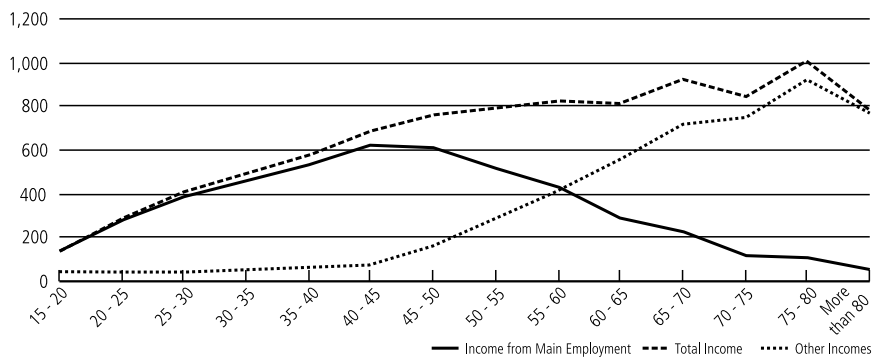


FIGURE 4E
BETWEEN 12 AND 15 COMPLETED YEARS OF SCHOOLING

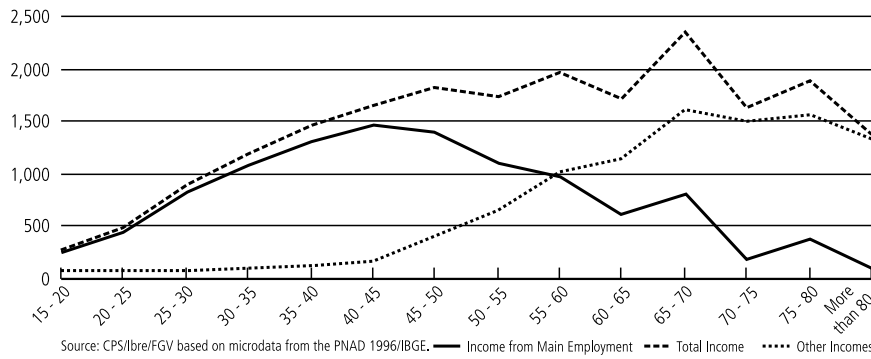
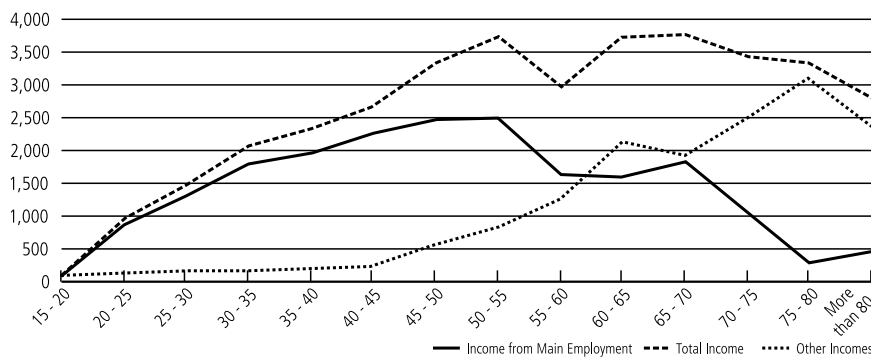


FIGURE 4F
MORE THAN 16 COMPLETED YEARS OF SCHOOLING

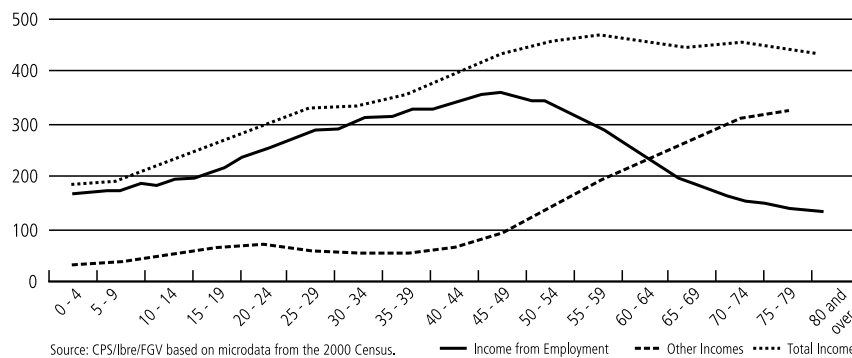


during the life cycle with the object of smoothing consumption and maintaining a constant level of welfare in the final stages of the life cycle, when labour earnings are reduced.

We now move to the per capita concept from different income sources classified by the age of individuals (i.e., not the age of household heads) using the data of the 2000 Census.

Now comes a series of charts referring to absolute and relative life cycle profiles of family per capita income flows from different sources, such as main employment, other employment, rent, retirement and social security benefits, private transfers and other incomes. Income from main employment (Figures 6A and 7A) has a bell shaped curve, reaching the absolute peak of R\$ 327 between 45-49 years of

FIGURE 5
PER CAPITA INCOME TRAJECTORY DURING THE LIFE CYCLE



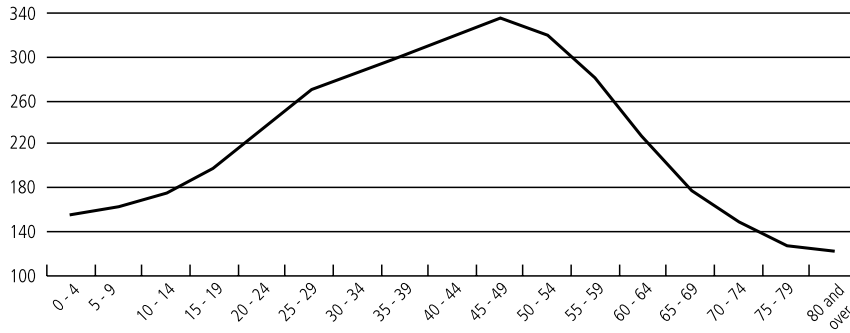
age and the relative peak is achieved ten years earlier, corresponding to 86% of total income. From then on it falls monotonically to around 30% for those over 80 corresponding to an absolute value of R\$ 125.

Income from other employment (Figures 6B and 7B) is at a much lower level than income from main employment. Nonetheless, its path has a similar share along the second phase of the life cycle, falling from a peak of R\$ 13 for the 45 to 49 age group, 3% of total income, to R\$ 3, 8%, for the over 80 age group. The difference can be found in the first half of the life cycle when secondary labour earnings grow at lower absolute and secondary rates indicating lower occupational diversification, which implies greater financial risk.

Each group of non labour incomes increases during the life cycle, as is the case of income from rent. Rent reaches a value of R\$ 34 among elderly people and can be perceived as a proxy of the stock of real estate not used as place of residence. The path of other incomes including public transfers, as well as those from financial investments, indicates the accumulation of capital throughout the life cycle, with the peak being reached in the 75 to 80 age group with a value of R\$ 20,45. However, private transfers follow a similar pattern for a quite different motive, younger members of the family complement the income of the elderly members reaching a peak of R\$ 7,3 for those 80 or over. This result shows the elderly to be the net recipients of private transfers.

In the composition of incomes, retirement and social security benefits is the most important form of income for elderly people. One should note that even in the elderly group, income from retirement continues to increase with age.

FIGURE 6A
INCOME FROM MAIN EMPLOYMENT BY AGE



Source: CPS/lbre/FGV based on microdata from the 2000 Census.

FIGURE 6B
INCOME FROM OTHER EMPLOYMENT BY AGE

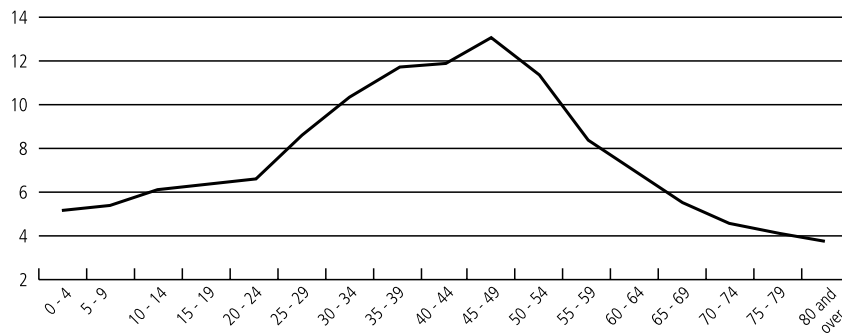
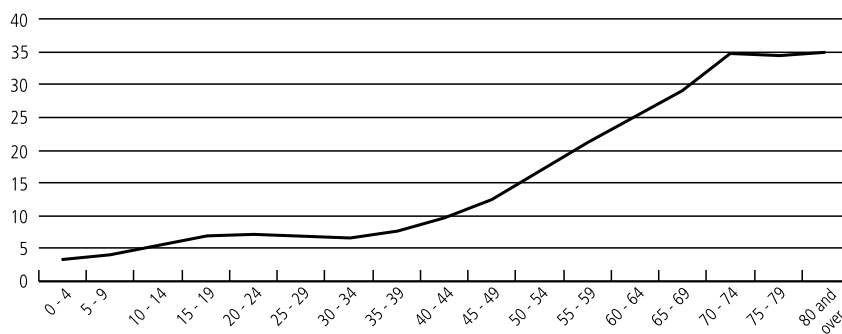


FIGURE 6C
INCOME FROM RENT BY AGE



Source: CPS/lbre/FGV based on microdata from the 2000 Census.

FIGURE 6D
INCOME FROM RETIREMENTS AND SOCIAL SECURITY BENEFITS

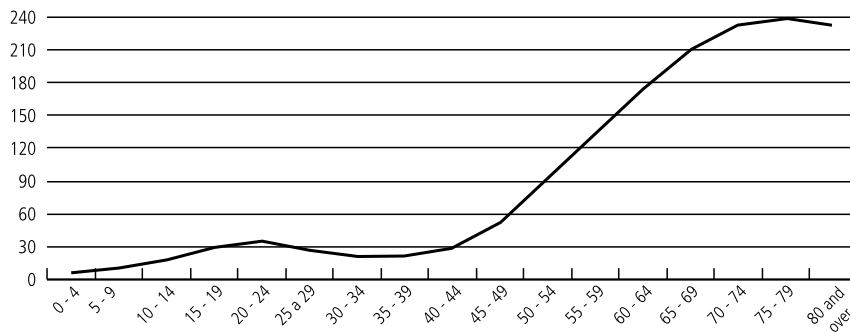
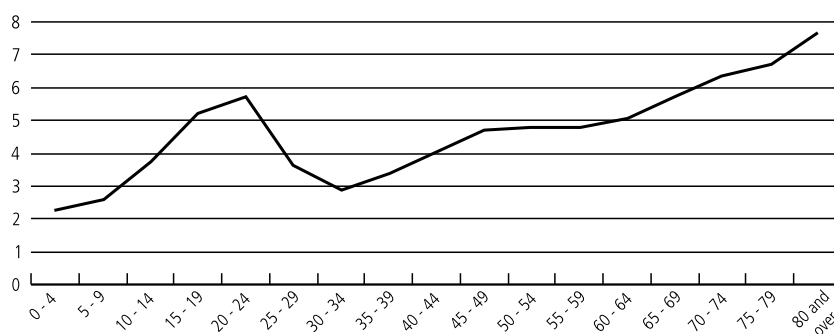
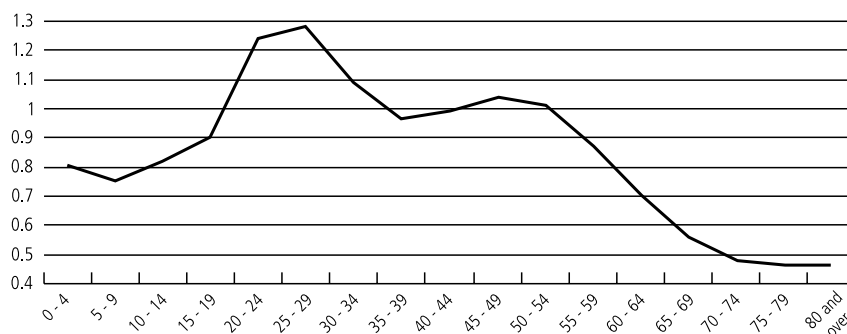


FIGURE 6E
INCOME FROM PRIVATE TRANSFERS BY AGE



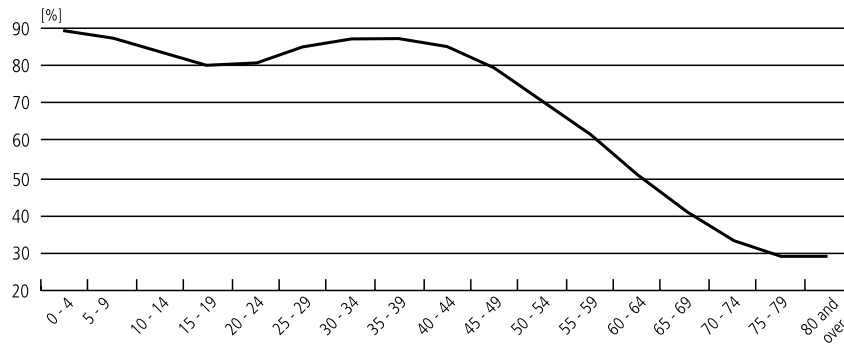
Source: CPS/Ibge/FGV based on microdata from the 2000 Census.

FIGURE 6F
OTHER INCOMES BY AGE (INCLUDING PUBLIC TRANSFERS BY AGE)



Source: CPS/Ibge/FGV based on microdata from the 2000 Census.

FIGURE 7A
INCOME FROM MAIN EMPLOYMENT BY AGE



Source: CPS/lbre/FGV based on microdata from the 2000 Census.

FIGURE 7B
INCOME FROM OTHER EMPLOYMENT BY AGE

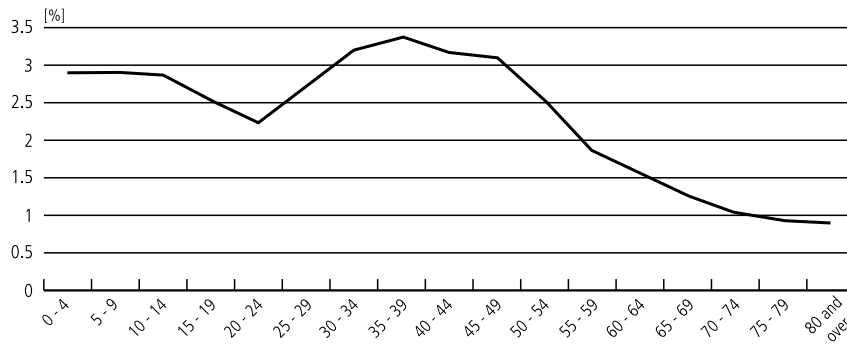
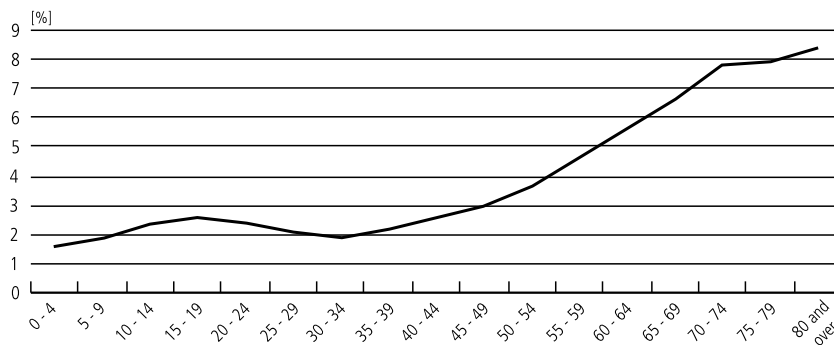


FIGURE 7C
INCOME FROM RENT BY AGE



Source: CPS/lbre/FGV based on microdata from the 2000 Census.

FIGURE 7D
INCOME FROM RETIREMENTS AND SOCIAL SECURITY BENEFITS BY AGE

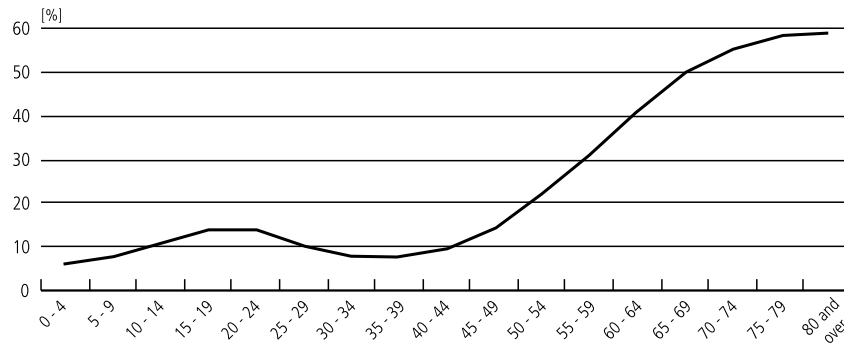
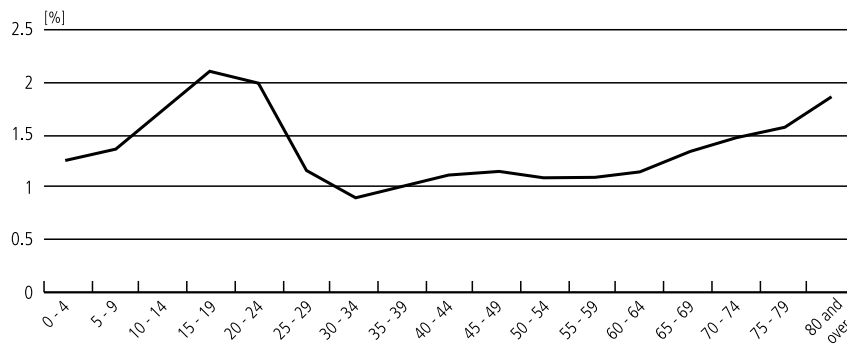
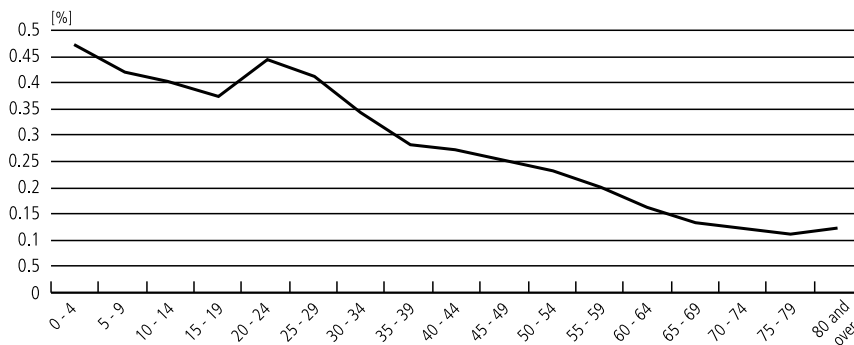


FIGURE 7E
INCOME FROM PRIVATE TRANSFERS BY AGE



Source: CPS/Ibre/FGV based on microdata from the 2000 Census.

FIGURE 7F
OTHER INCOMES (INCLUDING PUBLIC TRANSFERS BY AGE)



3.2 Long-Term Financial Behaviour

This section aims to discuss the financial behaviour of individuals, giving special attention to those of advanced ages. The data referring to the analysis is given in the statistical annex.

3.2.1 Financial profile

We will start by tracing the profile of savers by age groups, using the Survey on Financial Behaviour carried out by the Abecip. Abecip's research was carried out until 1987 in eight Brazilian metropolitan regions (Belém, Fortaleza, Recife, Salvador, Belo Horizonte, Rio de Janeiro, São Paulo and Porto Alegre) and provides a general picture of the financial behaviour of individuals. In order to investigate financial behaviour throughout the life cycle, individuals are divided into three age groups: 18 to 29, a period in which they are entering in the labour market and begin to acquire goods and accumulate assets; 30 to 49 years, the most prominent professional phase and, therefore, involving the intensification of the asset accumulation process; and 50 and over,⁴ when the process of retirement begins.

Abecip research on consumer finances shows that 53% of adults possessed some sort of financial asset. This proportion increases among the older age groups, from 48% among the youngest group to 57% among the oldest. The research also shows that the most popular form of financial asset in Brazil is the savings account: 82% of individuals who have some financial assets have savings accounts. Those in the over 50 age group use savings accounts most often (87%). The high proportion of investors with savings accounts in the population means that when the spectrum of financial assets is restricted to this asset, little is lost.

In 1987, there were around 70 million active savings accounts in Brazil, though savers could have more than one account. Abecip data shows that at the same time there was an average of 1.4 savings accounts for each adult saver. The quantity of savings accounts per person increases with age, the older groups have the highest quantity, approximately 1.6. Among the youngest group, this figure is 1.3. The average balance in savings accounts is also higher for the over 50 age groups than for the youngest group (20 minimum salaries compared to 11).

The first explanation for the popularity of savings accounts can be found in the low level of income needed to open these types of accounts. These low levels are due to the operational simplicity of the monthly capitalisation period. This

4. Abecip data was organised according to these three age categories, therefore elderly people were included in the over 50 age group.

philosophy, adopted when savings accounts were introduced for the first time, results in the absence of entrance barriers in official institutions, such as Caixa Econômica Federal. In 1987, 36% of those with savings accounts held accounts in this institution.

An indication of the easy access to savings accounts is shown in the explanations given by respondents who “did not have a savings account”, where the answer “very high opening limit” has a minimal proportion of respondents among all age groups. On the other hand, the preference for savings account among the elderly is shown by the fact that only 2% of individuals aged 50 or over who “did not have a savings account” explain this by stating that they prefer another type of asset, compared to approximately 38% of savers between 18 and 35.

Two reasons can be offered to explain the popularity of savings accounts among the oldest groups: first, these individuals have not actively participated in innovations occupied in the financial market, such as the introduction of stock market funds, open market operations, etc. Second, they tend to be more conservative and the savings account is considered to be one of the safest financial investments. As a result, assets with greater risks are more important for the intermediate age group. In this group, approximately 5% invest in shares and 2% in the *open market*, while among the oldest groups, these numbers are 2% and 1%, respectively.

Among the characteristics seen as important by depositors, investment risks, contained by the item “security”, appear in first place with 42%. Profitability is next with 29%. Liquidity is third, but much below, with 3%. Facility to invest is also the same, 3%. Among the triad of profitability, risk and liquidity, only profitability differs between the age groups, being given a greater weight by the youngest group, 31% compared to 22% for the oldest, reflecting the higher margin for the substitution between assets preferred by the former.

3.2.2 Financial motivations

Abecip’s qualitative questions about individuals’ aims and motivations when deciding whether or not to invest in savings accounts allows us to investigate the importance of the theoretical approaches discussed above on the financial behaviour of individuals throughout the life cycle.

According to the survey, precautionary motives are the most important type of motive among Brazilian savers. The main objective of most savers when they

open a savings account is to use the money saved for emergencies (44%).⁵ This reason is stronger for savers in the over 50 age group, (51%). The majority of elderly people say that they save to protect themselves from the uncertainties of income, in accordance with the precautionary savings model seen in the first part of the article.

The second and most important reason is to save funds for the future, which, as could be expected, is slightly higher among the youngest age group (30%) than among the oldest (28%). This result is not inconsistent with Modigliani's life cycle theory, but we will look at this question in greater detail below.

Other evidence for the life cycle theory is the intention to invest or withdraw savings in the future. The intention to invest in savings accounts in the future is 63% among the oldest age groups, falling to 78% among those aged between 18 and 29. The youngest age group deposits money most frequently: 38% had last deposited money in their savings account less than a month previously, while 38% of the oldest age group had last deposited money more than a year previously. The average date of the last deposit in a savings account was five months for the youngest group and eight months for the oldest. The main reason for the oldest group for not depositing money in savings accounts was the lack of extra money (93%). The choice of other investments was quite relevant among the youngest group (21% against 2% among the oldest) who did not invest in savings accounts.

Also consistent with the life cycle perspective, is the intention of withdrawing money from savings, it has a trajectory that grows with age (7% of the youngest group compared with 17% of the over 50 group). The oldest group are also those who withdraw money from savings most frequently, 19% had withdrawn money less than a month previously. Among the youngest, only 8% had done so. On the other hand, 24% of the youngest group had never withdrawn money from their savings accounts, while 18% among the oldest group had never done so. These results reveal the concern of the youngest group to accumulate assets to ensure stable living standards in the future, while the oldest groups used their accumulated savings to a greater extent to compensate losses of income.

In fact, the main reason for withdrawing money from savings accounts in the future for those over 50 is to complete their budget (74%). In the case of the savers aged between 18 and 29, this proportion falls to 24%. Among the same

5. Coincidentally, Carrol and Sawfwick (1994) estimates that precautionary savings account for 40% of the accumulation of American stocks of wealth. Tobin (1967) calls attention to the ratio between the aggregate stock of wealth and the Gross Domestic Product (GDP) is around 4, the same shown by the simplified version of the life cycle presented in the first part of this article which is similar to that observed in the US. Brazilian data presented in Morandi (1997) is reasonably close to the results cited by Tobin (1967).

group, one of the main reasons for withdrawing money from savings in the future is to invest it in other investments (10% among the 18 to 29 group and 24% among the 30 to 49 group).

According to Abecip, Brazilians do not have the habit of saving to leave inheritance for their families. The proportion of people who save for a better future for their families is insignificant (0.39%). In this case, any inheritance left to their descendents can be seen as accidental.

Liquidity constraints, as we have seen, encourage the prior accumulation of resources by individuals to acquire indivisible assets, which can be seen in the high proportion of individuals who save to acquire high value physical assets, such as property, construction, etc., and also to acquire intangible items, such as wedding, parties, and in some cases travel. Another example of an indivisible good is the opening of an individual's own business. In general, people need to save for a long period to be able to set up their own business. According to the Abecip survey, a large number of individuals save to buy goods and property, especially among the youngest group. This corresponds to 15% of individuals under 50, compared to 9% of individuals over 50. A significant part of individuals aged between 18 and 29 also save to travel (4%). On the other hand, the proportion of people who save for construction, weddings and for setting up their own businesses is small (less than 0.5%).

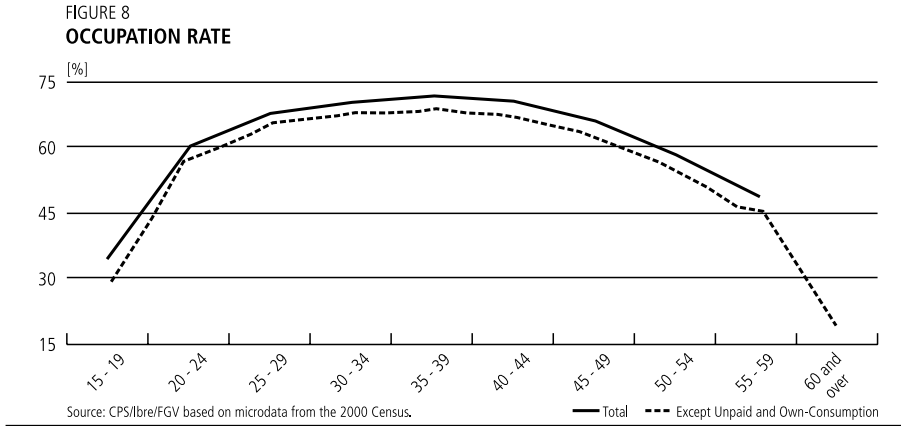
4 MOTIVES, ASSETS AND THE LIFE CYCLE

4.1 Overview

Drawing on the theoretical discussion and the qualitative results discussed above, we will emphasise in this section some of the most significant resources accumulated during the life cycle, such as: *a*) private pensions and public social security contributions that smooth fluctuations in labor earnings as suggested by the life cycle theory and the evidence presented above; *b*) small business and housing assets more subject to credit market constraints; and *c*) health insurance which plays a precautionary role in relation to morbidity risks for elderly people.

4.2 Life Cycle and Social Insurance Contributions

The fall in employment income during the life cycle reflects the reduction of occupation rates during the final phases of the life cycle, as a result of which it is necessary to look for other sources of income in order to sustain the same level of welfare. Figure 8 shows occupation rates per age group. As shown in the charts



related to employment income, the occupation rate has an inverted U shape, reaching the peak during the 35 to 45 age group.

A fundamental question in the evaluation of the motivations initially given by Modigliani in the life cycle theory is related to social security contributions, both public and private. Figures 9A and 9B show the contribution rates for social insurance and for private pension funds among the occupied population.

The private contribution rate is on average almost ten times lower than the social security rate. The percentages are 2.68% and 20.31% respectively. Looking across age groups, it can be seen that the groups with the highest contribution rates are distinct depending on the type of insurance. Contributions to public social insurance are more uniformly distributed in the 25 to 50 age groups, with a peak in

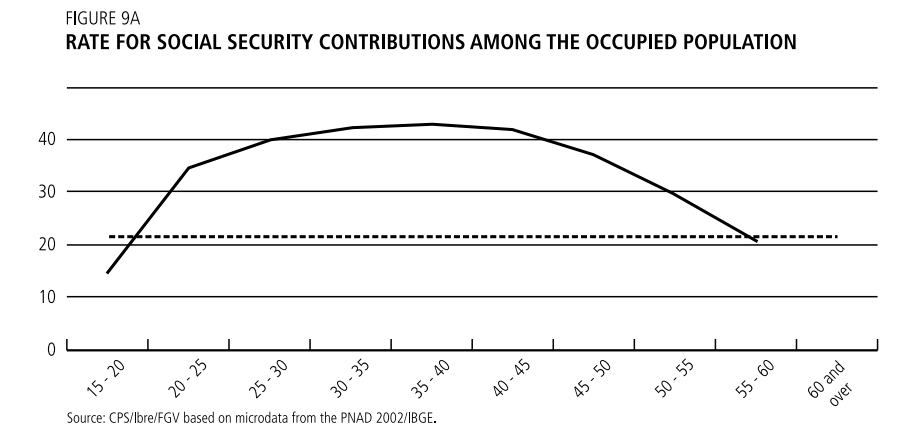
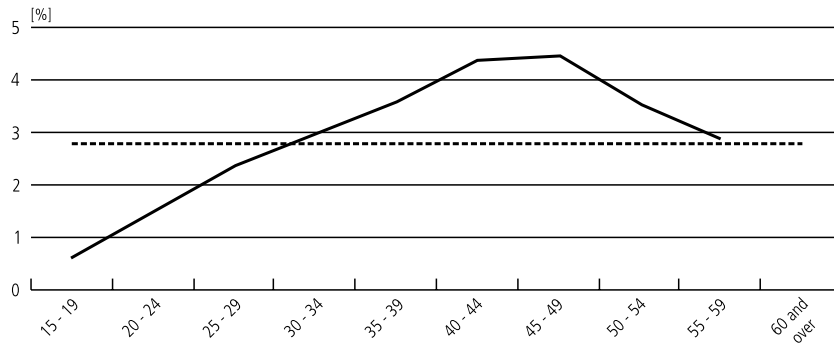


FIGURE 9B
RATE FOR PRIVATE PENSION FUNDS AMONG THE OCCUPIED POPULATION



the 35-to-40 group (41.57%). The peak of private insurance contributions is in the 45-to-49 age group (4.36%).

The Brazilian Institute of Geography and Statistic [Instituto Brasileiro de Geografia e Estatística (IBGE)] 1996 Family Budget Survey [Pesquisa de Orçamentos Familiares (POF)] provides information about the monetary values spent on insurance contributions among the occupied population working in the private sector in Brazilian metropolitan regions. It can be seen that the volume of contributions increases in accordance with age until the 40-to-45 age group. Then, the ratio between contribution and income falls during the rest of the life cycle, due to the greater growth of average income compared to the value of the average contribution until 50 and because of an expected fall in the volume of contributions of the elderly as they reach the age of retirement.

FIGURE 10A
RATIO BETWEEN CONTRIBUTION AND INCOME—OCCUPIED POPULATION IN THE PRIVATE SECTOR

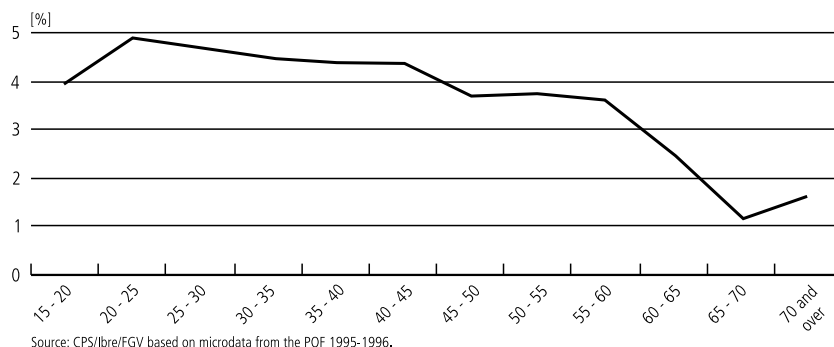
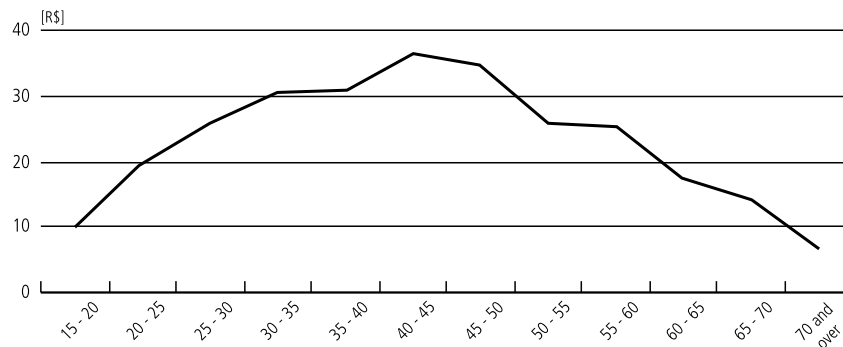


FIGURE 10B
VOLUME OF CONTRIBUTIONS—OCCUPIED POPULATION IN THE PRIVATE SECTOR



4.3 Precautionary Motives and Health Insurance

According to the Abecip research, the most popular financial asset in Brazil is the savings account and the main reason given for opening savings accounts is the precautionary motive: 44% of savers explicitly open them as a way of dealing with possible emergencies, including 51% of the oldest group. Precautionary demand aims to improve the ability to deal with adverse shocks. The role of smoothing consumption through assets occurs due to the importance of shocks and the emergence of various parts of the financial market that allow the smoothing of the impact of shocks on the level of welfare. Therefore, the greater the presence of shocks and the worse the types of insurance available, the greater will be the need for this type of range of financial products.

Factors related to the life cycle are related morbidity risk due to the natural ageing process. Some types of health needs can be seen in the series of Figures 11A to 11F. The self-evaluation of health (good and very good) assumes decreasing proportions as the individual ages. On the other hand, measures of morbidity displays increasing behaviour as a function of increased age.

The possession of health insurance also shows increasing monotonic behaviour, because of the increased need of individuals of advanced ages to use health services. In relation to the difference between health insurance services, behaviour is homogeneous among different age groups. In relation to the cost of health insurance, it can be seen that the proportion of individuals who spend less than R\$ 50 on their health insurance decreases with age. Here, it is clear that the value of monthly payments is proportional to age, since the probability of death or illness increases with age.

FIGURE 11A
SELF-EVALUATION OF HEALTH (GOOD AND VERY GOOD)

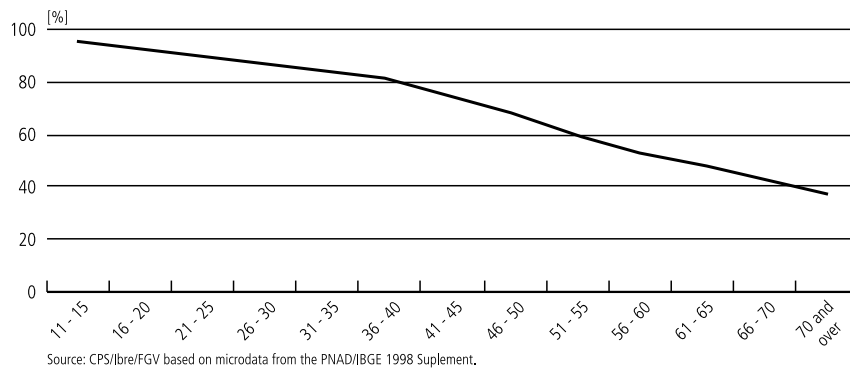


FIGURE 11B
MEASURES OF MORBIDITY

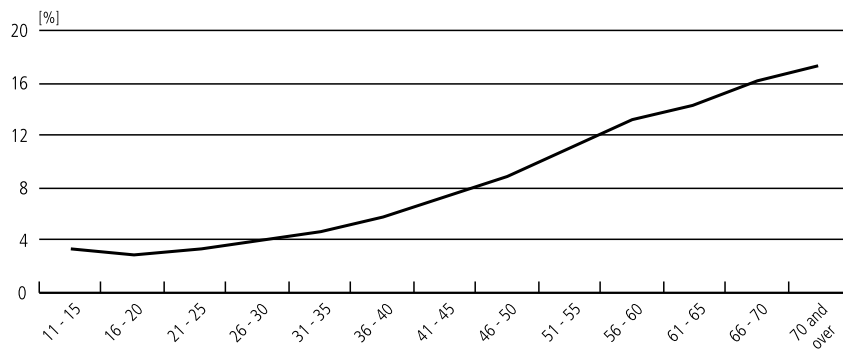


FIGURE 11C
DIFFERENCES BETWEEN HEALTH INSURANCE SERVICES

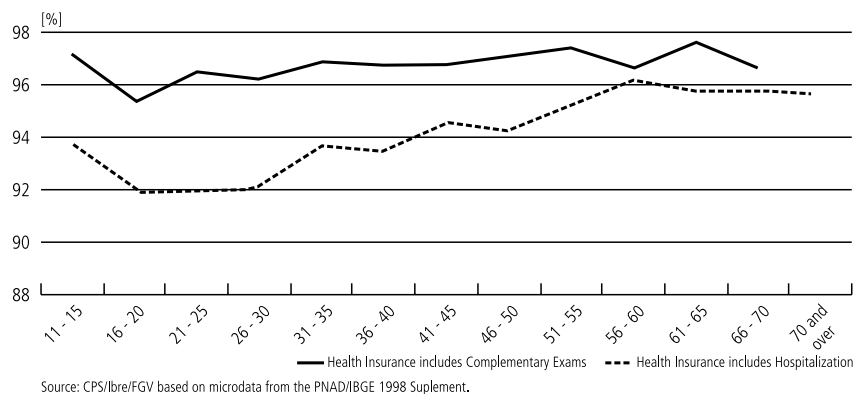


FIGURE 11D
POSSESSION OF HEALTH INSURANCE

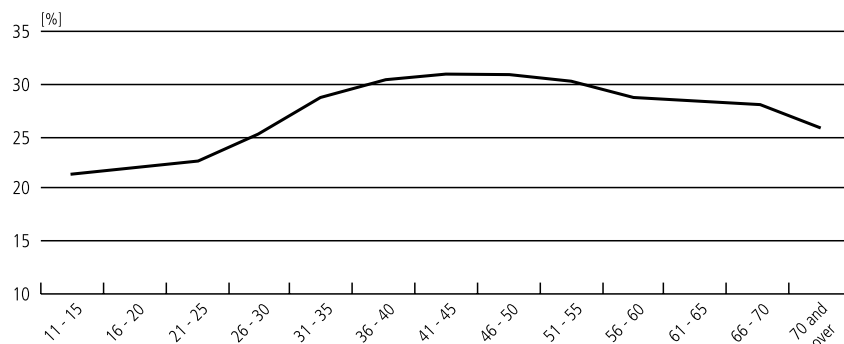


FIGURE 11E
VALUE OF MONTHLY PAYMENTS OF HEALTH INSURANCE

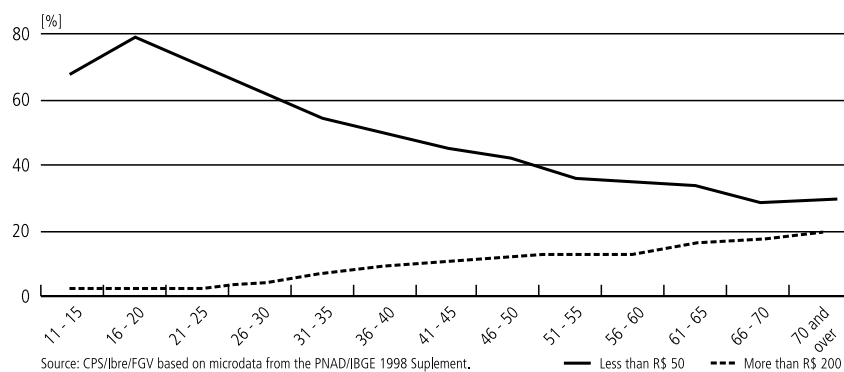
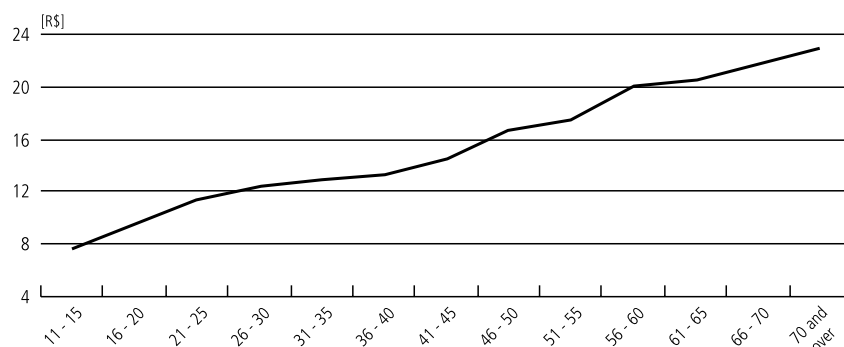


FIGURE 11F
NEEDED HEALTH SERVICES IN THE LAST TWO WEEKS

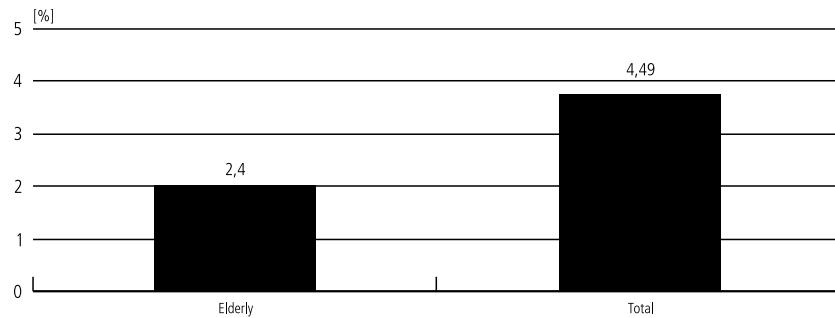


4.4 Credit Restrictions: Real State and Entrepreneurship

4.4.1 The use of credit

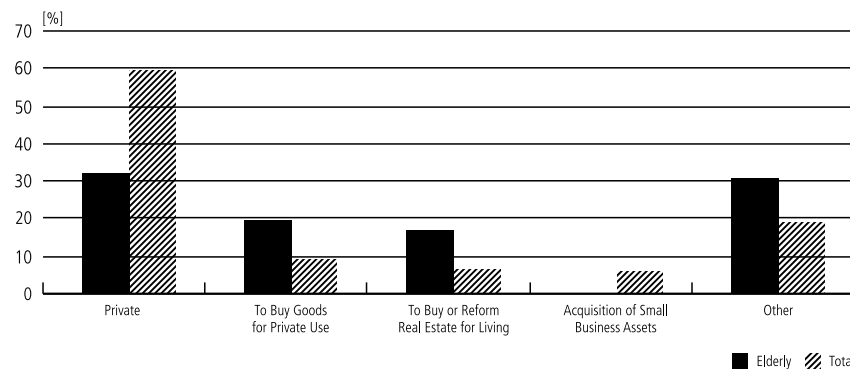
Questions included in the Living Standards Measurement Survey [Pesquisa de Padrões de Vida (PPV)] about credit and loans can provide us with information about an alternative vision of the Modigliani life cycle. As Figures 12A and 12B show, the proportion of individuals who contract loans is inversely related to age. The youngest are those who most obtain them, 6.3% of the 15-to-25 age group. This figure declines in the different age groups, falling to 2.4% among individuals in the over 65 group. In general, individuals take out loans using private means (76% from other individuals or loan sharks). Among the youngest (less than 35) and the oldest (over 65), in other words the polar age groups, this proportion is higher, being approximately 90% and 85%, respectively.

FIGURE 12A
USE OF CREDIT AND LOANS OVER THE LAST 30 DAYS



Source: CPS/lbre/FGV based on microdata from the PPV 1996-1997.

FIGURE 12B
MOTIVATION FOR OBTAINING LOANS



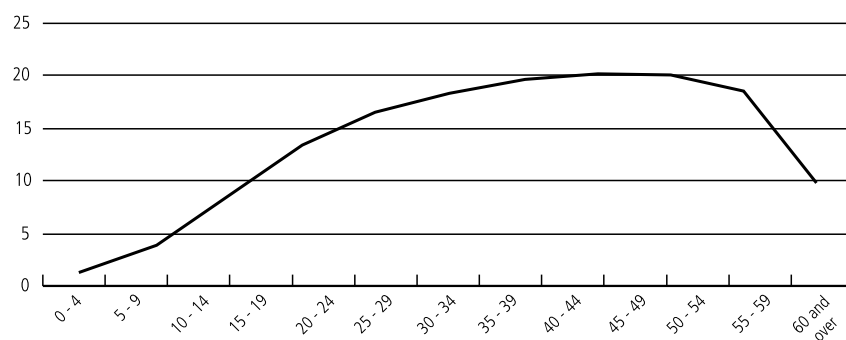
The motivation for the acquisition of physical property assets, goods for private use, and goods associated with business activities are the most important reasons given for obtaining loans. Buying or renovating the family house is especially important among the oldest groups, accounting for 17% of loans taken out by elderly people compared to 6.3% for the total population. Similarly, the purchase of goods for private use is responsible for 20% of demand for credit among the elderly, while for the population in general this figure is 9.2%. Finally, the acquisition of small business assets is absent from the sample of elderly people, while for the population in general it accounts for 5.6%. This reflects the lower occupation rate of the elderly population and the lower tendency to make new investments in productive physical capital in the final phase of the life cycle.

4.4.2 Occupational choices

Turning the life cycle analysis to occupational strategies, more specifically small business strategies, it can be seen that access to self-employment and employer positions follows an inverted U shaped trajectory throughout the life cycle, with high growth rates in the first age groups, increasing during the life cycle, peaking in the middle aged groups (50 to 55 and 40 to 45, respectively) and declining afterwards.

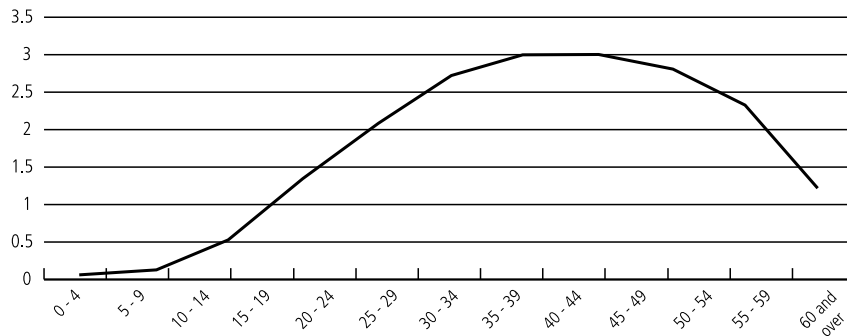
There is a greater probability for individuals to gain the status of a small entrepreneurs during middle age. It is important to note that the declining period in the occupation rate for self-employment and employers in the later phases of the life cycle is more pronounced than the ascending phase during youth. These differences can be basically explained by the reduction in the occupation rate in relation to population of an economically active age, which intensifies after 40. As

FIGURE 13A
ACCESS TO SELF-EMPLOYMENT POSITION



Source: CPS/lbre/FGV based on microdata from the 2000 Census.

FIGURE 13B
ACCESS TO EMPLOYER POSITION



has already been noted, the peak of the occupation rate is reached in the 40-to-44 age group (65%) and falls afterwards, dropping to a value of 21% among the Brazilian elderly.

In Figures 14A and 14B, it can be seen that the rate of access to self-employment and employer positions is dependent on the individual being occupied. It should also be noted that the rate of access to both self-employment and employer positions increases with age. However, the increase in self-employment among the economically occupied is more pronounced in the older groups. Between the 40 year old and the 60 year old age groups, this rises from 28% to 45%. The evolution of the proportion of employers among the economically occupied does not increase so markedly, rather it increases at lower rates, reaching its maximum point among the elderly age group, 5,5%.⁶

This analysis reveals that there really is delayed access to the position of small entrepreneurs among those who are occupied. Nonetheless, the relative importance of the asset accumulation process and credit constraints versus difficulties in finding positions in the labour market for older people cannot be directly inferred from the data presented here.

The data related to sources of financing for the opening of businesses with five or less employees obtained from the 1997 Informal Urban Survey [Pesquisa Informal Urbana (Ecinf/IBGE)] show that finance from new businesses (*seed money*) rarely comes from the financial system (Figure 15A). The reduced role of inheritance in Brazil is an important difference in relation to developed countries, perhaps because of the relative importance of public transfers through retirement benefits that are not

6. For a more detailed analysis see Wajnman, Oliveira and Oliveira in this book.

FIGURE 14A
ACCESS TO SELF-EMPLOYMENT POSITION AMONG OCCUPIED POPULATION

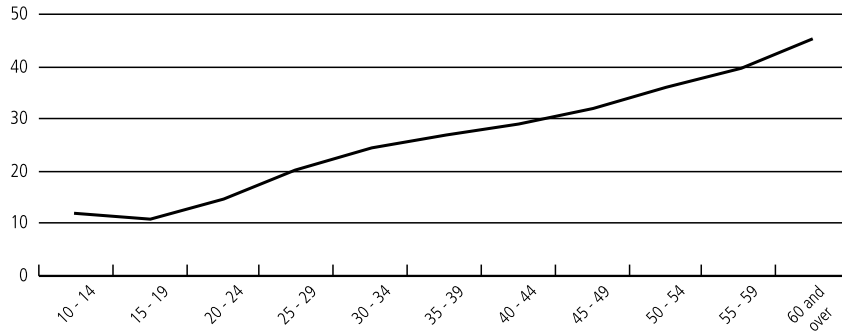


FIGURE 14B
ACCESS TO EMPLOYER POSITION AMONG OCCUPIED POPULATION

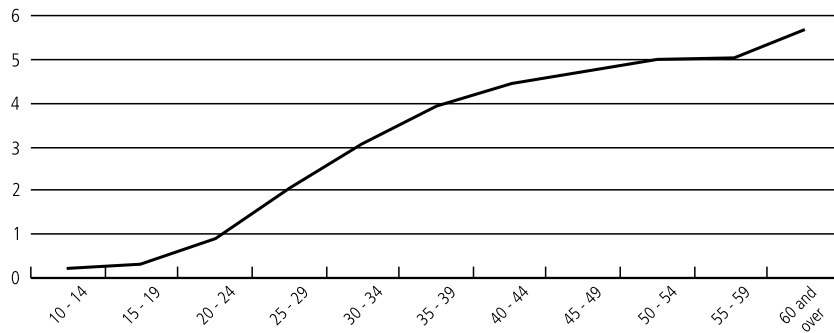
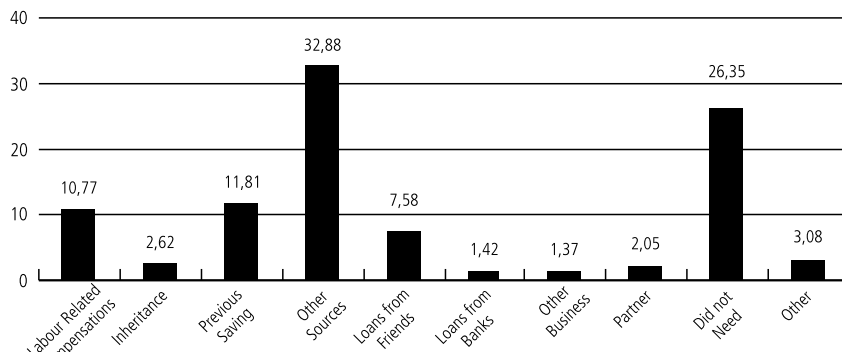
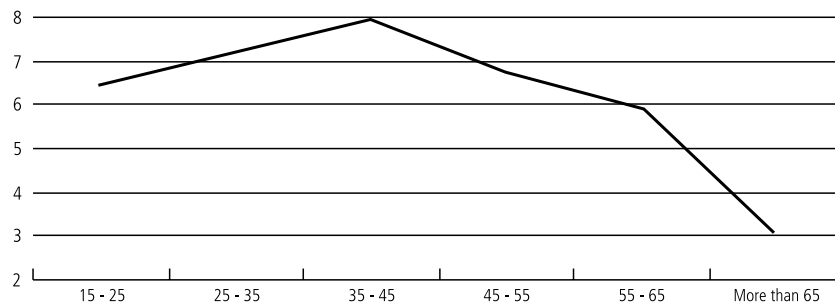


FIGURE 15A
SOURCES OF FINANCING FOR THE OPENING OF BUSINESSES



passed through generations. In general terms, new businesses that do not receive an injection of capital due to their precariousness use previous savings, an indicator of the conjunction of indivisibilities and credit constraints. Curiously, the main external source of resources are labour related compensations. The analysis of financial flows per age group reveals that among settled urban entrepreneurs the percentage of those who obtained loans in the previous three months is lower among elderly people (2.9%) than the population in general, confirming the evidence from the PPV (see Figure 15B).

FIGURE 15B
PERCENTAGE OF THOSE WHO OBTAINED LOANS IN THE PREVIOUS THREE MONTHS



4.4.3 Real state

As we have seen, people who want to acquire their own home can encounter two types of constraints: the indivisibility of goods and credit rationing. Individuals who encounter liquidity constraints need to accumulate resources in advance, since there are no perfect credit markets. The young, who have more need for credit, have rates of access to their fully paid for homes lower than those of elderly people. This rate grows in accordance with age due to older age groups' greater access to the credit market and the need to accumulate to acquire high value goods due to credit constraints for young people.

Figures 17A and 17 B can be used to compare the value of households among those who own and those do not own their land for the population as a whole and for the elderly population. The charts are quite similar, with the values of households be higher in owned land, irrespective of age.

Figures 18A and 18B show that elderly people have more access to their own land, whether it has been fully paid for or they are still paying for it. This better definition of land holding rights allows greater access to credit for elderly people

FIGURE 16
RATE OF ACCESS TO FULLY PAID FOR HOMES

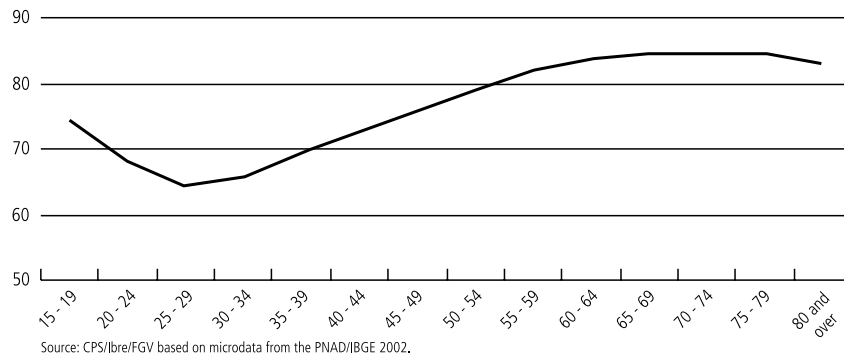


FIGURE 17A
VALUE OF HOUSEHOLDS FOR THE POPULATION AS A WHOLE

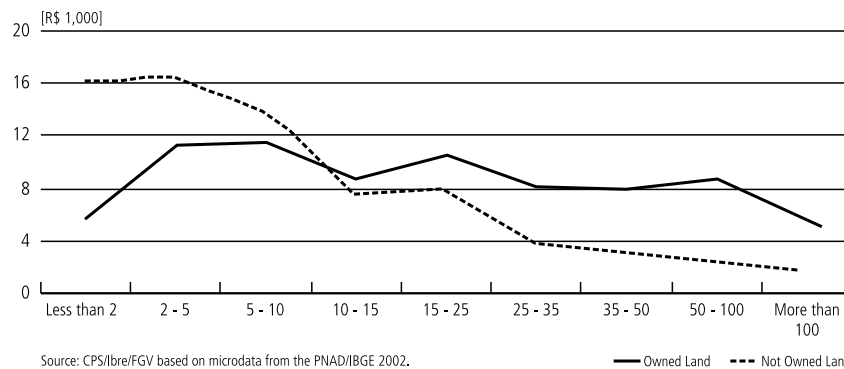


FIGURE 17B
VALUE OF HOUSEHOLDS FOR THE ELDERLY POPULATION

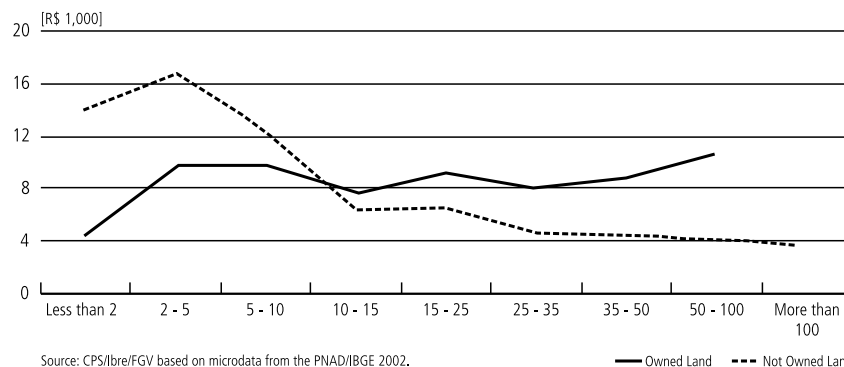


FIGURE 18A
ACCESS TO OWN LAND

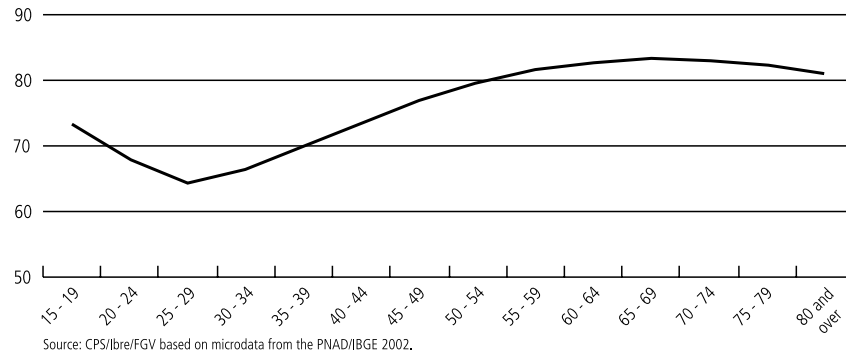
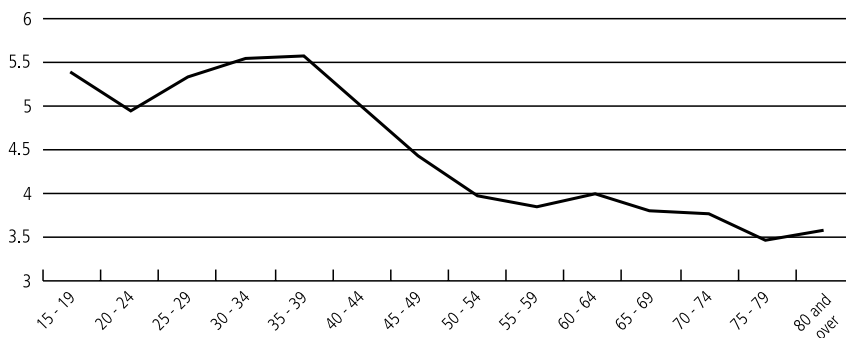


FIGURE 18B
NOT ACCESS TO OWN LAND



and raises the value of their properties. In other words, using the terminology of Hernando de Soto, the capital of elderly people is more alive (and more valuable) than that of others.⁷

5 CONCLUSION

This work investigated the process of the accumulation and depletion of financial resources throughout the life cycle, giving a special emphasis to the demand for assets, credit and insurance in old age. Since the Brazilian literature on this theme is incipient, we tried to check whether the main stylized facts found in the literature

7. Hernando de Soto in his book *The Mystery of Capital* argues that the problem of the poor is not the low quantity, but the low quality of property. The high informality of property results in a reduction of the market value of the assets of the poor, a type of dead capital in the conception of Soto.

are observed in various sources of microdata available in the country. The study gave a brief theoretical overview of the reasons behind the demand for long-term assets by individuals and an empirical evaluation of the qualitative nature of these motivations.

The life cycle theory is frequently presented as the main motivation for long-term demand for financial assets by individuals. According to this theory, the fall in income in old age causes the prior accumulation of financial assets by individuals, in order to maintain a stable standard of consumption throughout the life cycle. We have observed occupation and earnings trajectories that create bell-shaped earnings profile. The rates of social insurance contributions, both public and private, follows movements consistent with Modigliani hump savings hypothesis, as do the values of average contributions.

The most popular financial assets in Brazil are savings account deposits. They are most used by older people, who also have the highest number of accounts and that save the largest amounts. The second most important reason given by savings account holders is to save funds for the future. As expected from the viewpoint of the life cycle theory, this motivation is highest among the young. This result, as well as the lower level of deposits and higher amount of withdrawals by elderly people, is also consistent with Modigliani's theory.

More generally speaking, the relative evidence of labor earnings flows compared with alternative incomes shows the existence of strong smoothing behaviour of total incomes in more advanced ages for all educational levels as predicted by the life cycle hypothesis. On the other hand, to the contrary of the striped-down version of the life cycle, we observed during young ages positively inclined income trajectories from all sources—as well as for consumption—,which questions the ability of young people to smooth out consumption across their life span.

The inclusion of the possibility of indebtedness in the initial period of active life gives us a complementary perspective to that proposed by Modigliani. In this initial period, the desire for consumption is generally higher than income, whether because of the lack of experience of those who are employed, high levels of unemployment, or the need for time and financial resources to invest in human capital, resulting in a demand for loans. If individuals do not encounter credit market constraints, they will finance consumption based on credit, alternatively, they will force into a "corner solution" consuming all their income during a period of professional ascension. Similarly, we provided evidence that the demand for credit, whether from individuals or companies, formal or informal, is stronger at young age.

According to the literature about family financial behaviour, the process of smoothing consumption during the life cycle is affected by three main factors: *a)* credit constraints; *b)* inheritance; and *c)* uncertainty.

First, credit constraints are understood as a lower limit to the volume of assets, therefore, by definition they raise the stock of savings. The desire to acquire indivisible goods with high unit values—such as real state—reinforces even further the affects of liquidity restrictions on the demand for savings. In fact, a part of those who have savings accounts deposits, especially the young, state that the reason for this is to acquire indivisible goods.

The evidence presented here is consistent with this hypothesis for two particular types of indivisible goods: real state and productive assets. Access to small business occupations takes place at advanced stages of the life cycle, while access to initial financing (*seed money*) rarely comes from the financial system. The main source of finance is previous savings that reflects the combination of indivisibilites and credit restrictions. In terms of property capital, in addition to delayed access to home ownership and income from rent, we noted that elderly people have better defined property rights, giving leverage to access to credit and value to their properties.

Second, in the case of inheritance, the individual saves to finance the consumption of descendents. Nevertheless, in opposition with the evidence reported for developed countries, the rare use of inheritance to finance new business, points to its low importance in Brazil. In addition, Brazilian—elderly people in particular—do not have the habit of investing in savings accounts to guarantee the future of their descendents. In this case, observed inheritances could be considered accidental.

Third, the precautionary motive derived from a situation of uncertainty in relation to the future encourages demand for various financial instruments. The demand for social insurance, both public and private, analysed previously, serves to absorb adverse shocks. Health insurance is another fundamental instrument in old age due to the increase in morbidity risks. The increasing investment of resources in health insurance during the life cycle observed is less connected to access to health insurance, but rather to the greater value—and more intensive use—of these plans. Finally, the main reason given to invest in savings accounts is precautionary: almost half of elderly savers save explicitly to deal with possible emergencies.

ANNEX 1

DATABASE DESCRIPTION

Demographic Census

The 2000 Demographic Census Sample is a household survey that seeks to interview 10% of the Brazilian population throughout the country. The Census classifies people and occupations of all household members. The Census provides detailed information about various income sources, on the access to housing, public services and durable goods among other assets.

PNAD

PNAD is a household survey carried out in the 3/4 of each year, covering 100,000 dwellings. This survey provides detailed personal and occupational characteristics from all household members, on access to housing, public services, durable goods, etc. In 2002, PNAD introduced new variables in the questionnaire, such as classes of property according to value and area.

Financial Behaviour Survey of Abecip

This survey was carried out by Abecip in 1978, 1980, 1983, 1985 and 1987. We used the secondary data from the 1987 survey, according to which 3,600 households in the eight biggest Brazilian metropolitan regions were interviewed. The Abecip survey provided information on the possession of financial assets and portfolios composition, but the main focus was on savings accounts. The survey obtained data about the amount of money saved, the number of accounts held, motivations, how long accounts had been held for, and estimate of future deposits and withdrawals, reasons for not opening a savings account, reasons for not making deposits in savings accounts, reasons and taken and timing to close accounts, perceptions of changes in various laws related to savings accounts, the characteristics perceived of sums deposited in savings (return, liquidity and risk), etc.

PPV

A basic source for primary data used was the access to different types of assets examined by PPV. The main advantages of the PPV are that it connects the use of these assets and a vast array of dimensions of households.

The PPV actually corresponds to the Brazilian version of the Living Standard Measurement Survey (LSMS) and was carried out in Brazil only once—in 1995-96 in a joint project between the World Bank and IBGE. A sample of 5,000

households was taken in the Northeastern and Southeastern regions. Like PNAD, this survey also contains detailed information about the personal and occupational characteristics of individuals, possession of durable goods and housing conditions. The PPV questionnaire has special sections about consumption (at a desegregated level), individual financial behaviour, the evaluation of access to public services, (health, infrastructure, education).

POF

The main objective of this survey is to obtain the consumption structure of the population in order to create weightings to calculate Inflation Indices [Índice de Preços ao Consumidor Amplo (IPCA), Índice Geral de Preços (IGP), etc.]. It allows a more detailed analysis of the living standards of the population, especially information about the value of insurance contributions and their participation in income.

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THE CAPITAL FOR THE OLD AGE*

Marcelo Neri

Fundação Getulio Vargas (FGV)/Instituto Brasileiro de Economia (IBRE)/Centro de Políticas Sociais (CPS)/Escola de Pós-Graduação em Economia (EPGE)

Luisa Carvalhaes

Fundação Getulio Vargas (FGV)/Instituto Brasileiro de Economia (IBRE)/Centro de Políticas Sociais (CPS)

Hessia Costilla

Fundação Getulio Vargas (FGV)/Instituto Brasileiro de Economia (IBRE)/Centro de Políticas Sociais (CPS)

Samanta Monte

Fundação Getulio Vargas (FGV)/Instituto Brasileiro de Economia (IBRE)/Centro de Políticas Sociais (CPS)

1 INTRODUCTION

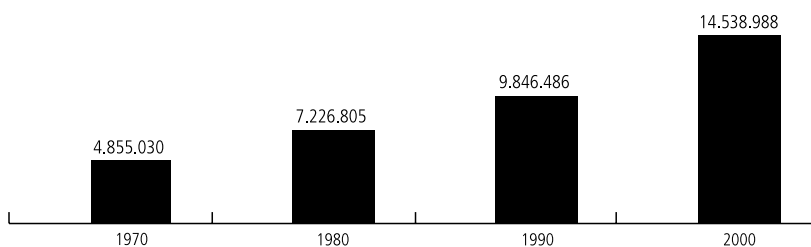
This study describes access rates to different types of assets by age groups. The availability of new data sources provides unmatched conditions to do this, in the Brazilian case. The assessment of resources possession was structured under three headings: physical capital (financial assets, durable goods, housing and public services), human capital (schooling, technical education, experience and health) and social capital (participation in political parties, trade unions, associations and family structure).

Special emphasis is given to quantifying the capital of those over 60. According to the 2000 Demographic Census, this group numbered 14.5 million Brazilians, practically triple the over 60 population in 1970, as shown in Figure 1. In the last decade the over 60 population has increased 47% as compared to a 15.7% increase in overall population.

The age profile of access rates to each asset herein analyzed is developed using static and dynamic approaches. In the static approach we evaluate access to

* This article is an extension of Neri et al (1999). It was translated from Portuguese to English by Barbara Melo and Eoin O'Neill and reviewed by the authors.

FIGURE 1
NUMBER OF OLDER BRAZILIANS



Source: CPS/lbre/FGV based on microdata from the 1970, 1980, 1991 and 2000 Censuses.

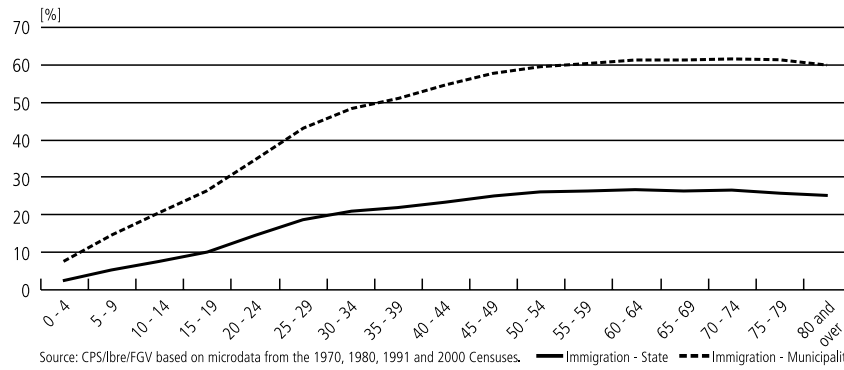
a specific asset of an age group in a certain point in time as compared to other age groups or the evaluation is made by an analysis of this age group in other points in time. The main problem with this analysis is that it does not take into account differences between individuals or generations. In cohort analysis, we follow the data for one special generation over a period of time.

The objective of the dynamic analysis used in this study is to evaluate the access rate of one generation to a specific resource. Methodologically speaking, it would be better if we could have access to long-term panel data enabling us to follow up on the history of specific persons. For lack of such information, we use cohorts, also known as pseudo-panels. With pseudo-panels, we are able to survey successive years and follow the access rate of a given generation over a period of time, joining data of successive years for one group with the same year of birth. In this way, we attempt to have a more exact measure of the life cycle trajectory of a given variable.

This study is a review and an extension of Neri et al (1999). An initial difference is the database used. The previous study used data from the National Household Survey [Pesquisa Nacional por Amostra de Domicílios (PNAD)] as a basis. The current study is based on microdata derived from the last four Demographic Censuses, allowing the coverage period of analyses to be expanded from 20 to 30 years of profound transition in the age structure of the Brazilian population.

The previous study covered only metropolitan regions, which, aside from not being representative of the nation as a whole, were distorted by migratory movements. The migrant stock is relatively important and grows according to age, as shown in the Figure 2. This is, to say that as Brazilians age they tend to

FIGURE 2
MIGRANT STOCK



stray further from their hometowns. The high point in the interstate migratory flux occurs between the ages of 25 and 29 and between 30 and 34. After this age bracket the migratory flux drops and as of 70 years of age the migratory rate begins to decline. As is to be expected, inter-municipal migration is even more intense and the high point of the flux occurs between 20 and 24 years of age.

Neri et al (1999) used heads of household as the reference for cohorts. In this study we consider all persons, which allows for a more general cohort analysis. This is a more satisfactory approach, as the position in the family is not a fixed attribute, changing throughout the life cycle. According to the 2000 Demographic Census, persons over 60 years of age who are references or heads of household represent 63.52%. In the overall population, the percentage of heads is 28.6%.

FIGURE 3
MIGRATION FLUX UNDER 5 YEARS OF AGE

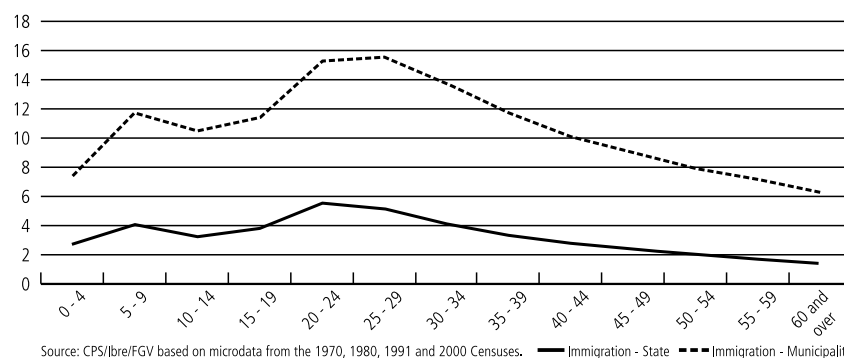


FIGURE 4
POSITION IN HOUSEHOLD

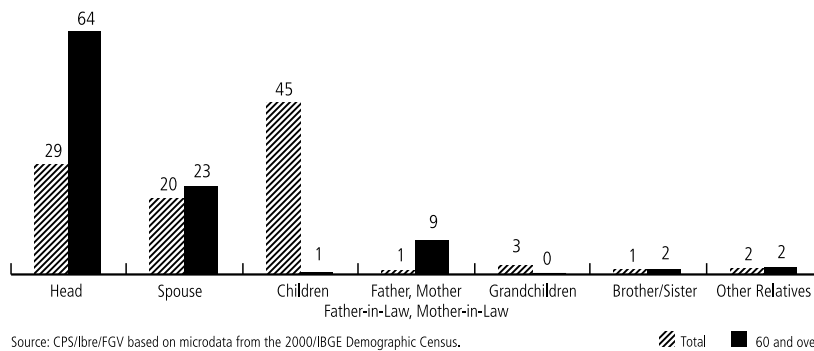
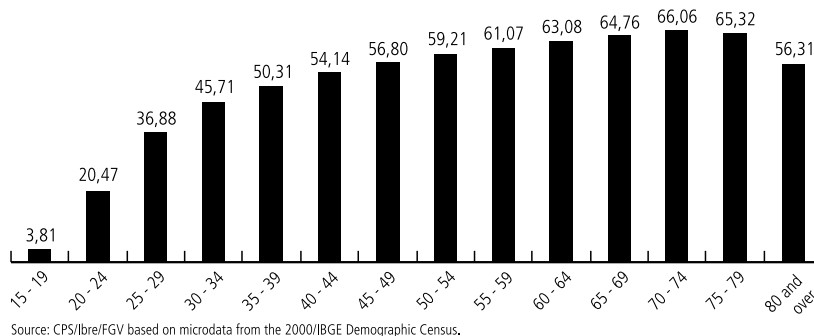


FIGURE 5
PERCENTAGE OF HEADS BY AGE



The Census allows us to assess as well those who live in collective households (including old-age homes, barracks, prisons, and so on). In the case of persons 60 years of age and over, those that live in old-age homes comprise the most important segment for analysis. In this respect, the Census allows for greater precision in identifying where one lives, which represents a person's basic asset: 0.26% of Brazilians live in collective households. This percentage increases to 1.03% when looking at those over 67 years of age.

2 METHODOLOGICAL ASPECTS

Cohort data are imperfect substitutes for longitudinal data, as they do not provide information on the same persons over a period of time. In fact, the information is about different persons with identical characteristics, such as year and place of birth, gender or race.

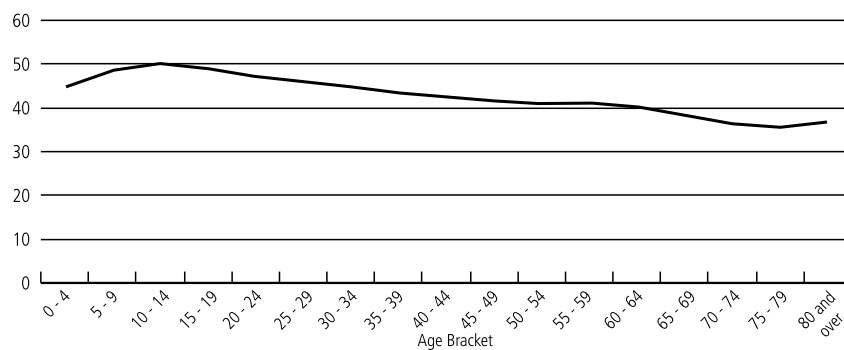
Cohort data present some advantages over panel data. In the first place, there is no sample attrition, that is, one is able to observe persons of the same cohort in different years, which is simpler than observing the same person over a period of time. In addition, as cohort information refers to an average, or another fixed moment in the distribution, there is a reduction in measurement error derived from information on the same person over specific moments in time. Another advantage is that there is the possibility of using more than one database at the same time, which is unfeasible with longitudinal data.

An analysis based on pseudo-panels has two potential problems. The first lies in the choice of attribute to be pursued over time, as it has to be fixed. There are attributes that change over time, such as the position in the family and the schooling of children. To illustrate, a person who is the head in this decade, did not necessary hold the same position in previous decades. Thus, we should choose fixed characteristics such as gender and race. The second problem is that there are mortality differentials among analyzed characteristics, such as among men and women, whites and blacks, poor and non-poor.

We have observed that women live longer than men, the proportion of blacks and “mulatos” share in the population diminish with the passing of age and the poverty level for older persons is also lower than for the rest of the population.

In other words, there are mortality differentials between men and women. In general, women live longer than men, comprising 55.5% of the population over 60 in Brazil. There is also a clear differential in the binomial mortality/fertility between blacks and whites. In the overall population, blacks and mixed race represent 44.65%. Among youngsters between 15 and 19 years of age, this

FIGURE 6
BRAZIL: PROPORTION OF BLACKS AND MIXED RACE BY AGE GROUP—2000



proportion is even greater: 48.21%. On the other hand, this percentage takes an abrupt fall in the population over 60 years of age: 37.51%. Cohort data only goes to confirm this drop, but an explanation for the fact is that Blacks in general tend to be poorer than whites, due to persistently strong racial inequality, and thus tend to live less, as they have fewer resources.

3 ASSETS AND THE LIFE CYCLE

3.1 Typology of Capital

The availability of new sources of data opens previously unmatched conditions in the Brazilian case to trace an asset profile of older persons. The conjunction of different household surveys provides a broad view of asset possession. There is a description of the main databases used in the Appendix. Our strategy is to compare the access of heads of household to different assets by age groups in Brazil. In this way, we have sought to identify some behavioural characteristics of families with older persons as regards accumulation of assets. It is important to highlight that we use data for Brazil as a whole whenever possible, though in a few cases we have confined ourselves to the six main metropolitan regions in Brazil contained in the Special Supplement of Monthly Employment Survey [Suplemento da Pesquisa Mensal do Emprego (PME)].¹

The assessment of resource possession is initially structured under three headings:

- physical capital (durable goods, housing and public services);
- human capital (schooling, technical education, experience and training); and
- social capital (employment, membership in trade unions and associations, political participation and family structure).

The first two categories are conceptually easier to quantify both in terms of possession and of asset returns. The available literature on education is one of the good examples of successful empirical work applied in Brazil. On the other hand, there is practically no literature available in Brazil on individual access to different types of physical capital.² Access to basic public services and goods, such as water supply, electricity, sewage and garbage disposal, can be measured directly using standard household surveys. Even so, the private and social returns were not

1. These are: Recife, Salvador, Belo Horizonte, Rio de Janeiro, São Paulo and Porto Alegre.

2. The exception would be literature on access to land [Ganziroli (1992) and Silva (1987)] and to housing [Prado and Pelin (1993) and Lucena (1985)].

measured systematically in the literature. Similar considerations are also valid for access and return rates of social capital.

3.2 Physical Capital

We begin by analysing the existing relationships between different ages and access rates to several types of physical capital such as housing, durable goods and public services surveyed by the Demographic Census.

3.2.1 Housing

Table 1 shows that access to one's own fully paid house increases as the population ages. The greatest rates are seen in the over 60 age brackets. Inversely, access rates to one's own house, financed, rented or on concession, generally decrease throughout the analysed age groups. This can be explained by the fact that real estate purchases usually occur when people are young and settling down. Access to housing among older persons is divided in the following manner: 82% live in their own fully paid houses and 13% in rented houses or houses on concession. For the overall Brazilian population, these figures correspond in average to 69% and 22%, respectively.

Analyzing the data on type of housing, we find that access rates to apartments are around 9% for the over 60 population, higher than for the rest of the population (7%). This is most likely due to the greater difficulty older persons have in maintaining and caring for their own homes.

A complementary line of research compares the quality of housing for different age groups. Observing access to bathrooms in the household, it appears that 83% of older persons have at least one bathroom in the household as compared to 80% in the total population. With respect to the average number of bathrooms, the two groups do not show much difference: 1.2 in elderly households and 1.1 in the total population. In spite of the small difference, the first group is in a more comfortable position as there is a smaller number of persons in the family, 3.0, as compared to 4.2. Restricting the analysis to those who have three or more bathrooms, again we perceive better conditions in the 60 and over population (8%) as compared to the total population (6%).

From a perspective of land ownership rights, we have observed higher access rates for land ownership among the over 60 population: 81%, as compared to 69% for the total population.

TABLE 1
BRAZILIAN POPULATION: ASSET RESOURCE PROFILE BY AGE GROUP: PHYSICAL CAPITAL—2000
 [in %]

	Total 60 and over	Age Groups																	
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 and over	
		Access to housing																	
House	90.82	89.56	92.40	93.14	93.20	92.38	90.41	89.39	89.42	89.10	88.85	88.95	89.51	90.18	90.53	89.93	89.05	88.63	87.98
Apartment	7.43	8.83	5.21	5.07	5.45	6.19	7.32	8.28	8.46	9.31	9.73	9.79	9.24	8.53	8.16	8.65	9.44	9.62	9.19
Rented Housing	12.15	7.01	14.52	11.78	10.34	11.17	14.92	16.41	14.72	13.24	11.98	10.62	9.15	7.88	7.14	6.93	6.91	7.00	7.01
Housing Owned by Third Party	9.63	6.13	13.52	11.87	9.96	8.84	10.08	11.01	10.48	9.41	8.14	7.18	6.52	6.40	6.04	5.93	5.99	6.35	6.75
Own Housing - fully Paid	69.49	81.30	63.09	67.40	70.98	71.64	66.56	63.12	64.63	67.08	69.90	72.92	76.22	78.78	80.65	81.58	82.03	81.83	80.73
Own Housing - partially Paid	6.67	3.75	6.30	6.64	6.73	6.49	6.22	7.09	8.00	8.28	8.17	7.58	6.50	5.34	4.61	3.93	3.40	2.92	2.55
		Condition of Land Occupation																	
Own Land	69.13	80.55	60.12	65.18	69.77	71.21	65.94	62.88	65.22	68.55	71.91	74.97	77.61	79.23	80.53	80.98	81.17	80.51	78.79
Land Owned by Third Party	4.55	2.85	6.25	5.94	5.22	4.41	4.36	4.77	4.80	4.35	3.83	3.38	3.09	2.98	2.91	2.84	2.70	2.78	3.00
		Housing Quality																	
Access to Bathroom	80.47	82.85	73.13	74.47	76.17	79.04	80.84	82.54	84.04	85.16	85.79	85.55	84.82	83.19	83.14	83.54	83.78	82.61	79.51
Average Number of Bathrooms	1.06	1.17	0.88	0.92	0.98	1.05	1.07	1.05	1.07	1.13	1.19	1.22	1.22	1.18	1.17	1.17	1.18	1.16	1.14
1 Bathroom	60.68	57.06	61.19	60.66	59.07	58.87	61.33	65.24	65.71	63.33	60.83	58.19	57.11	56.66	57.48	58.00	57.60	56.88	53.48
2 Bathrooms	13.83	17.85	8.87	10.06	12.10	13.94	13.35	12.45	13.45	15.43	17.06	18.14	18.27	17.79	17.70	17.85	18.28	17.87	17.55
3 Or more	5.96	7.93	3.07	3.74	5.00	6.23	6.16	4.85	4.87	6.40	7.90	9.22	9.44	8.74	7.96	7.69	7.90	7.86	8.48

(continue)

	Total 60 and over	Age Groups													75-79	80 and over			
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64			65-69	70-74	
Access to Durable Goods																			
Refrigerator or Freezer	81.52	82.85	73.69	76.32	78.46	80.44	81.10	83.23	85.08	86.27	86.88	86.72	85.86	84.10	84.02	83.94	83.67	81.67	77.60
Radio	87.20	85.81	82.10	84.76	86.71	87.79	86.83	87.20	88.62	89.89	90.65	90.71	90.14	88.74	87.67	86.68	85.64	84.10	81.25
TV	86.17	85.23	81.24	83.07	84.42	85.82	86.32	87.71	88.78	89.41	89.73	89.33	88.52	86.87	86.46	86.11	85.66	84.17	80.69
Washing Machine	31.58	34.18	23.52	25.81	28.37	30.39	29.90	30.46	33.08	36.49	38.74	39.78	39.13	36.91	35.45	35.01	34.60	32.70	30.09
Microwave oven	17.97	17.74	12.50	13.19	15.09	17.09	18.02	18.45	19.34	21.28	23.02	24.39	23.89	21.75	19.57	18.14	17.40	15.82	14.64
Telephone	37.11	44.12	24.95	28.41	32.55	36.09	35.73	35.37	38.31	42.43	45.85	47.75	47.56	45.45	44.70	44.49	44.90	43.44	41.31
Desktop Computer	10.20	7.99	5.42	6.67	9.27	11.27	10.85	9.63	9.99	12.41	14.79	15.94	14.67	11.87	9.30	7.88	7.24	6.84	7.11
Car	32.03	29.53	24.02	26.55	28.77	30.19	30.47	32.24	35.43	38.37	40.03	41.16	40.10	37.03	33.76	30.72	28.05	25.04	23.02
Average Number of Cars	0.40	0.37	0.28	0.31	0.34	0.38	0.40	0.40	0.43	0.46	0.50	0.54	0.54	0.50	0.44	0.39	0.35	0.31	0.29
1 Car	25.45	23.09	20.56	22.53	23.77	23.67	22.86	25.71	29.27	31.27	31.47	30.64	28.84	27.08	25.65	24.11	22.46	20.28	18.24
2 Cars	5.34	5.11	3.05	3.58	4.36	5.25	5.55	4.97	5.22	6.27	7.35	8.33	8.37	7.39	6.27	5.31	4.57	3.88	3.78
3 Or more	1.24	1.33	0.40	0.44	0.64	1.26	2.06	1.57	0.93	0.83	1.20	2.19	2.89	2.56	1.83	1.30	1.02	0.87	1.00
Air Conditioning	6.76	7.72	4.73	4.99	5.62	6.618	6.15	6.32	7.08	8.26	8.95	9.41	9.14	8.46	7.94	7.82	7.70	7.53	7.22
Average Number of Air Conditioners	0.10	0.12	0.07	0.07	0.08	0.10	0.09	0.09	0.10	0.12	0.13	0.15	0.14	0.13	0.12	0.12	0.12	0.11	0.11
1 Air Conditioner	4.42	4.92	3.39	3.41	3.60	33.82	3.88	4.40	5.08	5.57	5.70	5.73	5.50	5.18	5.02	5.01	4.95	4.84	4.55
2 Air Conditioners	1.39	1.64	0.86	0.99	1.19	1.31	1.24	1.15	1.32	1.72	1.95	2.12	2.02	1.85	1.70	1.64	1.59	1.60	1.57
3 Or more	0.95	1.16	0.48	0.59	0.82	1.04	1.03	0.76	0.69	0.96	1.29	1.56	1.61	1.44	1.22	1.17	1.15	1.09	1.10

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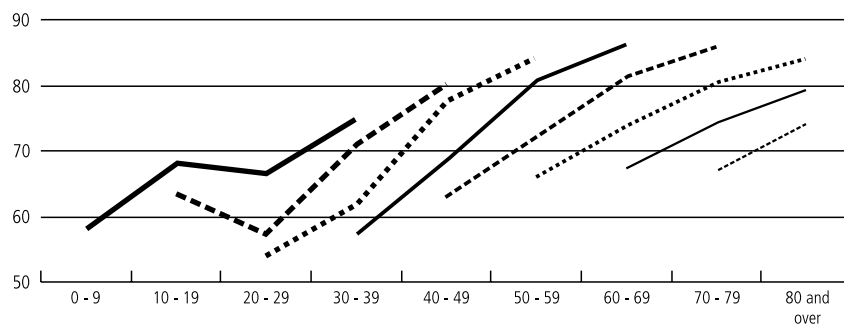
	Age Groups																		
	Total 60 and over	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 and over	
		Access to Public Services																	
Public Water System	75.18	77.06	70.22	70.51	71.91	74.31	76.18	76.89	77.56	78.35	79.06	78.66	77.80	76.03	76.33	77.10	78.13	77.81	76.47
Public Sewage System	44.39	49.38	37.53	37.80	39.33	42.39	45.15	45.91	46.55	48.05	49.79	50.27	49.71	48.23	48.41	49.54	50.85	50.33	48.33
Electric Distribution System	92.69	93.00	90.08	90.31	91.12	92.41	93.20	93.83	94.29	94.54	94.58	94.30	93.83	92.93	93.05	93.28	93.51	93.10	91.42
Garbage Collection	70.94	72.26	65.29	65.35	66.37	69.32	72.16	73.46	74.25	75.22	75.97	75.55	74.44	72.19	71.99	72.58	73.24	72.54	70.52
		Human Capital																	
Average Years of Education	4.81	3.30	0.00	0.52	3.77	6.72	7.48	7.24	6.95	6.83	6.49	5.95	5.20	4.42	3.83	3.42	3.14	2.82	2.40

Source: CPS/FGV based on microdata from the 2000/IBGE Demographic Census.

— Cohort analysis

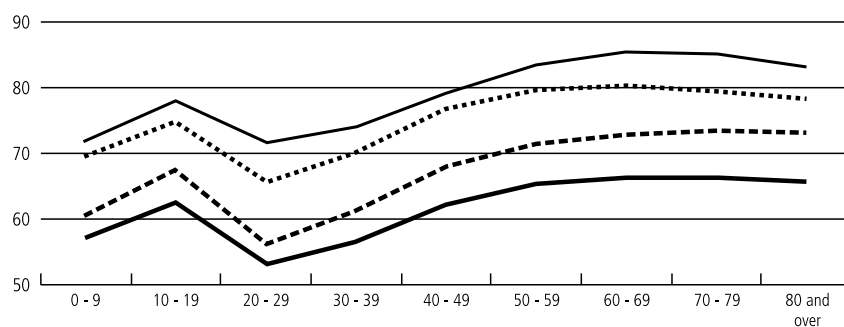
The proportion of persons that own their own housing increases throughout different stages of the life cycle. For example, in 2000, 85% of the over 60 population owned their own houses. In that year the 60-to-69-year age bracket held the highest access rate (85.3%). The comparable proportion was 57% in 1970 when the same generation was in the 30-to-39-year age bracket. On restricting the analysis to the population that has partially paid for their own housing (this information was unavailable in 1991), we see that the evolution of access rate through different cohorts is not very defined. In general, it presents an inverted U-shape, decreasing in the last stages of the life cycle. In counterpart, it is possible to observe that the proportion of access to rented housing falls continuously over the years starting from the 30-to-39-year age bracket. This group presented an 18.8% rate in 1970 and in 2000 (at 60-to-69 years of age) held a rate of 7%.

FIGURE 7
BRAZIL: PROPORTION OF PEOPLE WITH ACCESS TO THEIR OWN HOUSING BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

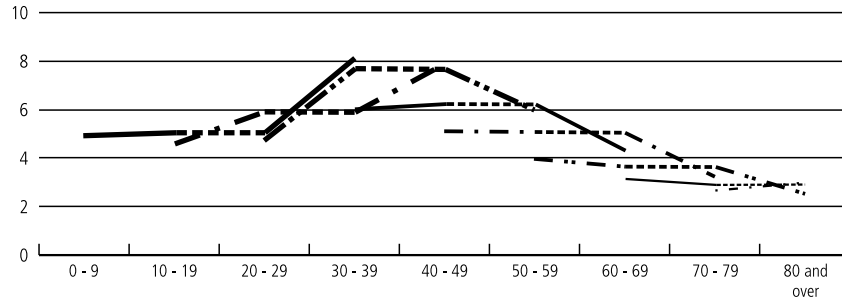
FIGURE 8
BRAZIL: PROPORTION OF PEOPLE WITH ACCESS TO THEIR OWN HOUSING BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

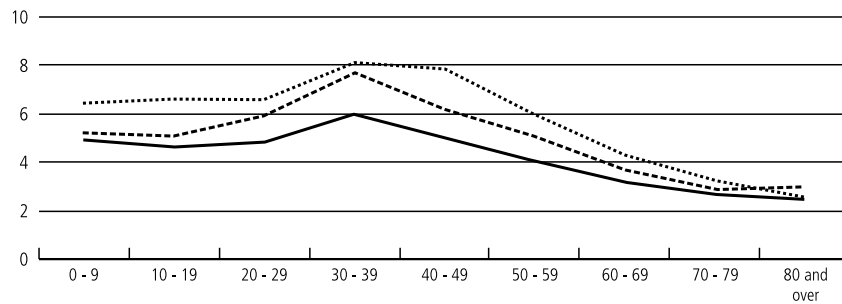
— 1970 - - - 1980 ···· 1990 — 2000

FIGURE 9
BRAZIL: PROPORTION OF PEOPLE WITH ACCESS TO THEIR OWN HOUSING, PARTIALLY PAID, BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

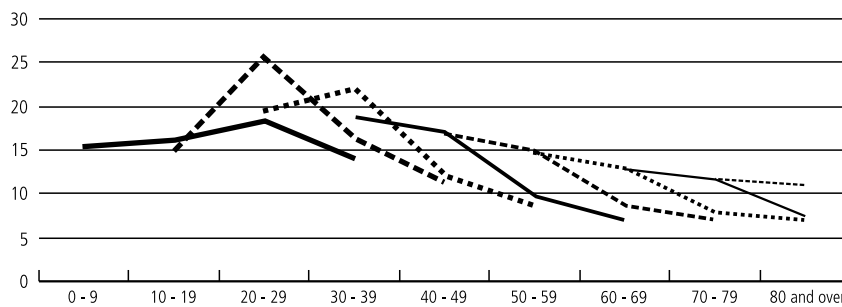
FIGURE 10
BRAZIL: PROPORTION OF PEOPLE WITH ACCESS TO THEIR OWN HOUSING, PARTIALLY PAID, BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

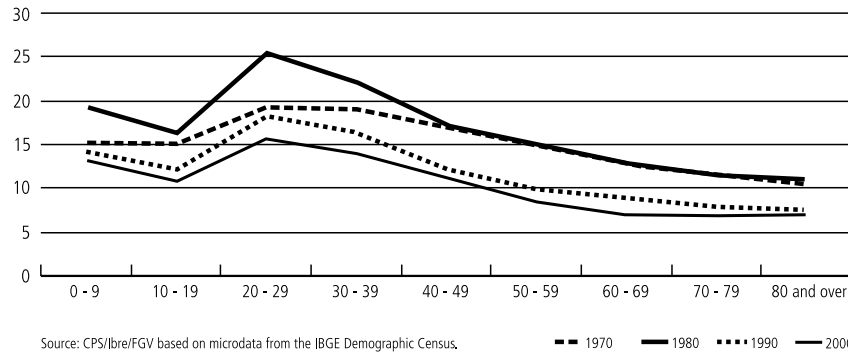
— 1970 - - - 1980 ···· 2000

FIGURE 11
BRAZIL: PROPORTION OF PEOPLE WITH ACCESS TO RENTED HOUSING BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

FIGURE 12
BRAZIL: PROPORTION OF PEOPLE WITH ACCESS TO RENTED HOUSING BY AGE GROUP



3.2.2 Durable goods

According to Table 1, access rates to durable goods do not present great differences by age groups when one analyses access to basic goods or those that have been introduced in the Brazilian culture for a longer length of time, as: refrigerator or freezer (83% for older persons and 82% for the overall population), radio (86% and 87%) or television (85% and 86%). On the other hand, products considered to be a luxury and more recently introduced were not completely assimilated by the elderly population. The access rate to durable goods such as washing machines, microwave ovens, automobiles, air conditioners and desktop computers in general present an inverted U-shape, rising in middle age, though falling in older age brackets. A similar age pattern is observed for automobiles.

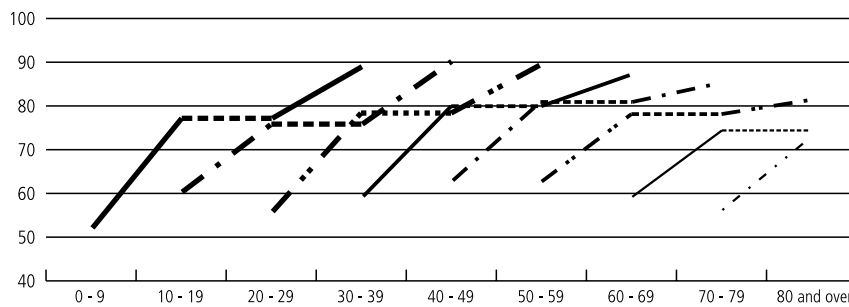
— Cohort analysis

By means of census data available since 1970, it is possible to compare the evolution of access to durable goods between generations. Access to certain durable goods, considered important means of communication such as the radio and television, could not be measured in the year 1990, due to methodological differences in the questionnaire. Thus, access was estimated² at three points in time—1970, 1980 and 2000. Access rates to radio and television increase throughout the generations. One such example can be seen if we focus our analysis on the 60-to-69 year old population that had access to television in 2000. The rate was then 87%, but when this same generation was 30-to-39 years of age in 1970, only 26% had access to television. An evaluation was also made as regards access to the telephone that was only made available after 1980. We have observed a rising access rate to

the telephone in all generations, especially in the last period analysed (1990 and 2000) when cohort profiles are steeper.

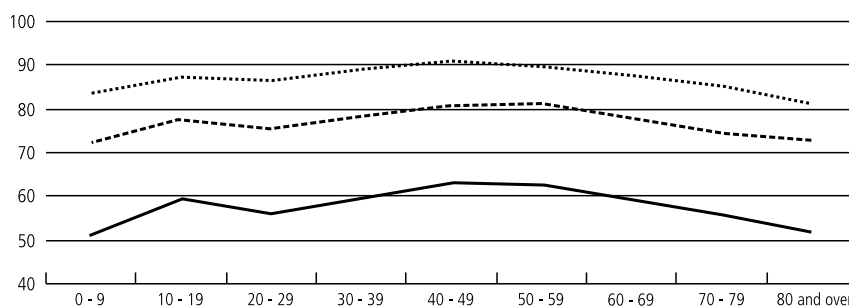
The Census also allows us to follow the evolution of access to luxury goods as, for example, access rates to automobiles that can be used as an initial gauge of wealth. According to Figures 19 and 20, rates increase throughout different cohorts, especially in younger groups. Among those who were 30-to-39 years of age in 1970, 11% owned automobiles. When we look at this same generation in the year 1980 (at 40-to-49 years of age) the rate rises to 23%, ten years later when in the 50-to-59 year old age bracket the access percentage was 28%, and when they reached the 60 year old age bracket, the rate reached 33%.

FIGURE 13
BRAZIL: PROPORTION OF PEOPLE WITH ACCESS TO RADIO BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

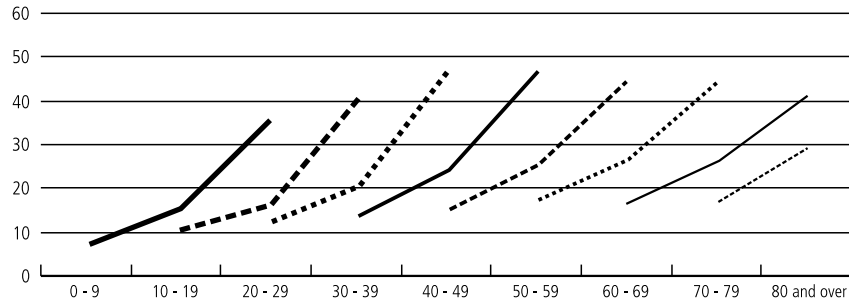
FIGURE 14
BRAZIL: PROPORTION OF PEOPLE WITH ACCESS TO RADIO BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

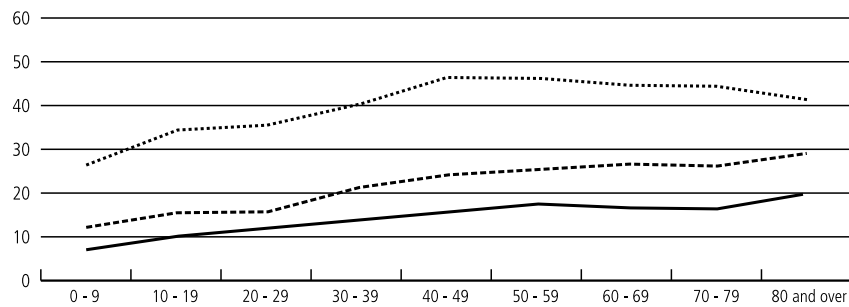
— 1970 - - - 1980 ···· 2000

FIGURE 15
BRAZIL: PROPORTION WITH ACCESS TO TELEPHONE BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

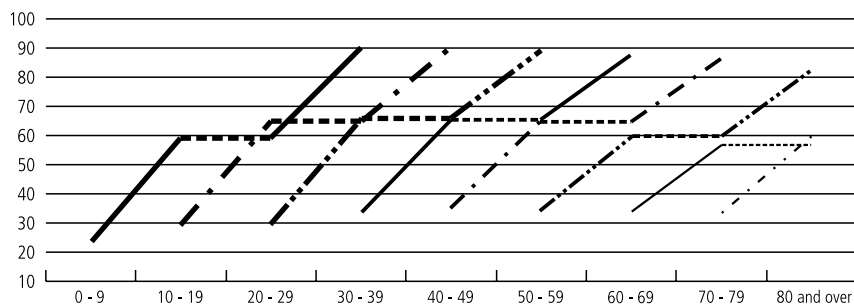
FIGURE 16
BRAZIL: PROPORTION WITH ACCESS TO TELEPHONE BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

— 1980 - - - 1990 ···· 2000

FIGURE 17
BRAZIL: PROPORTION WITH ACCESS TO TELEVISION BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

FIGURE 18
BRAZIL: PROPORTION WITH ACCESS TO TELEVISION BY AGE GROUP

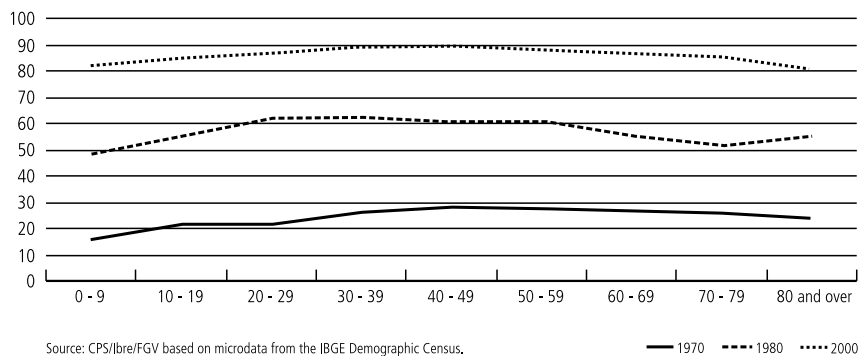


FIGURE 19
BRAZIL: PROPORTION WITH ACCESS TO CAR BY AGE GROUP

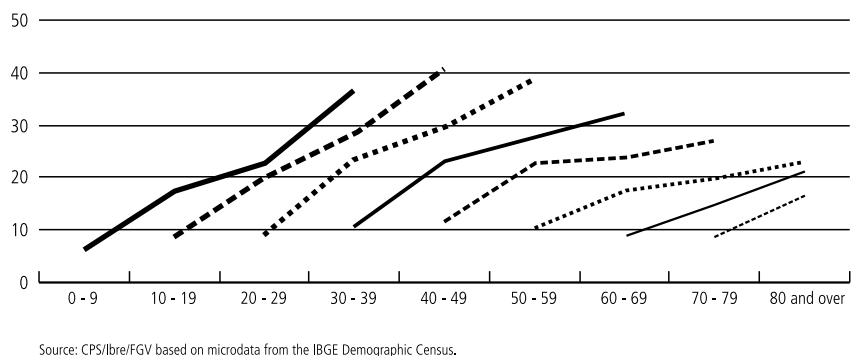
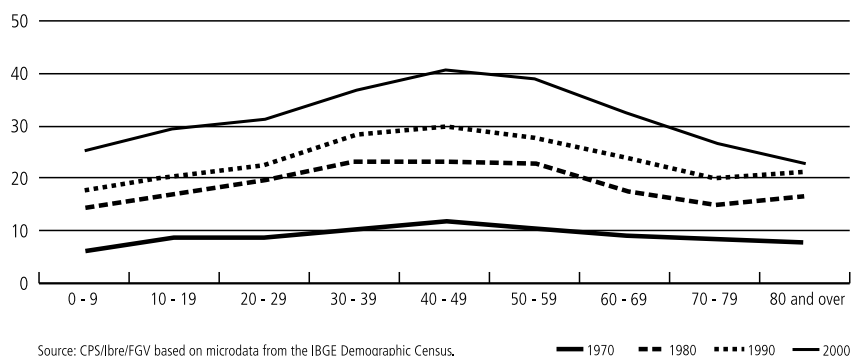


FIGURE 20
BRAZIL: PROPORTION WITH ACCESS TO AUTOMOBILE BY AGE GROUP



3.2.3 Public services

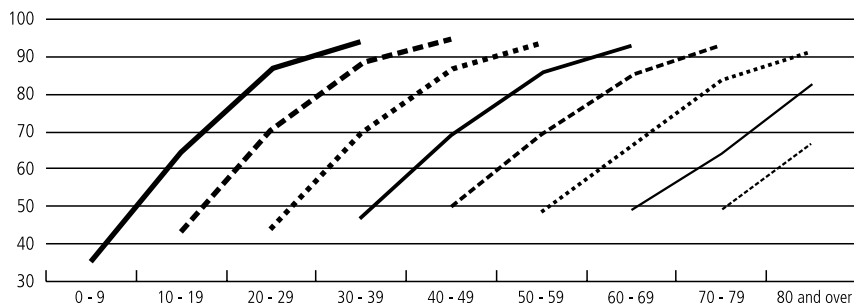
Access to public services such as water, sewage, adequate garbage collection and electricity can be directly measured by standard household surveys, such as the Demographic Censuses.

Analyzing the situation in 2000, one can see that access to the general water supply network became practically uniform among the several population groups (77% among older persons and 75% in the total population). The proportion of households with water supply was approximately 83% among older persons and 80% of the total population. Access to the sewage system is still not widespread, i.e., less than half the Brazilian population have access to this service (49% among older persons and 44% of the total population). When analyzing access to garbage collection, rates are approximately 70% for both the older population and the population as a whole. Access to electricity is available to over 90% of the population in all age groups, unlike 30 years ago, when access was less equal? between young and old. These rates drew closer and closer with the passage of time.

— Cohort analysis

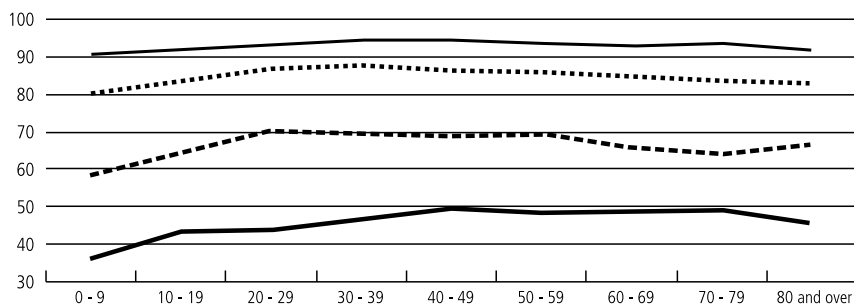
Access rates to different public services have risen substantially and homogeneously throughout the life cycle of different cohorts during the 1970 to 2000 period. During this period, for example, as shown in Figure 22, the access rate to electricity for the 60 and over generation increased from 49% in 1970 to over 93% in 2000. If we analyze a specific subgroup, as for example 70-to-79 years of age, we can see that in 2000 this service covered 91% of the population, a much better situation than the one three decades ago, when electricity was only available to 49% of this same population at 40-to-49 years of age. Another service that warrants highlighting is access to water supply that has increased rather significantly in the years under study. An example of this can be seen by analysing the 80 and over generation in 2000. Their access rate was 76%, a little more than double the rate observed when this population was 50-to-59 years of age in 1970. Similar to what happens with electricity and water, we can observe comparable behaviour the access to sewage disposal and garbage collection in the figures below (see Figures 25 to 28). It is important to mention that data on access to garbage collection has only been made available for the years 1990 and 2000. This information goes to show that there was great improvement in the quality of life of older persons throughout these decades, as well as for the rest of the age groups.

FIGURE 21
BRAZIL: PROPORTION WITH ACCESS TO ELECTRICITY BY AGE GROUP



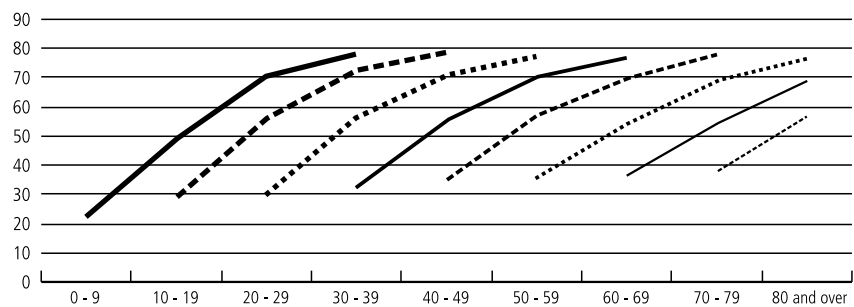
Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

FIGURE 22
BRAZIL: PROPORTION WITH ACCESS TO ELECTRICITY BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census. — 1970 — 1980 1990 — 2000

FIGURE 23
BRAZIL: PROPORTION WITH ACCESS TO PUBLIC WATER SYSTEM BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

FIGURE 24
BRAZIL: PROPORTION WITH ACCESS TO PUBLIC WATER SYSTEM BY AGE GROUP

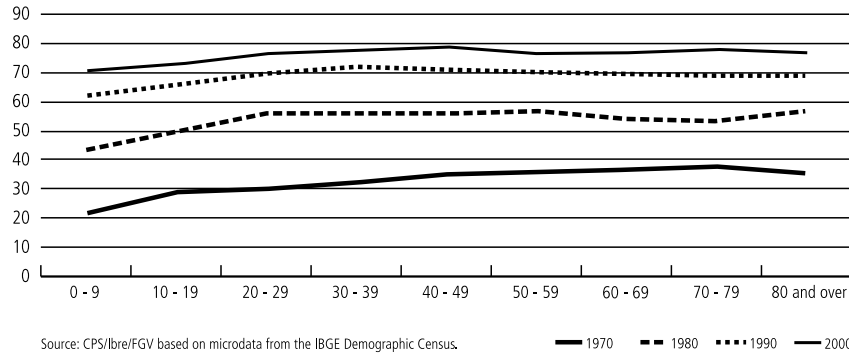


FIGURE 25
BRAZIL: PROPORTION WITH ACCESS TO PUBLIC SEWAGE SYSTEM BY AGE GROUP

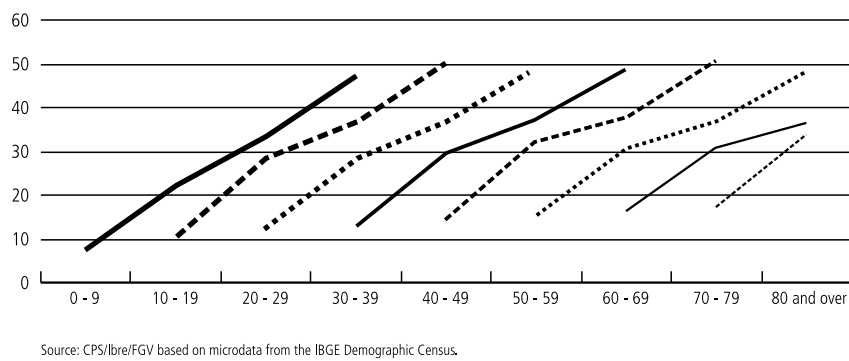


FIGURE 26
BRAZIL: PROPORTION WITH ACCESS TO PUBLIC SEWAGE SYSTEM BY AGE GROUP

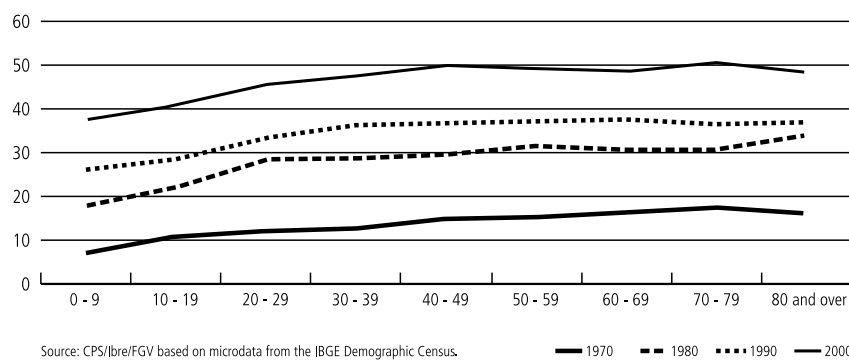
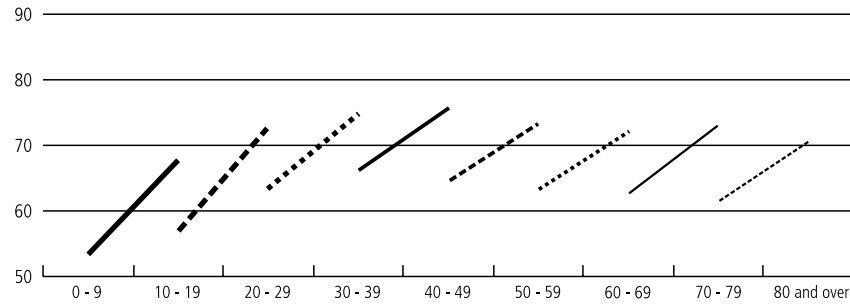
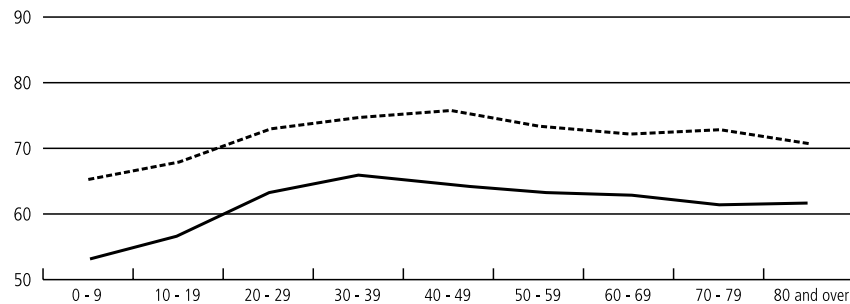


FIGURE 27
BRAZIL: PROPORTION WITH ACCESS TO GARBAGE COLLECTION BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

FIGURE 28
BRAZIL: PROPORTION WITH ACCESS TO GARBAGE COLLECTION BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

— 1990 - - - 2000

3.3 Human Capital

The literature on formal education is one of the best examples of empirical literature applied to studies on access to human capital in Brazil. Returns to schooling and its main determinants, providing education as a public good, school dropouts, education and inequality, the influence of community variables, access to quality schools have been analyzed in detail in various studies in Brazil.³

3.3.1 Complete years of study

One can see an example of return to schooling in the case of older persons that have had higher education in Table 2. Only 5.54% have had more than 12 complete

3. See, specially, the work of Barros (1996).

TABLE 2
BRAZIL: PROPORTION BY YEARS OF EDUCATION—2000

Years of Education	Number of Persons	Vertical Set (%)	Mean Per Capita Income
No Education or Less than 1 Year	42,340,658	25.07	150.16
1 - 3	31,099,267	18.41	160.47
4 - 7	46,658,164	27.63	224.11
8 - 11	38,213,277	22.63	415.01
12 or More	9,361,227	5.54	1,319.10
Unknown	1,209,078	0.72	181.81

Source: CPS/lbre/FGV based on microdata from the 2000 IBGE Demographic Census.

years of studies but, even so, they are able to attain a per capita income level 412% higher than the elderly population as a whole.

Looking at the entire age spectrum, up to the age of 25 people are in average still studying and accumulating human capital. According to the 2000 Census, the average number of years of study of the population as a whole is 4.81 years. Those in the 20-to-29-year age bracket are the ones who present the highest completed years of schooling, 7.37. After this bracket, the level of schooling drops according to the age. Those who are over 60 have a low level of schooling, only 3.3 years of study. Among those 80 years and over, the level of schooling is even lower: only 2.4 years of study. Despite the low level of schooling of Brazilians, and of older persons in particular, we have observed that the situation improved between 1970 and 2000. In 1970, for example, the average level of schooling of Brazilians was only 2.4 years of study. This average evolved in 1980 to 3.21 years, and in 1990 to 4.18 years. Focusing on the 60 and over group, we see that in 1970 the average level of schooling for this group was 1.77 years, increasing to 1.95 in 1980, 2.53 in 1990 and 3.30 in 2000. Although slow, some improvement is perceivable over these three decades under scrutiny. In other words, the average

TABLE 3
BRAZIL: EDUCATION LEVEL BY AGE GROUP—2000

Education Level	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Up to 3 Years of Education	43.49	100.0	99.75	43.93	15.06	16.29	18.78	21.66	23.59	26.43	32.20	39.78	47.47
12 or More Years	5.54	0.0	0.00	0.00	1.03	8.62	9.78	10.01	11.08	11.40	11.19	9.57	7.20

Source: CPS/lbre/FGV based on microdata from the 2000 IBGE Demographic Census.

TABLE 4
BRAZIL: SECONDARY EDUCATION BY AGE GROUP—2000

Age Groups	1970	1980	1990	2000
Total	2.40	3.21	4.18	4.81
60 and over	1.77	1.95	2.53	3.30
0 - 4	0.00	0.00	0.00	0.00
5 - 9	0.34	0.25	0.71	0.52
10 - 14	2.21	2.37	3.34	3.77
15 - 19	3.47	4.47	5.50	6.72
20 - 24	3.66	5.11	6.28	7.48
25 - 29	3.30	4.95	6.41	7.24
30 - 34	3.01	4.41	6.08	6.95
35 - 39	2.76	3.77	5.51	6.83
40 - 44	2.61	3.35	4.84	6.49
45 - 49	2.41	3.09	4.17	5.95
50 - 54	2.16	2.83	3.68	5.20
55 - 59	2.09	2.52	3.27	4.42
60 - 64	1.88	2.23	2.93	3.83
65 - 69	1.85	1.93	2.57	3.42
70 - 74	1.72	1.78	2.29	3.14
75 - 79	1.69	1.67	2.09	2.82
80 and over	1.32	1.66	1.89	2.40

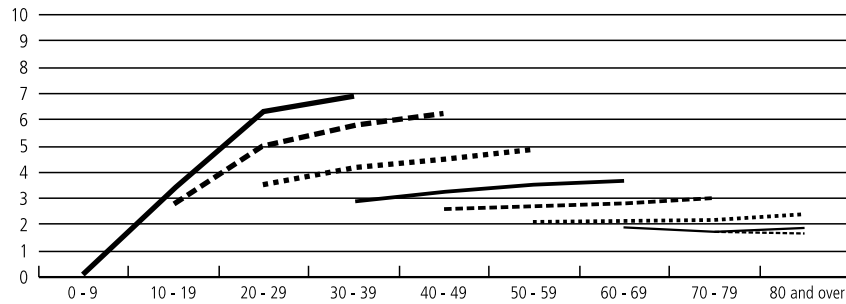
Source: CPS/Ibpe/FGV based on microdata from the 1970, 1980, 1991 and 2000 Censuses.

years of study of those over 60 years of age grew by almost one year. This growth is small if compared, for example, to the 20-to-29-year age bracket.

— Cohort analysis

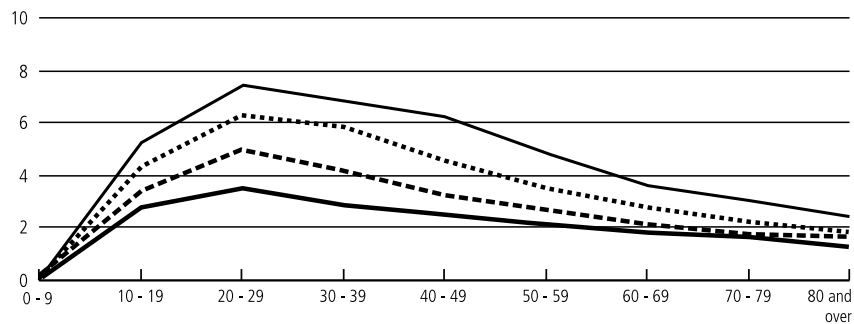
Figures 29 and 30 present a static profile of average years of study of the population for several age brackets in the years 1970, 1980, 1991 and 2000. The systematically overlapping lines indicate the occurrence of gradual improvement over time in the level of schooling for all age brackets. In 1970, the highest level of schooling for the Brazilian population was 3.66 years of study in the 20-to-29-year age

FIGURE 29
BRAZIL: AVERAGE EDUCATION BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the 1970, 1980, 1991 and 2000 Censuses.

FIGURE 30
BRAZIL: EVOLUTION OF ACCESS TO EDUCATION BY AGE GROUP



Source: CPS/lbre/FGV based on microdata from the 1970, 1980, 1991 and 2000 Censuses.

bracket. In 1980, the highest level of schooling evolved to 5.11 years of study also in the 20-to-29 year bracket and in 2000, the highest educational level was 7.48 years for the same age bracket. The educational level of those over 60 also evolved in this 30-year period.

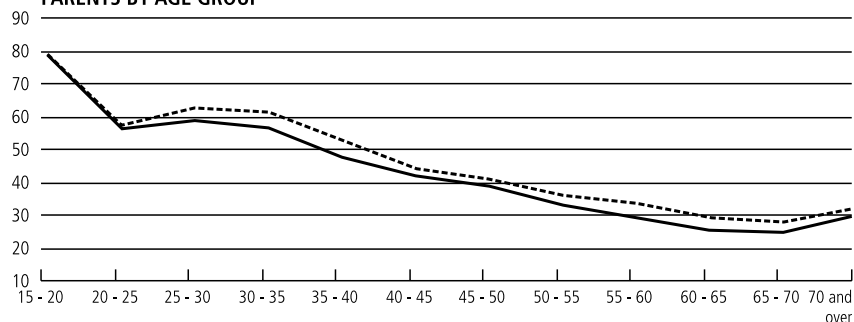
Again by means of cohort data a comparison can be made of the level of schooling between generations, i.e., how the access to education was among older persons in 1970 and how it is today. In Figure 29, this trajectory can be seen over the years. After 30 years of age, the level of schooling evolved very little for a given generation. This means that in this case the evolution can be analysed by generation using the latest available cross-sectional survey.

3.3.2 Data from PME

Another way of establishing differences in level of education between generations is to make inferences based on retrospective questions from household surveys on the mother and father's level of schooling. This information can be obtained from the 1996 Monthly Employment Survey's Special Supplement (PME). Figure 31 presents the static profile of the proportion of persons throughout all the different age groups that attained a certain level of schooling (i.e., reading and writing certification, high school degree, high school dropout etc.) strictly superior to that of their father and mother.

The lines that compare individuals' level of schooling to their respective mothers are somewhat higher than the lines referring to the paternal comparison. This indicates that the mothers' level of schooling is, generally speaking, rather lower than the fathers'. The proportion of persons with a higher educational level than their fathers' decreases monotonically from 79% for the 15-to-20-year age bracket to 25% for the 60-to-65-year one. Note that the findings refer to degrees and not strictly to higher school years (i.e., elementary school degree, elementary school dropout and so forth). The movement indicates an accelerated expansion in level of schooling when compared to the generation of their procreators over the last 40 years. Observe, too, that the proportion of persons with a level of schooling strictly higher than their mothers' or fathers' is smaller among the older population, indicating a growing acceleration in path of educational expansion.

FIGURE 31
BRAZIL: PROPORTION OF PERSONS WITH HIGHER LEVEL OF EDUCATION THAN THEIR PARENTS BY AGE GROUP



Source: CPS/IBRE/FGV based on microdata from the Monthly Employment Survey's Special Supplement — PME 1996/IBGE. — Father — Mother

3.4 Social Capital

Social capital can be widely understood as referring to different types of institutions or coordinating mechanisms that affect private and social returns or public and

private assets. The complementarity between this type of capital and other types is essential to the understanding of the social capital concept. For example, the organization of production factors is a key feature in obtaining results from a given quantity of accumulated physical and human capital.

3.4.1 Associations and trade unions

An initial overview is related to membership rates in trade unions and non-professional associations. According to Table 5, there is an inverse relationship between age and membership rates in these organizations. Among all the elderly population over 60, 14% are members or associates of trade unions and non-communitarian associations. This proportion is significantly lower than that of the total population, which is approximately 23%.

Considering that the majority of members of trade unions and community associations generally have some employment relation and that the elderly occupation rate is low, we have opted to analyse membership rates only for those occupied. The membership rate of those occupied is quite evenly distributed over the various age groups, although it presents a slight drop in the older groups. Even so it is still rather remarkable: 24% of the over 60 population is a member of associations of a professional nature as compared to 28% of the population as a whole.

In the universe of those that today are no longer a member of professional associations but who had been within the last five years, the proportion of the elderly population is also inferior to the whole population (9% and 14%, respectively). The current effective participation in these activities is much smaller in both universes: only 2% of older persons attend at least one meeting annually. This same proportion corresponds to 3% of the total population.

Generally speaking, membership rates in community associations are smaller and more evenly distributed by age groups than those found for trade unions and non-communitarian associations mentioned above. Table 2 shows that 13% of persons over 60 are members of community associations. The proportion of people that attend at least one meeting a year is greater for community associations than for any other type of association surveyed (on average, 10%). The analysis of the composition of community associations reveals that older persons have a more significant participation in religious associations, primarily those over 70 years of age: 56% of older persons in this age bracket belonging to some religious community association.

TABLE 5
BRAZIL: ASSET POSSESSION PROFILE—SIX MAIN METROPOLITAN REGIONS—1996
TOTAL POPULATION

	Total	> 60	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	>70
Education Strictly Greater than														
Father	43.54	26.71	78.95	56.36	58.69	56.62	48.14	41.68	38.93	33.32	29.60	25.20	24.87	30.07
Mother	46.38	29.87	78.96	57.45	62.29	60.95	52.82	44.00	41.46	35.64	33.39	29.26	27.95	32.40
Specific Human Capital														
Finished Technical School Equivalent to Secondary School	13.01	7.62	12.62	10.45	16.93	21.58	18.72	14.90	15.95	12.38	9.66	8.26	7.45	7.16
Believes that Will Be in the Same Position in the Next 5 Years	59.03	45.10	73.75	69.46	67.25	67.10	64.28	63.40	60.91	54.74	52.15	44.94	46.51	43.84
More Knowledge Will be Needed														
Had Difficulty Adapting to New Equipment														
1991	15.24	15.90	3.63	17.02	13.17	14.78	16.20	16.18	16.40	20.72	17.07	19.73	13.00	14.96
1996	17.40	21.30	15.86	14.50	12.42	14.53	16.71	16.55	18.69	18.66	16.95	15.91	22.34	25.65
Trade Unions and Non-Community Associations														
Members or Associates														
Total	23.16	13.53	17.03	23.72	27.80	29.00	30.23	32.37	31.02	25.78	20.34	18.24	13.86	8.51
Engaged	28.32	24.39	19.54	26.00	29.30	30.54	31.92	35.34	34.97	31.01	28.09	29.27	24.35	19.56
Participates in At Least 1 Meeting per Year	3.94	2.25	3.13	2.99	4.20	4.33	5.05	5.60	5.89	5.38	3.96	4.16	1.82	0.76
Participates in At Least 4 Meetings per Year	2.78	1.71	1.56	1.80	2.96	2.93	4.18	4.24	3.97	3.77	2.84	3.28	1.45	0.40
Is No Longer a Member, but Has Been Within the Last 5 Years	13.66	8.63	6.54	15.07	19.98	20.20	18.69	17.98	15.93	13.25	10.34	12.07	8.62	5.20

(continue)

(continuation)

	Total	> 60	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	>70
Community Associations														
Members	12.67	12.79	13.99	11.26	10.40	11.05	12.01	12.55	13.46	14.47	14.48	13.63	11.45	13.28
Participates in At Least 1 Meeting per Year	10.04	10.13	12.51	9.62	8.17	8.43	9.35	8.93	10.36	11.36	11.40	11.55	9.02	9.82
Member of the Neighbourhood Association	24.77	18.92	17.95	23.64	28.86	26.79	26.87	34.06	27.28	24.72	30.39	18.81	20.30	17.64
Religious Congregations	39.96	50.91	37.56	45.76	37.48	29.61	34.03	25.90	36.58	43.43	36.44	49.30	46.92	56.52
Atheist	7.19	4.28	15.09	8.62	9.83	9.16	6.92	7.41	5.54	5.25	5.57	5.01	3.70	4.14
Political Activities														
Member of Political Party	3.17	2.27	0.37	2.60	4.24	3.55	4.53	5.23	4.34	3.01	3.40	2.67	2.80	1.33
Participates in Activities of Political Parties	35.32	22.43	0.00	56.05	42.31	39.51	44.59	46.36	38.58	49.39	39.75	29.65	28.27	9.36
Supports a Political Party	20.93	17.62	16.11	22.27	24.38	25.16	23.60	24.01	23.33	20.71	18.72	18.68	16.51	17.68
Does Not Use Any Source to Decide Whom to Vote for	35.32	46.87	20.43	28.26	28.55	28.55	31.66	33.20	35.04	36.69	40.90	41.36	42.92	56.33
Among Those who Use Some Source of Information Uses TV to Decide Whom to Vote for	66.50	64.52	57.55	70.49	71.67	68.20	69.40	64.85	68.11	66.62	67.49	65.64	64.93	62.99
Knows the Correct Name of the Nation's President	83.54	79.21	74.82	80.82	86.87	87.28	88.66	87.85	87.89	86.24	84.41	83.08	81.81	72.74
Knows the Name of the Mayor, Governor and President	69.66	66.77	47.57	61.08	72.98	74.44	77.09	76.97	77.32	75.47	72.67	71.96	70.56	57.79

Source: CPS/FGV based on the microdata from the Monthly Employment Survey's Special Supplement - PME 1996/IBGE.

3.4.2 Political activities

We shall now look at the participation of older persons in political activities. According to Table 2, formal membership rates in political campaigns are small and present a bell shaped life cycle profile, attaining more significant values in the intermediary age groups (5% on average). For older persons this proportion was 2% and roughly 3% for the entire population. These low membership rates can be the result of high requirements for political affiliation in terms of effective participation. The rate of participation of those that are members of political parties is also lower for older persons: among those affiliated over 60 years of age, only 22% participate in political party activities. In the population as a whole, this percentage corresponds to approximately 35%.

Given the low formal rate of membership in political parties, other gauges will be used to evaluate the political participation of older Brazilians, as for example, their inclinations and sympathies towards political parties. It has been seen that the percentage of older persons that are sympathetic towards some political party decreases with age; 18% for the over 60 population and 21%, on average, for the population as a whole. A final issue shows that the political culture of older persons, measured by whether they knew the correct name of the President of Brazil—or whether they knew the name of the president and of their respective governor and mayor—also shows an inverted U-shape. Among those over 60, 79% know the correct name of the president and 67% know the names of the mayor, governor and president (84% and 70%, respectively for the population as a whole).

4 CONCLUSION

The objective of this study has been to evaluate access to several types of assets by age groups, giving special emphasis to those in their later years. Life cycle behaviour with respect to resource possession was analysed using a static profile and pseudo-panels. The main problem in static analysis is that it fails to take into account generational differences between different individuals. Dynamic analysis using pseudo-panels, on the contrary, enables us to track the value of certain statistical data within a certain generation over a period of time.

The assessment of resource possession was structured under three headings: physical capital (durable goods, housing and public services), human capital (level of schooling) and social capital (trade unions and associations, political participation and family structure).

Physical assets allow income fluctuations to be smoothed over, in the case of income decline due to pensions, illness, and unemployment, among others. As

was seen, older persons have a greater access to their own housing and smaller access to rented housing than the rest of the age groups. Access to public services showed a tendency towards growth over a period of time for all age brackets.

Access to human capital is fundamental in the initial and intermediary stages of the life cycle, as it enables greater accumulation of physical and financial capital, guaranteeing greater well-being at the end of the life cycle. Insofar as that is concerned, the level of schooling is a key variable to understanding inequalities in income distribution among different generations. Based on cohort data, an evolution in access to education was discernible for all ages, though for older persons this improvement is not as great as that observed for the 20-to-29-year age bracket.

As regard to social capital, older persons had smaller membership rates in trade unions and non-communitarian associations, even when controlled by their occupational status. Even so, older persons primarily over 70 years of age, have a more representative participation in community associations, especially religious ones.

APPENDIX A

DESCRIPTION OF DATABASE

● Demographic Census

The Demographic Census is a household survey that is held nationwide. It contains detailed personal and occupational characteristics of all members of the household, detailed information on access to housing, public services and durable goods, among others.

● National Household Sample Survey (PNAD)

PNAD is a household survey undertaken in the third quarter of every year, covering 100,000 dwellings. It contains detailed personal and occupational characteristics of all members of the household, detailed information on access to housing, public services and durable goods, among others.

● Monthly Employment Survey (PME)

The PME is a monthly household survey on the labour force and participation earnings. Data for derives from a probabilistic sample of approximately 39,000 monthly households located in the Metropolitan Regions of Recife, Salvador, Belo Horizonte, Rio de Janeiro, São Paulo and Porto Alegre.

The supplementary survey applied to the PME in 1996 was focused on establishing some characteristics in the population in relation to associativism; representation of interests and political mediation and education themes.

APPENDIX B

TABLE 1B
AVERAGE EDUCATION

Age	1970	1980	1991-1	2000
0 - 9	0.04	0.22	0.08	0.05
10 - 19	2.80	3.39	4.35	5.27
20 - 29	3.50	5.04	6.34	7.37
30 - 39	2.89	4.12	5.82	6.89
40 - 49	2.52	3.23	4.54	6.25
50 - 59	2.13	2.70	3.50	4.86
60 - 69	1.87	2.09	2.78	3.65
70 - 79	1.71	1.74	2.21	3.01
80 and over	1.32	1.66	1.89	2.40

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

TABLE 2B
OWN HOUSING

Age	1970	1980	1991-1	2000
0 - 9	57.28	60.60	69.74	71.73
10 - 19	62.46	67.50	74.78	77.92
20 - 29	53.12	56.34	65.78	71.59
30 - 39	56.67	61.14	70.04	73.95
40 - 49	62.26	67.94	76.76	79.17
50 - 59	65.44	71.48	79.86	83.33
60 - 69	66.40	72.94	80.43	85.37
70 - 79	66.33	73.36	79.43	85.17
80 and over	65.80	73.15	78.34	83.27

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

TABLE 3B
OWN HOUSING PARTIALLY PAID

Age	1970	1980	2000
0 - 9	4.91	5.23	6.47
10 - 19	4.58	5.06	6.61
20 - 29	4.76	5.88	6.62
30 - 39	5.98	7.67	8.13
40 - 49	5.08	6.21	7.90
50 - 59	3.98	5.07	5.99
60 - 69	3.19	3.64	4.31
70 - 79	2.68	2.91	3.21
80 and over	2.48	2.98	2.55

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

Note: There are no available data from the 1991 Census.

TABLE 4B
RENTED HOUSING

Age	1970	1980	1991-1	2000
0 - 9	15.52	19.29	13.90	13.14
10 - 19	15.01	16.27	12.18	10.76
20 - 29	19.36	25.44	18.31	15.61
30 - 39	18.79	22.00	16.37	14.00
40 - 49	16.77	17.07	12.20	11.36
50 - 59	14.71	15.04	9.92	8.59
60 - 69	12.93	12.90	8.79	7.05
70 - 79	11.64	11.61	8.02	6.95
80 and over	10.47	10.96	7.49	7.01

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

TABLE 5B
RADIO

Age	Access Rate		
	1970	1980	2000
0 - 9	51.86	72.41	83.44
10 - 19	59.85	77.27	87.26
20 - 29	55.79	75.55	87.00
30 - 39	59.10	78.59	89.24
40 - 49	62.88	80.17	90.68
50 - 59	62.34	81.07	89.53
60 - 69	59.05	77.88	87.24
70 - 79	56.09	74.31	85.04
80 and over	51.71	72.84	81.25

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

Note: There are no available data from the 1991 Census.

TABLE 6B
TELEVISION

Age	Access Rate		
	1970	1980	2000
0 - 9	15.76	47.84	82.16
10 - 19	21.45	54.63	85.13
20 - 29	22.40	61.17	86.96
30 - 39	26.05	62.02	89.08
40 - 49	28.27	61.04	89.55
50 - 59	27.11	60.81	87.80
60 - 69	26.48	55.35	86.31
70 - 79	26.15	51.96	85.08
80 and over	23.49	55.48	80.69

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

Note: There are no available data from the 1991 Census.

TABLE 7B
TELEPHONE

Age	Access Rate		
	1970	1980	2000
0 - 9	7.21	12.00	26.69
10 - 19	10.17	15.62	34.35
20 - 29	11.84	16.19	35.56
30 - 39	13.92	20.76	40.31
40 - 49	15.51	24.15	46.71
50 - 59	17.57	25.24	46.64
60 - 69	16.51	26.38	44.61
70 - 79	16.57	26.24	44.33
80 and over	19.79	29.09	41.31

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

Note: There are no available data from the 1991 Census.

TABLE 8B
AUTOMOBILE

Age	Access Rate			
	1970	1980	1990	2000
0 - 9	6.09	14.17	18.21	25.29
10 - 19	8.71	17.20	20.65	29.49
20 - 29	8.88	19.95	22.60	31.29
30 - 39	10.55	23.24	28.33	36.86
40 - 49	11.66	23.17	29.92	40.54
50 - 59	10.42	22.49	27.76	38.76
60 - 69	8.97	17.68	23.86	32.43
70 - 79	8.46	14.81	19.90	26.87
80 and over	7.84	16.52	21.11	23.02

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

TABLE 9B
ELECTRICITY

Age	Access Rate			
	1970	1980	1990	2000
0 - 9	36.06	58.78	80.38	90.19
10 - 19	43.06	64.24	83.15	91.78
20 - 29	44.19	70.37	86.74	93.49
30 - 39	47.13	70.02	88.09	94.41
40 - 49	49.45	69.00	86.56	94.45
50 - 59	48.80	69.34	85.74	93.44
60 - 69	48.84	65.83	84.89	93.15
70 - 79	49.28	64.14	83.50	93.35
80 and over	45.76	66.65	82.72	91.42

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

TABLE 10B
GENERAL WATER SUPPLY NETWORK

Age	Access Rate			
	1970	1980	1990	2000
0 - 9	22.28	44.35	62.23	70.37
10 - 19	28.67	49.46	65.71	73.13
20 - 29	30.24	55.98	70.12	76.50
30 - 39	32.27	55.92	72.59	77.94
40 - 49	35.23	55.75	71.10	78.88
50 - 59	35.59	56.70	70.12	77.03
60 - 69	36.53	54.25	69.68	76.67
70 - 79	37.67	53.80	68.97	78.01
80 and over	35.05	56.79	68.93	76.47

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

TABLE 11B
GENERAL SEWAGE SYSTEM

Age	Access Rate			
	1970	1980	1990	2000
0 - 9	7.44	18.43	26.18	37.67
10 - 19	10.70	22.11	28.63	40.88
20 - 29	11.97	28.37	33.61	45.50
30 - 39	12.83	28.52	36.73	47.27
40 - 49	14.58	29.71	36.61	50.01
50 - 59	15.33	31.87	37.17	49.06
60 - 69	16.30	30.64	37.60	48.90
70 - 79	17.40	30.67	36.64	50.65
80 and over	16.11	33.90	36.88	48.33

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

TABLE 12B
GARBAGE COLLECTION

Age	Access Rate	
	1991-1	2000
0 - 9	53.45	65.32
10 - 19	56.91	67.87
20 - 29	63.39	72.76
30 - 39	66.11	74.72
40 - 49	64.48	75.78
50 - 59	63.37	73.46
60 - 69	62.85	72.24
70 - 79	61.55	72.97
80 and over	61.80	70.52

Source: CPS/lbre/FGV based on microdata from the IBGE Demographic Census.

Note: There are no available data before the 1991 Census.

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INFLATION AND ELDERLY BRAZILIANS*

Marcelo Neri

Fundação Getulio Vargas (FGV)/Instituto Brasileiro de Economia (IBRE)/
Centro de Políticas Sociais (CPS)/Escola de Pós-Graduação em
Economia (EPGE)

Salomão Quadros

Fundação Getulio Vargas (FGV)/Instituto Brasileiro de Economia (IBRE)

André Braz

Fundação Getulio Vargas (FGV)/Instituto Brasileiro de Economia (IBRE)

Vagner Ardeo

Fundação Getulio Vargas (FGV)/Instituto Brasileiro de Economia (IBRE)

1 INTRODUCTION

In recent years Brazilian legislation has created various affirmative policies aimed at elderly people.¹ Two important examples are related with the 1988 Constitution and with the 2003 Elderly People's Statute. The Constitution guarantee the purchasing power of social security benefits, without, however, specifying any reference index. The Brazilian Economics Institute of the Getulio Vargas Foundation [Fundação Getulio Vargas (FGV)], following its long tradition of creating price indices, such as the General Price Index of Internal availability [Índice Geral de Preços de Disponibilidade Interna (IGP-DI)], has begun to research specific segments, such as elderly people.

This article details the first steps towards a methodology to gauge the cost of living index developed for elderly Brazilians [Índice de Preços ao Consumidor (IPC-3I)], which will be published on a regular basis. The structure of the chapter is as follows. The introduction is the first section. The second describes the calculation of the specific index and compares its structure with that of the general consumer price index (IPC). The third section comparatively analyses the cost of living for elderly people. The fourth section deals with the real evolution of the purchasing

* This chapter was translated from Portuguese to English by Eoin O'Neill and reviewed by the authors.

1. For a description of Brazilian policies for elderly people, see the chapter by Camarano and Pasinato in this book.

power of the minimum wage, using the IPC and the IPC-3I. Finally, in the Appendix, the background, methodology and structure of IPC-3I are given in greater detail.

2 THE STRUCTURE OF CONSUMPTION IN OLD AGE

The “depersonalisation” of inflation does not harm macroeconomic policy. After all, if increases in prices are generalised, even if not quite simultaneously, they will be felt to some extent by everyone. Monetary control reverses the generalised character of the increase. This is only part of the story. Some prices increase more than others, in a more prolonged way and even more permanently. From the influence of the exchange rate on productivity increases, to the level of competition in each market, and through the preferences of the consumer, many factors explain the differentiated dynamics of various prices collected.

In this way, diversified inflation arises. The expenditure of some social groups can be concentrated on items whose prices, over relatively long periods, increase more quickly than other items. Using the results obtained from the last family budget survey [Pesquisa de Orçamentos Familiares (POF)], carried out in 2002 and 2003, FGV is currently identifying certain groups and constructing specific inflation indices, including the group of elderly people. Also in relation to special price indices, FGV intends to study the child and teenage segment, to assist the implementation of programmes such as Family Benefit (Bolsa Família).

The Consumer-Budget Survey allows to capture private demands and behaviour in order to support actions and studies at various levels of government and of the civil society. A properly designed public policy shall be able to cover the areas not catered for in the private sphere—while the POF/FGV allows us to discover these areas. We are not going to have a normative discussion here, rather we will just look at some descriptive elements that are useful to the debate, such as, for example, the recently reopened debate about the convenience of disentangling the basic social security benefit from the minimum wage.

The design of an inflation index for elderly people requires great care. The concept of budget used in this type of survey is a family one and not individually based, therefore, it is not possible to calculate the cost of living index for elderly people this way—except for those families composed only of elderly people. Although we consider this calculation interesting, we decided to use a definition we judged to be more representative in terms of public policy decisions: families

2. An alternative possibility would be to use the familiar per capita concept, common in the social literature on poverty. In other words, we could divide the expenses of each household by its number of members, and afterwards regroup them according to certain characteristics, such as elderly people or children. This would give greater internal consistency to the range of indices. Also relevant from the poverty life perspective is the calculation of the level—and not just the variation—in the cost of life of special groups.

composed of at least 50% of elderly people.² The main difference is, without a doubt, expenditure on health and special care that are responsible for 15% of the budget of these families, compared to 10.4% for the total set of families surveyed (Table 1). In the United States, a country that is known to spend a lot on the prevention and treatment of illnesses, families as a whole spend around 5% of their family budgets on this type of expenditure, according to the Bureau of Labor Statistics. Among those aged over 65, health costs rise to 11.5%, while only in the over 75 age group do they reach the 15% reported by Brazilian families with a majority of members over 60.

Dividing our reference groups by income into those with income above and below 8 minimum wages, we can see once again, similar proportions (14.5% and 15.1%, respectively). However, there are important differences in the composition of health expenditure per income group: health services including doctors, hospitals, laboratories, and health insurance plans account for 8.5% of the budget of the highest income group and 5.1% in the lowest income group. On the other hand, expenditure on general medicines accounts for 3% and 5.8% of the budget of high income and low income families, respectively. Other health expenses do not vary between income groups. In this way, irrespective of the operational questions, health service policies, such as the prohibition of the differentiation of health insurance charges based on age established by the Elderly People's Statute, have a lower potential for affecting poor elderly people than actions aimed at improving the offer of medicine, such as the "popular pharmacy" or generic medicine programmes.

In relation to the composition of large consumption groups, the main differences in expenditure between families where at least 50% of members are elderly people and the total set of families can be found in the higher expenditure of the former group on: *a*) health and personal care costs (15% against 10.4%, respectively); *b*) expenditure on food (30.2% against 27.5%); *c*) miscellaneous expenses (5.79% against 4.44%); and *d*) slightly higher housing costs (32% against 31.8%). The opposite, i.e., a higher proportion of expenditure among the total population in comparison with elderly families can be found in the following groups of expenses:

a) Transport (7.85% against 11.72%), probably reflecting the lower demands and elderly people's entitlement to free public transport. The impact of urban public transport is 50% higher for population as a whole than for elderly families.

b) Clothing (3.67% against 5.4%). In this item, elderly women spend more than men, probably due to their greater longevity.

c) Education, reading and leisure (4.43% against 8.74%). There are important differences in this item. The higher expenditure on education of the total population

TABLE 1
STRUCTURE OF PRICE INDICES FOR TOTAL FAMILIES AND FOR FAMILIES WITH ELDERLY PEOPLE

	IPC-BR Total Population	Families with at Least 50% of Elderly People		Families with Elderly People	Families with only Elderly People	
		IPC-3I	Up to 8 Minimum Wages Above 8 Minimum Wages			
Food	27.488725	30.2332	35.3371	24.9046	30.4276	30.0479
Food Types	24.750333	27.9641	33.3296	22.4483	28.1985	27.6147
Housing	31.842367	32.9964	35.2525	30.8369	32.9693	35.7917
Clothing	5.402492	3.6760	2.7013	4.5209	3.6456	3.0078
Clothes	3.457859	2.3916	1.6820	3.0095	2.4085	1.9360
Male Clothes	1.274613	0.8599	0.6692	1.0517	0.9107	0.6656
Female Clothes	1.589443	1.3461	0.8537	1.6356	1.3169	1.2038
Health and Personal Care	10.361233	15.0288	14.4692	15.0852	14.9021	16.7940
Health Services	3.695111	6.8096	5.0930	8.4602	6.7390	8.2734
Hospital and Laboratories	0.149579	0.5855	0.9212	0.3022	0.5876	0.7898
Doctor, Dentist, etc.	3.545532	6.2241	4.1718	8.1580	6.1514	7.4836
Medical And Dental Products	2.603546	4.9063	5.7889	3.4786	4.8878	5.5022
Medicines in General	2.198719	4.4753	5.4735	2.9923	4.4072	5.2173
Personal Care	4.062576	3.3128	3.5873	3.1464	3.2753	3.0184

(continue)

(continuation)

	IPC-BR Total Population	Families with at Least 50% of Elderly People		Families with Elderly People		Families with only Elderly People
		IPC-31	Up to 8 Minimum Wages	Above 8 Minimum Wages	People	
Education, Reading and Leisure	8.744800	4.4255	1.8127	7.6253	4.4736	2.8376
Education	5.756494	1.8622	0.5191	3.9062	1.9939	0.4443
Reading	0.430508	0.5719	0.4166	0.7555	0.5510	0.5898
Leisure	2.557798	1.9914	0.8771	2.9635	1.9286	1.8035
Transport	11.722055	7.8501	6.2371	9.0579	7.8726	6.3261
Public Transport	5.005745	3.0312	3.3554	2.4128	3.0429	2.1571
Urban Public Transport	4.756608	2.9111	3.2505	2.2793	2.9364	2.0605
Inter-Urban Public Transport	0.249137	0.1202	0.1050	0.1335	0.1065	0.0966
Miscellaneous Expenses	4.438329	5.7900	4.1901	7.9693	5.7093	5.1950

Source: DGD/brefGV.

Obs.: Group, Subgroup and Item.

(1.86% against 5.76%) reflects the long time spent to obtain a return on investment in human capital. In the case of reading and leisure, similar proportions can be found, despite elderly people having more time for leisure, probably because elderly people enjoy half-price tickets to the cinema and the theatre (0.40% and 0.48%) and their greater free time.

The analysis of health can be complemented by the National Household Sample Survey [Pesquisa Nacional por Amostra de Domicílios (PNAD)] 1998/IBGE data. The proportion of families with access to health insurance is highest among elderly people; 27% of elderly people and 24.4% in the population as a whole.³ The composition of health insurance plans is similar in relation to complementary exams (96% for both), while there is a slight difference in the proportion of those who have the right to be hospitalised (95.5% against 93.6%). In relation to the use of health services, however, the proportions are very different: 21.4% and 13%. This difference has an impact on the cost of private health insurance, with elderly people having to pay more: only 27% of elderly people paid less than R\$ 50 a month for health insurance, compared with 48% for the total population. In this way, the recently enacted prohibition of the differentiation of prices per age group in accordance with the elderly people's statute will not be innocuous.

PNAD also allows the analysis of the incidence of health problems. As shown in Table 2, 10% of elderly people had been sick in bed in the two weeks before the survey, compared to 4% for the population as a whole. Chronic illnesses, such as hypertension, affect 45% of elderly people compared with 10.6% of the population as a whole. Cardiac problems (19% and 3.9%) and depression (11.9% and 4.9%) can also be interpreted as affecting elderly people relatively more. The POF/FGV index allows connections to be made between the state of health and the structure of medicine consumption per therapeutic class, as shown in Table 3.

Comparing families with at least 50% of elderly people and the total population, we can see high differences in the consumption of vasodilators for arterial pressure (46% and 22.7%), as well as in the consumption of tranquillisers and anti-depressives (15.6% and 9.4%). The opposite relationship can be found in other types of medicines, such as contraceptives and hormones (4% and 6.8%) dermatological medicines (0.97% and 3.7%), vitamins (1.3% and 4.4%), anti-infection medicines (0.96% and 7.2%) and painkillers and anti-thermins (4.5% and 9%). The flu vaccination campaign among elderly people may have contributed to a lower use of painkillers and anti-thermins.

3. For an analysis of elderly people's health insurance by, see the chapter by Camarano and Pasinato, in this book.

TABLE 2
AGE PROFILE OF PEOPLE SUFFERING FROM CHRONIC DISEASES—BRAZIL 1998
 [%]

	Total	Over 60	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	Over 70
Sick in Bed During Last Two Weeks	3.94	9.63	2.06	2.27	2.71	3.20	3.50	3.55	4.37	5.05	5.84	6.69	7.43	8.75	11.98
Has Back or Rib Pains	17.41	45.53	3.13	7.24	12.01	16.58	21.53	26.13	30.87	36.26	40.23	44.13	44.53	46.78	45.02
Has Arthritis or Rheumatism	8.16	37.97	0.89	1.48	2.46	3.63	5.32	7.51	11.26	16.15	22.68	28.06	32.69	37.34	42.60
Has Cancer	0.22	1.13	0.03	0.03	0.04	0.08	0.10	0.23	0.33	0.38	0.42	0.70	0.98	0.91	1.40
Has Diabetes	1.97	10.39	0.09	0.20	0.29	0.48	0.71	1.30	2.71	4.14	5.97	7.94	9.40	10.12	11.35
Has Bronchitis or Asthma	4.85	7.94	4.57	3.89	3.70	3.19	3.01	3.11	3.21	3.60	3.90	5.09	6.48	7.59	9.35
Suffers from Depression	4.96	11.95	0.83	2.30	3.74	4.90	6.45	7.49	9.23	10.17	10.57	12.19	11.99	11.66	12.12
Has Cardiac Problems	3.89	19.42	0.60	0.86	1.19	1.56	2.00	3.03	4.95	6.91	9.50	13.32	15.58	19.11	22.70
Has Hypertension	10.57	44.24	0.30	1.33	3.18	5.06	7.50	11.56	17.77	24.07	30.89	36.51	41.12	45.51	45.90

Source: CPS/FGV based on microdata from the PNAD98/IBGE.

TABLE 3
PARTICIPATION OF MEDICAL EXPENDITURE BY THERAPEUTIC CLASS IN BRAZILIAN FAMILY EXPENDITURE
 [%]

	Total Pop.	Families with at Least 50% Elderly
Anti-infection	7.16	0.96
Painkillers and Anti-thermins	8.95	4.54
Anti-inflammatory	11.27	9.17
Anti-flu and Cough Sedatives	3.73	1.26
Anti-allergic	4.69	2.65
Vasodilatations for Arterial Pressure	22.67	45.99
Tranquillisers and Anti-depressives	9.37	15.64
Hepatic Medicine (Liver)	0.90	2.47
Kidney Medicine (Renal)	5.49	2.66
Anti-acids	2.00	1.92
Tonics	2.11	0.84
Contraceptives and	6.81	4.01
Appetite Modifiers	1.52	1.39
Dermatological	3.66	0.97
Vitamins (Including Imported)	4.39	1.33
Homeopathic/Natural Medicines	2.91	2.42
Laxatives	0.73	0.81
Expectorant	1.65	0.54
Total	100.00	100.00

Source: DGD/lbre/FGV based on POF/FGV.

Table 4 shows the variations in the IPC-3I⁴ and IPC-BR indices and their impact during the 1996-2004 period on the expenditure of the two study groups in this research. We expect to shown here the immediate determinants of the difference in inflation between the two groups. The differences found in the weighted structures were the result of an accumulated variation between May 1996 and March 2004 of 92.15% and 74.6% for elderly families and other families

4. Based on 1,384 families covered by the POF in 2002/2003, with at least 50% of family members being 60 or over. For a better description of the methodology of the two calculated indices, see the Appendix.

TABLE 4
**VARIATION IN CONSUMER PRICE INDEX OF ELDERLY PEOPLE AND THE TOTAL POPULATION—
MAY 1996/MARCH 2004**

Description	IPC - Variation (%)		Impact	
	Elderly	Total	Elderly	Total
IPC-General	92.15	74.56	100.00	100.00
Food	109.60	69.09	36.65	25.69
Food Stuffs	116.81	72.75	35.81	23.79
Eating Out	45.08	44.11	1.26	1.98
Housing	118.05	89.23	37.82	35.70
Rent and Charges	68.86	58.03	7.94	9.68
Public Residence Services	273.29	229.16	26.52	22.43
Furniture	70.21	45.71	0.17	0.65
Bed, Bath and Table Clothes	47.95	51.68	0.23	0.24
Electro-domestic Appliances and	29.53	9.56	0.48	0.26
Misc. Utensils	22.20	38.16	0.15	0.40
Conservation and Repair Items	90.25	83.78	3.42	3.72
Residence Services	89.67	77.67	3.59	2.66
Clothing	9.87	5.64	0.53	0.39
Clothes	6.04	0.14	0.22	0.01
Footwear	8.23	8.65	0.08	0.15
Clothing Accessories	14.45	18.39	0.06	0.09
Fabrics	45.36	41.23	0.10	0.10
Clothing Services	27.69	24.25	0.03	0.06
Health and Personal Care	51.89	62.32	9.24	8.73
Health Services	66.09	61.37	4.84	3.81
Medical and Dental Products	39.63	80.16	2.52	2.45
Personal Care	44.01	49.11	1.83	2.34
Education, Reading and Leisure	82.56	82.46	4.17	11.57
Education	86.77	83.80	1.81	7.74

(continue)

(continuation)

Description	IPC - Variation (%)		Impact	
	Elderly	Total	Elderly	Total
Reading	104.98	102.75	0.63	0.70
Leisure	70.15	69.66	1.66	2.87
Transport	111.17	99.01	8.71	14.56
Public Transport	161.70	177.74	4.56	9.61
Own Transport	82.44	68.59	4.14	6.38
Misc. Expenses	64.09	61.66	2.87	3.36
Alcoholic Drinks and Tobacco	49.59	50.70	0.91	1.54
Other Misc. Expenses	109.50	85.61	2.88	2.07

Source: DGD/lbre/FGV.

respectively. The main “villain” responsible for inflation in elderly people were housing; responsible for 37.8% of total inflation and 118% for the study group. This was followed by food (36.7% of total inflation for families as a whole and 110% for elderly families) and health (9.2% of total inflation for families as a whole and 52% of inflation for the study group). This final result contrasts with the IPC-Total index, where education and transport had a lower impact than health.

3 INFLATION FOR ELDERLY PEOPLE

The affects of the different consumption structures of the different age groups can be summarised in terms of the inflation indices for the period. Figure 1 shows the evolution of monthly inflation since August 1994 according to the general consumer price index (IPC-BR) and the index referring to elderly families (IPC-3I). Due to the differences in the rate of inflation since stabilisation in 1994, it is possible to visually analyse the results. This data is presented month by month in the Appendix.

Figure 2 shows the ratio of the two indices in use since August 1994. They fall continuously showing the inflation for elderly people has surpassed systematically that of the population as a whole. In the years included, the variation in the IPC-3I index exceeded that of IPC-BR by 18%. This is equivalent to an annual average difference of 1.8% in the post-stabilisation period.

FIGURE 1
VARIATION OF INDICES—AUGUST 1994 TO MAY 2004

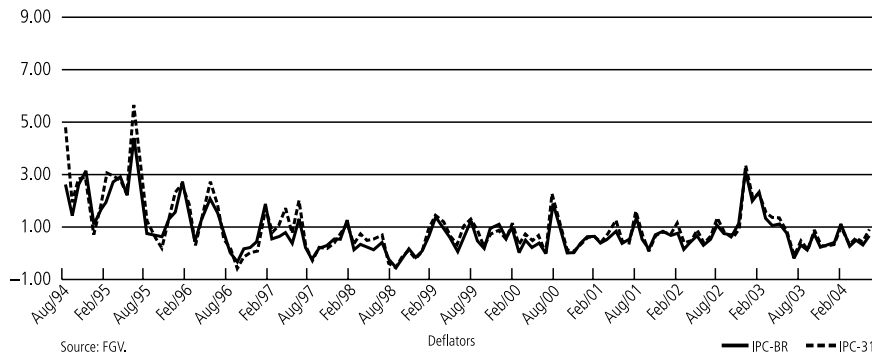
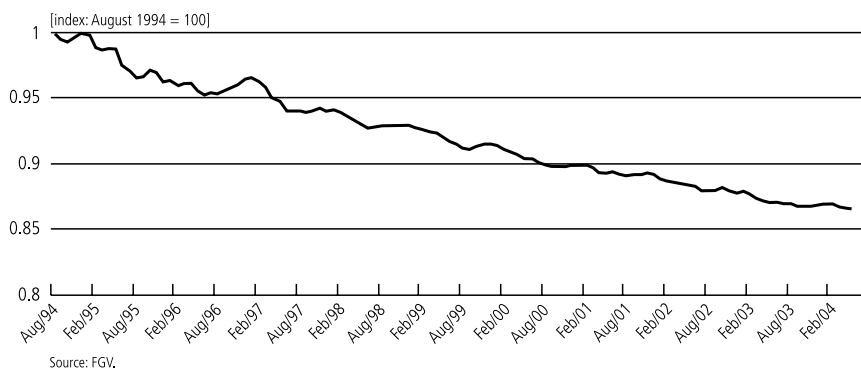


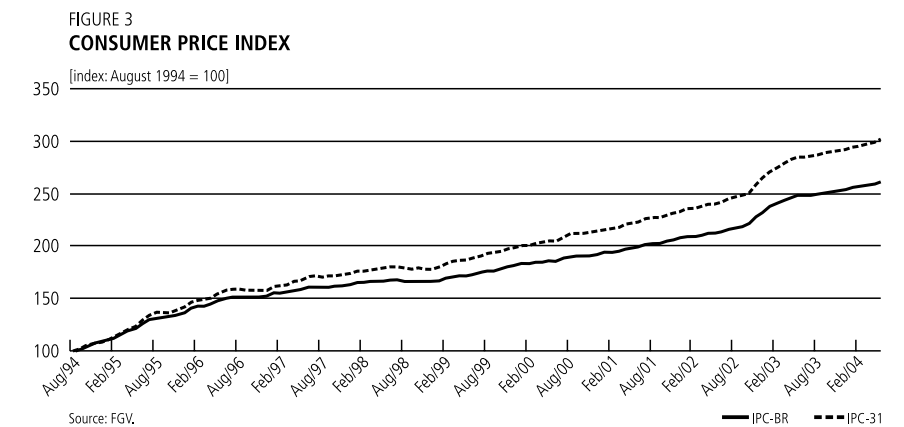
FIGURE 2
RATIO BETWEEN INDICES—IPC-BR/IPC-31



4 THE REAL MINIMUM WAGE

This section looks at the evolution of the purchasing power of elderly people, beginning by analysing the purchasing power of the minimum wage, the basic reference unit for social security benefits. Figure 3 complements the analysis in the previous section tracing the trajectory of the absolute values in the two price indices since August 1994, when it is possible to describe the levels of these series.⁵ As can be seen, the two gradually and continually drift apart and the IPC for elderly people rises above the IPC-BR. The differences in the consumer price indices observed imply a relatively small increase in the purchasing power of the

5. The successive changes in currency that occurred during the launching of stabilisation plans makes the calculation of purchasing power during inflationary transitions difficult, especially in the case of the 1994 Real Plan, due to the adoption of the URV [Neri (1995)].

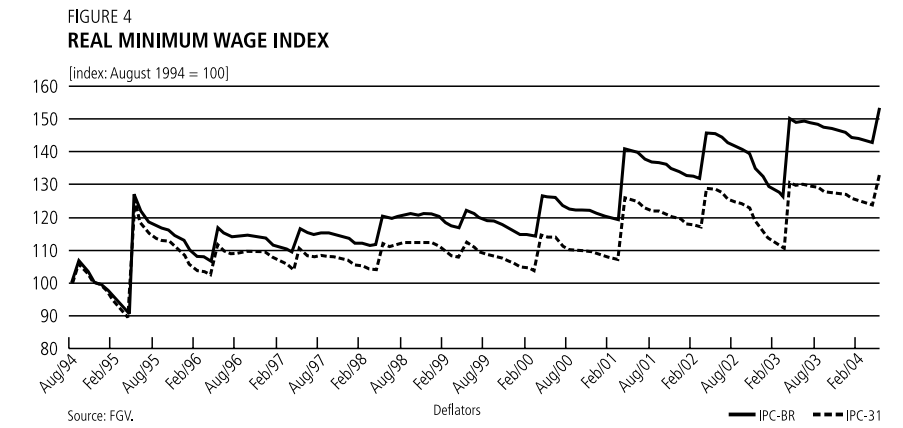


minimum wage during the period—when deflated by IPC-3I—in comparison with IPC-BR. In the first case, the minimum wage had a real increase of 33.1%, from August 1994 to May 2004. The increase rises to 53.8% if deflated by the IPC-BR. The different trajectories of the minimum wage purchasing power index are shown in Figure 4.

In the 12-month-period ending in May 2004, inflation for elderly people was 5.67% compared to 5.29% in the IPC index for the population in general. Although inflation for elderly people is at a higher level, its value is still lower than the variation conceded to the minimum wage, representing a real increase at the end of 2.52%. In this way, the substitution of the general consumer price index by a specific index that used the consumption structure of elderly people as a reference for social security would have had a more favourable impact for this segment in the recent period.

By way of conclusion, the results show that the inflation indices for elderly people allow a more precise measurement of the evolution of their effective purchasing power.⁶ They act as an alternative reference system to implement health and social security policies. Their correct use, which is only beginning, is our newest challenge. They also show that, due to the consumption structure of elderly people, they have been more effected by inflation in the last ten years that the population as a whole.

6. Analyses at the purchasing power level, instead of the variation in purchasing power, require similar treatment to that observed in the literature about poverty lines. The question of economies of scale, in particular, can play an important role in the differentiation of the purchasing power at a given level of income among elderly families from others, due to the lower size of the forms [Ferreira, Lanjouw and Neri (2003)].



APPENDIX

IPC-31

A.1 Background

POF aims to collect representative information on the expenditure and earnings of families in relation to the formation of consumer prices indices. The POF, whose aim was to define the weightings for the general IPC, was began in June 1956. The survey was based on the completion of “household notebooks”, in which the type and value of different items of expenditure were entered on a daily basis.

In the second quarter of 1966, the IPC of Rio de Janeiro used items and weightings from the POF carried out between 1961 and 1963. The weightings reflected the consumption patterns of families earning less than five minimum wages, representing more than 2/3 of the population of Rio de Janeiro at the time. In 1972, the results of the POF (1966/1967) were introduced into the IPC, and the weighting now covered 411 items of expenditure.

In January 1989, IPC began to be calculated for São Paulo, as well as Rio de Janeiro, with the structures being extracted for the POF carried out in 1986-1987. This strengthened the accuracy of the survey, with the cost structure now covering families with earnings between one and 33 minimum wages.

In 1992/1993 and 1997/1998, two other surveys were carried out. The price and consumption indices derived from these surveys were used in the methodological changes occurred in January 1994 and January 1999, respectively. In January

2001 the Getulio Vargas Foundation's IPC index became even more representative, through its expansion to a further ten state capitals: Belém, Belo Horizonte, Brasília, Curitiba, Florianópolis, Fortaleza, Goiânia, Porto Alegre, Salvador and Recife.

The POF carried out by the Getulio Vargas Foundation (POF/FGV) in 2002/2003 was used to prepare the IPC-3I. The population focused on consisted of urban families residing in Belém, Curitiba, Florianópolis, Fortaleza, Goiânia, Porto Alegre, Rio de Janeiro, Recife, Salvador and São Paulo. Members of the armed forces and other quasi-military institutions residing in barracks and institutional housing, people in hospital, patients of various institutions, and people residing in collective housing were excluded.

A random sample is made on four different dates, so that consumption information can provide an updated empirical basis in order to allow the preparation of average consumption structures. In this way, baskets of goods and services can be classified. In each city eight field surveys were carried out—four price surveys and four family budget surveys.

A.2 IPC-3I

IPC-3I, as it is calculated, does not just cover families consisting solely of elderly people (defined as individuals aged 60 or over). The structure of the index was produced by families with at least 50% of their members being elderly people and whose income is between one and 33 minimum wages.

The final basket of the index for elderly people has a similar structure to that used by the traditional IPC published by FGV. The consumption structure is broken down into seven groups, 25 subgroups, 88 items and 450 sub-items. The main difference between the traditional IPC and its version for elderly people lies at the sub-item level, the traditional version has 25 more sub-items than the version for elderly people.

The most important differences can be found in the weightings used in the consumption baskets. In the development of this index, important differences in the consumption structure of elderly families were discovered. These differences can be perceived through the weighting structure, used to reveal where the expenditure of these family units is most concentrated. Table A1 shows the weight of the seven classes of expenses in the structure of the IPC-BR vis-à-vis that of the IPC-3I. Table A2 shows the weighting of the large groups of expenses for alternative modalities of families that contain elderly people, such as those composed of elderly people in general and where the family only has elderly people. A high rate

of overlapping was observed: 82% of people in elderly families were elderly people, corresponding to 1.5 elderly people per household. We highlight below the differences between the different groups of expenses analysed for the different universes of analysis.

IPC-3I already has a historical series—lasting to May 2004. The first calculations introduced to the inflation indices the differences found in the weightings structures with total accumulated variations in the period from May 1996 to March 2004 coming to 92.15% and 74.6%, respectively. Table A3 shows the evolution of the structure of variations in IPC-3I and in IPC-BR and their impact during this period.

TABLE A1
STRUCTURE OF PRICE INDICES

	IPC-BR Total Population	Families with at Least 50% of Elderly People				Families with Elderly People				Families Composed only of Elderly People					
		IPC-3I		Up to 8		Above 8		Total		Up to 8		Above 8		Total	
		Minimum	Wages	Minimum	Wages	Minimum	Wages	Minimum	Wages	Minimum	Wages	Minimum	Wages	Minimum	Wages
Eating	27.488725	30.2332	35.3371	24.9046	30.4276	35.5617	25.2460	30.0479	35.5774						
Foodstuff	24.750333	27.9641	33.3296	22.4483	28.1985	33.5765	22.7772	27.6147	33.3604						
Rice and Beans	1.302776	1.4228	1.8445	0.9503	1.4164	1.8645	0.9711	1.3132	1.7513						
Vegetables and Greens	2.274779	2.7250	3.3309	2.2744	2.7239	3.3348	2.2962	2.6829	3.4307						
Fruits	2.057911	2.4807	3.0501	1.8828	2.6453	3.1735	2.0677	2.6551	3.4126						
Dough and Flour	1.140503	1.1738	1.4396	0.9271	1.2023	1.4650	0.9639	1.1038	1.3694						
Bread and Biscuits	2.241656	2.4662	3.2789	1.5399	2.5198	3.3719	1.6132	2.3506	3.0166						
Sweeteners	0.594086	0.9325	1.2118	0.6610	0.9197	1.1887	0.6689	1.0023	1.2546						
Sweets and Chocolates	0.481273	0.5216	0.5187	0.5292	0.5106	0.5152	0.5061	0.5071	0.5071						
Milk Products	3.048723	3.4168	4.1822	2.5625	3.3918	4.1638	2.5745	3.5489	4.3740						
Poultry and Eggs	1.347903	1.7913	2.3839	1.1137	1.7132	2.2987	1.0882	1.9225	2.4582						
Beef	2.706122	2.8727	3.2929	2.4836	2.9280	3.3375	2.5262	2.6094	3.0456						
Pork	0.341104	0.3596	0.3687	0.4702	0.3644	0.3776	0.4683	0.3485	0.3495						

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	IPC-BR Total Population	Families with at Least 50% of Elderly People			Families with Elderly People			Families Composed only of Elderly People			
		IPC-3I	Up to 8	Above 8	Total	Up to 8	Above 8	Total	Up to 8	Above 8	Total
			Minimum Wages	Minimum Wages		Minimum Wages	Minimum Wages		Minimum Wages	Minimum Wages	
Meat from other Animals	0.032520	0.0737	0.0480	0.1448	0.0731	0.0422	0.1485	0.0488	0.0381	0.0488	0.0381
Fresh Fish	0.891696	1.2078	1.2705	1.1145	1.2277	1.2779	1.0916	1.2534	1.3129	1.2534	1.3129
Industrialised Meat and Fish	1.389303	1.3012	1.4545	1.1707	1.3157	1.4589	1.1745	1.1715	1.3624	1.1715	1.3624
Oils and Fats	0.999640	1.1596	1.3821	1.0012	1.1629	1.3765	1.0157	1.1036	1.3665	1.1036	1.3665
Condiments	0.805580	0.8068	0.9072	0.6557	0.8225	0.9422	0.6489	0.7540	0.9122	0.7540	0.9122
Conserved Vegetables	0.293156	0.3236	0.2759	0.3536	0.3263	0.2754	0.3540	0.3419	0.3168	0.3419	0.3168
Non-Alcoholic Drinks	1.772889	1.7252	1.9743	1.4695	1.7304	1.9769	1.4831	1.6647	1.9480	1.6647	1.9480
Other General Foodstuffs	0.367358	0.4035	0.3953	0.3823	0.4161	0.3996	0.3911	0.3770	0.3867	0.3770	0.3867
Frozen Prepared Food	0.409353	0.3307	0.2517	0.3691	0.3341	0.2689	0.3655	0.3279	0.2613	0.3279	0.2613
Diet/Light Type Foodstuffs	0.252004	0.4690	0.4680	0.3921	0.4543	0.4669	0.3600	0.5275	0.4858	0.5275	0.4858
Eating Out	2.738392	2.2691	2.0075	2.4563	2.2291	1.9852	2.4687	2.4332	2.2170	2.4332	2.2170
Restaurants	1.996871	1.8086	1.5383	1.9676	1.7778	1.5174	2.0018	2.0506	1.7546	2.0506	1.7546
Bars and Snack Bars	0.741521	0.4605	0.4692	0.4887	0.4513	0.4678	0.4669	0.3826	0.4624	0.3826	0.4624

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	IPC-BR Total Population	Families with at Least 50% of Elderly People			Families with Elderly People			Families Composed only of Elderly People		
		IPC-3I	Up to 8 Minimum Wages	Above 8 Minimum Wages	Total	Up to 8 Minimum Wages	Above 8 Minimum Wages	Total	Up to 8 Minimum Wages	Total
Housing	31.842367	32.9964	35.2525	30.8369	32.9693	34.9271	31.1401	35.7917	36.5696	
Rent and Charges	9.710130	10.3425	11.3724	9.8106	10.4003	11.1963	9.7538	11.1214	12.3241	
Rent and Condominium	7.109261	6.7131	7.5316	6.4747	6.6487	7.4622	6.3539	7.5082	8.0629	
Charges and House Insurance	2.600869	3.6294	3.8408	3.3359	3.7516	3.7340	3.4000	3.6132	4.2612	
Public Residence Services	11.199786	12.0068	15.2789	8.8257	11.9159	15.1608	9.1666	12.2889	15.2823	
Electricity, Gas and Telephone	11.199786	12.0068	15.2789	8.8257	11.9159	15.1608	9.1666	12.2889	15.2823	
Furniture	0.917902	0.4081	0.2332	0.4650	0.4001	0.2253	0.4504	0.5485	0.2797	
Furniture	0.805837	0.3622	0.1833	0.4264	0.3530	0.1768	0.4057	0.4699	0.2041	
Mattresses	0.112066	0.0458	0.0499	0.0387	0.0471	0.0485	0.0447	0.0786	0.0757	
Bed, Table and Bath Clothes	0.319536	0.3679	0.3149	0.2857	0.3584	0.3137	0.2542	0.3224	0.3228	
Bed, Table and Bath Clothes	0.319536	0.3679	0.3149	0.2857	0.3584	0.3137	0.2542	0.3224	0.3228	
Electro-Domestic and General Equipment	2.279484	1.4908	1.0131	2.2399	1.4025	0.9513	2.1808	1.4252	0.7354	
Electro-Domestic Equipment	0.737017	0.7275	0.4523	1.1530	0.6623	0.4020	1.1699	0.8595	0.3951	

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	IPC-BR Total Population	Families with at Least 50% of Elderly People			Families with Elderly People			Families Composed only of Elderly People		
		IPC-31	Up to 8 Minimum Wages	Above 8 Minimum Wages	Total	Up to 8 Minimum Wages	Above 8 Minimum Wages	Total	Up to 8 Minimum Wages	Up to 8 Minimum Wages
Electronic Equipment	1.375072	0.6166	0.5057	0.6030	0.5963	0.4948	0.5606	0.3966	0.3239	
Other Equipment	0.167395	0.1466	0.0551	0.4839	0.1439	0.0546	0.4504	0.1691	0.0164	
Miscellaneous Utensils	0.602429	0.4621	0.3587	0.5279	0.4502	0.3458	0.4721	0.4675	0.2987	
Decoration	0.212431	0.2043	0.1005	0.2637	0.1973	0.0958	0.2364	0.2411	0.0797	
Pans and Crockery	0.174020	0.1199	0.1078	0.1306	0.1150	0.1033	0.1006	0.0939	0.0600	
Other Domestic Utensils	0.215978	0.1379	0.1505	0.1336	0.1379	0.1467	0.1351	0.1326	0.1590	
Repair and Conservation Items	4.198628	3.7110	4.2845	3.1142	3.9055	4.3412	3.4189	4.0351	4.6554	
Cleaning Material	3.003298	2.9891	3.6507	2.2576	2.9519	3.6068	2.2225	3.1056	3.8198	
Painting Material	0.303425	0.2234	0.1814	0.4097	0.2215	0.1790	0.4059	0.3121	0.2689	
Hydraulic Equipment	0.014006	0.0416	0.0569	0.0179	0.0410	0.0568	0.0156	0.0616	0.0874	
Electric Equipment	0.115087	0.0902	0.0987	0.0842	0.0893	0.0993	0.0857	0.0722	0.1065	
Ironware and Tools	0.012197	0.0229	0.0249	0.0143	0.0250	0.0298	0.0134	0.0201	0.0215	
Material for Household Repairs	0.750615	0.3439	0.2719	0.3306	0.5767	0.3694	0.6760	0.4635	0.3513	

(continue)

(continuation)

	IPC-BR Total Population	Families with at Least 50% of Elderly People			Families with Elderly People			Families Composed only of Elderly People			
		IPC-3I	Up to 8	Above 8	Total	Up to 8	Above 8	Total	Up to 8	Above 8	Total
			Minimum Wages	Minimum Wages		Minimum Wages	Minimum Wages		Minimum Wages	Minimum Wages	
Residence Services	2.614472	4.2073	2.3969	5.5680	4.1364	2.3927	5.4432	5.5829	2.6712	2.6712	
Domestic Employees	1.773199	3.1042	1.8330	3.8565	2.9948	1.8326	3.6825	3.9158	2.1084	2.1084	
Other Residence Services	0.841273	1.1031	0.5638	1.7114	1.1416	0.5601	1.7607	1.6671	0.5628	0.5628	
Clothing	5.402492	3.6760	2.7013	4.5209	3.6456	2.7346	4.2811	3.0078	2.1209	2.1209	
Clothes	3.457859	2.3916	1.6820	3.0095	2.4085	1.7429	2.9439	1.9360	1.2490	1.2490	
Men's Clothes	1.274613	0.8599	0.6692	1.0517	0.9107	0.7167	1.1535	0.6656	0.5222	0.5222	
Women's Clothes	1.589443	1.3461	0.8537	1.6356	1.3169	0.8593	1.5072	1.2038	0.6487	0.6487	
Children's Clothes	0.593803	0.1856	0.1591	0.3223	0.1809	0.1669	0.2832	0.0665	0.0781	0.0781	
Footwear	1.353802	0.7433	0.6309	0.8204	0.7089	0.6032	0.7340	0.4944	0.4533	0.4533	
Men's Footwear	0.536766	0.2755	0.2584	0.2593	0.2679	0.2425	0.2535	0.1739	0.1197	0.1197	
Women's Footwear	0.537282	0.3974	0.3428	0.4437	0.3759	0.3280	0.3837	0.3062	0.3175	0.3175	
Children's Footwear	0.279755	0.0704	0.0298	0.1175	0.0650	0.0327	0.0967	0.0143	0.0161	0.0161	
Clothing Accessories	0.401824	0.2818	0.1265	0.4278	0.2769	0.1248	0.3634	0.2760	0.1039	0.1039	

(continue)

(continuation)

	IPC-BR Total Population	Families with at Least 50% of Elderly People			Families with Elderly People			Families Composed only of Elderly People			
		IPC-31	Up to 8	Above 8	Total	Up to 8	Above 8	Total	Up to 8	Above 8	Total
			Minimum Wages	Minimum Wages		Minimum Wages	Minimum Wages		Minimum Wages		
Jewellery and Costume Jewellery	0.241806	0.1289	0.0378	0.2216	0.1269	0.0361	0.1802	0.1313	0.0280	0.0280	
Belts and Bags	0.160017	0.1415	0.0768	0.1810	0.1395	0.0768	0.1672	0.1274	0.0665	0.0665	
Umbrellas	-	0.0114	0.0120	0.0251	0.0105	0.0119	0.0160	0.0173	0.0094	0.0094	
Fabrics and Dry Goods	0.098896	0.1675	0.1917	0.1421	0.1591	0.1906	0.1192	0.1937	0.2601	0.2601	
Fabrics	0.063587	0.0746	0.0749	0.0834	0.0697	0.0752	0.0641	0.0617	0.1010	0.1010	
Dry Goods	0.035309	0.0929	0.1168	0.0587	0.0894	0.1155	0.0551	0.1320	0.1591	0.1591	
Clothing Services	0.090111	0.0918	0.0702	0.1211	0.0922	0.0731	0.1207	0.1077	0.0545	0.0545	
Confection Services	0.037095	0.0315	0.0425	0.0416	0.0315	0.0440	0.0411	0.0290	0.0227	0.0227	
Clothing Repair	0.053017	0.0604	0.0277	0.0795	0.0607	0.0291	0.0796	0.0787	0.0318	0.0318	
Health and Personal Services	10.361233	15.0288	14.4692	15.0852	14.9021	14.2500	15.0105	16.7940	15.6007	15.6007	
Health Services	3.695111	6.8096	5.0930	8.4602	6.7390	4.9633	8.3669	8.2734	5.9007	5.9007	
Hospitals and Laboratories	0.149579	0.5855	0.9212	0.3022	0.5876	0.9135	0.3082	0.7898	1.1142	1.1142	
Doctor, Dentist and Others	3.545532	6.2241	4.1718	8.1580	6.1514	4.0498	8.0587	7.4836	4.7865	4.7865	

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	IPC-BR Total Population	Families with at Least 50% of Elderly People			Families with Elderly People			Families Composed only of Elderly People			
		IPC-3I	Up to 8	Above 8	Total	Up to 8	Above 8	Total	Up to 8	Above 8	Total
			Minimum Wages	Minimum Wages		Minimum Wages	Minimum Wages		Minimum Wages	Minimum Wages	
Medical and Dental Products	2.603546	4.9063	5.7889	3.4786	4.8878	5.7105	3.5399	5.5022	6.3222	6.3222	
Medicines in General	2.198719	4.4753	5.4735	2.9923	4.4072	5.3960	2.9672	5.2173	6.0613	6.0613	
Medical and Dental Apparatus	0.342518	0.3684	0.2651	0.4134	0.4185	0.2639	0.5056	0.2417	0.2105	0.2105	
Pharmaceutical Products	0.062309	0.0627	0.0504	0.0729	0.0620	0.0506	0.0671	0.0432	0.0504	0.0504	
Personal Care	4.062576	3.3128	3.5873	3.1464	3.2753	3.5762	3.1038	3.0184	3.3778	3.3778	
Hygiene and Personal Care Items	3.229725	2.4254	2.7536	2.2117	2.4039	2.7519	2.2128	2.1049	2.5442	2.5442	
Personal Care Services	0.832851	0.8875	0.8337	0.9346	0.8715	0.8242	0.8909	0.9135	0.8336	0.8336	
Education, Reading and Leisure	8.744800	4.4255	1.8127	7.6253	4.4736	1.9449	7.3125	2.8376	1.2817	1.2817	
Education	5.756494	1.8622	0.5191	3.9062	1.9939	0.6549	3.8782	0.4443	0.2278	0.2278	
Formal Courses	4.223153	1.2780	0.2403	2.9899	1.4141	0.3639	3.0775	0.1232	0.0933	0.0933	
Informal Courses	0.942534	0.3069	0.1419	0.4610	0.3358	0.1597	0.4555	0.1782	0.0691	0.0691	
School Material and Books in General	0.590807	0.2774	0.1368	0.4554	0.2440	0.1314	0.3451	0.1428	0.0654	0.0654	
Reading	0.430508	0.5719	0.4166	0.7555	0.5510	0.4128	0.6421	0.5898	0.4278	0.4278	

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	IPC-BR Total Population	Families with at Least 50% of Elderly People			Families with Elderly People			Families Composed only of Elderly People		
		IPC-3I	Up to 8	Above 8	Total	Up to 8	Above 8	Total	Up to 8	Above 8
			Minimum Wages	Minimum Wages		Minimum Wages	Minimum Wages		Minimum Wages	
Newspapers and Magazines	0.430508	0.5719	0.4166	0.7555	0.5510	0.4128	0.6421	0.5898	0.4278	
Leisure	2.557798	1.9914	0.8771	2.9635	1.9286	0.8772	2.7922	1.8035	0.6261	
Toys and Sporting Goods	0.314823	0.1313	0.0952	0.1914	0.1331	0.0942	0.1875	0.0950	0.0561	
Musical Instruments	0.036917	0.0384	0.0502	0.0351	0.0439	0.0637	0.0350	0.0227	0.0000	
Photography	0.172341	0.0760	0.0316	0.0994	0.0756	0.0312	0.0997	0.0399	0.0144	
Records and Tapes	0.354109	0.2145	0.1352	0.2796	0.2086	0.1286	0.2614	0.1419	0.0821	
Shows	0.556216	0.3729	0.1990	0.5284	0.3592	0.1963	0.4904	0.2195	0.1075	
Physical Culture	0.141603	0.0859	0.0688	0.1452	0.0800	0.0670	0.1288	0.0739	0.0586	
Parks and Clubs	0.093705	0.0709	0.0419	0.1783	0.0666	0.0396	0.1747	0.0405	0.0020	
Trips and Holidays	0.888084	1.0015	0.2553	1.5061	0.9617	0.2565	1.4146	1.1701	0.3054	
Transport	11.722055	7.8501	6.2371	9.0579	7.8726	6.4561	9.1553	6.3261	4.6483	
Public Transport	5.005745	3.0312	3.3554	2.4128	3.0429	3.4765	2.2810	2.1571	2.2259	
Urban Public Transport	4.756608	2.9111	3.2505	2.2793	2.9364	3.3728	2.1745	2.0605	2.1771	

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	IPC-BR Total Population	Families with at Least 50% of Elderly People			Families with Elderly People			Families Composed only of Elderly People		
		IPC-3I	Up to 8 Minimum Wages	Above 8 Minimum Wages	Total	Up to 8 Minimum Wages	Above 8 Minimum Wages	Total	Up to 8 Minimum Wages	Up to 8 Minimum Wages
Inter-Urban Transport	0.249137	0.1202	0.1050	0.1335	0.1065	0.1037	0.1065	0.0966	0.0488	
Own Transport	6.716310	4.8189	2.8817	6.6451	4.8297	2.9796	6.8743	4.1689	2.4224	
Vehicles	0.610230	0.0880	0.0188	0.1642	0.0786	0.0179	0.1543	0.0910	0.0000	
Parts and Accessories	0.479074	0.2941	0.3408	0.2418	0.2813	0.3408	0.2604	0.2692	0.2684	
Fuel and Lubricants	3.987302	2.8810	1.4263	4.3503	2.9361	1.5271	4.6321	2.0871	1.0414	
Repair Services	0.515200	0.2785	0.0836	0.3518	0.2980	0.0836	0.4017	0.3335	0.0751	
Other Expenses with Vehicles	1.124505	1.2772	1.0122	1.5371	1.2357	1.0103	1.4258	1.3882	1.0375	
Miscellaneous Expenses	4.438329	5.7900	4.1901	7.9693	5.7093	4.1256	7.8545	5.1950	4.2015	
Alcoholic Drinks and Tobacco	1.895918	1.5072	1.5781	1.3886	1.4971	1.5516	1.3750	1.1752	1.4388	
Alcoholic Drinks	0.740163	0.6185	0.5958	0.6118	0.6177	0.5936	0.5703	0.5419	0.5468	
Imported Alcoholic Drinks	0.103400	0.0431	0.0285	0.0957	0.0415	0.0285	0.0882	0.0457	0.0317	
Tobacco and Accessories	1.052355	0.8456	0.9538	0.6812	0.8379	0.9295	0.7165	0.5877	0.8603	
Other Miscellaneous Expenses	2.542411	4.2828	2.6121	6.5806	4.2122	2.5740	6.4796	4.0197	2.7626	

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	IPC-BR Total Population	Families with at Least 50% of Elderly People			Families with Elderly People			Families Composed only of Elderly People		
		IPC-3I	Up to 8	Above 8	Total	Up to 8	Above 8	Total	Up to 8	Above 8
			Minimum Wages	Minimum Wages		Minimum Wages	Minimum Wages		Minimum Wages	
Post and Public Telephone	0.191713	0.1292	0.1575	0.0970	0.1234	0.1536	0.0946	0.1246	0.1453	
Lotteries	0.298876	0.3648	0.4351	0.2603	0.3578	0.4286	0.2567	0.4371	0.4851	
Expenses with Domestic Animals	0.365459	0.2978	0.3275	0.2836	0.2974	0.3255	0.2740	0.3448	0.4257	
Miscellaneous Services	1.686363	3.4909	1.6921	5.9397	3.4336	1.6664	5.8543	3.1133	1.7065	

TABLE A2
CONSUMER PRICE INDEX FOR OLD AGE AND FOR TOTAL POPULATION
 [variation (%)]

Item	Description	March 2004/ March 2003		March 2003/ May 2000		May 2000/ May 1996	
		Elderly People	Total	Elderly People	Total	Elderly People	Total
0	Ipc-General	6.56	5.83	39.37	34.25	32.20	25.10
1	Food	3.96	4.03	58.14	44.88	29.84	13.89
11	Foodstuffs	3.43	3.42	60.71	46.70	32.78	15.50
12	Eating Out	9.64	9.73	31.72	29.67	2.84	3.62
2	Housing	10.04	8.71	37.40	32.69	48.97	35.16
21	Rent and Charges	6.52	6.06	16.09	14.43	38.16	31.73
22	Public Residence Services	15.00	14.91	73.48	67.30	96.42	80.39
23	Furniture	1.56	1.54	29.53	28.21	28.43	12.85
24	Bed, Bath and Table Clothes	12.13	11.29	18.37	17.61	15.65	20.15
25	Electro-Domestic and General Equipment	4.68	0.68	25.60	17.17	-0.06	-6.39
26	Miscellaneous Utensils	5.00	8.63	20.20	27.12	-0.62	4.04
27	Repair and Conservation Items	7.96	5.59	39.68	37.88	31.17	29.41
28	Residence Services	9.00	11.16	24.44	25.43	46.20	33.27
3	Clothing	3.82	4.01	13.63	12.32	-4.05	-7.02

(continue)

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Item	Description	March 2004/ March 2003		March 2003/ May 2000		May 2000/ May 1996	
		Elderly People	Total	Elderly People	Total	Elderly People	Total
31	Clothes	3.37	3.75	13.03	10.51	-5.74	-9.64
32	Footwear	4.94	4.80	12.80	13.71	-6.85	-7.02
33	Clothing Accessories	1.90	2.17	20.24	21.23	-6.05	-3.45
34	Fabrics and Dry Goods	7.60	7.74	15.87	18.15	18.62	13.79
35	Clothing Services	4.50	7.07	8.66	12.18	11.48	4.25
4	Health and Personal Care	5.69	5.94	20.40	21.95	21.52	28.33
41	Health Services	6.59	6.25	20.75	19.31	29.28	27.74
42	Medical and Dental Products	4.40	5.42	17.97	23.15	16.72	43.39
43	Personal Care	5.62	6.27	22.47	24.09	14.87	17.11
5	Education, Reading and Leisure	7.69	8.27	37.47	32.99	25.84	28.07
51	Education	9.23	9.48	27.49	28.24	34.65	31.21
52	Leisure	6.94	6.95	65.86	64.04	20.15	19.78
53	Recreation	6.31	5.40	39.00	34.96	18.56	21.80
6	Transport	0.17	-0.81	44.43	40.01	44.98	42.93
61	Public Transport	10.79	9.04	45.31	51.02	66.27	72.85

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Item	Description	March 2004/ March 2003		March 2003/ May 2000		May 2000/ May 1996	
		Elderly People	Total	Elderly People	Total	Elderly People	Total
62	Own Transport	-6.43	-5.22	42.53	35.46	33.35	29.38
7	Miscellaneous Expenses	19.10	17.39	31.47	28.20	6.81	9.26
71	Alcoholic Drinks and Tobacco	12.58	12.33	33.39	33.41	0.24	1.69
72	Other Miscellaneous Expenses	41.09	24.39	25.99	22.61	23.88	24.63

Source: DGS/IBRFGV.

TABLE A3
ANNUAL AND MONTHLY INFLATION RATES ACCORDING TO IPC-3I AND IPC-BR—1994-2004
[%]

Index	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
	1994												
Consumer Price Index – Elderly People								4.81	1.94	2.85	2.86	0.68	13.80
Consumer Price Index – Elderly IOC/BR-IDI								2.60	1.46	2.65	3.11	1.11	11.40
	1995												
Consumer Price Index – Elderly People	1.73	3.03	2.95	2.78	2.23	5.64	3.16	1.25	0.57	0.15	1.42	2.32	30.77
Consumer Price Index – Elderly IOC/BR-IDI	1.63	1.97	2.74	2.90	2.21	4.39	2.63	0.74	0.67	0.63	1.25	1.57	25.91
	1996												
Consumer Price Index – Elderly People	2.61	1.88	0.27	1.28	2.72	1.86	0.54	0.15	-0.58	-0.12	0.03	0.09	11.19
Consumer Price Index – Elderly IOC/BR-IDI	2.70	1.46	0.43	1.31	2.08	1.57	0.76	0.01	-0.35	0.18	0.25	0.44	11.34
	1997												
Consumer Price Index – Elderly People	1.72	0.80	1.03	1.71	0.74	2.02	0.26	-0.30	0.24	0.19	0.38	0.74	9.94
Consumer Price Index – Elderly IOC/BR-IDI	1.85	0.53	0.63	0.80	0.39	1.30	0.24	-0.27	0.17	0.29	0.53	0.56	7.21
	1998												
Consumer Price Index – Elderly People	1.15	0.32	0.74	0.46	0.53	0.69	-0.38	-0.56	-0.15	0.15	-0.21	0.07	2.83
Consumer Price Index – Elderly IOC/BR-IDI	1.26	0.14	0.33	0.23	0.14	0.41	-0.25	-0.52	-0.17	0.20	-0.19	0.09	1.66

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Index	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
	1999												
Consumer Price Index – Elderly People	0.94	1.47	1.20	0.66	0.35	1.04	1.33	0.87	0.30	0.71	0.91	0.55	10.84
Consumer Price Index – Elderly IOC/BR-IDI	0.64	1.41	0.95	0.52	0.08	0.65	1.20	0.48	0.19	0.92	1.12	0.60	9.12
	2000												
Consumer Price Index – Elderly People	1.17	0.31	0.74	0.50	0.70	-0.03	2.27	1.15	0.11	0.08	0.31	0.56	8.14
Consumer Price Index – Elderly IOC/BR-IDI	1.01	0.05	0.51	0.25	0.40	-0.01	1.91	0.86	0.04	0.02	0.40	0.62	6.21
	2001												
Consumer Price Index – Elderly People	0.64	0.43	0.75	1.25	0.45	0.38	1.59	0.69	0.05	0.69	0.77	0.76	8.78
Consumer Price Index – Elderly IOC/BR-IDI	0.64	0.40	0.56	0.86	0.41	0.52	1.36	0.54	0.12	0.71	0.85	0.70	7.94
	2002												
Consumer Price Index – Elderly People	1.12	0.37	0.49	0.89	0.37	0.68	1.36	0.81	0.60	0.97	3.37	2.14	13.96
Consumer Price Index – Elderly IOC/BR-IDI	0.79	0.14	0.42	0.71	0.28	0.55	1.03	0.76	0.66	1.14	3.14	1.94	12.18
	2003												
Consumer Price Index – Elderly People	2.27	1.58	1.35	1.37	0.78	-0.11	0.51	0.12	0.90	0.30	0.27	0.34	10.09
Consumer Price Index – Elderly IOC/BR-IDI	2.32	1.37	1.06	1.12	0.69	-0.16	0.34	0.13	0.76	0.21	0.33	0.43	8.93
	2004												
Consumer Price Index – Elderly People	0.98	0.33	0.59	0.44	0.87								3.24
Consumer Price Index – Elderly IOC/BR-IDI	1.08	0.28	0.46	0.31	0.71								2.88

Source: DGD/IBRE/FGV.

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WELL BEYOND 60 YEARS OF AGE, BUT HOW?

Ana Amélia Camarano
Instituto de Pesquisa Econômica Aplicada (IPEA)

Several chapters in this book have shown that prolonging life or lives is one of the most important social conquests of the twentieth Century. Actually, reaching 100 years of age is not a privilege of this generation. There is evidence to show that people have died at ripe old ages such as a man at 115 [see Wilmoth (1997)] and a woman at 122 [see Robine and Allard, apud Wilmoth (1997)]. What is new is the increase in life expectancy at birth, which results in more people reaching more advanced ages. For example, in 1980, out of 100 Brazilian children of the female gender, 22 lived to celebrate their eightieth birthday. In 2000, this number has doubled. The fall in mortality rates for all ages has been the most important determinant of this.

This was the effect of the “success” achieved by economic and social policies that have resulted in generalized improvements in living conditions, especially with regard to health. It has been observed since the latter part of the 1950s that the Brazilian population has been experiencing greater access, though unequally, to preventive and curative medical services, to advanced medical technology, to potable water, to sewage and sanitation, to schooling, etc.

The perspectives that can be foreseen for the medium term are continued reduction in mortality for all ages and, especially, for the more advanced ages. It is very likely that there will be a high growth rate of elderly people living longer in the near future. This is the continuation of population ageing. Nowadays, this subject is the focus of national and international conferences, government planning, public and private policymaking, and it constantly appears in the media. It has gained a place on the national and international agenda.

Aside from the certainty in gains in years of life, another reason that has contributed to the growing importance of this issue is the uncertainty in health

* This chapter was translated from Portuguese to English by Barbara Melo and reviewed by Ana Amélia Camarano.

conditions that elderly people will face. This is so not only in terms of health, but also in terms of income, of familial support, etc. The question raised here is the one that closed the introduction to this book: “Well beyond 60 years of age, but how?” Another way of putting it is to ask if the new elderly Brazilians or elderly people in the future will be able to continue to enjoy the relative improved living conditions that the elderly of today have.

Negative points of view associate the increase in life expectancy to an increase in the time period in which elderly people would spend with mental disorders and chronic illnesses. The concern comes from the fact that this would place pressures on the finances of the health system and would raise the burden on families. This point of view has been the core of the discourse of various researchers in health conditions who have come to call it *the bankruptcy of success*.

It is understood here that it is a static point of view that ignores advances in medical science, improvements in access to preventive and curative medical services, changes in the life style of the population, the expansion in Social Security coverage, modifications in production processes, etc. It ignores as well the fact that even survival to the age of 60 is dramatically increasing; there are many persons who do not reach that age. Those that do should have a high degree of selectivity. Though a rather European and North American phenomenon, the rise and expansion of a group of elderly individuals not characterized by failing health, by pauperisation or by exclusion from various sectors of social life has been observed in Brazil.

While recognizing improvements in the health condition of the elderly population, another issue that has been present in the debate over ageing is the association of elderly people to the lack of productivity as they are excluded from the workplace, i.e., they are “consumers,” not “producers”. This leads to the thinking that even if ageing is desirable from the point of view of the individual, the increase in the elderly population would become a burden for the young population and the cost of supporting them can threaten the future of the nations.¹

Indeed, the Brazilian debate on population ageing continues to be strongly focused on Social Security expenditures, on fiscal adjustments and on the distribution of public expenditures. It was strongly influenced by a document put out by the World Bank in 1994 and re-evaluated in 2004, though still within the same focus [see World Bank (2004)]. Elderly people have been considered the greatest beneficiaries of public expenditures. As Goldani has stressed in this book, in Brazil, as well as in other countries, the conflict between generations over the

1. For an alarmist view of population ageing, consult: World Bank (1994) and Petersen (1999), apud Lloyd-Sherlock (2002).

distribution of resources, whether real or perceived or invented, has become one of the core issues in political discussions and, also, in popular thinking owing to the media. This can be exemplified by the relative improved economic situation of elderly people in relation to the non-elderly group.²

This discussion is quite biased, as well, by demographic determinism. A change in age distribution in itself is neither good nor bad. Ageing does not drop into an empty social space. Caring for a healthy elderly population is different from caring for a sick one. Health paradigms or institutional models are other important determinants in health costs. Ageing, therefore, can be seen as a problem or as a social conquest depending on how the society opts to deal with it.

The challenge raised here is in finding ways to commemorate this great social conquest, i.e., the fact that more and more people are experiencing a prolonged life span. To a large extent, the United Nations has given the answer: “Add quality of life to added years”. Now it is necessary to find out how.

The starting point for thinking about the proposed question is to take into account the heterogeneity of the elderly population. It begins by assuming that this age group has experienced differentiated life trajectories that will affect their living conditions in the final phase of their lives. These trajectories are strongly affected by ongoing social, regional and racial inequalities. Social policies, as well as myths, stereotypes and prejudices related to the elderly population can either reinforce such inequalities or weaken them.

In order to better understand how the Brazilian population is experiencing the final phase of life and to think of future perspectives, the Amartya Sen theoretical perspective [apud Lloyd-Sherlock (2002)] has been adopted. It considers that this depends on:

- basic capacities (those which people were born with);
- capacities acquired throughout life; and
- environmental conditions in the last phase of life; therein included familial arrangements and public policies.

The somewhat better economic situation of the elderly population as compared to the non-elderly has been well documented in this book. Though on uneven conditions, today elderly people have benefited from the reduction not only in maternal mortality, but also in middle-age mortality, and in adult and

2. For more information, see Camarano (2002) and Beltrão, Camarano and Mello (2004).

advanced age mortality. They have been the great beneficiaries of bypass heart surgery. They have survived high mortality rates of infectious-contagious diseases in early childhood. They experienced at their prime a period of economic growth, of stable and formal work. They were also beneficiaries of government financing for housing. On the other hand, this was the period in Brazilian economy in which social inequalities have been stressed and poverty has gained room on the public agenda. From the familial point of view, intimate relations were also more stable; once married they remained so. Fertility rates were high and the main role of women was to care for family dependents. Men continued to be the main providers of the family.

The family represented by women continues to be the main care-giver for elderly members with no autonomy to deal with daily activities. Their caring allows males that cannot deal with such activities to remain heads of their households. On the other hand, if women have no income of their own, their economic survival depends on their husbands' income. Still, the majority of elderly women who cannot manage their daily activities, probably widows, look to their children for aid by way of co-residence. Although they need help, they bring income to the family budget, derived from pensions of deceased spouses. In other words, they receive and provide help. In sum, the family continues to play an important role in providing support for vulnerable segments. In fact, it is a two-way system of intergeneration transfer and it is mediated by social policies. Nevertheless, in Sen's words, family is a space for "conflicting cooperation" as these relationships are based on power. In addition, one does not know whether the forms of help, as co-residence, for instance, reflect preferences or not.

Some of the public policies that are currently being designed for this age group have contributed to reduce inequalities that have marked the lives of these individuals while others have reinforced them. As was mentioned in various chapters in this book, the 1988 Constitution established a number of benefits for the group that is living the last phase of life today. It could be mentioned, for example, the increase in rural social security coverage, the establishment of a minimum value for benefits (one minimum wage). This applies to the rural and urban social security and social assistance benefits. Also, for the rural social security, the beneficiary unit was changed from the head of household to the individual. All these have had a great impact in reducing not only rural poverty, but also income inequalities in rural areas and have offered an incentive to small subsistence production units. These have also affected familial arrangements and have resulted in greater empowerment of elderly people. Changes in rural social security have been widely recognized as a modern social protection policy for the rural population.

On the other hand, both the private and public urban social security systems present various distortions. One of them is retirement according to working time or contribution time. As demonstrated in this book by Oliveira et al, in 1998, 91% of retired males had begun to receive benefits according to working time or time of contribution before the age of 60. Due to the increase in life expectancy, these retirees will spend a long time receiving benefits and will be “putting pressure” on a system that has been on stand-by alert since 1994.

It is difficult to believe that the traditional way of financing Social Security will be sufficient to deal effectively with the elderly population of the future within the context of rising informalisation of the economy. Two reforms were made, one in 1998 and another in 2003, focused on delaying the retirement age and on linking the benefit to the contribution.

In the case of retirement benefits from the private sector, Oliveira et al showed some results of the “reform” with regard to delaying retirement age. On the other hand, linking eligibility to benefits to the contribution itself means not taking into account transformations in the labour market. While the labour market tendency is one of growing flexibility that of the Social Security policy is one of “rigidity”. This will certainly bring about difficulties in retiring for the 40 million Brazilians that were either engaged in informal work or were unemployed in 2002. Besides, it will not sort out the matter of how to finance Social Security.

Another social security policy that has contributed to reducing or even changing the direction of gender relationships is the one related to women. In general, for the elderly of today, those who worked and/or contributed were entitled to retirement pensions. Those who did not fulfil these conditions were eligible for the Social Assistance benefit from the age of 65 onwards, as of the beginning of 2004. Since the 1988 Constitution, elderly rural women were made eligible for the benefit regardless of whether the heads of household were receiving it or not. This benefit is theoretically linked to work and, thus, contributory. Nevertheless, some research work has already shown that a great part of the 60-79 female cohort currently receiving benefits did not work when they were 40 to 59 years old nor did they contribute to Social Security [Camarano (2003)]. This is more evident among rural women and it may be associated to the difficulty in measuring female work in rural areas.

Aside from receiving retirement pensions, widowed women have the right to receive a survivor’s pension upon the death of their husbands. Since the 1988 Constitution, this is equal to the husband’s last wage/benefit. Also, these women are allowed to work. This has led to a change in gender relationship with regard to income. Non-elderly women are poorer than non-elderly men and the inverse is

true in the last phase of life [Camarano (2002)]. Men can also accumulate the two benefits and keep working, but few become widowers.

Based on the proposed model by Sen and on the near certainty of prolonged life for a large segment of Brazilians, the question raised is how will these additional years be lived?

The new elderly people or those entering the 60 and over age bracket from 2010 onwards are the baby boomers (born under a high fertility regime) and those who experienced dramatic reduction in childhood mortality. The women got great gains in schooling and entered the labour market *en masse*. They made the revolution inside the family by getting married, getting divorced, remarrying or not marrying again, and by having fewer children. The condition of not marrying and not having children also became a choice.

The instability in family relationships has also affected the men. Though they remarry at a greater rate than do the women, they maintain less ties of affection with their children if divorced. The increase in the number of relationships may result in a greater fragility in these.

The labour market has also changed. Part of this generation is already experiencing the effects of its flexibility and the “rigidity” of Social Security policy, which will affect their retirement benefits in the near future. Among the males aged 40 to 69 in 2002, 82.2% worked and 50.3% contributed to Social Security. The comparable proportions for females were 43.1% and 25.2%. Although the proportion of contributors is low, it is difficult to know how long these people have been contributing. In addition, it is difficult to expect that they will be able to contribute for 30 years (in the case of women) and 35 years (in the case of men) towards retirement by contributory time or 15 years towards retirement by age, as required by the Constitutional Amendment 20. These numbers do not include the unemployed.

The outlook as to the likelihood of retirement for elderly people in the next 20 years is not a promising one and gets even worse for the generations that are now 20 to 40 years of age. It is very unlikely that social assistance will be able to generate income for this high proportion of the population, today unemployed and informally employed, when they lose their working capacity.

In addition, the transition to adult life is being affected by difficulties in the labour market and in family relationships. The result has been that young adults have been spending more time in the home of elderly parents, reliant on their income. How this relationship will unfold in the near future is a great interrogation

mark. What kind of help will future young people be able to rely on in their transition to adult life?

On the other hand, the future elderly generation is also experiencing great advances in medicine, cosmetology, hormone drugs and over-valorisation of youth. Elderly people will become political actors more and more, increasing their political representation in government, in the legislative branch, in organised society, etc. This increases the heterogeneity of the elderly group. On the one hand, a proportion of the elderly population wants to turn youth into the negation of death while the other suffers in its approach to death, requiring health care and emotional nurturing. The family will no longer be the same, with fewer children. Multiple marriages weaken family ties with relation to fathers and mothers-in-law. Women are fully integrated in the labour market, as they are providers as well as care-givers. They can give to the elderly relatives more financial resources, though less time and attention. The poor family, especially the woman, needs help in caring for dependents. In other words, policies must help her to decide whether to care for dependents or engage in the labour market in order to guarantee economic survival.

Health policies should take the entire life cycle into account in order to assure not only that more people reach the last phase of life but also that they are healthy when they get there. Among such policies, one should highlight the promotion of health, universal access to public health services throughout life and, as a consequence, the consideration of the impact of environmental, economic, social and educational factors, among others, on health conditions. For the final phase of life, a public health system must be able to assure the ways and means by which people may live out this phase of their lives in dignity and with minimal suffering when they decide the right moment has come to end it. This is what Debora Diniz discusses in her chapter.

Though it is recognized here that elderly people have specific requirements, differentiated both by age and gender, in order to reach “a society for all ages”, as proposed by the United Nations, a policy geared to the elderly population should be inserted into a sustainable development policy aimed at increasing the well-being of the whole population. Elderly people do not live in isolation and their well-being is closely linked to that of the society as a whole.

It is believed that the ultimate target of any public policy is the well-being of the population. Financial equilibrium is necessary in order for this to occur in a sustainable way. In the case of Brazil, the concern over fiscal adjustments has been held as the main aim of public policies, i.e., the means is being privileged in detriment of the end.

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Ipea – Instituto de Pesquisa Econômica Aplicada

Editorial

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Cover design by

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Editorial Committee

Executive Secretary

Marco Aurélio Dias Pires

SBS – Quadra 1 – Bloco J – Ed. BNDES

9º andar, sala 904

70076-900 – Brasília – DF

Fone: (61) 315-5374

Fax: (61) 315-5314

e-mail: madp@ipea.gov.br

Brasília

SBS – Quadra 1 – Bloco J – Ed. BNDES, 9º andar

70076-900 – Brasília – DF

Fone: (61) 315-5090

Fax: (61) 315-5314

e-mail: editbsb@ipea.gov.br

Rio de Janeiro

Av. Presidente Antônio Carlos, 51, 14º andar

20020-010 – Rio de Janeiro – RJ

Fone: (21) 3804-8118

Fax: (21) 2220-5533

e-mail: editrj@ipea.gov.br