TEXTO PARA DISCUSSÃO N° 862

POPULATION AND SOCIAL SECURITY IN BRAZIL: AN ANALYSIS WITH EMPHASIS ON CONSTITUTIONAL CHANGES

Kaizô Iwakami Beltrão*
Sonoe Sugahara Pinheiro**
Francisco Eduardo Barreto de Oliveira***

Rio de Janeiro, março de 2002

*   From Ence/IBGE – National School of Statistics – National Institute of Geography and Statistics - Brazil.
**   From UFRJ – National University of Rio de Janeiro - Brazil.
*** From IPEA – Institute of Applied Economic and Social Research - Brazil.

TEXTO PARA DISCUSSÃO

Uma publicação que tem o objetivo de divulgar resultados de estudos desenvolvidos, direta ou indiretamente, pelo IPEA e trabalhos que, por sua relevância, levam informações para profissionais especializados e estabelecem um espaço para sugestões.

SUMMARY

RESUMO

Este texto compara a situação da população brasileira desagregada por condição de domicílio (urbano/rural) em dois instantes do tempo, 1988 e 1998, *vis-à-vis* a previdência e a assistência social, utilizando informações das PNADs. Principia com uma visão panorâmica da evolução do sistema de seguridade social brasileiro, com ênfase na previdência social, concentrando-se nas mudanças mais recentes. Ainda que a Constituição de 1988 tenha modificado as regras de elegibilidade e o valor dos benefícios tanto para a população urbana quanto rural, foi somente com a Lei 8.213, de julho de 1991, que essas mudanças foram inteiramente implementadas. São comparadas, por sexo e idade individual, as taxas de atividade e de recebimento de benefícios antes e depois da mudança de legislação para a população urbana e a rural. Na população urbana considera-se a formalização da relação de trabalho. Comparam-se também, as estruturas familiares, a participação da renda dos idosos na renda da família e a sua relevância no orçamento familiar.

ABSTRACT

This paper analyses the situation of the Brazilian population disaggregated by urban/rural condition with respect to Social Insurance and Social Assistance with emphasis on recent changes. It starts with a historical overview of the system, but concentrates on new provisions mandated by the 1988 Constitution. The 1988 Constitution defined new rules with regard to eligibility conditions and benefit values for both the rural and urban population. But it was only in July 1991, with Law 8213, that these changes were fully implemented. We compare, by sex and individual age, activity rates and probability of receiving benefits, before and after the changes in legislation for the urban and rural population. For the urban population we take into consideration the formalization of work ties. We compare, also in two instances in time, family structure and the importance of the income of the elderly in the family budget.

1 - INTRODUCTION

Brazilian legislation dealing with Social Security rights has undergone lengthy and sinuous evolutionary steps both forwards and backwards. With a total of 20 million beneficiaries receiving benefits (as of December 2000), expansion of coverage has represented a major achievement with respect to universalizing the system, reduction of inequality and eradication of absolute poverty in Brazil (mainly in rural areas, nowadays with 7 million pensioners). On the other hand, the 1988 Constitution softened rules for eligibility to benefits, as well as doubling the value of minimum Social Security and Social Assistance benefits. This paper is aimed at making a comparative analysis of the situation of the Brazilian population, disaggregated by urban and rural condition, with regard to Social Security in two moments in time: in 1988, i.e., under the rules prior to the enactment of new constitutional directives; and ten years later, in 1998, when these had been fully deployed. Our aim, therefore, is to address the following questions:

- Has Social Security coverage improved?

- Have the new directives of the 1988 Constitution allowed for a reduction in poverty and in inequality among either the urban or the rural population?

- Has there been gender differentiation in the Social Security System?

Section 2 briefly discusses the evolution of the Brazilian population, disaggregated by urban and rural condition; Section 3 presents a historical overview of the Brazilian Social Security Legislation. Sections 4 to 11 compare the situation of the population with regard to work and Social Security benefits from different points of view in two moments in time: 1988 and 1998, i.e., before and after the deployment of the Constitutional changes of 1988, first for the rural population and then for their urban counterpart. Finally, in Section 12, we have conclusions and comments.

2 - SPACIAL DISTRIBUTION OF THE BRAZILIAN POPULATION

The Brazilian population that was mostly rural in the 40's (see Graph 1) is primarily urban today. The degree of urbanization followed a logistic curve with values close to 30% in 1940 (date of first Census with information on rural/urban condition of households) crossing the 80% mark in the year 2000 (the last available Census count). The rural[1] population in spite of the high emigration 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 by an annual rate of approximately 0.84%.

---

[1] We have adopted here the IBGE – Instituto Brasileiro de Geografia e Estatística (Brazilian Central Statistical Office) definition for household condition: "According to the location of the household, the situation can be classified as urban or rural according to 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 population.

GRAPH 1
Percentage of Urban Population in Total Population (Degree of
Urbanization): BRAZIL — 1940/2000
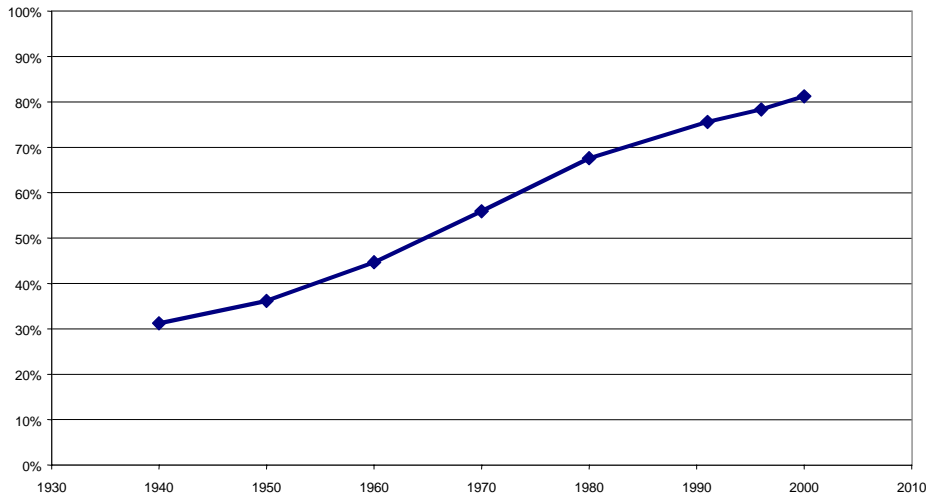
Source: IBGE, Census 1940, 1950, 1960, 1970, 1980, 1991, 1996 and 2000.

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 were 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 16% in 1940 to 80% in 2000. Around 17% of the Brazilian population were 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, we are talking about a contingent of 31.8 million inhabitants (by September 2000). The entire Brazilian population totaled 170 million inhabitants on the same date.

3 - EVOLUTION OF BRAZILIAN SOCIAL SECURITY LEGISLATION

As in most Latin American countries, the first initiatives with regard to social insurance were aimed at covering special groups such as the military and civil public servants. It was not, though, until 1923 that the first law was passed granting some private sector workers (railroad workers) pensions and health benefits. During most of the following decade the system evolved as a very fragmented, company-based, low-coverage set of isolated programs, operating under a full capitalization regime.

During the 30's and 40's these isolated programs were consolidated into sector-wide systems. For example, bank employees had their own "Institute", as well as the employees of the industrial sector, transportation sector, federal-level public servants and so on. It should be noted that this movement roughly coincides with the first

efforts to industrialize the nation. It also coincides with the emergence of the labor movement in Brazil, although most of the unions were under severe State control. All the Institutes originally operated under a full capitalization regime with a tripartite costing scheme (employer, employee and State). Very soon it became clear that the state would never be able to fulfill its commitment; in addition, reserves were often mismanaged. As a result, by the 60's the whole system shifted to a purely pay-as-you-go defined benefit scheme.

Only in 1964, after 14 years of debate in Congress, was a Social Security Organic Law approved, unifying benefit and costing schemes among the various Institutes. Two years later, a National Social Security Institute (INPS) was created, replacing the old Institutes and incorporating their revenues and expenditures, as well as the assets and liabilities. At that time, most urban workers, including employers and the self-employed were theoretically covered by the system. In practice, coverage was below 50% for the salaried population, and no more than 10% for the employed and the self-employed.

Contributions were set at 8% for both employer and employee, with a maximum contributory salary equivalent to ten minimum wages.[2] The Federal Government would transfer revenues from general taxes in order to cover administrative costs and eventual deficits.

Retirement benefits were granted according to the following general rules:

a) By age: 65 for males and 60 for females, provided they had been contributing to the system for at least five years;

b) By length of service:[3] 35 years for males and 30 years for females, with no age limits, for the full benefit.[4] Proportional retirement could be obtained with five years less of work.

c) By special conditions, depending on the nature of the job. Divers, underground miners and other hazardous, unhealthy and arduous professions could retire with as few as 15 years of service.

d) By disability, at any age. If the cause of the disability was work-related[5] there was a workmen's compensation program.

Other short duration benefits were also included in the law such as sickness allowance, accident allowance, family allowance and maternity leave. Most of the benefits had a 95% theoretical replacement rate up to a ceiling that was equivalent to roughly ten minimum wages. In practice, replacement rates were lower and varied along time, as the benefit formula did not correct the last 12 contribution salaries for inflation. Workmen's compensation benefits were based on the last salary previous to

---

[2] Actually, the law established a fixed nominal value. As a result, numerous adjustments by decree were needed to compensate for the erosion due to inflation..

[3] Also known as "seniority benefits".

[4] Teachers could retire with full benefits five years earlier.

[5] Later, even accidents occurring on the way to or from the workplace were included.

the accident date and would give 100% replacement, subject to the ceiling. Maternity leave would guarantee the full salary up to three months from child birth.[6]

Other lump sum benefits were also added such as:

a) Funeral allowance; and

b) Child delivery allowance.

As for unemployment, the country used to have provisions in its labor laws guaranteeing a worker on-the-job stability after ten years of continuous service. Of course, the provision backfired, as most workers would be fired just prior to the completion of the required period. In the 60's, integrating a set of comprehensive reforms, this system was abolished. In its place a compulsory contribution of 8% of the workers' salary[7] to be credited by his employer in an individual capitalized account — FGTS — in the National Housing Bank (BNH) was created. These contributions would earn a 3% real interest rate per year,[8] on top of a full inflation correction of the capitalized asset. In case of involuntary dismissal the worker could draw from this account (lump sum); he/she could also draw from it to buy or build his/her house and, in case of death, it was considered as a bequest to his/her descendants. Since the closing of BNH in the late 80's, the Federal Savings Bank — Caixa Econômica Federal (CEF) administers the program.

Later on, in 1990, another unemployment insurance scheme was implemented, since most workers were unable to accumulate substantial amounts in their accounts. As a matter of fact, high turnover workers — those who by definition need the benefit the most — were the ones that were unable to accumulate any sizeable amount in their accounts. Considering this fact, the new program would provide an employment benefit of 50% of average covered earnings during the last three months prior to dismissal with a ceiling of three minimum wages payable for at most four months.[9] The program is administered by the Ministry of Labor.

Despite various attempts, in the 60´s, to include the rural population in the program, it was only in 1974 that an effective coverage was achieved. A flat benefit of half a minimum wage was granted to rural workers at the age of 65 or to the disabled at any age, without any waiting period. Medical assistance was also supplied, mostly through contracts with private and philanthropic hospitals. The cost of the program was financed by a special contribution of 2.4% levied on the urban wage bill, plus a contribution of 2.5% levied on the first commercialization of rural products. A specific institution — Funrural — was created to manage the new program.

Also in 1974, a Social Insurance and Social Assistance Ministry was created, as a dismemberment of the previous Ministry of Labor.

During the 70's, social assistance cash benefits (also half a minimum wage) were also created to cover both the urban and rural non-insured 70-year-olds and older, and the disabled with no other sources of income.

---

[6] It was later modified so as to allow the woman to choose the period in which to use the three months' paid leave.

[7] No ceiling.

[8] For a while 4%, 5% and 6% depending on how long the job duration had been.

[9] With a 60-day waiting period.

From 1978 to 1990 the institutional setup was of functional specialization, with the previous institutions (INPS and Funrural) rearranged as follows:

- The new INPS, to take care of benefit payments and professional rehabilitation for both the urban and rural insured, as well as paying social assistance cash benefits.

- Inamps, to take care of health services (mostly curative) for the urban and rural insured.

- Iapas, basically to collect contributions and manage assets.

- LBA, Funabem and Dataprev, respectively, to provide social assistance service for the needy, social assistance service for the abandoned and/or juvenile delinquents and a supporting data processing agency.

The next step towards universalization was taken through the 1988 Constitution that reflected increasing social concerns after almost 20 years of military rule. As a defense against eventual violation of rights, a large number of social insurance provisions regarding what was now called "Regime Geral de Previdência Social" — RGPS were embedded in the Constitution itself.

In general, the new basic provisions were:

a) introduction of the Social Security concept, as an integrated set of social insurance, health and social assistance;

b) creation of a unified Social Security budget, financed by contributions levied on salaries, gross business revenues, business profits, lotteries and by transfers of general tax revenues;

c) health as a universal citizenship right;

d) doubling of all social assistance and rural benefit values;

e) reduction of five years in age limits for rural benefits;

f) recalculation of all benefit values so as to recompose their original value;[10]

g) full inflation indexing of all contribution salaries used in the benefit calculation formulas at the time of concession;

h) full inflation indexing of all benefit values so as to preserve their "real value";

i) values of the minimum social insurance and social assistance benefits equaled to the minimum wage; and

j) universalization of the benefit for the entire rural population. Men and women were both given equal access.

As can be seen, these were very generous provisions, based on social justice values. Unfortunately, they turned out to be very costly over time.

Nevertheless, it was only with the advent of Law 8213 dated July 24, 1991 that these modifications became totally binding. The law that "deals with Social Security

---

[10] Benefit values have been severely eroded by inflation. The new provision mandated a recalculation of their value based on the number of minimum wages at the date of the concession.

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 men and women …". 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 and the value was immediately put in practice.

Aside from another institutional reform in 1990, when all the health activities were transferred to the Ministry of Health and a single social insurance institution was created - INSS, no real major changes occurred until 1995.[11] To try to contain the increasing deficit, the Government proposed a Constitutional Amendment regarding Social Security. It was voted only in December 1998 and had no immediate effect, except to eliminate proportional retirement for length of service for new entrants in the labor force, to define a minimum age for retirement for civil servants and to open the way for new benefit formulae. Later, a Law nicknamed Fator Previdenciário (Social insurance factor) defining a complicated formula to calculate pensions for length of service retirement was promulgated.[12] The formula included a list of actuarial variables such as life expectancy, years of work, age and so on, but had no actuarial theory backing it. The government had expected people to postpone retirement due to the smaller pension. Effects of this Constitutional Amendment and of the new law have not been made visible so far and will not be analyzed in this text.

4 - EVOLUTION OF RURAL POPULATION: ACTIVE AND BENEFICIARIES

Graph 2 shows the evolution of selected segments of the total rural population, namely, the economically active population (EAP) and beneficiaries (social security and social welfare recipients), for the period 1970/2000. Despite the systematic drop in total rural population (9.2 million between 1970 and 2000), the EAP remained quite stable (a drop of 0.9 million for the same period — 0.25% decrease per annum), a 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 lower age for eligibility established in the 1988 Constitution (considering as well the four-year delay in promulgation of complementary laws).

---

[11] Beginning of President Fernando Henrique Cardoso's first term. Later on, new Constitutional amendments were voted and new complemenay laws based on these amendments were established. It is way too soon to perceive the effect of these changes in the population.

[12] With a transition period to be implemented and a pro-rata value between the old formula and the new one during the transition.
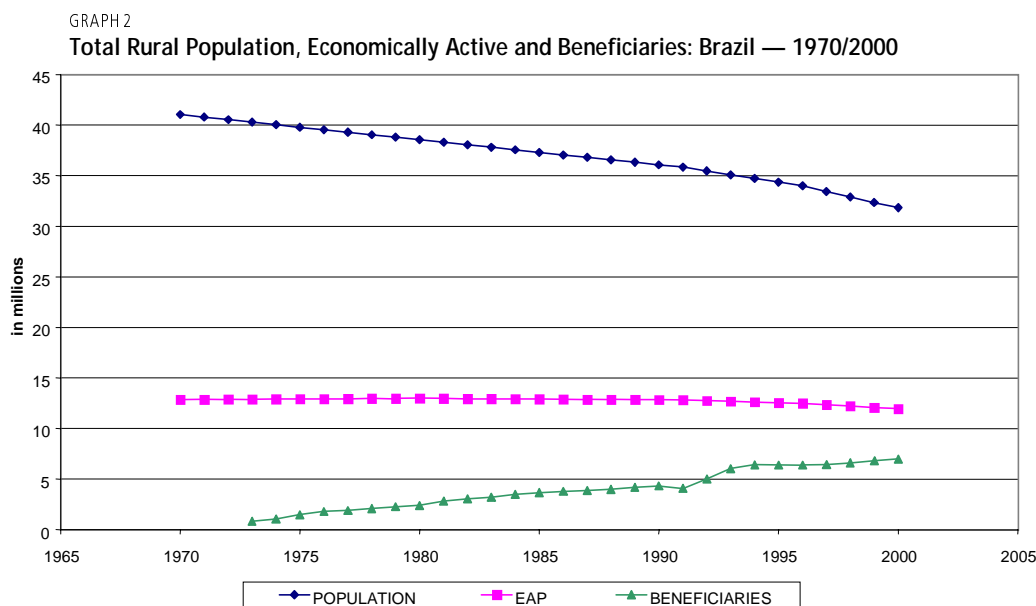
GRAPH 2
Total Rural Population, Economically Active and Beneficiaries: Brazil — 1970/2000

Graphs 3 and 4 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 1998 (ten years later and after all the Constitutional provisions had already been implemented). It is worthwhile noting that these figures were extracted from a sample survey, the National Household Survey — Pesquisa Nacional por Amostra de Domicílios (PNAD) — collected by IBGE and are, therefore, based on the same definition for "rural" as the one given by that agency,[13] as Social Security records for the population of rural pensioners do not allow tallying by sex. Consequently, not all those who receive benefits from rural social security are included herein nor are all those tabulated as receiving benefits necessarily rural workers. Furthermore, it does not include rural areas in the Northern Region (excepting the State of Tocantins). We have opted for disaggregating data as "workers actively working at least 40 hours a week," "workers actively working less than 40 hours a week," "beneficiaries still in activity," "retirees," "survivors benefit beneficiaries" and "inactive individuals with no income."[14]

---

[13] As previously noted, IBGE adopts the administrative definition of areas considered urban and rural for the municipal level. On principle, all municipal, district and village seats are considered urban and so are their population. The concept of rural workforce used here is not the usual definition of labor force working on agriculture, cattle handling and fishery activities, but of workforce living in rural areas. It does not include the "bóias-frias", urban dwellers working in rural activities.

[14] "Workers actively working at least 40 hours a week" were defined as those who had worked 40 hours or more on the week of the survey and who received no pensions; conversely, "workers actively working less than 40 hours a week" were defined as those who had worked less than 40 hours on the week of the survey and who received no pensions as well; the "beneficiaries still in activity" were defined as those who had monthly income from their main occupation and who also collected pensions; the "inactive individuals with no income" were defined as those who did not work and had nil monthly income from all possible sources.

Ten-Year-Old-and-Over Rural Population Distributed According to Age, Sex and Condition of Benefit/Activity: Brazil — 1988

EAP>=40 hrs ▢ EAP<40 hrs ▢ EAP&BENEF. ■ RETIREES ■ SURVIVORS BENEFIT ■ RETIR.&SURVIVORS' ■ NO INCOME
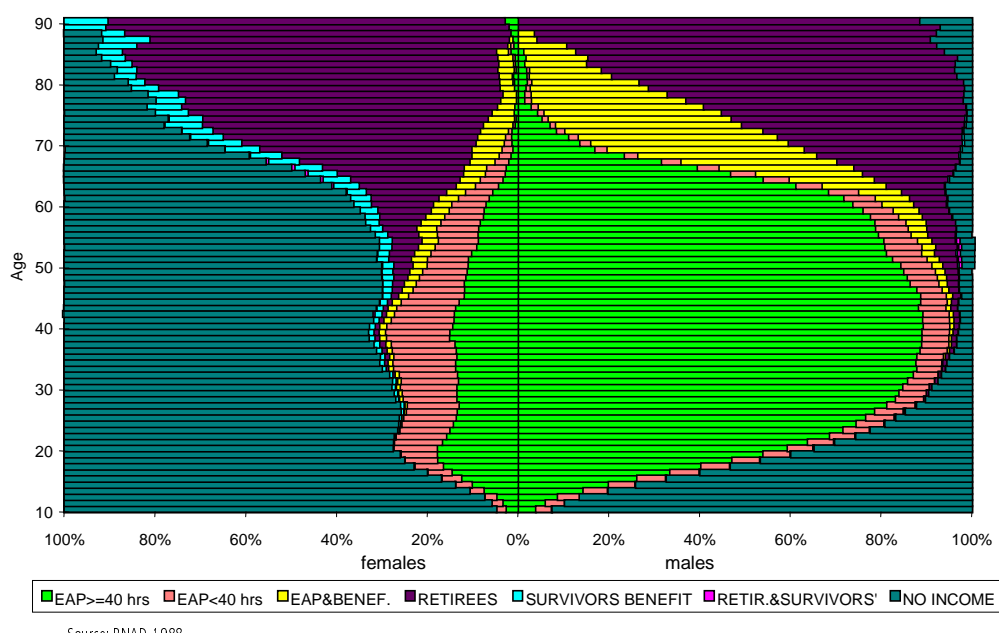
Source: PNAD 1988.

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 of life both in 1988 and in 1998. For instance in 1988 approximately 44% of men at the age of 70 continued to be active, though on social security benefits. Although the value of benefits increased, doubled based on the number of minimum wages,[15] the same pattern is evident in 1998. This fact may be viewed as a social bias, since society in general associates a positive value to the "vigorous" elderly who, despite their years, continue to work.

The age distribution for the rural female working population in 1988 is bimodal both for the ones declaring to work 40 or more hours a week and for those working less than that. This is typical in societies where women quit work during the reproductive period and resume work after the children are of school age. The same pattern is not noticeable in 1998: the age distribution for the female workforce widens, increases, and the double peaks are barely visible among women working 40 or more hours a week. For the total female workforce the shape is very similar to the distribution for the male workforce, only on a lower level. In both years considered, the male workforce presents a bell-shaped curve with a retraction in size for the second date.

---

[15] 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 in time under consideration. This is, unfortunately, outside of the scope of this work. The actual value, corrected by INPC, was used as proxy (see Table 2 in Section 8).

Ten-Year-Old-and-Over Rural Population Distributed According to Age, Sex and Condition of Benefit/Activity: Brazil — 1998
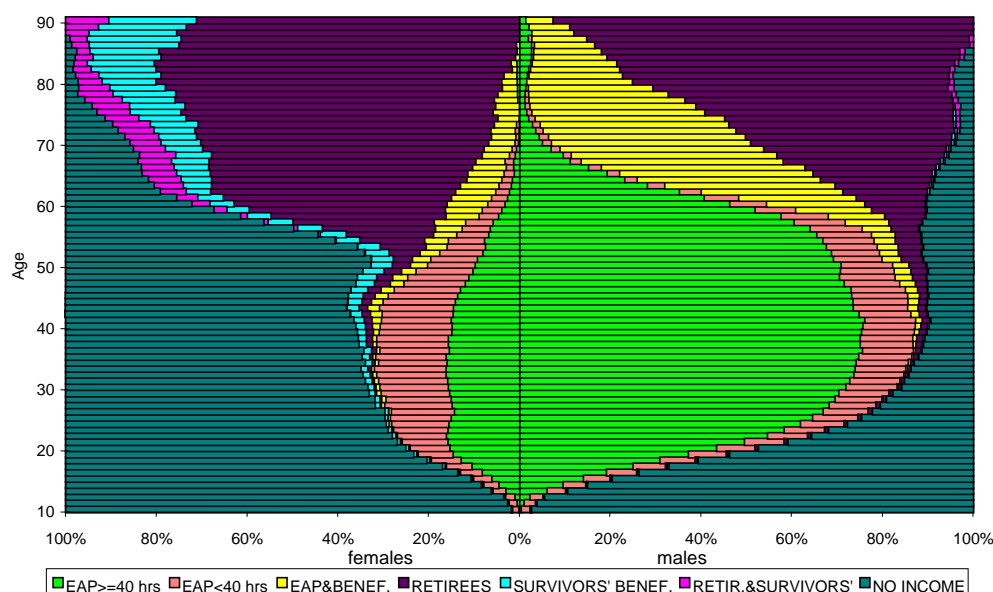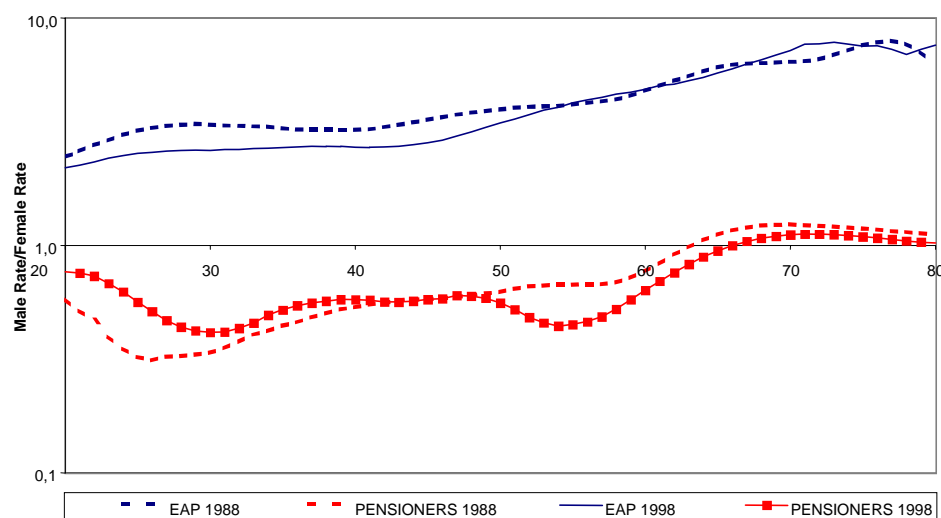

Source: PNAD 1998.

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 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, a woman's work is restricted to the region around the house, there included the plot of land used for subsistence and it is not associated with economic activity. The activity rates presented by women on both occasions are consistently below 40% for all ages for the two years under study. However, the beneficiary incidence rate is quite high, even back in 1988 when legislation included only the head of household, probably denoting a "leakage" from the categories of "recipients of social welfare" and "survivor beneficiaries" to "retirees." Note, too, the rising rates as of 60 years of age (in this case it is probably related to urban benefits or disability retirement, as the age for eligibility was 65), affecting roughly 80% of those around 80 years of age.

Since the new legislation went into effect before 1998, data for this calendar year shows a clear retraction in the number of the non-beneficiary EAP (see Graph 4). On the other hand, there was an expansion in beneficiaries and — especially in the case of men — of beneficiaries still in activity. The new incidence rate configuration for retirement benefits among the female population also became quite visible. Unlike what happened in 1988, when rates had been rising slowly since 60 years of age, we have in 1998 rapid growth as of 55 years of age, affecting the same 80% incidence rate later on at 60 years of age. There is growth in incidence rate, too, among older women, with respect to survivors' benefits.

Comparing activity rates for men and women in 1988 (see Graph 5) we find ever greater ratios according to age, ranging from twice as great for the 15 to 20 age bracket to six or seven times 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 graph of the ratio of user rates of benefits between men and women is roughly S-shaped: at early ages (under 20) incidence is greater among men (not shown in the graph), perhaps due to disability retirement. From then on, female incidence is ever greater (due to the concession of survivors' benefits), until the ratio hits a low mark at around the age of 26, at which point it begins to increase again. From age 63 on, the greater incidence of benefits goes once again to men (due to legislation that restricted the benefit to the heads of household) and reaches a relative maximum at age 70, with the male/female ratio decreasing from this age on.

GRAPH 5
Ratio of Activity Rates and Receipt of Benefits between Sexes: Rural Brazil
1988 and 1998 — Males/Females (Log Scale)

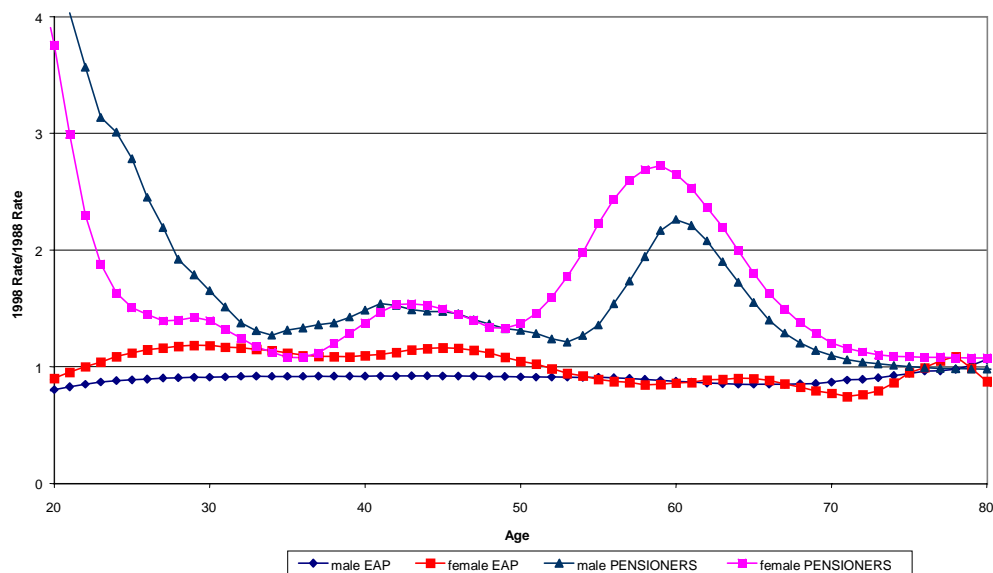Source: PNAD 1988; PNAD 1998.

These observations can lead to certain interesting conclusions about the interrelationship between work and the rural Social Security system in Brazil. Note that at first one might suppose that the distribution of benefits between men and women would reflect that of the EAP. As was shown, this was not the case: there is utter male dominance in the labor market, whereas, on the side of benefits, there is 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.

The ratio of male and female activity rates in 1998 (see Graph 5) are quite similar to those observed in 1988 in most active age brackets; the really great differences are found in the population over 70. In other words, the sex ratio in the workforce remained practically unaltered during the period under study. There are, however, considerable changes in the ratio of male and female beneficiaries: there are two minima and both occur at more advanced ages (30 and 56 years of age in 1998 as compared to 26 years of age in 1988) but as of 65 years of age the values grow closer together and the ratio is closer to one. Whatever the case may be, the

conclusion remains the same: despite slight (declared) participation in the workforce, women have high participation with regard to rural Social Security benefits.

In order to appreciate the change that occurred during this ten-year period, Graph 6 presents the ratio of 1998 and 1988 activity rates and receipt of benefits for each sex for the rural population. The later entry of rural workers (both males and females) into the labor market is clearly visible from a comparative analysis of activity rates and usufruct of benefits in 1998 and 1988, as seen by ratios less than one for males of all working ages (it does go above one for ages above 77) and for women up to 22. It also shows a change in the labor market. Males are showing a lower activity rate and females, between 22 and 50 years of age, a higher activity rate. On the other hand, in the case of benefits, ratios are above one for almost all ages for both men and women (the exceptions are women above 87 years of age). In other words, there are a greater proportion of retirees in 1998 than in 1988 for each age bracket considered. 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 eligibility age for retirement, these provisions seem to have provoked a boom in the proportional share of pensioners. For instance, at 60 years of age, the proportion of retired women in the rural area is, in 1998, roughly three times that in 1988; for men, the ratio between the proportions of retirees in the same age bracket is approximately 2.3.
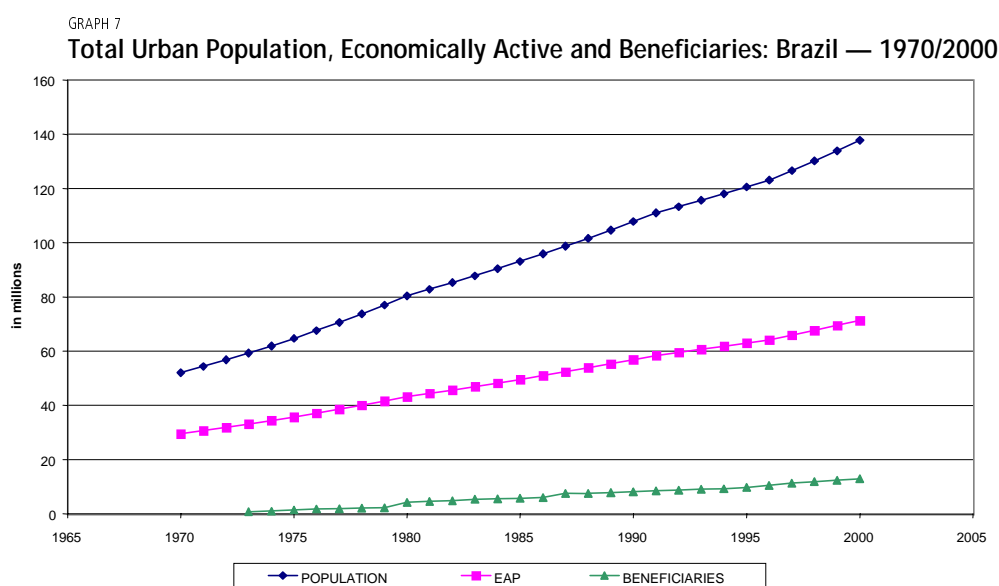
GRAPH 6
Ratio of Activity Rates and Receipt of Benefits between 1998 and 1988 for each Sex — Brazil

Source: PNAD 1988; PNAD 1998.

5 - EVOLUTION OF URBAN POPULATION: ACTIVE AND BENEFICIARIES

Graph 7 shows the evolution of the total urban population, for the same segments and instances in time of the ones used for the rural population in Graph 2. Despite the systematic increase in total urban population (85.7 million between 1970 and 2000), the EAP did not maintain the same growth rate, a consequence of an older population profile and a later entry age in the labor market of the young population. The rising numbers of beneficiaries in the urban social security segment are also something to worry about, a result of weak eligibility conditions for retirement.[16]
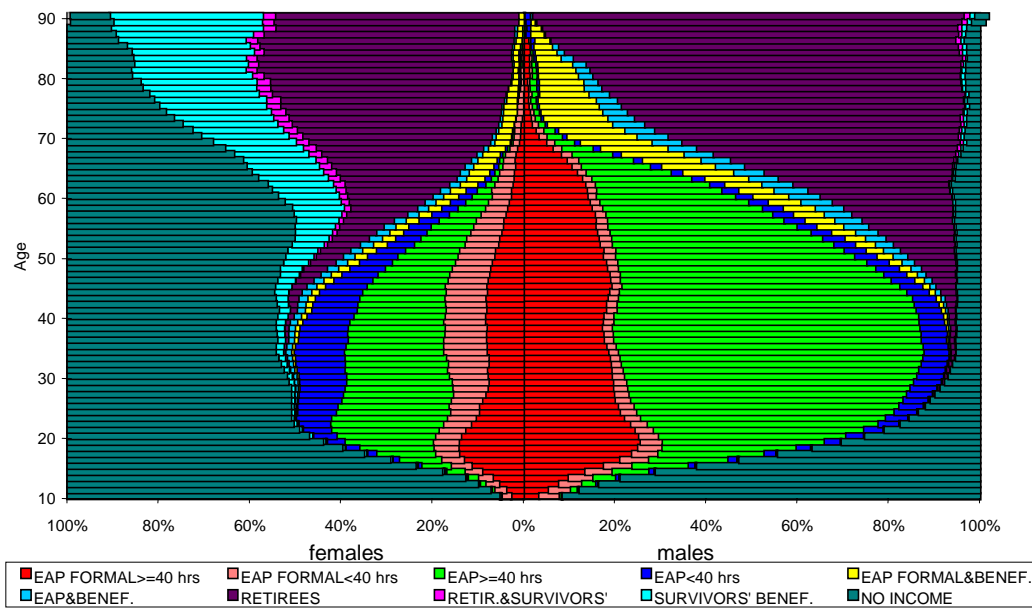
GRAPH 7

Total Urban Population, Economically Active and Beneficiaries: Brazil — 1970/2000

Source: IBGE, Census 1940, 1950, 1960, 1970, 1980, 1991, 1996 and 2000.

Graphs 8 and 9 present analogous information to the one displayed in Graphs 3 and 4, except that now it refers to the urban[17] population and is further disaggregated according to the pertinence of workers in the formal or informal labor market.[18]

---

[16] Brazil is one of seven countries in the world that offers "Length of Service Retirement". Males can retire with 35 years of work and females with 30. Half of the pensioners retiring by "Length of Service" do so before they turn 55 years of age.

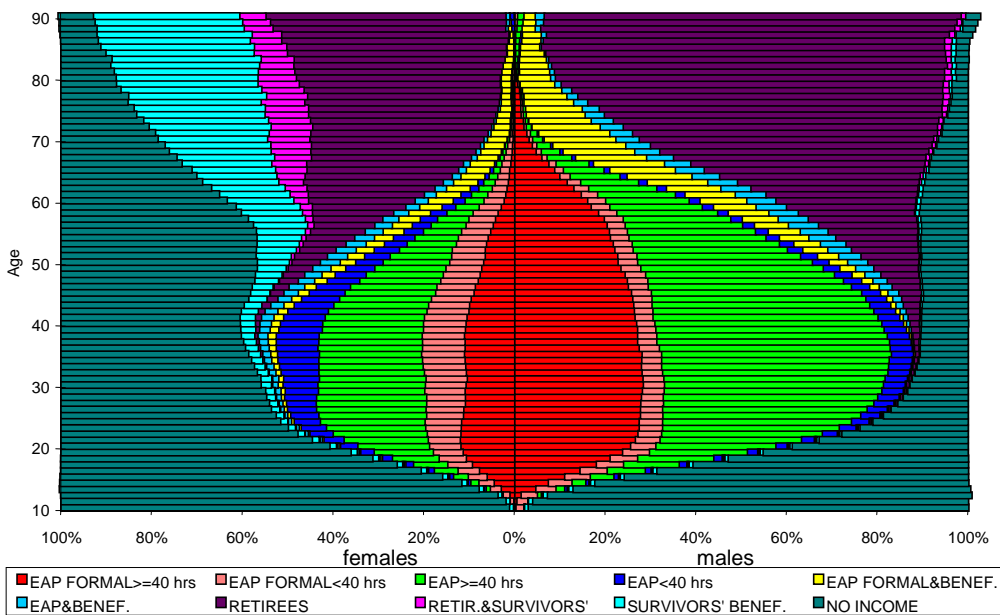[17] Note once again that urban workers in this text are the ones living in urban areas.

[18] For the purpose of this paper individuals that as employees have a formal work relationship ("carteira assinada" — work contract) and as self-employed or employers contribute to the Social Security System were considered as part of the formal labor market.

GRAPH 8

Ten-Year-Old-and-Over Urban Population Distributed According to Age, Sex and Condition of Benefit/Activity: Brazil — 1988


| EAP FORMAL>=40 hrs | EAP FORMAL<40 hrs | EAP>=40 hrs | EAP<40 hrs | EAP FORMAL&BENEF. |
| EAP&BENEF. | RETIREES | RETIR.&SURVIVORS' | SURVIVORS' BENEF. | NO INCOME |

Source: PNAD 1988.

GRAPH 9

Ten-Year-Old-and-Over Urban Population Distributed According to Age, Sex and Condition of Benefit/Activity: Brazil — 1998

| EAP FORMAL>=40 hrs | EAP FORMAL<40 hrs | EAP>=40 hrs | EAP<40 hrs | EAP FORMAL&BENEF. |
| EAP&BENEF. | RETIREES | RETIR.&SURVIVORS' | SURVIVORS' BENEF. | NO INCOME |

Source: PNAD 1998.

For the urban population we also find a large number of pensioners still working, both in 1988 and 1998. Compared to the rural population the main difference is that the female workforce is more present among the urban population. The size of the informal market is also impressive. Around 60% of male workers are

in the informal market. The same is true for around 60% of the female workers (see Graph 9). The shape of the formalization rate[19] is somehow similar to the activity rate: low for extreme ages (the young and the elderly) and higher for adults. The percentage of women working in the informal market is also larger than the percentage for their male counterparts.
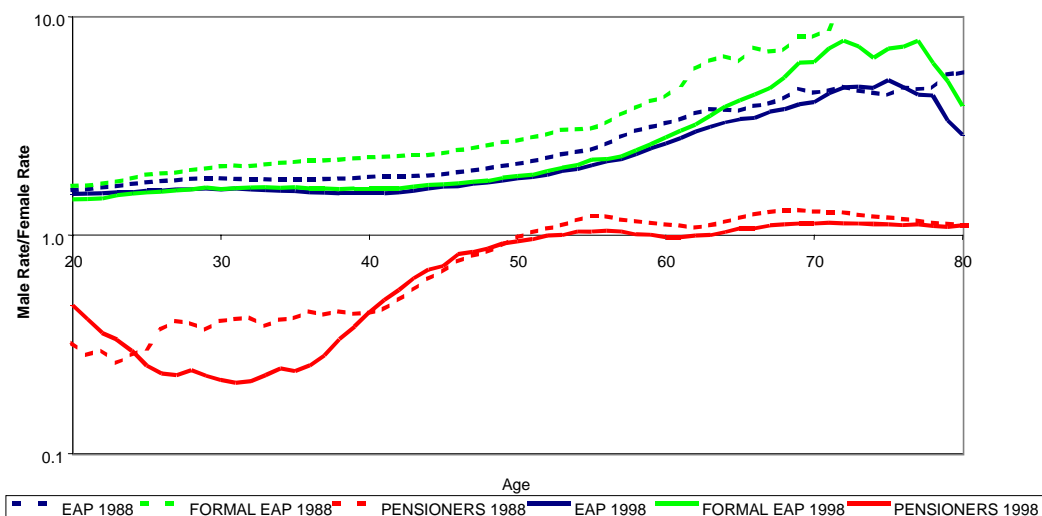
GRAPH 10
Percentage of Individuals in the Formal Market by Sex and Age:
Brazil — 1988 and 1998
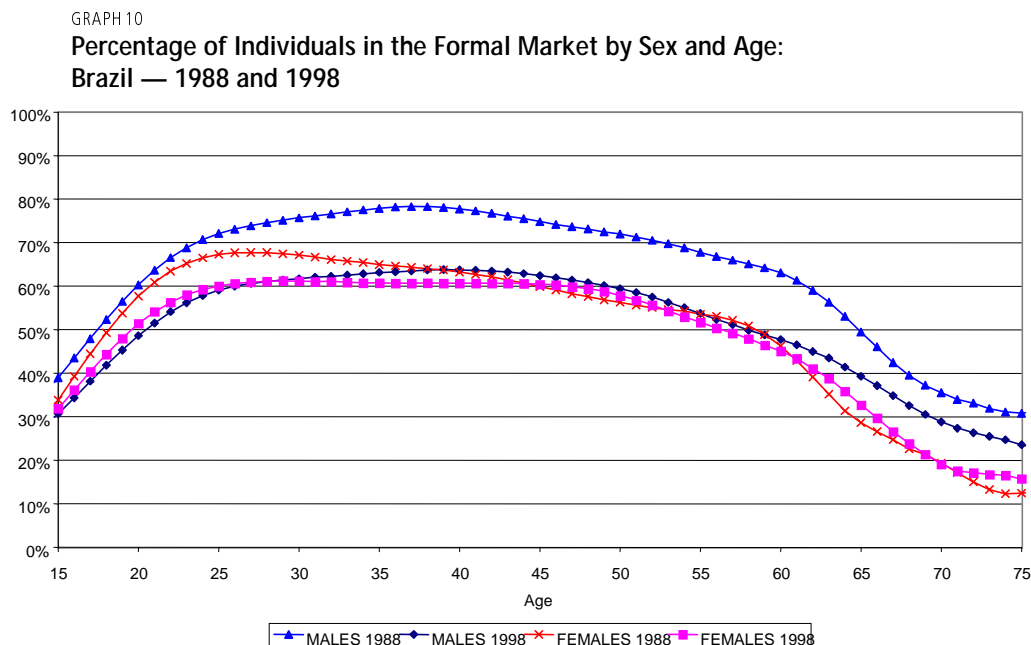
In 1998 the female workforce age distribution widened and did not present the obtrusive peak in the early twenties as in 1988. With respect to formal ties, the situation worsened between 1988 and 1998 (See Graph 10), but more so for the male workforce. The percentage of formal ties among males became almost identical to the level among female workers.

Comparing activity rates for men and women in 1988 (see Graph 11) we find the same age pattern as for the rural population but with a narrower dynamic range: from 1.5 times at early ages to 4.7 times for the elderly. For the formal market the situation is quite similar but with a larger difference between male and female workers in 1988. In 1998 the difference is noticeable only after age 60. The graph of the ratio of male and female beneficiaries is also roughly S-shaped, but this time with a wider dynamic range: in the early twenties female incidence is greater (due to the concession of survivors' benefits). The ratio approaches one and from age 50 on there is a greater incidence of benefits among males. The sex ratio for EAP is very similar for both dates but the differences diminish over time.

---

[19] The formalization rate is herein defined as the ratio by sex and age of individuals in the formal labor market and total economically active population presently working.

GRAPH 11

Ratio of Activity Rates (Formal and Informal Market) and Receipt of Benefits between Sexes: Urban Brazil — 1988 and 1998 — Males/Females (Log Scale)
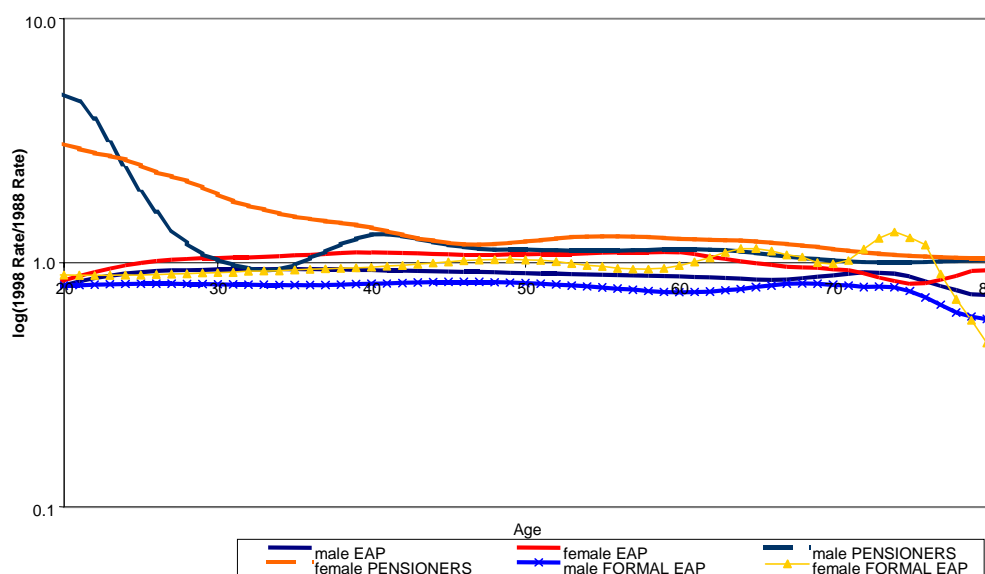

Source: PNAD 1988; PNAD 1998.

Graph 12 presents the ratio of 1998 and 1988 activity rates and receipt of benefits for each sex, for the urban population. Similar to the rural labor market, urban male workers show a lower rate in 1998 than in 1988, as opposed to the higher rate presented by the females. One can also see a later entry of workers (both males and females) into the urban labor force. If one considers only the formal market, basically, the situation of female and male workers got worse in the period, but male workers experienced heavier losses. In the case of benefits, ratios are above one for almost all those ages below 70 for both men and women . The main differences are observed for young adults. There is an increase between 1988 and 1998, but nothing as spectacular as the change observed among the rural population: females increased around 25% and males around 15%.

Ratio of Activity Rates and Receipt of Benefits between 1998 and 1988 for each Sex — Urban Brazil (Log Scale)

Source: PNAD 1988; PNAD 1998.

6 - PARTICIPATION OF THE ELDERLY[20] IN RURAL FAMILIES CLASSIFIED BY *PER CAPITA*[21] FAMILY INCOME

Graphs 13 and 14 present the participation of the elderly in rural families classified by percentile of *per capita* income, respectively, for 1988 and 1998, comparing the participation of the elderly to the rural population as a whole. On both reference dates, there are always fewer elderly within the 40% poorer families than in the population as a whole. This goes to show that the elderly are to be found preferentially in the midst of more affluent families. This may indicate one of two things: either the elderly have the means, or wealthier families take in elderly members more often. Furthermore, a bettering of conditions occurred for the said population between the two dates under consideration. The greatest participation of elderly that showed up in the 60th percentile in 1988 now appears in the 75th percentile (i.e., the mode shifts to higher values).

Average participation of the elderly in rural families has increased from an average of 7.0% in 1988 to 9.0% in 1998, a result of the aging of the population in the period in question (lower fertility and migration at economically active ages). This information broken down by *per capita* family income shows a marked change. In lower income families (up to the 20th percentile in *per capita* income) we have noted that the average participation of the elderly has dropped from 2.7% in 1988 to 1.7% in 1998. However, for higher income families (80th percentile or more in *per*

---

[20] The "elderly" are defined as those over 60. Although not all beneficiaries of Social Security are necessarily elderly, Graphs 3 and 4 show that they stand in absolute majority. Hence a proxy of the elderly with an approximation for the beneficiary concept will be used.

[21] Percentiles for *per capita* income for 1988 and 1998 can be found in Table 1.

capita income) we have noted that the average participation in 1988 of 8.4% rose to 19.1% in 1998.
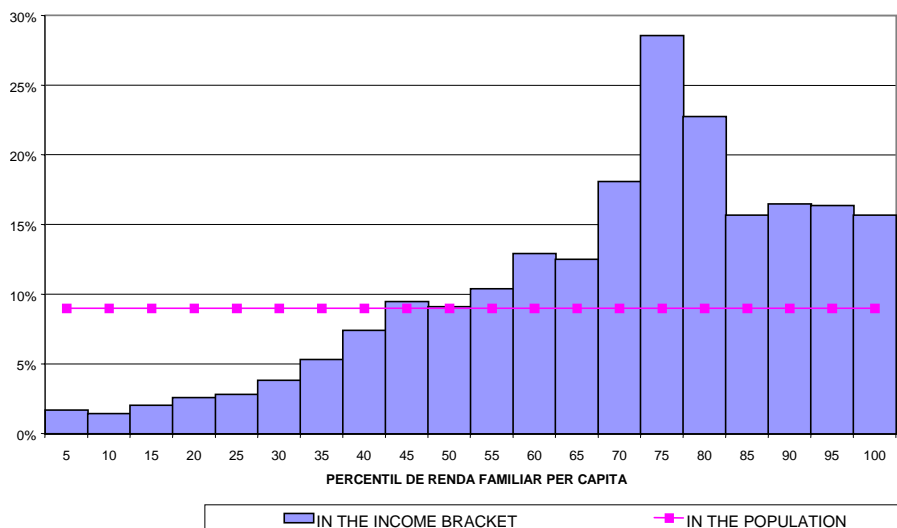
GRAPH 13

Participation of the Elderly in Families by Percentile of *Per Capita* Family Income: Rural Brazil — 1988
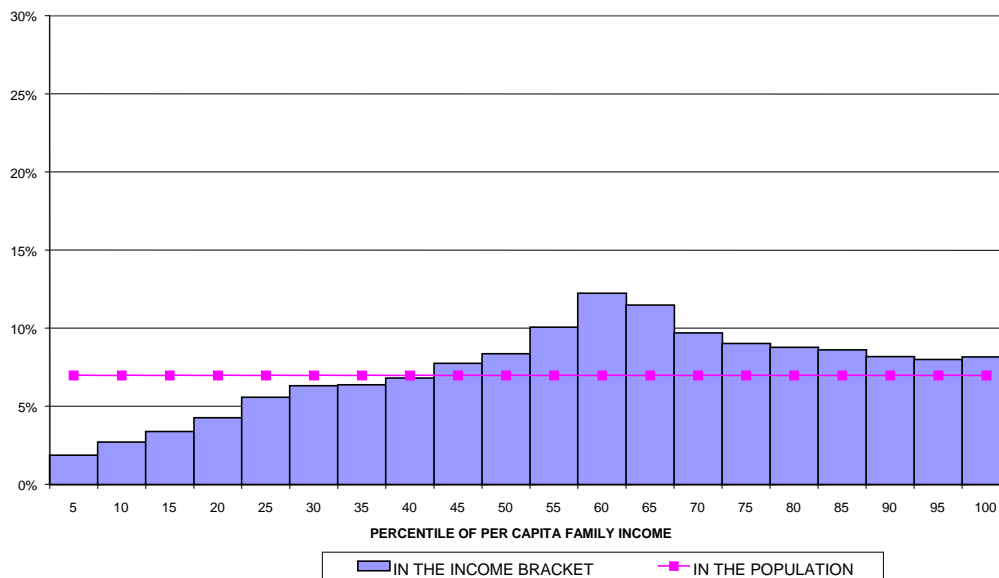
Source: PNAD 1988.

GRAPH 14

Participation of the Elderly in Families by Percentile of *Per Capita* Family Income: Rural Brazil — 1998

Source: PNAD 1998.

In 1988 and 1998, for the 45th percentile and above, the presence of the elderly in families is greater than in the rural population as a whole, the inverse happening before the above mentioned percentile.

In summary, there is an ever-growing concentration of the elderly in rural families with higher income levels. It is noticeable that though the average participation of the elderly in rural families for the period 1988/98 has risen, this growth has been quite lopsided when considering *per capita* income brackets. This corroborates the fact that it is the elderly who have been responsible for the economic improvement of the families they belong to.

7 - PARTICIPATION OF THE ELDERLY IN URBAN FAMILIES CLASSIFIED BY *PER CAPITA* FAMILY INCOME

Graphs 15 and 16 present the participation of the elderly in urban families classified by percentiles of *per capita* income, respectively, for 1988 and 1998, comparing the participation of the elderly to the urban population as a whole. Average participation of the elderly in urban families presented a similar increase to the one experienced by the rural population: from an average of 7.4% in 1988 to 8.8% in 1998, and for the same reasons. The 1988 pattern shows values lower than the urban population average below the 20th percentile and values not significantly different, statistically speaking, from the population average for other percentiles. On the other hand, in 1998, similar to the pattern found among the rural population, there are always fewer elderly within the 40% poorer families than in the population as a whole. As in the rural population, there is a marked threshold for the inclusion of elderly in families in the urban population in 1998 – the 40th percentile.
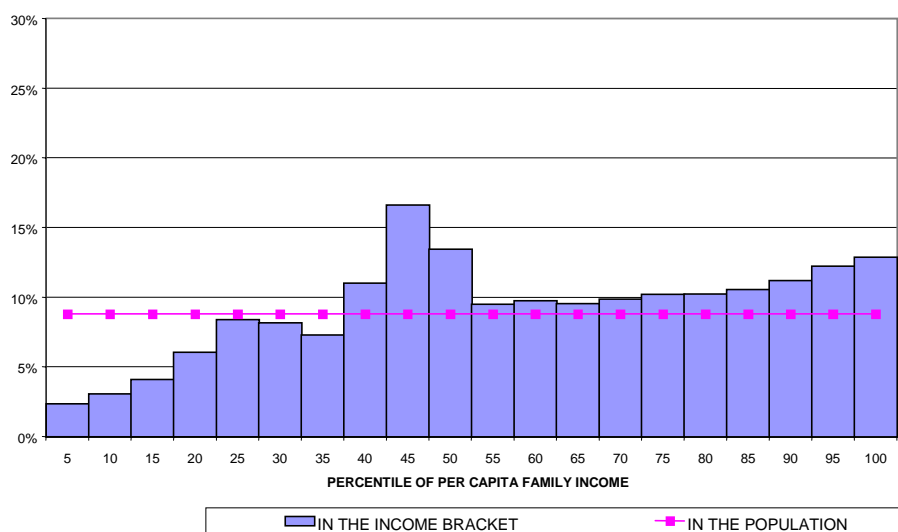
GRAPH 15

Participation of the Elderly in Families by Percentile of *Per Capita* Family Income: Urban Brazil — 1988
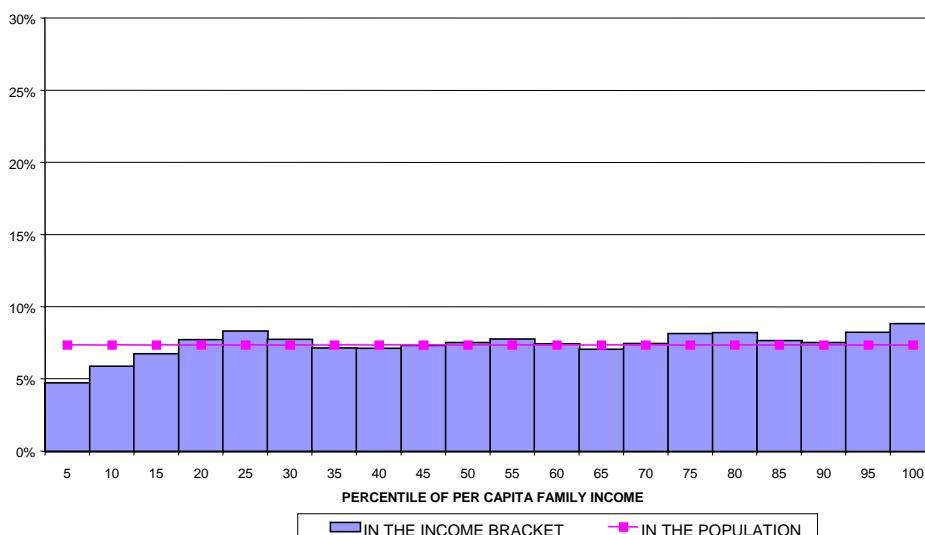
Source: PNAD 1988.

GRAPH 16

Participation of the Elderly in Families by Percentile of *Per Capita* Family Income: Urban Brazil — 1998
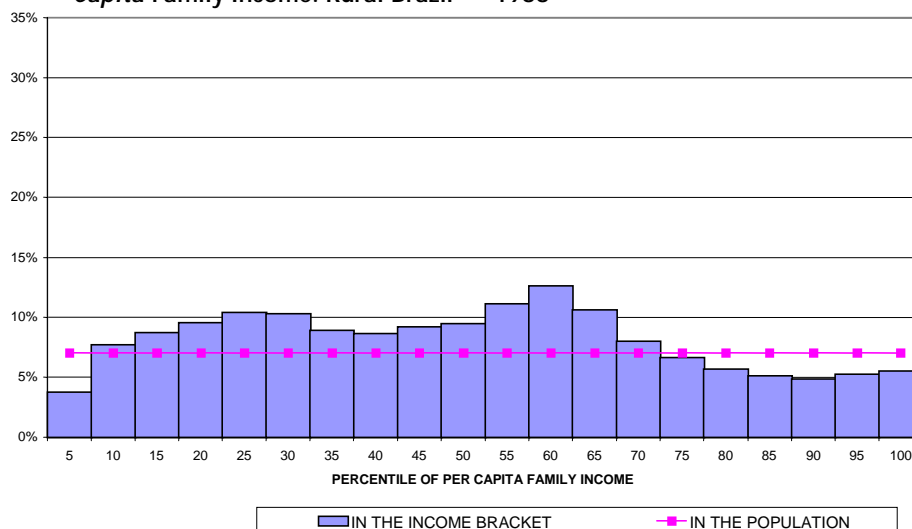

Source: PNAD 1998.

8 - PARTICIPATION OF INCOME[22] FROM THE ELDERLY IN RURAL FAMILY INCOME

Graphs 17 and 18 show the partic-,

ipation of income from pensions in overall rural family income, by income percentiles in 1988 and 1998, as compared with this participation in the rural population as a whole. Similar to the increase in participation of the elderly that occurred in the period, there was also a growth in income: from 7.0% in 1988 to 18.0% in 1998. Note that in 1988 the elderly contributed to the family income exactly their apportioned share, i.e., the percentage of elderly in the population exactly matches their contribution to the family income and conversely their average income equaled the rural population's average income. In 1998, though, they contributed with twice as much. This increase can be broken down into two parts: *a*) increase in the proportion of elderly population and therefore a parallel increase of elderly members (retirees and survivors' beneficiaries) in rural families; and *b*) rise in average income of the elderly. It is worthwhile to note that there was relative increase in income of the elderly since the aging of the population accounts for the increase of from 7.0% to 9.0% in the physical presence of the elderly in the families. The other 9.0% increase may have been caused by the increase in the individual value of benefits perceived. In other words, even taking into account the aging-of-population component, the rise in participation of the elderly 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 and lowered the eligibility age.

---

[22] When dealing with the elderly income we are refering exclusively to pensions.

GRAPH 17

Participation of Pensions on Total Family Income by Percentile of *Per Capita* Family Income: Rural Brazil — 1988

Source: PNAD 1988.

In terms of economic participation, differently from what occurred with physical presence, the representation is roughly an inverted U-shape: there is less relative contribution in family income of the elderly in extreme percentiles (in the poorer and richer families). In 1988 it is actually rather flat, slightly m-shaped but dropping at the extreme groups.

GRAPH 18

Participation of Pensions on Total Family Income by Percentile of *Per Capita* Family Income: Rural Brazil — 1998
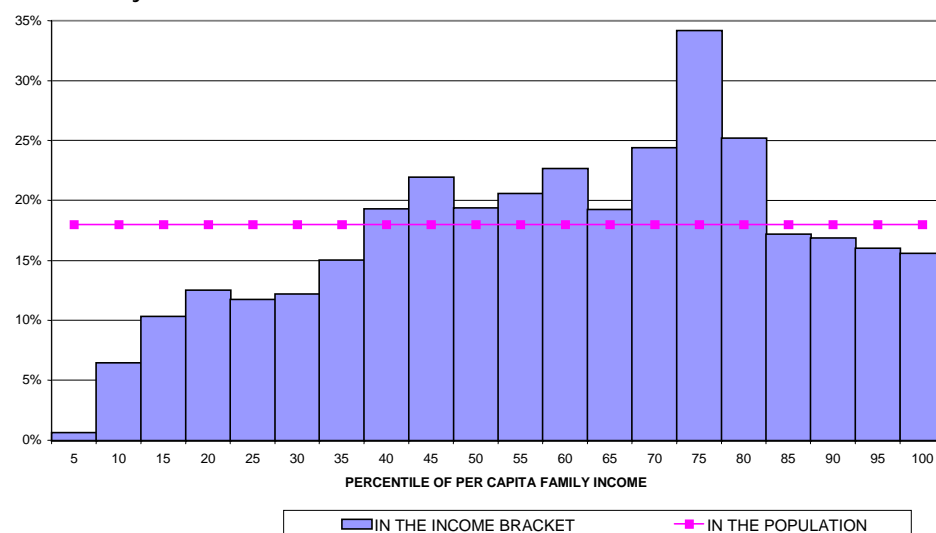
Source: PNAD 1998.

In lower income families (up to 20% percentile in *per capita* income) we have noted that the average contribution of the elderly to the family income was 7.4% of total income in both years under study: 1988 and 1998. However, for higher income

families (80th or more in *per capita* income) we have noted that the average participation in 1988 of 5.2% rose to 18.2% in 1998. Even though the income participation of the elderly in the family income for these income brackets is not as high as for the rural population as a whole (it is below average), the increase is sizeable as it more than tripled in value. In short, the presence of elderly members in the family is associated with improved income despite the fact that the income participation of the elderly 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* income reflects an increase in real terms[23] from 1988 to 1998 in all percentiles, with the exception of the 5th percentile. This can be seen in Table 1, which shows the percentiles as a fraction of the legal minimum wage at the time of the survey and in *reais* of September 1998. Note, too, that this increase can be observed despite the deterioration of the minimum wage in real terms (Table 2 and Graph 32).

TABLE 1
Percentiles of *Per Capita* Family Income for the Rural Population in 1988 and 1998 as a Fraction of the Minimum Wage in Force during the Month of the Survey in *Reais* of September 1998

| | Fraction of Minimum Wage | | R$ of September 1998 (INPC) | |
	1998	1988	1998	1988
5	0.044	0.064	5.77	6.83
10	0.130	0.124	16.88	13.09
15	0.182	0.171	23.67	18.09
20	0.229	0.211	29.78	22.36
25	0.273	0.245	35.44	25.96
30	0.311	0.284	40.38	30.05
35	0.360	0.323	46.74	34.22
40	0.428	0.368	55.67	39.03
45	0.492	0.414	63.91	43.85
50	0.541	0.465	70.34	49.28
55	0.616	0.519	80.10	55.02
60	0.691	0.581	89.89	61.53
65	0.782	0.645	101.60	68.34
70	0.900	0.738	117.04	78.21
75	0.998	0.850	129.70	90.02
80	1.085	1.002	141.01	106.16
85	1.288	1.211	167.47	128.30
90	1.617	1.533	210.23	162.42
95	2.221	2.175	288.67	230.49
100	5.993	5.190	779.15	549.89

Source: PNAD 1988 and 1998, IBGE.

---

[23] Using the INPC from IBGE as the measure of inflation.

Minimum Wage

|	Current Values	Constant Values (INPC) September/1998
September/1988	15,552.00	105.95
September/1998	130.00	130.00

Source: Social Security Statistics Yearbook (*Anuário Estatístico da Previdência Social*), MPAS, 1998.

9 - PARTICIPATION OF INCOME FROM THE ELDERLY IN URBAN FAMILY INCOME

Graphs 19 and 20 show the participation of income from pensions in overall urban family income, by income percentiles in 1988 and 1998, as compared to this participation in the urban population as a whole. Similar to what happened to the rural population there was also a growth in income: from 9.8% in 1988 to 16.2% in 1998. In 1988 the elderly contributed to the family income 32% more than their apportioned share in the population. In 1998, their contribution was even greater, totaling 89% over their apportioned share in the population. As for the rural population this increase can be broken down into two parts: *a*) the increase in the proportion of elderly population and therefore a parallel increase of elderly members (retirees and survivors' beneficiaries) in urban families; and *b*) rise in the average income of the elderly. Part (*a*) amounts to 1.4% and part (*b*) amounts to 5%. The impact is somehow more modest than the one found in the rural population, but the average income in the urban population is higher.

In 1988, below the 40th percentile, the elderly contributed a larger share to the family income than the average for the population. Above the 85th percentile they contributed slightly less.

GRAPH 19

Participation of Pensions on Total Family Income by Percentile of *Per Capita* Family Income: Urban Brazil — 1988
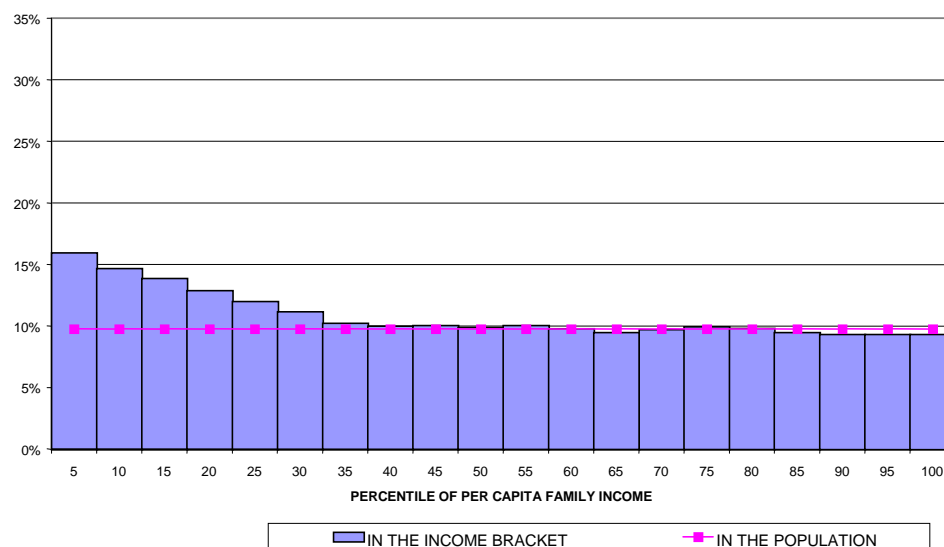
Source: PNAD 1988.

In 1998, the pattern is inverted and for percentiles below the 20th the contribution of the elderly is below the population average and beyond the 85th percentile, it is above average.

GRAPH 20
Participation of Pensions on Total Family Income by Percentile of *Per Capita* Family Income: Urban Brazil — 1998
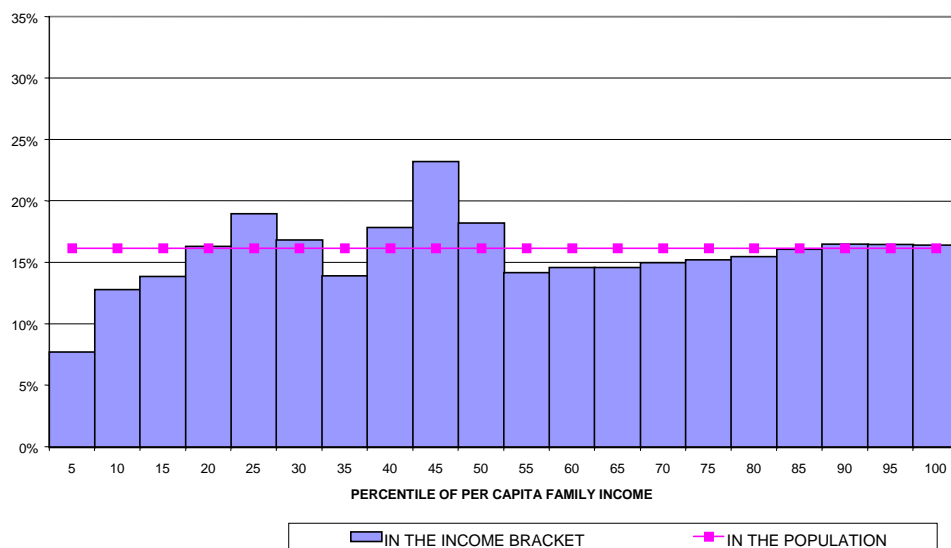
Source: PNAD 1998.

The *per capita* income for the urban population also reflects an increase in real terms in the period considered[24] (exactly as happened for the rural population, confront Tables 1 and 3). The increase in the average income of each percentile experienced by the rural population was around 40%, while the increase for the urban population was around 60%.

---

[24] With the exception, as noted before, of the 5th percentile.

TABLE 3

Percentiles of *Per Capita* Family Income for the Urban Population in 1988 and 1998 as a Fraction of the Minimum Wage in Force during the Month of the Survey in *Reais* of September 1998

	Fraction of Minimum Wage		R$ of September 1998 (INPC)	
	1998	1988	1998	1988
5	0.082	0.176	10.670	11.840
10	0.226	0.318	29.320	21.460
15	0.336	0.428	43.710	28.897
20	0.438	0.532	56.964	35.878
25	0.520	0.627	67.602	42.309
30	0.620	0.735	80.571	49.591
35	0.730	0.853	94.856	57.514
40	0.856	0.980	111.237	66.108
45	0.979	1.116	127.290	75.299
50	1.066	1.269	138.584	85.616
55	1.207	1.438	156.956	96.969
60	1.394	1.638	181.240	110.496
65	1.606	1.893	208.801	127.711
70	1.873	2.208	243.481	148.962
75	2.197	2.606	285.565	175.769
80	2.655	3.151	345.127	212.546
85	3.390	3.929	440.743	265.046
90	4.477	5.167	582.064	348.508
95	6.481	7.569	842.546	510.544
100	15.507	17.253	2.015.931	1.163.779

Source: PNAD 1988 and 1998, IBGE.

10 - *PER CAPITA* RURAL FAMILY INCOME WITH AND WITHOUT THE ELDERLY

Graphs 21 and 22 merge information related to two previous sections. In Section 6, the focus of the assessment was to consider the elderly as active members in family expenses, whereas Section 8 considered them as active providing members in the family budget. In this section an exercise is presented that consists in excluding the elderly from the family group and in figuring *per capita* income before and after the exclusion. These two graphs present the variation in rural family income with and without the elderly, respectively, for the years 1988 and 1998.

In 1988 the groups below the 60th percentile threshold had their *per capita* income diminished on average about 5% with the exclusion of the elderly. For the percentiles above this threshold the exclusion of the elderly raise the family income by 5%. Yet in 1998 the impact and the number of families affected negatively was much greater: all families, with the exception of the lower 5th percentile, suffered a reduction in the order of 8% in the family income with the exclusion of the elderly. This goes to prove once again the growing economic importance of the elderly in

rural areas, a result not only of demographic aging processes but also of more easily fulfillable eligibility conditions and higher benefit values.
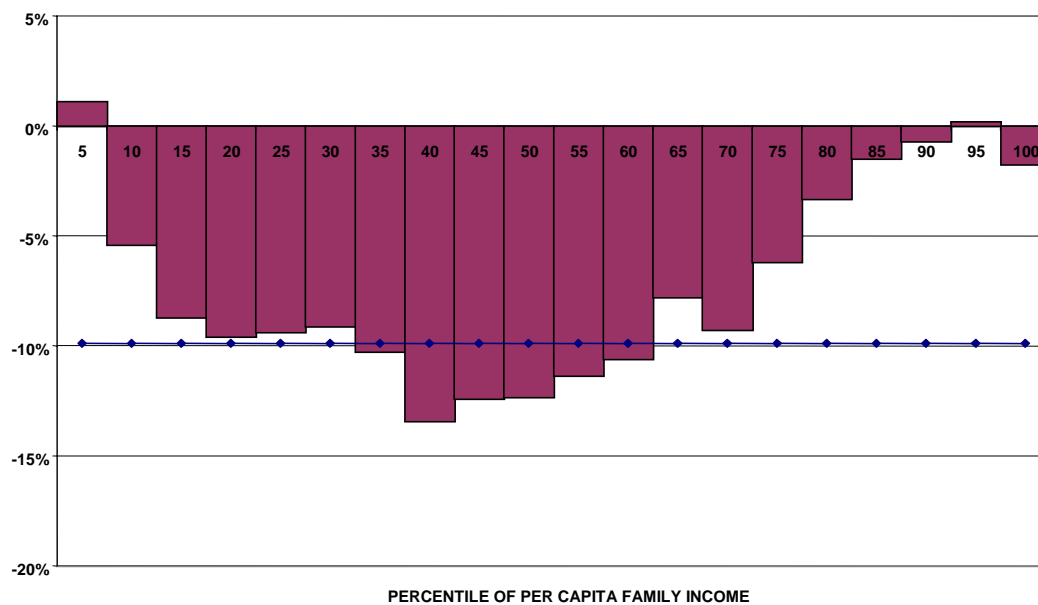
GRAPH 21
Variation in *Per Capita* Family Income with the exclusion of the Elderly Rural Brazil: all Families — 1988

PERCENTILE OF PER CAPITA FAMILY INCOME
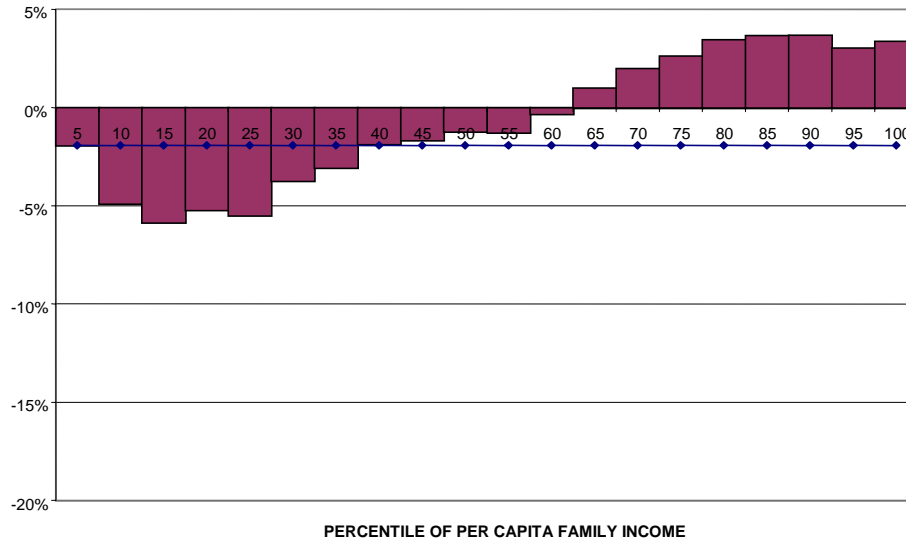
Source: PNAD 1988.

GRAPH 22
**Variation in *Per Capita* Family Income with the Exclusion of the Elderly Rural Brazil: all Families — 1998**

PERCENTILE OF PER CAPITA FAMILY INCOME

Source: PNAD 1998.

Graphs 23 and 24 present the average income in each 5% bracket for families in general, families with the exclusion of the elderly and the elderly themselves, respectively for 1988 and 1998. As mentioned before, in 1988 (see Graph 23), below the 60th percentile, the elderly would be better off (income wise) by themselves. The average income curve for the elderly alone is much flatter showing that the cash-flows go both ways, depending on the income bracket. In lower income families, the elderly helped the budget whereas in higher income families they probably profit 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 is another possibility. Nevertheless the *per capita* income of the elderly, regardless of the percentile of family income is very close to the Social Security benefit for rural workers, half a minimum wage, suggesting that social security is their main source of income. Only the elderly in the first two 5% brackets present income below the Social Security benefit value (half a minimum wage).

GRAPH 23

Average *Per Capita* Income by Family Income Percentile Bracket: Rural Brazil — 1998
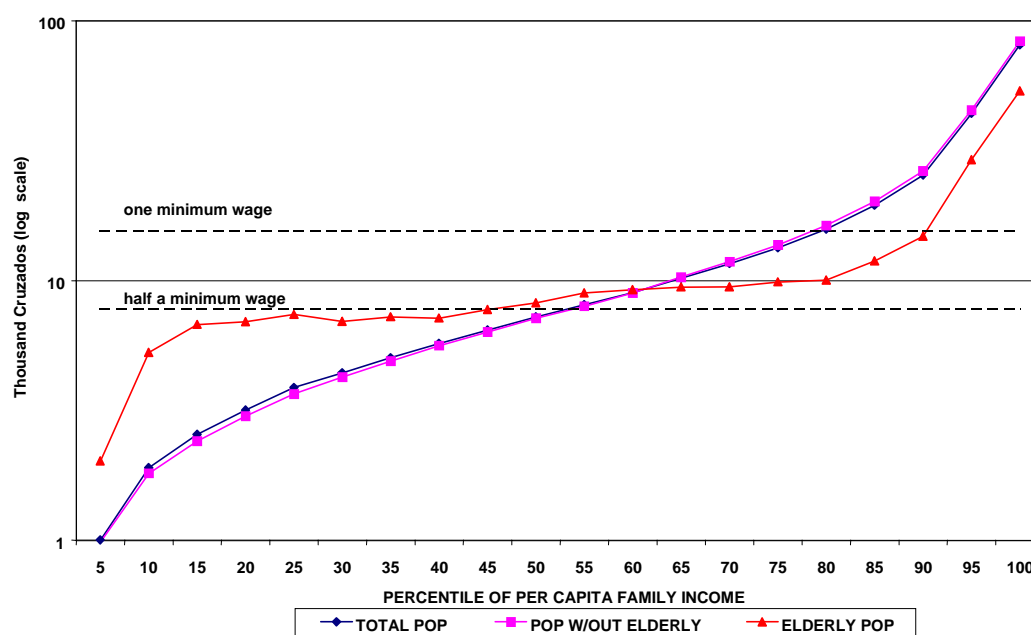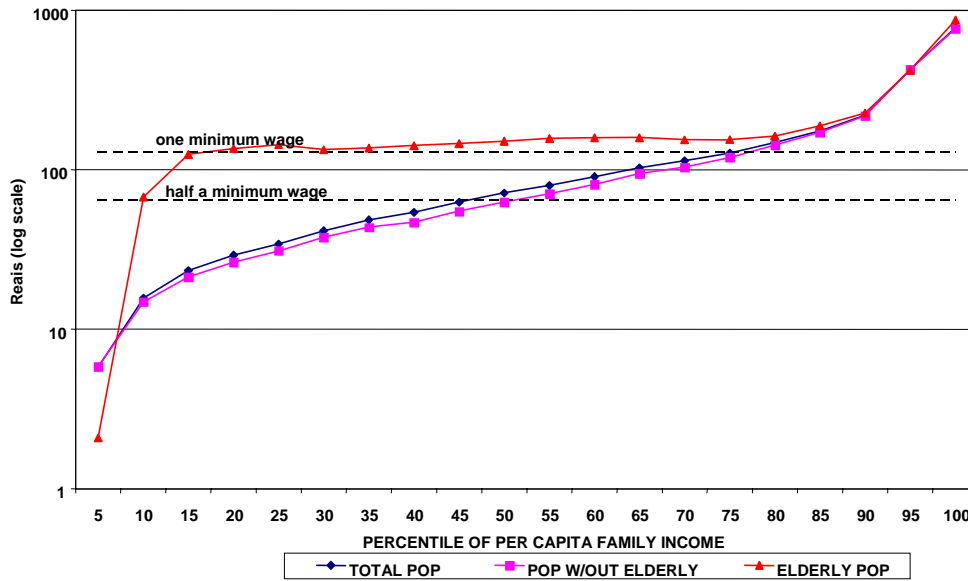

Source: PNAD 1988.

Graph 24 shows that the situation had shifted dramatically by 1998. In all but the poorest 5% of families, the average income for the elderly alone *vis-à-vis* the entire family was up to six times greater – with smaller differences for the wealthier income brackets. As noted in the comments on the graph for 1988, the *per capita* income of the elderly, irrespective of the percentile of family income is again very close to the benefit value (equal to one minimum wage), suggesting again that social security is their main source of income. Again, in 1998, only elderly in the first two 5% brackets present income below the Social Security benefit value (one minimum wage).

Average *Per Capita* Income by Family Income Percentile Bracket: Rural
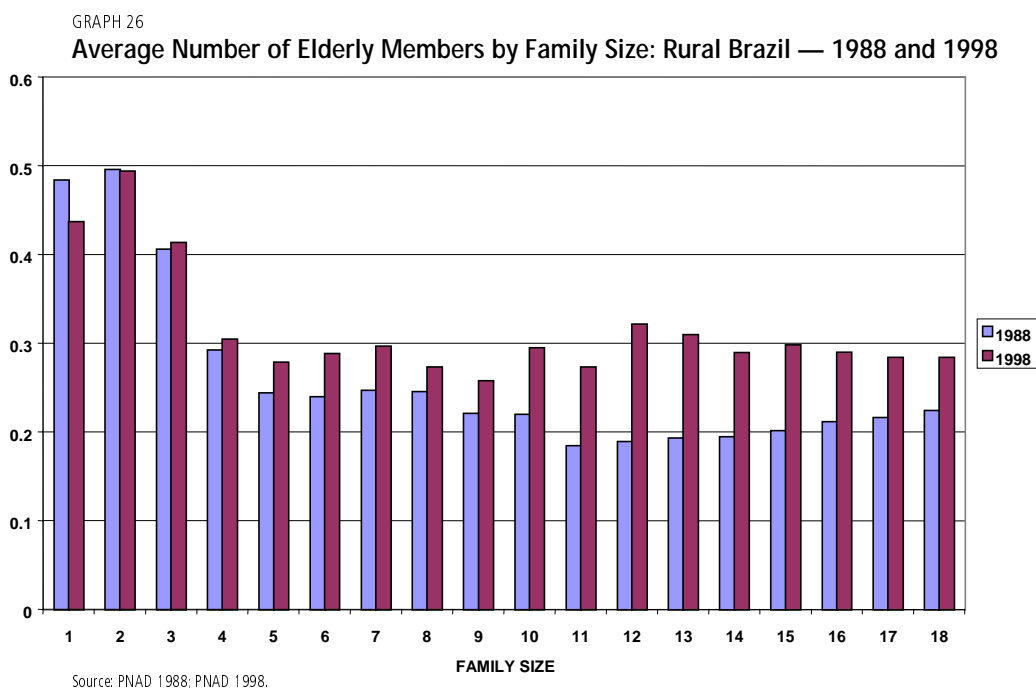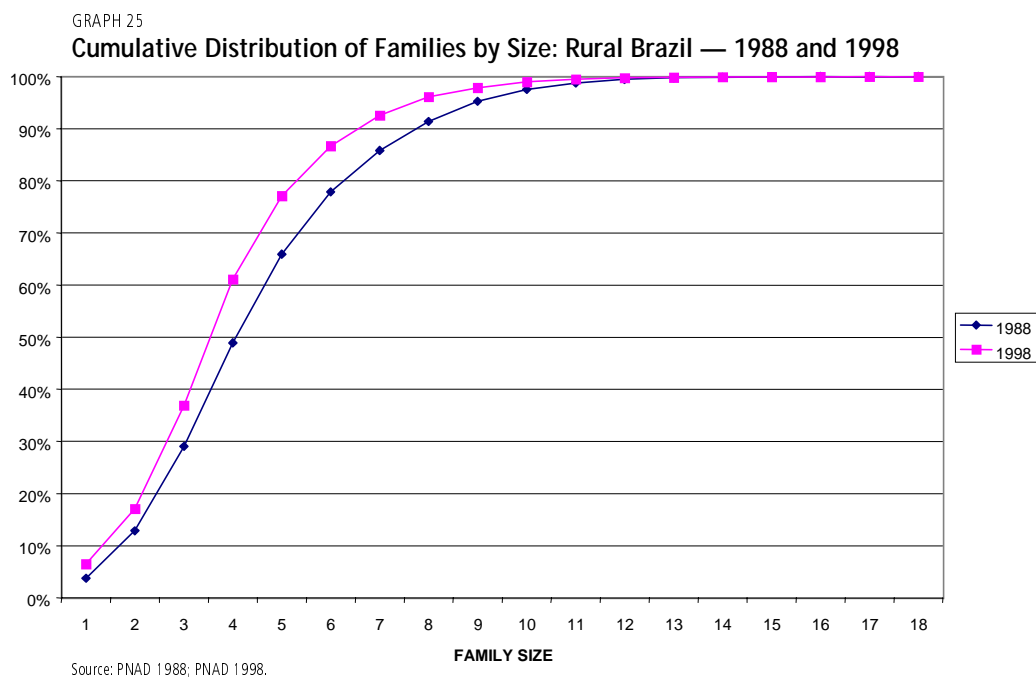Brazil — 1998

Source: PNAD 1998.

One could, however, argue that this phenomenon could 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 Graph 25 that shows the cumulative distribution of families by size, families got smaller in the period. The average size came down from 4.94 members to 4.30 members, a 13% decrease. The decrease in the median value was more or less the same: from 4.06 to 3.54. In addition, one can see in Graph 26 that shows the average number of elderly member by family size, a decrease of elderly living by themselves (family of one): In 1988, 48.4% of families with only one member were elderly individuals, as opposed to 43.7% in 1998. Parallel to this drop there is an increase in the amount of elderly in larger families. This data corroborates the impression that with the increase in income of the elderly more offspring would remain at home to take advantage of this ready income. The rural economy in Brazil is not fully monetized and very often active workers do not even earn as much as on minimum wage in payment for work rendered. Part of the payment is made in goods and most small farmers are actually sharecroppers. The elderly, with their one minimum wage pensions hold most of the cash in the back lands.

There is evidence that in certain cities in the Northeast the income gotten from retirement benefits far surpasses the Municipal Participation Fund (Fundo de Participação de Municípios[25]), and this fact seems to have an effect on the family structure.
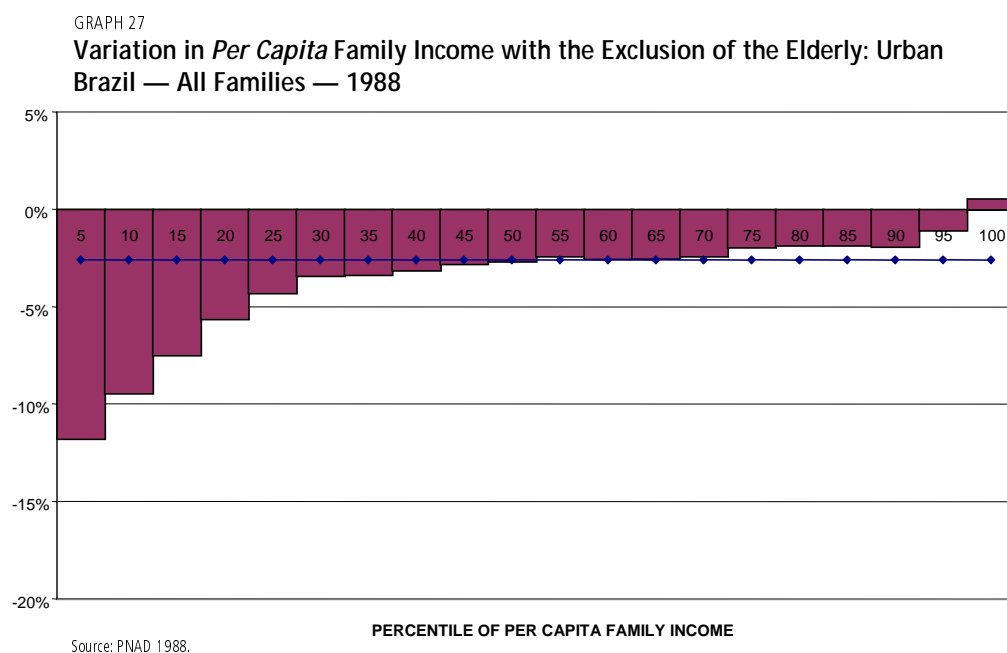
---

[25] Federal funds transferred to Municipal Governments mandated by the Constitution.

In other words, we can reject the hypothesis that the main economic importance of the elderly in rural families is caused by demographic changes and not by new constitutional directives.

GRAPH 25
Cumulative Distribution of Families by Size: Rural Brazil — 1988 and 1998

Source: PNAD 1988; PNAD 1998.

GRAPH 26
Average Number of Elderly Members by Family Size: Rural Brazil — 1988 and 1998

Source: PNAD 1988; PNAD 1998.

11 - *PER CAPITA* URBAN FAMILY INCOME WITH AND WITHOUT THE ELDERLY

Graphs 27 and 28 merge information related to two previous sections about the presence of elderly members in urban families. In Section 7, the focus of the assessment was to consider the elderly as active members in family expenses, whereas Section 9 considered them as active providing members in the family budget. Parallel to what was done for the rural population in Section 10, in this section the exercise is presented for the urban population. It also consists of excluding the elderly from the family group and in figuring out the *per capita* income before and after the exclusion. These two graphs present the variation in urban family income with and without the elderly, respectively, for the years 1988 and 1998.

GRAPH 27

Variation in *Per Capita* Family Income with the Exclusion of the Elderly: Urban Brazil — All Families — 1988

PERCENTILE OF PER CAPITA FAMILY INCOME

Source: PNAD 1988.

Both in 1988 and in 1998 all groups had their *per capita* income diminished with the exclusion of the elderly. The reduction was 2.6% in average for 1988 and 8.6% for 1998 and usually larger for the less economically affluent groups. While for the rural population there were, at least in 1988, some groups that were better off without the elderly, for the urban population this is not the case: the exclusion of the elderly and their income would worsen the situation for all families but the richer 5%. Since most of the elderly pensions come from the State, they are better off than their offspring, because this same offspring together with the entire generation contribute to the system, either in the form of taxes or as social contributions to the Social Security system.

Graphs 29 and 30 present the average income in each 5% bracket for families in general, families with the exclusion of the elderly and the elderly themselves. As expected, the average income of the elderly in each 5% bracket is above the average income of the population. The average income curve for the elderly is less steep

showing that the income distribution among the elderly is more homogeneous than in the population as a whole, but not as homogeneous as the distribution of their rural counterparts. For the elderly population in families below the 25-th percentile their average income is below the statutory minimum benefit value (one minimum wage) possibly reflecting the more stringent eligibility rules to access social security benefits for the urban population.
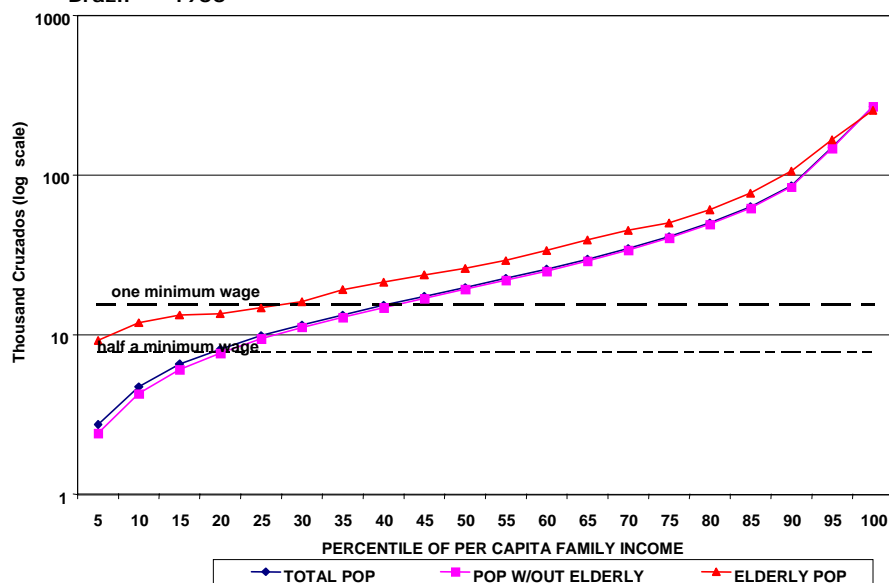
GRAPH 28

Variation in *Per Capita* Family Income with the Exclusion of the Elderly: Urban Brazil — All Families — 1998

PERCENTILE OF PER CAPITA FAMILY INCOME
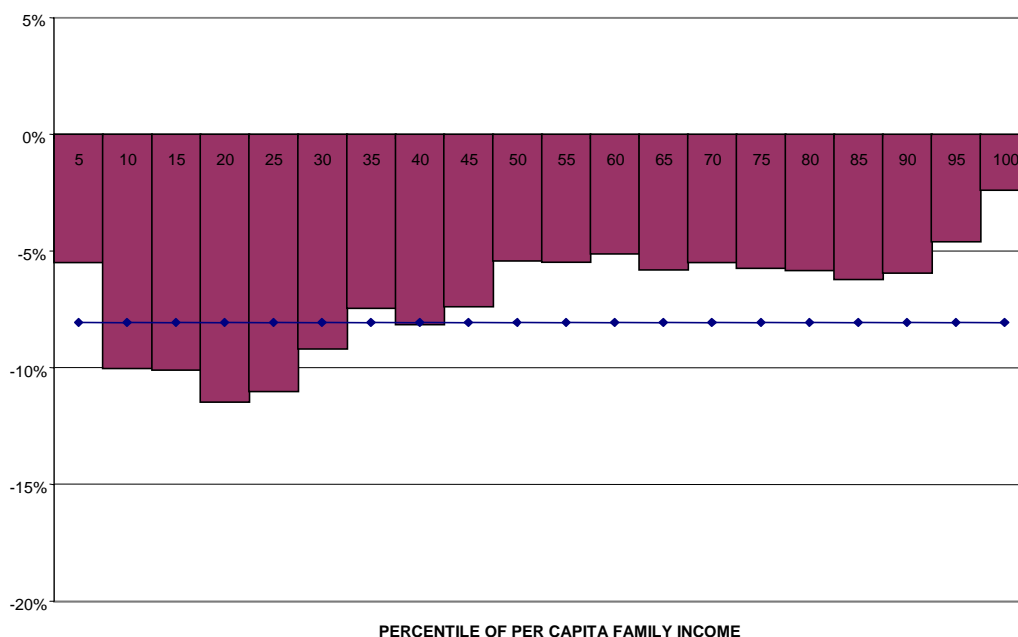
Source: PNAD 1998.

GRAPH 29

Average *Per Capita* Income by Family Income Percentile Bracket: Urban Brazil — 1988

Source: PNAD 1988.

Graph 30 shows that the situation had shifted somewhat by 1998. In all percentiles, the differences between the average income for the elderly *alone vis-à-vis* the entire family increased. Also, the curve for the elderly average income is flatter for the less affluent groups.

GRAPH 30
Average *Per Capita* Income by Family Income Percentile Bracket: Urban Brazil — 1998
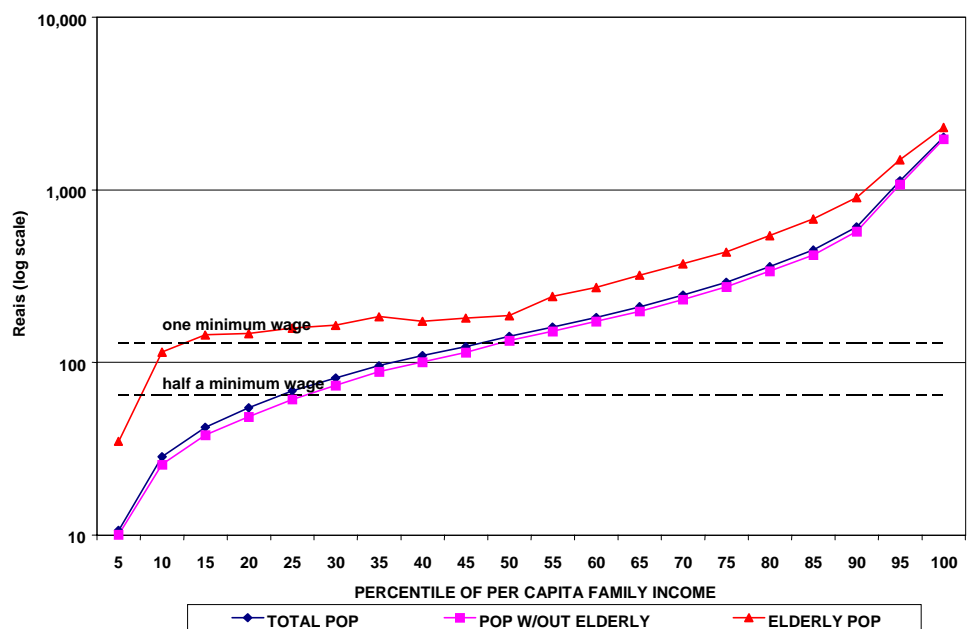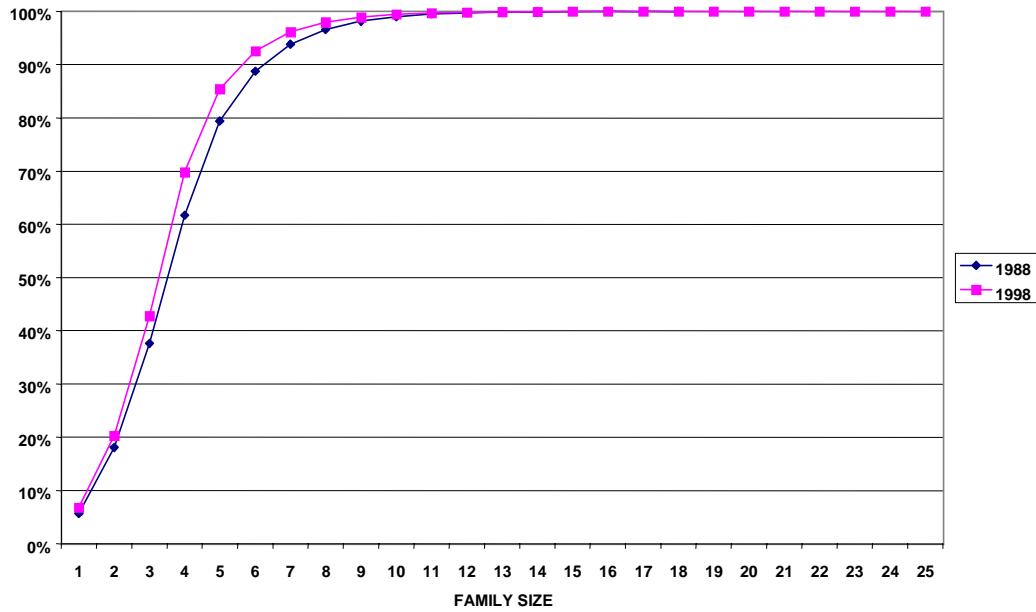

Source: PNAD 1998.

The changes in family size for the urban population were of a lesser magnitude than the ones occurring for the rural population (see Graph 31 for the cumulative distribution of urban families by size). Graph 32 shows the average number of elderly member by family size in urban areas and reinforces this idea. One can see an increase of elderly members in all family sizes, including for the family of one, i.e., those elderly people living alone.

GRAPH 31
Cumulative Distribution of Families by Size: Urban Brazil — 1988 and 1998

Source: PNAD 1988; PNAD 1998.

GRAPH 32
Average Number of Elderly Members by Family Size: Urban Brazil — 1988 and 1998
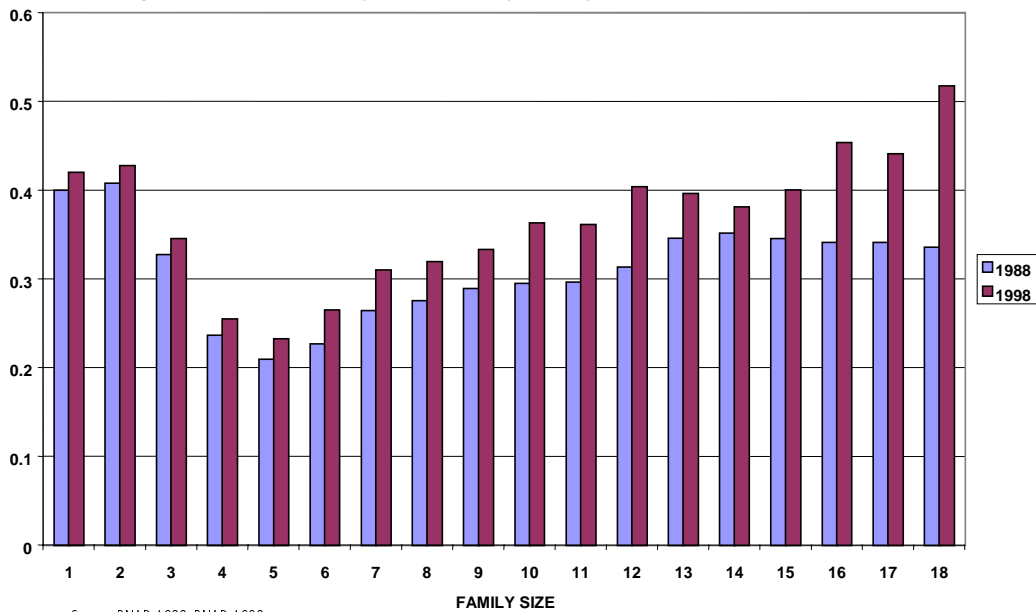

Source: PNAD 1988; PNAD 1998.

12 - COMMENTS AND CONCLUSIONS

Graph 33 presents selected percentile values of *per capita* family income for the Brazilian rural region for the two instances in time considered in this text. All values corresponding to percentiles over 10 have had their value increased in real terms from 1988 to 1998. It is worthwhile noting as well that the higher the family income

the greater the increases between 1988 and 1998. It is precisely in these families that the elderly are concentrated. Moreover, it is there too that the contribution of the elderly to the family income has grown the most. It is quite clear, also, 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 women.

GRAPH 33

Average Family Income by Family Income Percentile Bracket: Rural Brazil — 1988 and 1998

Source: PNAD 1988; PNAD 1998.
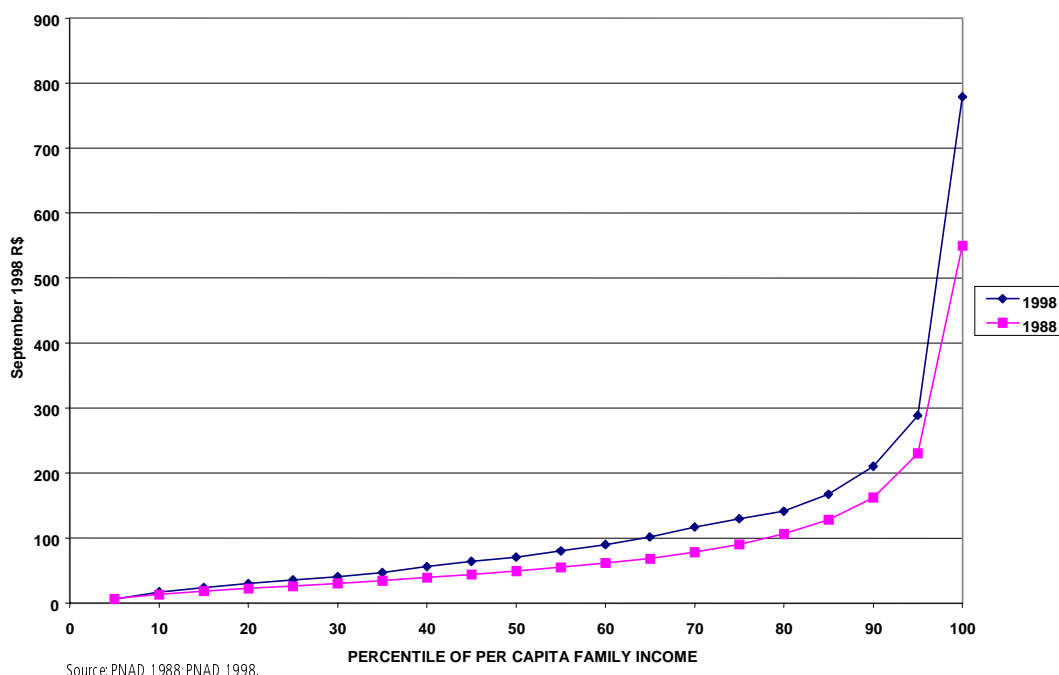
Graph 34 presents the Lorenz Curve for income distribution among the Brazilian rural population for the same years: 1988 and 1998. One can notice that the distribution has worsened slightly between the two years. So, considering that the average value for all the population income quintile brackets used in this study increased, is not a problem to worry about.

For the urban population the increase in the average income was even larger than the one for rural population (see Graph 35). The worsening of the income distribution was greater, though, as can be seen in graph 36 that shows the Lorenz curve for the two dates under study.
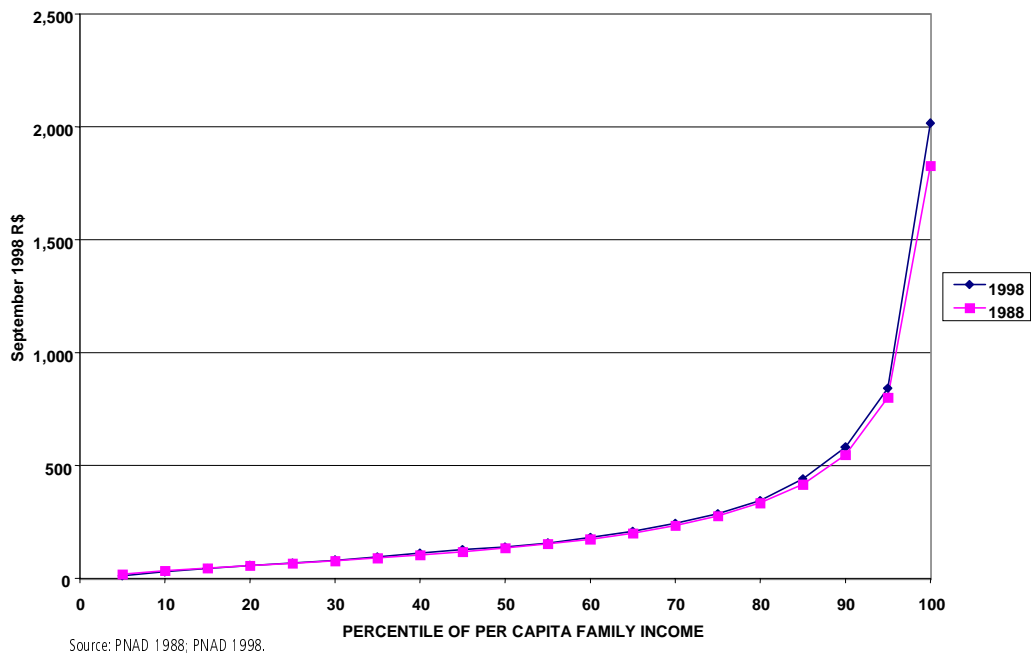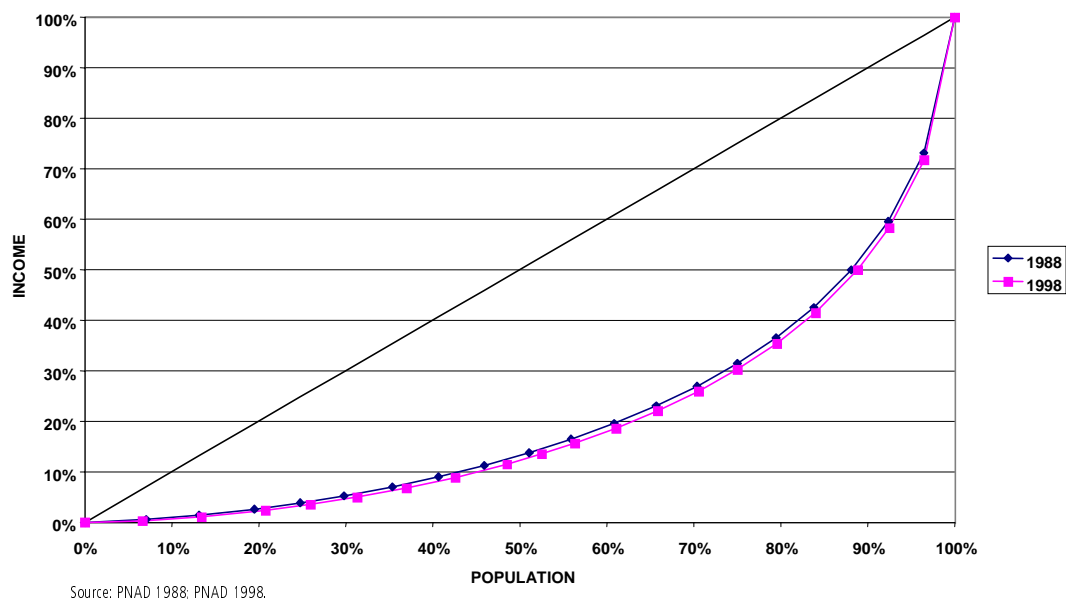
Lorenz Curve: Rural Brazil — 1988 and 1998
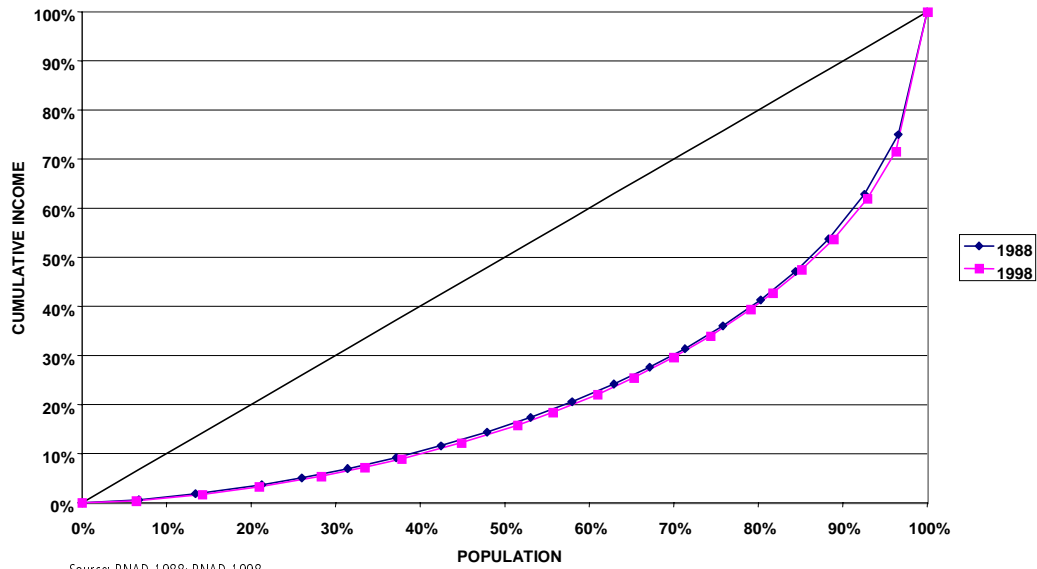
Source: PNAD 1988; PNAD 1998.

Average Family Income by Family Income Percentile Bracket: Urban Brazil — 1988 and 1998

Source: PNAD 1988; PNAD 1998.

GRAPH 36
Lorenz Curve: Urban Brazil — 1988 and 1998

Source: PNAD 1988; PNAD 1998.

Even if Social Security benefits have the specific function of serving as "insurance against loss of earning capacity," the social role that Social Security has played in elevating average income, specially for the rural population, is undeniable, and, in this way, has collaborated towards mitigating poverty. Besides, for the population as a whole, it is Social Security that guarantees the income for the elderly and consequently for their family members. The 1988 Constitution and the complementary laws that followed were fundamental in the shaping of this new reality.

BIBLIOGRAPHY

BARROS, R. P. de, MENDONÇA, R. *Determinants of inequality in Brazil.* Rio de Janeiro: IPEA, jul. 1995 (Texto para Discussão, 377).

BASSIN, A. The consumer revolt – what's in it for you? *Modern Beauty Shop*, Hjan, 1973.

BELTRÃO, K. I., OLIVEIRA, F. E. B. de, SOUZA, M. C. *et alii. MAPS: uma versão amigável do Modelo Demográfico.* Rio de Janeiro: IPEA, 2000 (Seminários Dimac, 7).

BRAZIL. *Constitution of the Federative Republic of Brazil.* Brasilia, 1988.

————. *Decree Law 7526 dated May 7, 1945* (Organic Law of Social Services).

————. *Decree Law 276 dated February 28, 1967* (Reforming of the Rural Workers' Statute).

————. *Decree Law 564 dated May 1, 1969* (Basic Social Security Plan).

————. *Law 2613 dated September 23, 1955* (created the Rural Social Services).

————. *Law 4214 dated March 2, 1963* (Rural Workers' Statute).

—————. *Law 5694 dated August 23, 1971* (changes first item I of paragraph 4 of article 64 of Law 3807 of August 26, 1960.

—————. *Law 6179 dated December 11, 1974* (creates a social assistance benefit).

—————. *Law 6195 dated December 19, 1974* (creates Rural Workers' Accident Insurance).

—————. *Law 6260 dated November 6, 1975* (includes Rural employer as a potential beneficiary).

—————. *Law 8213 dated July 24, 1991.*

—————. *Complementary Law 11 dated May 25, 1971* (Rural Workers' Assistance Program: Pró-Rural).

IBGE. *National Survey by Household Sampling* (PNAD), 1988.

—————. *National Survey by Household Sampling* (PNAD), 1998.

OLIVEIRA, F. E. B. de, BELTRÃO, K. I., DAVID, A. C. de A. *Previdência, poupança e crescimento econômico: interações e perspectivas*. Rio de Janeiro: IPEA, 1998 (Texto para Discussão, 607).

OLIVEIRA, F. E. B. de, BELTRÃO, K. I., MEDICI, A. C. *The social security reform in Brazil: past, present and future*. Rio de Janeiro, 1993 (Report for ILO).

OLIVEIRA, F. E. B. de, BEVILAQUA, A. S. *A diagnosis of rural social security and assistance*. Rio de Janeiro: IPEA, 1984.