TEXTO PARA DISCUSSÃO N° 1067

BRAZILIAN POPULATION AND THE SOCIAL SECURITY SYSTEM: REFORM ALTERNATIVES

Kaizô Iwakami Beltrão
Sonoe Sugahara Pinheiro

Rio de Janeiro, janeiro de 2005

TEXTO PARA DISCUSSÃO N° 1067

BRAZILIAN POPULATION AND THE SOCIAL SECURITY SYSTEM: REFORM ALTERNATIVES

Kaizô Iwakami Beltrão*
Sonoe Sugahara Pinheiro**

Rio de Janeiro, janeiro de 2005

* Da Ence/IBGE.

** Consultora do IPEA.

Governo Federal

Ministério do Planejamento, Orçamento e Gestão

Ministro – Nelson Machado (interino)
Secretário-Executivo – Nelson Machado

ipea **Instituto de Pesquisa Econômica Aplicada**

Fundação pública vinculada ao Ministério do Planejamento, Orçamento e Gestão, o IPEA fornece suporte técnico e institucional às ações governamentais, possibilitando a formulação de inúmeras políticas públicas e programas de desenvolvimento brasileiro, e disponibiliza, para a sociedade, pesquisas e estudos realizados por seus técnicos.

URL: http:/www.ipea.gov.br

Ouvidoria: http:/www.ipea.gov.br/ouvidoria

ISSN 1415-4765

JEL C10, C80, H6, H20, H50, H55, J14, J26, R10

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.

SUMÁRIO

SINOPSE

Este estudo analisa, a partir dos dados da PNAD, a situação da população brasileira *vis-à-vis* o Sistema de Seguridade Social (SSS). Foram escolhidos os anos de 1982, 1992 e 2002 com o objetivo de apresentar retratos da população brasileira em intervalos de tempo iguais, mas sob diferentes legislações no que tange à implementação da legislação de Seguridade Social. Atenção especial foi dada à diminuição da pobreza e ao impacto de algumas alternativas que podem ser consideradas uma eventual reforma do sistema. Dadas as diferenças nas regras de elegibilidade e contribuição das populações urbana e rural, os efeitos das mudanças legais diferem.

Nas simulações, a postergação da idade de elegibilidade para o benefício foi bastante significativa, mesmo quando considerada a idade de 65 anos, o que equivaleria à eliminação da aposentadoria por tempo de serviço. O teste de idade foi também significativo para os pensionistas. O teste de necessidade se mostrou também uma boa alternativa a ser considerada. A eliminação dos benefícios múltiplos, naturalmente progressiva, é uma alternativa a ser considerada.

ABSTRACT

This study analyses the situation of the Brazilian population vis-à-vis the Social Security System (SSS) using data from PNAD. We chose the 1982, 1992 and 2002 PNAD data to give a series of pictures of the Brazilian population at equal intervals but under different legal instances with respect to the implementation of Social Security legislation. Special attention is given to poverty alleviation and to the impact of some alternatives among the many that may be considered in an eventual reform of the Brazilian SSS.

In the simulations the alternative of postponing the eligibility age has had the greatest effect, mainly when one considers the age of 65, which would be the equivalent of eliminating length-of-service retirement. Age testing is also effective for survivor's benefit recipients. Eliminating multiple benefits, though not impressive when figures are in question, is progressive in nature and therefore an alternative to be considered.

1 INTRODUCTION

This study analyses the situation of the Brazilian population vis-à-vis the Social Security System (SSS) using data from PNAD, a household survey conducted annually by The Central Brazilian Statistical Office (IBGE) in years in which there is no census. Special attention is given to poverty alleviation and to the impact of some alternatives among the many that may be considered in an eventual reform of the SSS. Of course, in this kind of reform, there is a whole spectrum of limitations: the legal system, the level of legislation needed to implement the changes, the segment of the population with acquired rights under previous rules, political and economic constraints, plus demographic issues such as population ageing that have to be taken into consideration. These may be considered backstage scenarios since the main issue in any reform of the SSS is the question of how the reform is going to affect the population in terms of coverage and income distribution.

The legal landmark for the current Social Security framework is the 1988 Constitution that enlarged existing benefits and created new ones. Some of the changes mandated by the 1988 Constitution were self-explanatory and did not require a specific law, while others required complementary laws that took some time to be promulgated. By 1991 most changes related to the urban branch of the SSS had already been implemented, the ones regarding the rural population being implemented in 1991,[1] with impacts measurable only later on.

For an effective future reform to take place, a nationwide consensus should be reached as to which characteristics would be desirable in a SSS. The only consensus nowadays is that it needs to be changed. The subject will possibly require an open debate as misconceptions about Social Security are numerous and widespread. Issues to be discussed should include whether to favor individual equity or collective welfare, what risks should be covered, which population group should be targeted, whether to make it compulsory or voluntary, how to finance it, etc.

The Brazilian Social Insurance is comprised of the *Regime Geral da Previdência Social* (RGPS) for workers in the private sector, there included the self-employed and the *Regime Jurídico Único* (RJU), which are several separate regimes for civil servants at federal, state and municipal levels. Social assistance provides means-tested benefits for urban and rural dwellers.

The President Lula government assumed that the Social Insurance for public servants (RJU) was the central and most problematic issue when compared to the system for the private sector workers (RGPS), although as can be seen in Table 1, in

1. In July 1991, with Law 8213.

terms of rate of increase of financing needs,[2] the private sector regime was much higher than that of the public sector regime between 1995 and 2002. Based on this mistaken diagnosis, the government centered changes on the RJU that led to the approval of Constitutional Amendment EC41 in December 2003.

TABLE 1
SOCIAL SECURITY EXPENSES AND CONTRIBUTIONS—RGPS AND RJU
[R$ billions (current value) and % GDP]

	1995		2001		2002		2003	
	R$ billions	(% GDP)	R$ billions	(% GDP)	R$ billions	(% GDP)	R$ billions	(% GDP)
I – Private sector workers system (RGPS)	–0.4	–0.1	–12.8	–1.1	–17.0	–1.3	–27.3	–1.8
Contributions (Net contributions)	32.2	5.0	62.5	5.3	70.9	5.4	84.8	5.6
Pension Benefits	32.6	5.0	75.3	6.3	87.9	6.7	113.6	7.5
II – Public sector servants (RJU)	–19.2	–3.0	–48.6	–4.1	–54.7	–4.2	–54.5	–3.6
Employee contributions	6.2	1.0	7.8	0.7	8.4	0.6	10.6	0.7
Expenses with pensioners and survivor's beneficiaries	25.4	3.9	56.4	4.7	63.1	4.9	62.1	4.1
Union	–13.2	–2.0	–24.4	–2.1	–29.5	–2.3	–27.3	–1.8
Employee contributions	2.1	0.3	3.7	0.3	4.3	0.3	6.1	0.4
Expenses with pensioners and survivor's beneficiaries	15.3	2.4	28.1	2.4	33.8	2.6	33.3	2.2
States	–4.9	–0.8	–21.0	–1.8	–21.9	–1.7	–21.2	–1.4
Employee contributions	3.7	0.6	3.7	0.3	3.7	0.3	4.5	0.3
Expenses with pensioners and survivor's beneficiaries	8.6	1.3	24.6	2.1	25.5	2.0	25.8	1.7
Local governments	–1.1	–0.2	–3.2	–0.3	–3.3	–0.3	–3.0	–0.2
Employee contributions	0.4	0.1	0.5	2.1	0.5	0.0	0.0	0.0
Expenses with pensioners and survivor's beneficiaries	1.4	0.2	3.7	0.3	3.8	0.3	3.0	0.2
Total	–19.6	–3.0	–61.5	–5.2	–71.7	–5.5	–81.8	–5.4
Contributions	38.3	5.9	70.3	5.9	79.3	6.1	92.4	6.1
Benefits	58.0	9.0	131.7	11.1	151.0	11.6	175.7	11.6

Sources: MPAS, *Livro Branco da Previdência Social* (Social Security White Book) and Giambiagi et al (2004).

2. We will consider in this report as financing needs for the Private Sector the difference between contributions levied on payroll (employees' and employers') and benefits paid by INSS. For the public sector we will consider as financing needs the difference between employees´ contributions and benefits paid to pensioners. Both figures need some further explanation. It is arguable whether the so-called employers´ contribution is actually paid by employers. Every time the government decided to curb profits, this contribution was considered part of the costs, i.e., was embedded into prices paid by consumers. On the other hand INSS pays some benefits that would be better classified as Social Assistance and not Social Insurance. Contributions of the government as employer are usually not considered explicitly in the budget. To be totally fair while comparing the two financing needs one would have to face the problem of deciding what would be a comparable contribution from the government as employer. In the private sector, employers pay roughly 22% levied over the total payroll, though employees contribute (and are eligible) up to a ceiling. Since employees in the public sector contribute with no ceiling at all the comparable contribution of the employer cannot be the same 22% over the total payroll.

We used data from PNAD for three different years: 1982, 1992 and 2002 in order to analyze the evolution of the active and the beneficiary population, as well as the effects that would have been felt, had the changes under consideration been introduced at the time. All data, graphs and tables herein presented are the result of tabulations using individual level information from PNAD, disaggregated in urban/rural[3] conditions, at three instances in time, spaced at ten-year intervals mentioned above. We chose these dates to give a series of pictures of the Brazilian population at equal intervals but under different legal instances with respect to the implementation of Social Security legislation. In 1982, we have a situation prior to the 1988 Constitution that defined a large set of changes,[4] some of them self-explanatory and thus not requiring complementary legislation to define changes. In 1992 most of the changes mandated by the Constitution had already been implemented, both for urban and rural workers. The most recent available information from PNAD refers to 2002 and this date was used to simulate the impact of possible alternative changes on the present Social Security legislation.

This study is composed of seven sections: the Section 1 is this introduction. In the Section 2 we describe the evolution of the population according to labor market and social security ties for the 1982-2002 period. In the Section 3 we consider the effect of eliminating pension benefits from family income, in the Section 4, the effect of eliminating pension benefits for some specific age groups and in the Section 5, the effect of eliminating pensions with means testing. Considering the changes in the labor market where there has been an increase in female participation in the formal market, the Section 6 checks the existence of multiple benefits (from retirement and survivors' benefit) and estimates the effect of eliminating the smallest one. In the last section we present some conclusions and in the Annex some tables with average per capita family income by 20-tiles for the urban and rural population.

3. We have adopted here the IBGE 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. It is worth mentioning that the definition of urban/rural for Social Security purposes is linked to the type of activity the worker is engaged in. Farming, ranching and certain kinds of non-industrial-scale fishing are considered rural. The IBGE concept is but a proxy.

4. In general, the new basic provisions were: *a*) introduction of the Social Security concept as an integrated set including 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 (they were previously equal to half a minimum wage); *e*) reduction of five years in age limits for rural benefits; *f*) recalculation of all benefit values so as to recompose their original value (as multiples of the minimum wage); *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.

2 EVOLUTION OF THE POPULATION ACCORDING TO SOCIAL SECURITY AND LABOR MARKET TIES BETWEEN 1982 AND 2002

We consider in this section the population disaggregated according to formal Social Security ties and the labor market situation. With respect to the labor market, individuals can be part of it or not. If they are part of the active population they may have an employer or not. If they do not have an employer, they can be employers themselves or self-employed. With respect to the SSS, individuals may have a formal tie to the Private Sector System or to one of the Public Sector Systems. The formal tie can be either as a contributor or as a beneficiary (pensioners and survivors´ benefit recipients). The combination of ties to the Social Security System and to the formal market as previously described leads to six main categories (see Table 2). Contributors are hereafter called *formal market*, and those who are in the labor market and do not contribute to the system are hereafter called *informal market*.

TABLE 2
CATEGORIES CONSIDERED IN THE ANALYSIS

0 – Public servants, including military personnel (formal market)
1 – Employees in the formal market
2 – Employees in the informal market
3 – The self-employed or employers contributing to the system (formal market)
4 –The self-employed or employers not contributing on salaries/earnings to the system, workers without earnings and the unemployed (informal market)
5 – Beneficiaries* (pensioners and survivors´ benefit recipients)
6 – Population neither working nor receiving social security benefits

* PNAD data does not allow for disaggregation of beneficiaries by the different systems: RGPS, RJU or Social Assistance.

When we analyze the evolution of the participation of these different groups throughout a 20-year time interval (see Tables 3 and 4), we can observe that an increase occurred among beneficiaries of the system, mainly among women and the rural population. There are two different effects mingled in this statement. First, with population ageing there are fewer children (intrinsically in category 6) and more adults and elderly individuals (eligible for categories 3, 4 and 5). Second, there was an actual increase in Social Security coverage. The number of direct contributors in rural areas[5] is very small but, under Brazilian legislation, eligibility for benefits in these areas does not depend on a direct contribution unlike their urban counterparts. We then perceive a proportional increase in participation of beneficiaries. Considering the definition of rural/urban, it is unlikely but also possible that this proportional increase is due to urban dwellers in rural areas (see footnote 3). Urban male contributors, though, experience an increase in absolute figures, undergoing a decrease in proportional participation for all groups: public servants, employees and

5. Between January and November 2002, contributions amounted to R$ 63.0 billions (urban) and R$ 2.0 billions (rural), while benefits paid amounted to R$ 64.5 billions (urban) and R$ 15.6 billions (rural).

the self-employed. On the other hand, females present an increase both in absolute figures and in proportional participation for all formal groups considered. The informal market presents an increase both in absolute figures and proportional participation for both men and women in urban areas. These figures, though, hide age-related differences that will be analyzed in the next section. It is worth mentioning that the 1982 concept of workers differs somehow from the concept in later years. It was expanded to include individuals working in a family economy and planting produce for their own consumption.

TABLE 3
DISTRIBUTION OF THE URBAN/RURAL POPULATION WITH RESPECT TO SOCIAL SECURITY TIES: MALES AND FEMALES—1982, 1992 AND 2002
[relative values (%)]

	1982		1992		2002	
	Males	Females	Males	Females	Males	Females
			Urban			
0	3.41	1.00	3.22	3.34	3.06	3.47
1	23.65	10.18	22.12	10.89	20.26	12.21
2	8.60	7.78	9.50	7.62	10.27	8.42
3	6.33	1.11	5.36	1.21	3.80	1.31
4	10.40	6.18	10.75	7.29	12.46	7.51
5	7.14	7.00	8.01	9.80	10.09	13.69
6	40.48	66.74	41.04	59.85	40.07	53.40
			Rural			
0	0.40	0.08	0.44	1.07	0.52	1.33
1	6.20	1.81	7.90	2.73	8.43	3.20
2	13.05	4.07	14.91	5.60	14.57	5.60
3	2.08	0.17	1.63	0.19	1.28	0.17
4	35.28	15.68	34.46	28.27	33.12	26.16
5	4.70	4.00	6.86	7.47	10.10	13.88
6	38.29	74.19	33.80	54.67	31.98	49.66

Source: PNAD 1982, 1992 and 2002.

TABLE 4
DISTRIBUTION OF THE URBAN/RURAL POPULATION WITH RESPECT TO SOCIAL SECURITY TIES: MALES AND FEMALES—1982, 1992 AND 2002
[absolute values]

	1982		1992		2002	
	Males	Females	Males	Females	Males	Females
			Urban			
0	1.450.165	447.458	1.772.418	1.959.667	2.136.517	2.615.038
1	10.070.334	4.548.521	12.181.971	6.393.412	14.164.506	9.200.129
2	3.660.789	3.477.661	5.235.247	4.477.606	7.176.867	6.349.094
3	2.693.377	498.133	2.951.852	710.817	2.659.092	989.129
4	4.429.986	2.760.410	5.923.309	4.278.129	8.708.496	5.658.274
5	3.039.363	3.128.772	4.414.343	5.756.363	7.056.788	10.315.223
6	17.234.342	29.815.224	22.603.403	35.148.473	28.010.689	40.246.001
			Rural			
0	73.220	13.353	72.155	167.832	71.899	167.647
1	1.125.556	309.572	1.307.247	426.292	1.163.849	402.944
2	2.369.473	696.429	2.466.072	874.713	2.012.078	703.997
3	377.346	29.002	270.362	29.454	176.774	21.023
4	6.406.108	2.680.085	5.700.575	4.416.210	4.572.466	3.288.855
5	853.609	684.113	1.135.740	1.166.561	1.394.516	1.745.578
6	6.951.485	12.683.239	5.592.494	8.540.414	4.415.448	6.244.405

Source: PNAD 1982, 1992 and 2002.

In Table 5[6] we present the distribution of the benefits' mean values received by the urban and the rural population for the years considered. The tally singles out the population receiving exactly ½, ¾ and 1 minimum wage. The first two figures correspond to rural benefits before the 1988 Constitution. Social Assistance benefits were equal to ½ a minimum wage. We can see that in 1982, 44.2% of the urban and 88.5% of the rural population received benefits below the minimum wage. In 1992, these values were 7.2% and 8,9% for the urban and rural population respectively and in 2002 these values fell to 0.5% for the urban and 0.8% for the rural population, showing the impact of the 1988 Constitution. Note that in rural areas, 25.2% of male and 85.8% of female beneficiaries were receiving benefits equal to ½ a minimum wage in 1982. On the other hand the population receiving benefits corresponding to exactly the minimum wage increased largely in the period considered, for both the urban and the rural population, but much more among rural dwellers.

6. Some corrections were made in order to minimize dispersions around values corresponding to exactly ½ minimum wage, ¾ minimum wage and 1 minimum wage in 1982 and 1992.

TABLE 5
DISTRIBUTION OF THE URBAN/RURAL POPULATION WITH RESPECT TO THE AVERAGE VALUE OF THE BENEFIT RECEIVED—1982, 1992 AND 2002
[relative values (%)]

	1982		1992		2002	
	Males	Females	Males	Females	Males	Females
			Urban			
Below ½ mw	0.8	2.4	1.1	1.3	0.0	0.0
Exactly ½ mw	22.1	43.5	1.5	2.1	0.1	0.0
Between ½ and ¾mw	3.3	9.0	0.8	0.7	0.1	0.0
Exactly ¾ mw	3.1	4.5	0.2	0.2	0.0	0.0
Between ¾ and 1 mw	3.3	4.2	3.3	4.0	0.3	0.5
Exactly 1 mw	13.8	12.8	44.3	64.7	39.3	62.7
Above 1 mw	53.6	23.6	48.9	26.8	60.3	36.7
			Rural			
Below ½ mw	1.0	2.2	0.7	1.4	0.0	0.1
Exactly ½ mw	75.2	85.8	3.9	4.9	0.1	0.0
Between ½ and ¾mw	4.0	5.4	0.8	0.3	0.0	0.0
Exactly ¾ mw	1.9	1.6	0.1	0.0	0.0	0.0
Between ¾ and 1 mw	1.9	0.6	3.4	2.2	0.6	0.8
Exactly 1 mw	7.6	1.9	79.5	82.9	88.7	95.2
Above 1 mw	8.6	2.6	11.6	8.3	10.6	3.9

Source: PNAD 1982, 1992 and 2002.

2.1 THE URBAN POPULATION

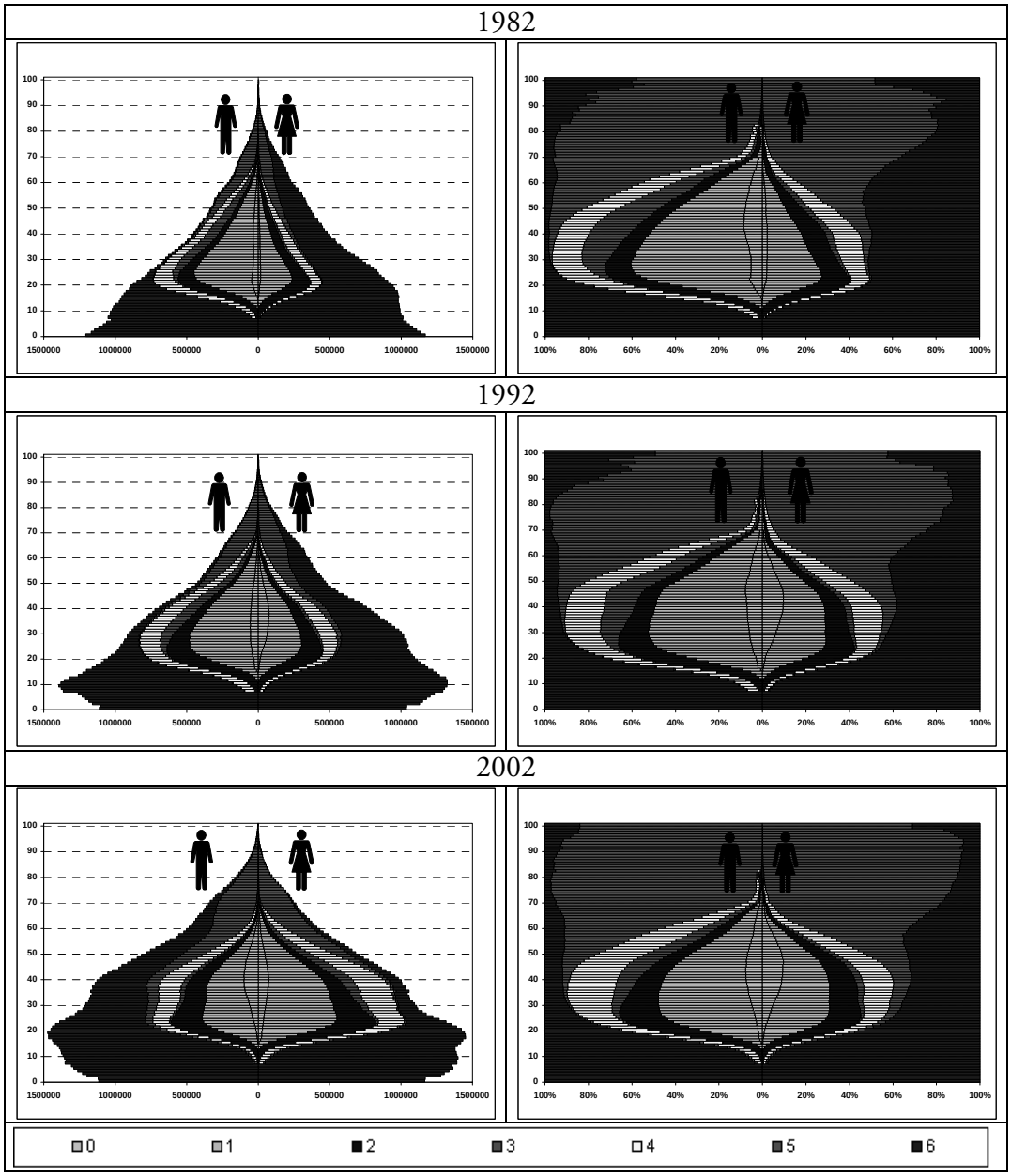
Graph 1 presents the age/sex[7] distribution of the Brazilian urban population in the already mentioned three instances in time: 1982, 1992 and 2002. The categories defined in Table 2 will be shown in Graph 1 and Graph 2.

The left-hand column presents absolute population values while the right-hand column presents the relative distribution for each combination of age/gender. Data for older age groups are quite sparse and the graph in the right-hand column presents higher variance for these ages. A five-term running average through the individual ages was used to smooth the data. We can note that among the urban male adult population, the formal self-employed population (category 3, which also includes employers contributing to the system) decreases[8] in both time intervals considered,

7. The left portion of the age/sex distribution refers to males and the right portion to females.

8. All comments refer to the relative participation of each category.

GRAPH 1
DISTRIBUTION OF THE URBAN POPULATION WITH RESPECT TO SOCIAL SECURITY TIES AND LABOR MARKET SITUATION—1982, 1992 AND 2002



Source: PNAD 1982, 1992 and 2002.

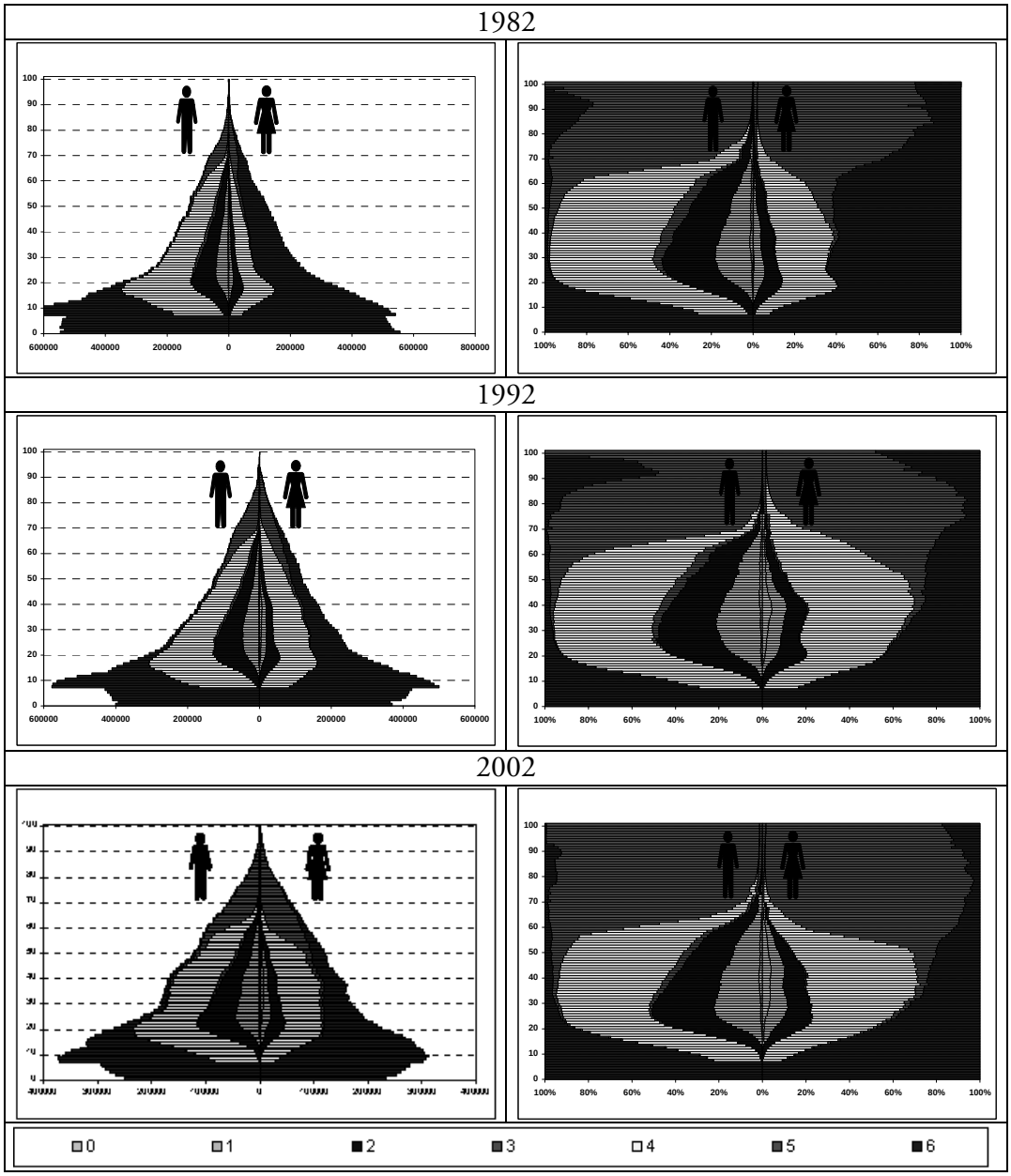
1982-1992 and 1992-2002, while categories 2 and 4 (informal market) increase considerably (Graph 1) in the period under analysis. It is worth highlighting that this increase in the first decade considered is concentrated on the young and middle-aged population. Among females, populations 1 and 4 show some increase in the first decade and 1 and 2 in the second decade. One specific segment of the formal market, female public servants (category 0), increases considerably in the first period. Among males, the formal market is larger than the informal, while among females the opposite is true. In addition one can perceive, in both decades, an increase in the population of beneficiaries among the aged. What is most striking in the age/sex

distribution is the discrepancy between the low level of formalization with respect to social security (few contributors) of the population in the active age-bracket and the elderly population, for whom coverage is quite universal, mainly in the last year considered, 2002. It seems that the system has some loopholes that allow people to become beneficiaries without a correspondingly lengthy contribution period (13 years is the required period nowadays and it will increase to 15 years by the year 2010. It was only five years up to the 1988 Constitution).

2.2 THE RURAL POPULATION

Graph 2 presents for the rural population a set of age/sex distribution similar to the ones displayed in Graph 1 for the urban population. As in the case of the urban population, the number of rural adults in category 3 decreases in time, while the inverse holds true for categories 2 and 4. Differences in the first decade are mainly due to the change in the concept of active population. From 1992 on, the concept is wider and encompasses also those working for self-consumption and in a family group without direct pay. These changes in concept affected mostly the rural population, and to a lesser degree the urban population as well. Among older persons, category 5 (beneficiaries) increases considerably. During the second decade, as a result of a complementary law to a provision in the Constitution lowering the eligibility age (55 years for women and 60 for men), a younger population gained access to benefits. In the rural areas, category 4 is the norm. Rural workers are not required to make a monthly contribution to the system in order to be eligible, but a contribution is levied on the first sale of produce. Most rural workers market their goods through coops and being a member of a coop is one possible way of gaining eligibility to a benefit (besides, for example, minimum age or impairment condition). Here also the discrepancy between direct contributors to the system among the population in the active age-bracket and the beneficiaries of the system among older persons is quite striking.

GRAPH 2
DISTRIBUTION OF THE RURAL POPULATION WITH RESPECT TO SOCIAL SECURITY TIES AND LABOR MARKET SITUATION—1982, 1992 AND 2002



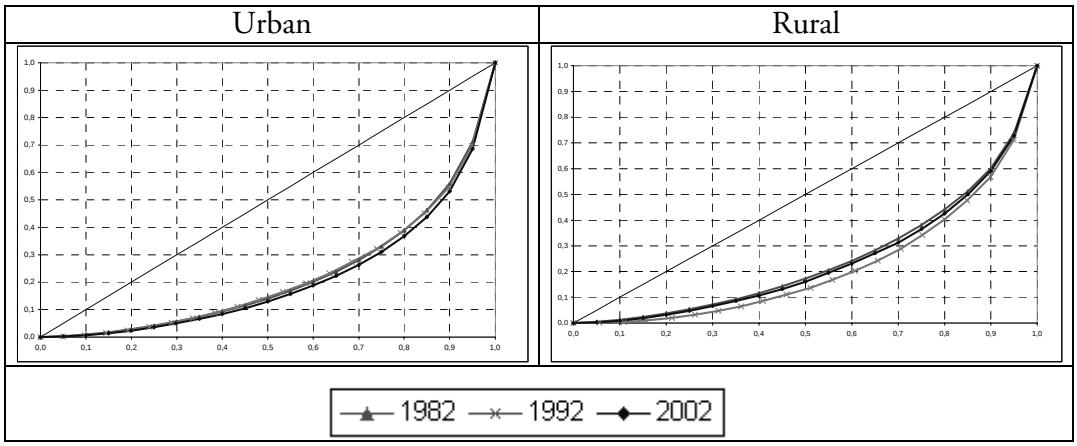
Source: PNAD 1982, 1992 and 2002.

3 EFFECTS OF ELIMINATING PENSION BENEFITS FROM FAMILY INCOME

To accomplish this analysis we ranked the families by per capita income from all sources and divided the population into 20 even groups. All statistics were then computed for each one of these groups. Tables A1 and A2 in the Annex list the values of average family income for each of the 20-tiles for the three dates considered. The data is further disaggregated by urban/rural situation. Table 1 shows current values and Table 2 shows values as multiples of minimum wage.

Graph 3 shows the Lorenz curves, both for urban and rural families, for each of the years considered: 1982, 1992 and 2002. The distribution inequality actually increases in the period for urban dwellers and the population as a whole. For rural dwellers it gets worse between the first two years considered and improves in the last period.

GRAPH 3
LORENZ CURVE FOR URBAN AND RURAL POPULATION—1982, 1992 AND 2002

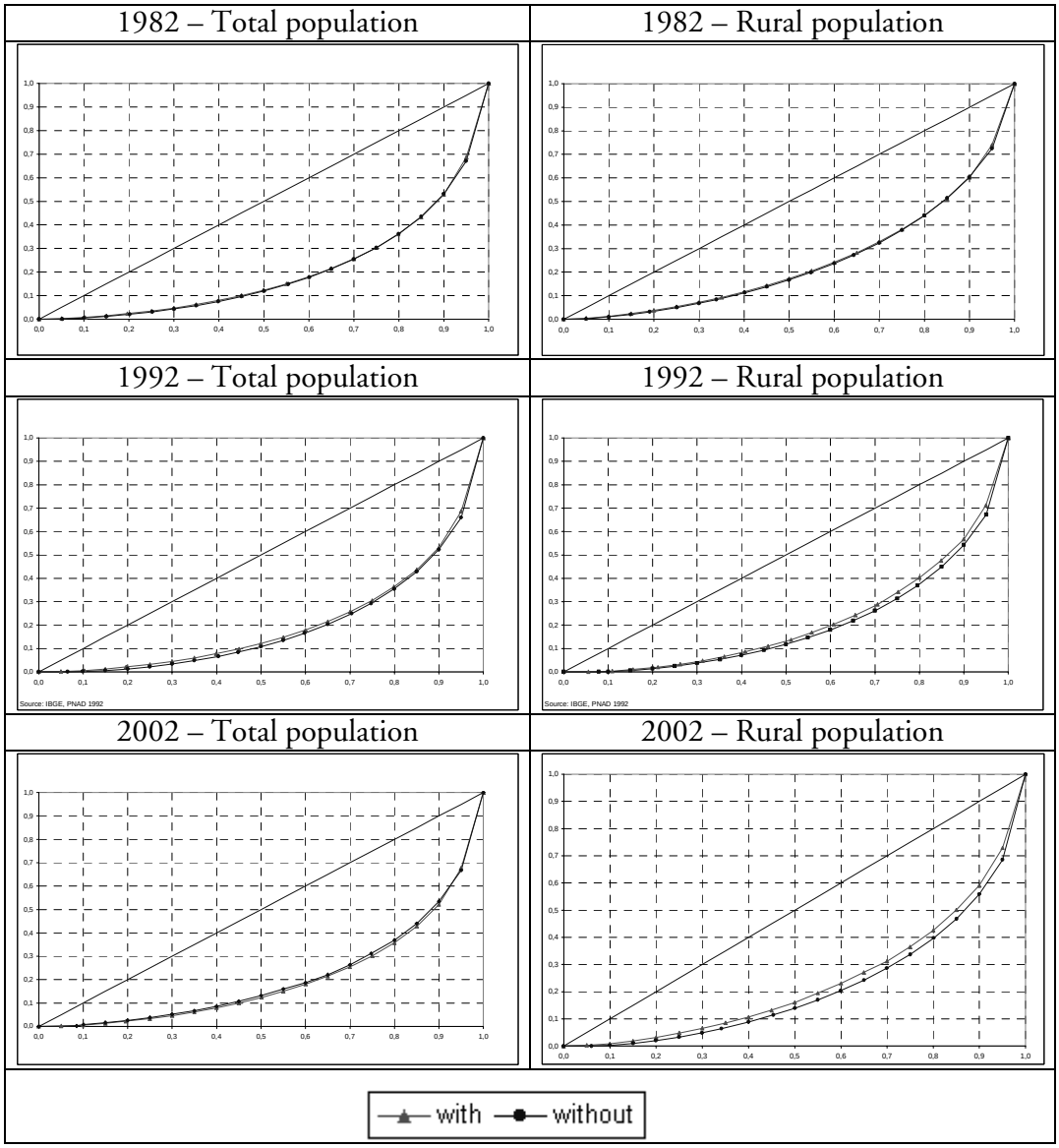


Source: PNAD 1982, 1992 and 2002

When one considers the Lorenz curves for the population as a whole with and without pensions the difference increases in time, from a mere 1% in the 1982 Gini coefficient to an almost fivefold figure in 2002 (see Graph 3, Graph 4 and Table 3). When one considers the rural population exclusively, figures are much more impressive: the difference in the Gini goes from 1.5% in 1982 to 7.1% in the 20-year period, showing that pensions play a much more important role among rural dwellers, possibly because rural society is not based solely on currency, and bartering and subsistence farming are still an important part of the economy.

GRAPH 4

LORENZ CURVE FOR TOTAL AND RURAL POPULATION WITH AND WITHOUT PENSIONS—1982, 1992 AND 2002



Source: PNAD 1982, 1992 and 2002

TABLE 6

TOTAL AND RURAL POPULATION: GINI COEFFICIENT WITH AND WITHOUT PENSIONS—1982, 1992 AND 2002

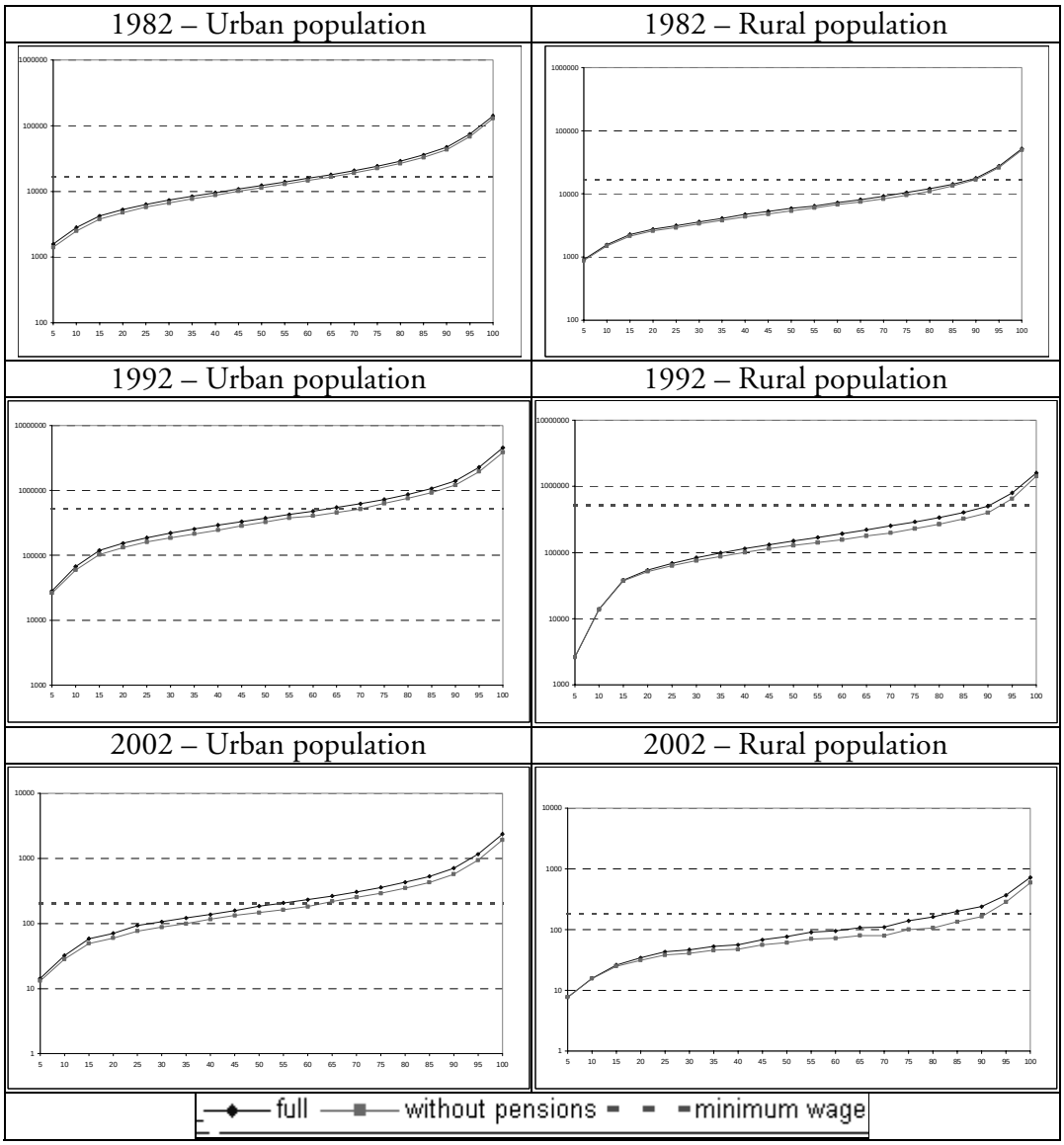
Year	Gini with pensions (1)	Gini without pensions (2)	Difference (%) [(2) – (1)]/(1)
Total population			
1982	0.5889	0.5947	1.00
1992	0.5906	0.6108	3.40
2002	0.5926	0.6228	5.08
Rural population			
1982	0.5040	0.5115	1.50
1992	0.5638	0.5927	5.10
2002	0.5221	0.5631	7.90

Source: PNAD 1982, 1992 and 2002.

3.1 THE URBAN POPULATION

Graph 5 presents, in the left-hand column, the average per capita income for all sources and the average per capita income without pensions for each of the 20-tile groups for the urban population in the years considered (see Tables A1 and A2 in the Annex for figures). We can see that the gap increases with time, which shows that pensions and survivors benefits are now a much more important component in family income. Also, we can note that in 1982 almost 65% of the urban population presents a per capita income below the minimum wage while in 2002 this proportion falls to 55%.

GRAPH 5
AVERAGE (LOG CR$) INCOME FROM ALL SOURCES BY 20-TILES OF PER CAPITA FAMILY INCOME WITH AND WITHOUT PENSION BENEFITS: URBAN AND RURAL POPULATION—1982, 1992 AND 2002



Source: PNAD 1982, 1992 and 2002.

3.2 THE RURAL POPULATION

Graph 5 presents, in the right-hand column, the average per capita income for all sources and the average per capita income without pensions for each of the 20-tile groups of the rural population. Here also the effect of taking out the pensions and survivor benefits are more visible in 2002. In 1982, 90% of the rural population presented a per capita income below the minimum wage, while in 2002 this percentage fell to 85%, a smaller decrease than the one encountered in the urban area.

4 EFFECTS OF ELIMINATING BENEFITS FOR SOME SPECIFIC AGE GROUPS

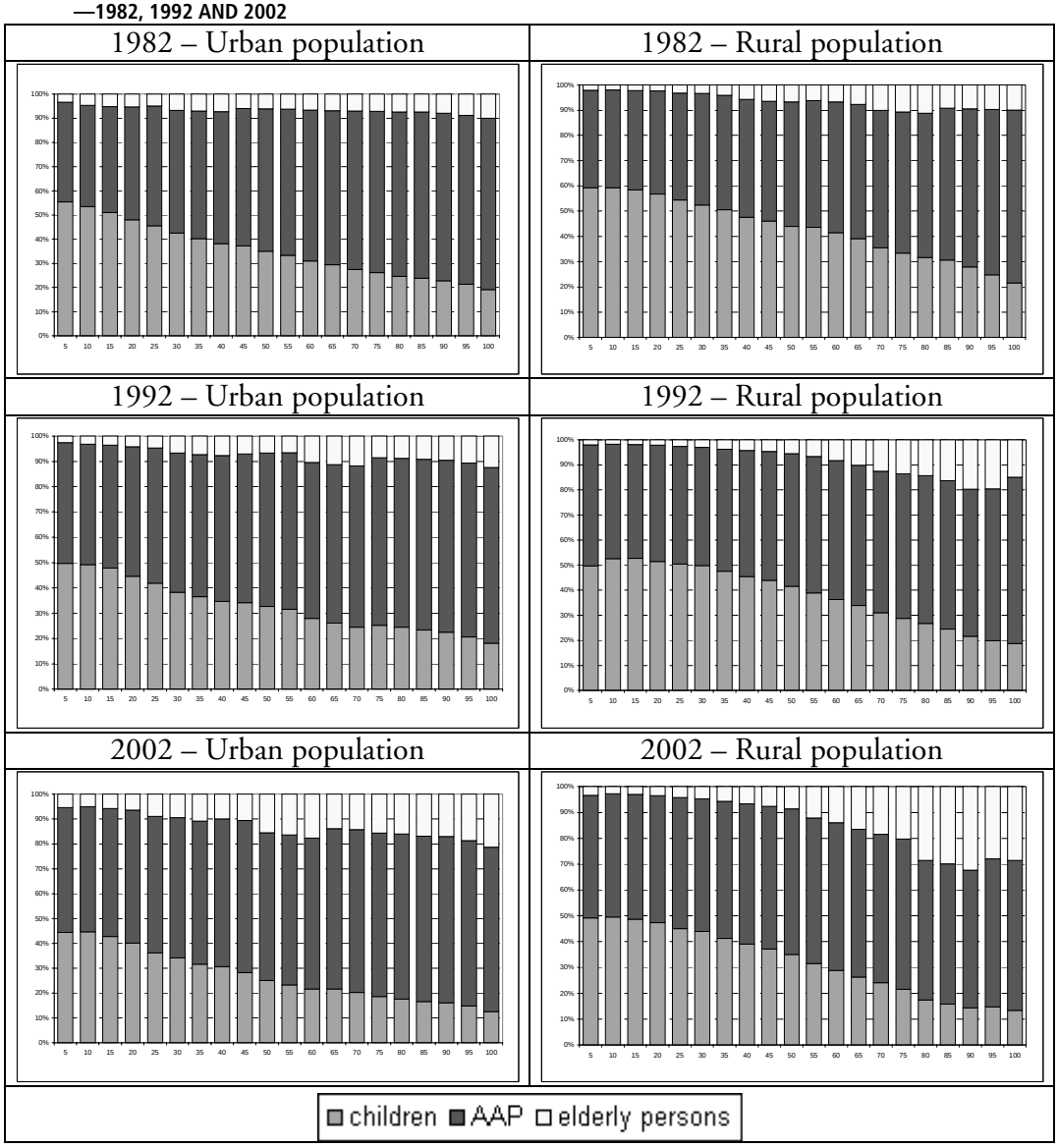
In this section we will estimate the effect of some alternatives for retirement eligibility rules, namely, different age limits. Effects of pensions on family income are a direct function of its age structure. Both for urban and rural dwellers, but more so for the rural population, the less affluent families have an age structure with more weight for children than for older persons. The situation exacerbates with time with respect to the participation of older persons. The fertility decline is reflected in a comparable decrease in the proportion of children for all families. There is a possible composite reason: families with more children, ceteris paribus, present lower per capita family income and in a troubled economy, like that of Brazil, pensions for older persons are a secure, regular and sure source of income.

Graph 6 presents the population distribution for greater age-brackets: 0-to-14 year-olds, *children*; 15-to-59 year-olds, *adults*; 60 year-olds and over, *older persons*, for each of the 20-tiles of per capita.

One set of alternatives for a possible reform has to do with establishing a minimum age for retirement eligibility. We considered three different possibilities: 55, 60 and 65 years of age for both males and females (the last one is equivalent to eliminating length of service retirement and setting a common age for both sexes for old-age retirement). In eliminating the benefit we have used 50 years as the lower limit, considering that most benefits below this age are bound to be due to invalidity. PNAD data do not inform what motivated the pension benefit and therefore the figures presented in this Section are slightly inflated because they include invalidity pensions as well. We have also considered the possibility of eliminating survivors' benefits for women in the 20-to-50-year age bracket.

GRAPH 6

POPULATION DISTRIBUTION BY GREAT AGE-GROUPS AND 20-TILES OF PER CAPITA INCOME: URBAN AND RURAL —1982, 1992 AND 2002

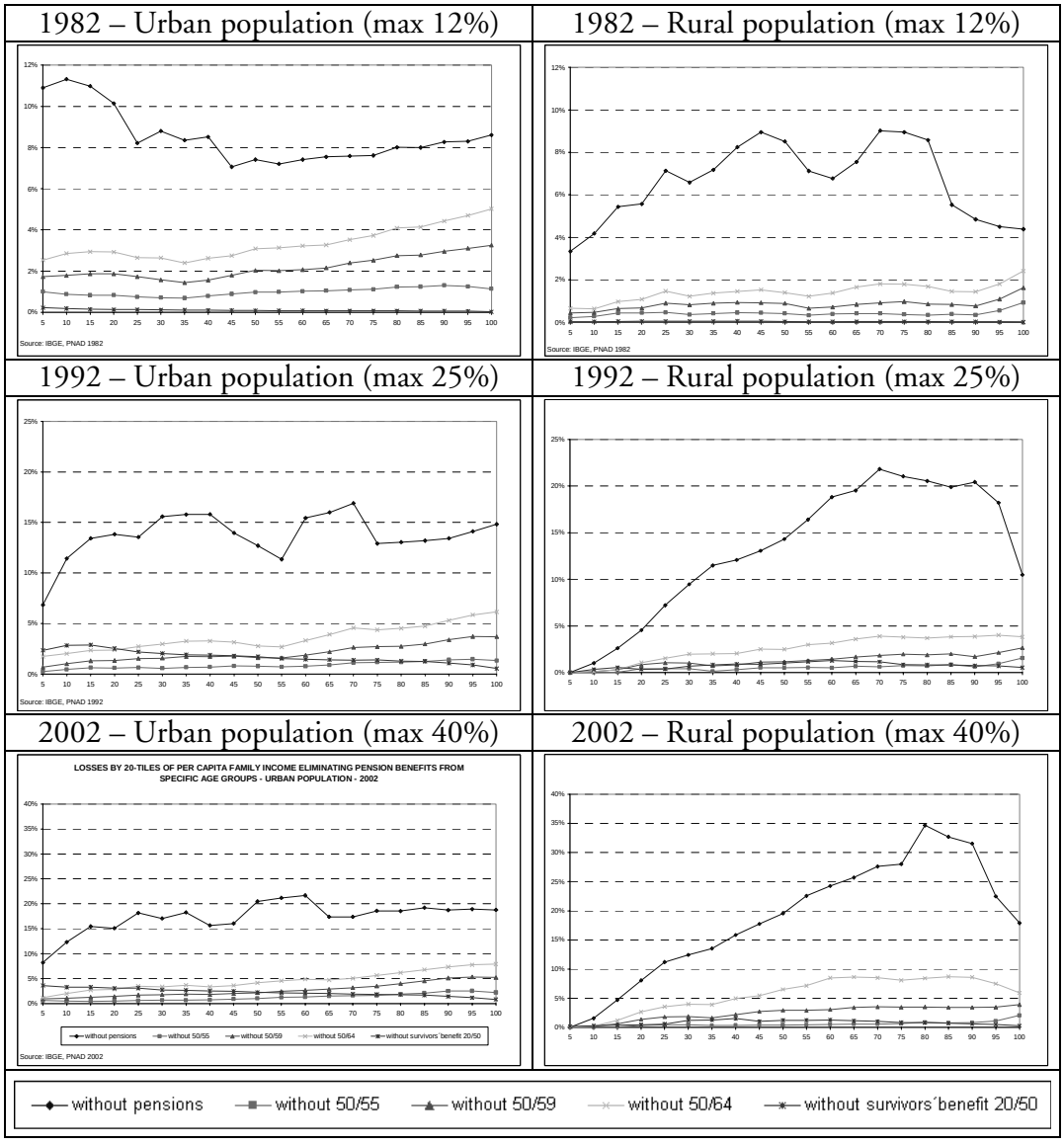


Source: PNAD 1982, 1992 and 2002.

Graph 7 presents losses incurred by elimination of pensions for some specific age groups (50-to-54, 50-to-59 and 50-to-64), for the urban population in the left column and for the rural population in the right column. Each year considered—1982, 1992 and 2002—is presented in a different row.[9] In the x-axis of each graph we have the 20-tile groups of per capita family income and in the y-axis, the loss incurred in eliminating the benefit from the family income for each group already described. For reference, the topmost line represents the total effect of eliminating all benefits (there included survivors' benefits), regardless of age.

9. Note the change in scale for the y-axis.

GRAPH 7
LOSSES INCURRED BY ELIMINATION OF PENSIONS FOR SOME SPECIFIC AGE GROUPS: URBAN AND RURAL POPULATION—1982, 1992 AND 2002



Source: PNAD 1982, 1992 and 2002.

4.1 THE URBAN POPULATION

When one considers the full effect of pensions for the urban population (see Graph 7), the impact increases with time and goes from an average of 8% in 1982 to 14% in 1992 and 19% in 2002. In 1982 the impact is slightly greater for less affluent groups and the opposite is true for the other years analyzed.

The curve representing losses as a function of income with the imposition of age limits for eligibility has a positive slope for higher levels of income and a steeper slope with the passing of years. Of course, higher ages present heavier losses. Table 7 presents the average losses for all income brackets with elimination of benefits for some specific age groups. For the sake of comparison we have also presented the

impact of eliminating all benefits. It is clear that there is an increasing loss in this 20 years period since pensions have become, with time, an ever-increasing share of family income.

TABLE 7
AVERAGE LOSSES FOR ALL INCOME BRACKETS WITH ELIMINATION OF BENEFITS FOR SOME SPECIFIC AGE GROUPS—URBAN POPULATION
[%]

	All ages	50-54	50-59	50-64	20-50 Survivors' benefit recipients
1982	8.2	1.1	2.7	4.2	0.1
1992	14.2	1.2	3.0	5.0	1.1
2002	18.6	1.9	4.3	6.6	1.3

Source: PNAD 1982, 1992 and 2002.

4.2 THE RURAL POPULATION

The right-hand column of Graph 7 presents the figures for the rural population. The same comments made about the urban population still hold true: losses from the imposition of age limits for eligibility are increasing functions of income with positive slopes and higher levels, steeper slopes with the passing of years and heavier losses for older eligibility ages. Similar to the figures presented in Table 7 for the urban population, Table 8 presents the average losses for all income brackets with elimination of benefits for some specific age groups in the rural population. It is clear that for the rural population there is also an increasing loss for age groups in the time period considered. The impact of all pensions is more impressive for rural areas as compared to urban areas in 1992 and 2002. This was not the case in 1982, though, before the new Constitution. When age limits are considered, the situation is somehow changed and with the exception of the 65-year-age limit in 2002, impacts are higher for the urban population. This fact was somehow expected since the population with benefits from invalidity and length of service are much higher among urban dwellers, and those typically occur at younger ages than the ones considered in these simulations. The same holds true for survivors' benefits in the 20-to-50-year age bracket. Most survivors' pensions in rural areas start as old-age benefits, which require the husband to be at least 60 years old. There is some anecdotal evidence of younger women marrying retirees to inherit their pensions, but data show that this is not a major problem yet.

TABLE 8
AVERAGE LOSSES FOR ALL INCOME BRACKETS WITH ELIMINATION OF BENEFITS FOR SOME SPECIFIC AGE GROUPS: RURAL POPULATION
[%]

	All ages	50-54	50-59	50-64	20-50 Survivors' benefit recipients
1982	6.0	0.5	1.1	1.8	0.0
1992	15.7	0.9	2.0	3.5	0.8
2002	22.8	1.1	3.3	6.9	0.7

Source: PNAD 1982, 1992 and 2002.

5 EFFECTS OF ELIMINATING BENEFITS WITH MEANS TESTING

Since most benefits of exactly one minimum wage have a major Social Assistance component, a possible alternative (besides setting Social Assistance benefits at a different value than the Social Insurance lower limit) is to define a means tested benefit.[10] We defined three levels for the per capita family income in the means test.[11] ¼ of the minimum wage, ½ and ¾. In 1982 the rural benefit and the social assistance benefit as well were equal to ½ a minimum wage.[12] From 1988 onwards, the minimum benefit was set at exactly one minimum wage. Graph 8 presents losses incurred by the elimination of pensions of "social assistance nature"[13] for some specific income brackets, in the left-hand column for urban population and in the right, for rural population. Similar to Graph 7, 1982, 1992 and 2002 are presented on a different row. In the x-axis of each graph we have the 20-tile groups of per capita family income and in the y-axis, the loss incurred in eliminating the benefit for each group already described. Here also, for reference, the topmost line represents the total effect of eliminating all benefits, regardless of the per capita family income.

5.1 THE URBAN POPULATION

As we have seen in the previous section, when one considers the full effect of pensions in the urban population (see Graph 7), the impact increases with time. Table 9 presents the average losses for all income brackets with elimination of benefits for the income groups already listed. The effect is very dispersed in the urban population: encompassing the 85% more affluent portion of the population for ¼ of minimum wage, 65% for ½ and 50% for ¾. Though the impact affects more affluent groups as the test line increases, for example in 2002, the mode is 50, 55 and 65, respectively, for test lines ¼, ½ and ¾ of the minimum wage. The effect is relatively small, at most 6% in 2002 for the lowest cutting line using as reference urban benefit expenses. This would imply, in 2002, savings of R$ 7.3 billion of the R$ 131.7 billion total expenses (both RJU and RGPS for urban and rural beneficiaries).

10. Nowadays, Social Assistance benefits are means tested with a ¼ minimum wage cutting line.

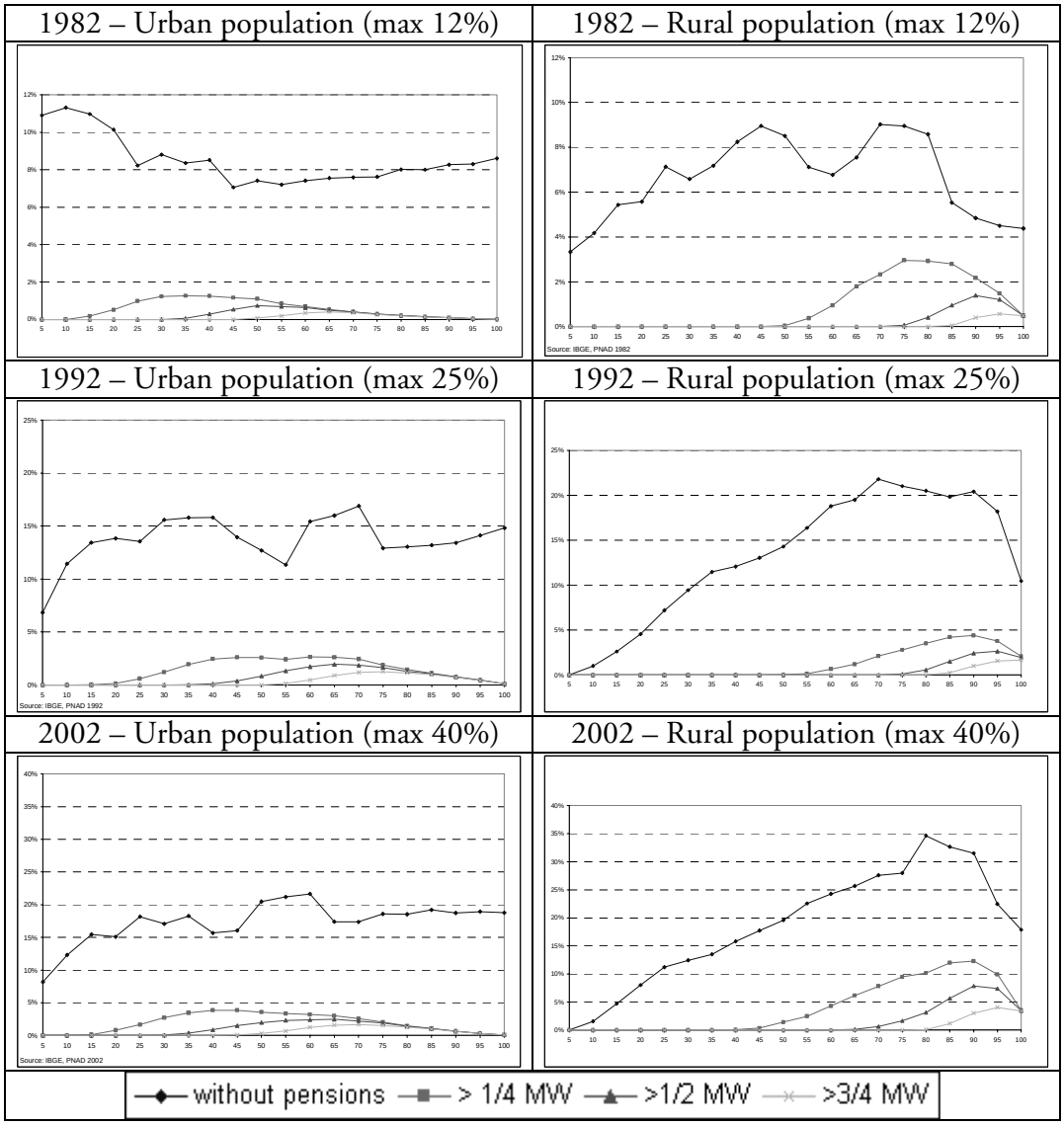
11. We also tried to use one full minimum wage as the limit for the means test, but this included too big a portion of the population.

12. With the exception of the work related disability benefit, equal to ¾ of a minimum wage.

13. Benefits with values equal to or less than one minimum wage.

GRAPH 8

LOSSES INCURRED BY ELIMINATION OF PENSIONS FOR SOME SPECIFIC INCOME-BRACKET GROUPS: URBAN AND RURAL POPULATION—1982, 1992 AND 2002



Source: PNAD 1982, 1992 and 2002.

TABLE 9

AGGREGATED LOSSES FOR ALL INCOME BRACKETS WITH ELIMINATION OF BENEFITS OF A "SOCIAL ASSISTANCE NATURE" FOR SOME SPECIFIC PER CAPITA FAMILY INCOME GROUPS—URBAN POPULATION

[%]

	Reference: urban benefits			Reference: urban income		
	>3/4	>1/2	>1/4	>3/4	>1/2	>1/4
1982	1.3	2.0	3.4	0.1	0.2	0.3
1992	3.3	4.8	7.1	0.5	0.7	1.0
2002	2.7	4.1	6.0	0.5	0.8	1.1

Source: PNAD 1982, 1992 and 2002.

5.2 THE RURAL POPULATION

Similar to the figures presented in Table 9 for the urban population, Table 10 presents the average losses for all income brackets with elimination of benefits for some per capita family income groups in the rural population. In rural areas, the effect of this alternative is more concentrated. As already mentioned, the weight of pension benefits on family income is more impressive for rural areas than for urban areas. In the rural population the means test affects only the population in the upper income brackets: 50 and above for ¼ of minimum wage, 70 for ½ and 85 for ¾. Therefore, this mechanism could be used as a fair way of reducing Social Security expenses. Using the lowest cutting line, this action would imply, in 2002, in savings with rural benefit expenses of R$ 2.7 billion.

TABLE 10
AGGREGATED LOSSES FOR ALL INCOME BRACKETS WITH ELIMINATION OF BENEFITS OF A "SOCIAL ASSISTANCE NATURE" FOR SOME SPECIFIC PER CAPITA FAMILY INCOME GROUPS—RURAL POPULATION
[%]

	Reference: rural benefits			Reference: rural income		
	>3/4	>1/2	>1/4	>3/4	>1/2	>1/4
1982	4.5	9.0	21.9	0.2	0.5	1.3
1992	5.3	8.5	15.2	0.5	0.8	1.1
2002	9.3	15.5	27.8	1.9	3.3	5.9

Source: PNAD 1982, 1992 and 2002.

6 EFFECTS OF ELIMINATING MULTIPLE PENSION BENEFITS

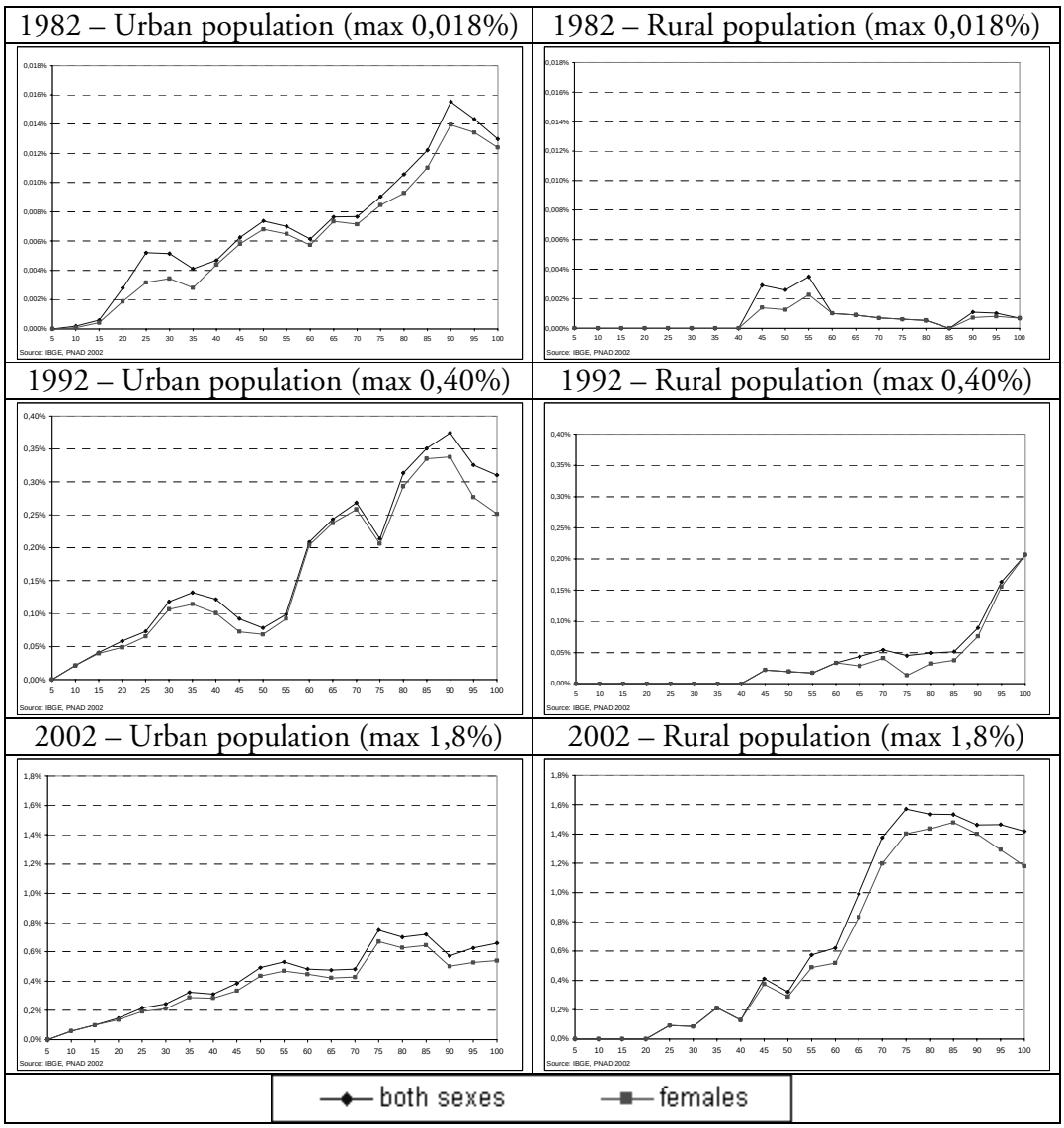
At the beginning, Social Security aimed at the family as the unit to be protected, since at that time, the single breadwinner family was the norm. Changes in society, brought about by the world wars, introduced women in the labor market. In Brazil, effects in Social Security were not perceived until the early nineties, when an ever-increasing female population started claiming not only survivors' benefits generated by their spouses contributions but also their own retirement pensions. It should be noted that, nowadays, in urban areas, given that one of the spouses is in the formal labor market, the probability of the other also belonging to the formal labor market is higher than that of belonging to the informal market or even of not working at all. In rural areas, nowadays, entitlement is almost automatic for both spouses, conditioned by the age limits.

The issue of double benefits is quite controversial. On the one hand, females have been claiming that their contribution should also generate a survivors' benefit and that it is a form of prejudice against women that their spouses are not entitled to a survivors' pension. Males are obviously in favor of this claim. If one considers more strictly the insurance nature of Social Security this would be true; however, given that we are talking about a social policy one could argue in favor of better targeting.

Graph 9 presents losses incurred by the elimination of the second benefit, in the left-hand column for urban population and in the right, for rural population.

Actually we eliminated the smaller of the two, when a pension and a survivors' benefit were at issue. The blue line considers the whole population and the red line only females. Similar to Graph 7 and Graph 8, 1982, 1992 and 2002 are presented on a different row in the table. In the x-axis of each graph we have the 20-tile groups of per capita family income and in the y-axis, the loss incurred in eliminating the smallest benefit.

GRAPH 9
LOSSES INCURRED BY ELIMINATION OF MULTIPLE PENSION BENEFITS: URBAN AND RURAL POPULATION—1982, 1992 AND 2002



Source: PNAD 1982, 1992 and 2002.

6.1 THE URBAN POPULATION

As can be perceived in Graph 9 the impact of eliminating the double benefit increases both with time and with income bracket. It should be noted that the scale had to be adjusted due to the variation (a 100-fold increase) in time. The impact upon the male

beneficiary population is almost negligible when compared to the female. Since the impact increases with income, the elimination of the double benefit is not regressive per se. When considering the aggregated effect for all income brackets (see Table 11) the largest change for the urban population occurs between 1982 and 1992. The aggregated effect is even smaller than the means tested, 3.11% in 2002 for both sexes combined, but we are talking about an altogether different population—these are mainly contributory benefits and for the most affluent income brackets. This would imply, in 2002, in savings of R$ 3.8 billion.

TABLE 11
AGGREGATED LOSSES FOR ALL INCOME BRACKETS WITH ELIMINATION OF SMALLEST OF THE MULTIPLE BENEFITS BY SEX—URBAN POPULATION
[%]

	Reference: urban benefits			Reference: urban income		
	Both sexes	Males	Females	Both sexes	Males	Females
1982	0.0014	0.0003	0.0010	0.0001	0.0000	0.0001
1992	1.9400	0.2300	1.7100	0.2800	0.0300	0.2400
2002	3.1100	0.4300	2.6800	0.5800	0.0800	0.5000

Source: PNAD 1982, 1992 and 2002.

6.2 THE RURAL POPULATION

Similar to the figures presented in Table 11 for the urban population, Table 12 presents the average losses for all income brackets with elimination of the smallest of the multiple benefits for the rural population. The time effect is much more striking among the rural population. As already mentioned, before the 1988 Constitution only the head of the rural household was entitled to the pension. Therefore, up to 1992 (the year after the implementation of the Constitution directives regarding rural benefits) the amount of women collecting both retirement pension and a survivors' benefit was minute. In 2002 the proportional impact of this alternative is greater among rural dwellers than among urban ones, contrary to what had happened so far. In absolute terms savings with rural benefit expenses would amount to R$ 0.5 billion.

TABLE 12
AGGREGATED LOSSES FOR ALL INCOME BRACKETS WITH ELIMINATION OF SMALLEST OF THE MULTIPLE BENEFITS BY SEX—RURAL POPULATION
[%]

	Reference: rural benefits			Reference: rural income		
	Both sexes	Males	Females	Both sexes	Males	Females
1982	0.0155	0.0038	0.0116	0.0009	0.0002	0.0007
1992	0.6300	0.0600	0.5700	0.1000	0.0100	0.0900
2002	5.1500	0.5500	4.6000	1.1700	0.1200	1.0400

Source: PNAD 1982, 1992 and 2002.

7 COMMENTS AND CONCLUSIONS

Given the differences in eligibility and contributory conditions for both urban and rural areas, effects of changes in the legislation are also quite diverse. Elderly persons are quite often, and more so in rural areas, an important contributor to family income. The SSS has played an important role in poverty alleviation, though mainly for a specific age bracket. Poor families with young children are usually left out. We can observe an increase in the number of beneficiaries of the system, mainly among women and among the rural population. Two different effects are mingled in this statement: with population ageing there are fewer children and more adults and elderly individuals, most of them females; and there was an actual increase in Social Security population coverage.

Urban male contributors experience an increase in absolute figures, but undergo a decrease in proportional participation for all groups: public servants, employees and the self-employed. On the other hand, females present an increase both in absolute figures and in proportional participation for all formal labor groups considered. The informal market presents an increase both in absolute figures and proportional participation for both men and women in urban areas.

In relation to the distribution of the benefit values received by the urban, rural and the whole population for the years considered, we see that in 1982, 44.2% of the urban and 88.5% of the rural beneficiary population received benefits below the minimum wage. In 1992, these values were 7.5% and 8.9% for the urban and rural population respectively and in 2002 these values fell to 0.5% for the urban and 0.8% for the rural population, showing the impact of the 1988 Constitution. Most striking is the discrepancy between the low level of formalization of the population in the active age-bracket with respect to social security (few contributors) and the elderly population, for whom coverage is quite universal, mainly in the last year considered in this analysis, 2002. It seems that the system has some loopholes that allow people to become beneficiaries without a correspondingly lengthy contribution period, for both the urban and the rural population.

The distribution inequality actually increases in the period for urban dwellers and the population as a whole while for rural dwellers it gets worse between the first two years considered and improves in the last period.

When one considers the Lorenz curves for the population as a whole with and without pensions the difference increases in time. When one considers only the rural population, figures are much more significant, showing that pensions play a much more important role among rural dwellers.

In the simulations, postponing the eligibility age has had the greatest effect, mainly when one considers the age of 65, which would be equivalent to eliminating length-of-service retirement and homogenizing the eligibility age for males and females. The full effect of pensions shows an increase with time. The curve representing losses as a function of income with the imposition of age limits for eligibility has a positive slope with higher levels becoming steeper with the passing of

years. Of course, higher ages present heavier losses. The impact of all pensions is more significant for rural areas as compared to urban areas in 1992 and 2002, though the opposite is true for 1982. When age limits are considered, the situation is somehow changed and with the exception of the 65-year-age limit in 2002, impacts are higher for the urban population. Age testing is also effective for survivors' benefit recipients. Checking for multiple benefits (retirement and survivors') and eliminating the smallest one has a moderate effect among female beneficiaries and is negligible for males. The proportion of females collecting both benefits shows a marked increase both in time and in income brackets. In 2002 the proportional impact was greater among rural dwellers.

Means testing is also a good alternative to consider. In the rural areas means testing affects only the upper 20-tiles, as opposed to the urban areas where the effect is more widespread. Since most benefits of exactly one minimum wage have a major Social Assistance component, a possible alternative (besides setting Social Assistance benefits at a different value than the Social Insurance lower limit) is to define a means tested benefit. When one considers the full effect of pensions in the urban population, the impact increases with time. The average losses for all income brackets with elimination of benefits for the income groups is very dispersed in the urban population, though the impact affects more affluent groups as the test line increases. The effect is relatively small, at most 6% in 2002 for the lowest cutting line using as reference urban benefit expenses. The weight of pension benefits on family income is more significant for rural areas than for urban areas. In the rural population the means test affects only the population in the upper income brackets. Therefore, this mechanism could be used as a fair way of reducing Social Security expenses without miss-targeting. Using the lowest cutting line, this action would imply, in 2002, in savings of R$ 10.0 billion for both RJU and RGPS for urban and rural beneficiaries. Eliminating multiple benefits has a more modest effect: R$ 4.3 billion but with the advantage of affecting the upper 20-tiles the most.

ANNEX

TABLE A1
BRAZIL: AVERAGE PER CAPITA FAMILY INCOME BY 20-TILES URBAN/RURAL—1982, 1992 AND 2002
[current values]

	1982			1992			2002		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
5	1,004.58	1,577.08	908.34	20,711.31	28,163.40	2,630.47	11.58	14.32	7.75
10	1,840.66	2,817.64	1,565.64	55,456.02	67,139.56	13,895.41	27.76	32.33	15.92
15	2,815.67	4,232.58	2,271.10	108,869.38	118,808.83	38,374.73	50.04	58.25	26.28
20	3,548.77	5,277.09	2,747.07	142,020.50	153,246.54	54,222.60	62.46	70.39	34.21
25	4,285.88	6,309.27	3,142.08	172,055.12	186,243.69	68,575.86	74.63	93.43	43.32
30	5,076.52	7,330.16	3,596.59	198,327.09	219,679.97	83,243.13	87.55	106.06	46.71
35	5,960.14	8,412.10	4,091.94	241,338.65	254,200.09	98,344.46	104.90	121.89	53.03
40	6,900.77	9,547.08	4,739.73	275,467.59	290,579.78	114,483.21	122.90	137.73	56.35
45	7,926.12	10,844.65	5,256.99	318,644.66	329,906.01	131,582.18	138.66	157.83	68.13
50	9,051.62	12,273.97	5,887.05	361,949.34	373,896.76	149,758.64	159.21	185.34	76.36
55	10,358.20	13,909.50	6,444.69	422,968.32	424,670.23	169,800.59	181.27	206.85	90.71
60	11,892.35	15,791.72	7,250.54	487,118.59	479,401.95	192,915.01	204.93	232.00	95.16
65	13,720.16	18,021.29	8,069.80	562,571.49	544,666.54	220,976.56	234.69	264.33	107.68
70	15,972.06	20,758.14	9,185.26	649,161.34	621,801.19	252,895.23	270.93	305.47	109.95
75	18,820.40	24,245.49	10,463.53	768,646.57	726,970.92	290,842.05	321.04	357.16	139.07
80	22,679.15	28,980.71	11,999.71	918,602.58	867,014.90	337,529.97	380.95	429.73	162.41
85	28,291.05	35,851.30	14,190.10	1,142,472.55	1,068,816.37	404,835.67	478.77	529.82	200.22
90	37,717.78	47,129.27	17,643.08	1,485,264.23	1,397,002.60	501,975.59	633.52	705.32	239.32
95	61,960.04	74,806.72	27,347.28	2,447,131.81	2,276,728.49	795,869.49	1,063.38	1,164.60	368.48
100	122,981.32	141,217.68	51,713.69	4,906,169.51	4,541,802.89	1,588,820.61	2,193.93	2,373.98	721.22
Minimum wage	Cr$ 16,608.00 (cruzeiros)			Cr$ 522,186.94 (cruzeiros)			R$ 200.00 (reais)		

TABLE A2
BRAZIL: AVERAGE PER CAPITA FAMILY INCOME BY 20-TILES URBAN/RURAL—1982, 1992 AND 2002
[multiples of minimum wage]

	1982			1992			2002		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
5	0.06	0.09	0.05	0.04	0.05	0.01	0,06	0,07	0,04
10	0.11	0.17	0.09	0.11	0.13	0.03	0,14	0,16	0,08
15	0.17	0.25	0.14	0.21	0.23	0.07	0,25	0,29	0,13
20	0.21	0.32	0.17	0.27	0.29	0.10	0,31	0,35	0,17
25	0.26	0.38	0.19	0.33	0.36	0.13	0,37	0,47	0,22
30	0.31	0.44	0.22	0.38	0.42	0.16	0,44	0,53	0,23
35	0.36	0.51	0.25	0.46	0.49	0.19	0,52	0,61	0,27
40	0.42	0.57	0.29	0.53	0.56	0.22	0,61	0,69	0,28
45	0.48	0.65	0.32	0.61	0.63	0.25	0,69	0,79	0,34
50	0.55	0.74	0.35	0.69	0.72	0.29	0,80	0,93	0,38
55	0.62	0.84	0.39	0.81	0.81	0.33	0,91	1,03	0,45
60	0.72	0.95	0.44	0.93	0.92	0.37	1,02	1,16	0,48
65	0.83	1.09	0.49	1.08	1.04	0.42	1,17	1,32	0,54
70	0.96	1.25	0.55	1.24	1.19	0.48	1,35	1,53	0,55
75	1.13	1.46	0.63	1.47	1.39	0.56	1,61	1,79	0,70
80	1.37	1.74	0.72	1.76	1.66	0.65	1,90	2,15	0,81
85	1.70	2.16	0.85	2.19	2.05	0.78	2,39	2,65	1,00
90	2.27	2.84	1.06	2.84	2.68	0.96	3,17	3,53	1,20
95	3.73	4.50	1.65	4.69	4.36	1.52	5,32	5,82	1,84
100	7.40	8.50	3.11	9.40	8.70	3.04	10,97	11,87	3,61
Minimum wage	Cr$ 16,608.00 (cruzeiros)			Cr$ 522,186.94 (cruzeiros)			R$ 200.00 (reais)		

BIBLIOGRAPHY

BRASIL. *Constituição da República Federativa do Brasil — 1988*. Brasília, DF: Senado, 1988.

————. *Emenda Constitucional* n. 20, de 15 de dezembro de 1998.

————. *Emenda Constitucional* n. 41, de 19 de dezembro de 2003. Modifica os arts. 37, 40, 42, 48, 96, 149 e 201 da Constituição Federal, revoga o inciso IX do parágrafo 3° do art. 142 da Constituição Federal e dispositivos da Emenda Constitucional n. 20, de 15 de dezembro de 1998, e dá outras providências.

IBGE. *PNAD 1982, 1992 e 2002*.

MPAS. *Informe da Previdência Social*, Brasília, DF, v. 14, n. 12, dez. 2002.

————. *Livro Branco da Previdência Social — 2002*. Brasília, DF, dez. 2002.

EDITORIAL

Coordenação
Silvania de Araujo Carvalho

Supervisão
Helena Rodarte Costa Valente

Revisão
André Pinheiro
Elisabete de Carvalho Soares
Jane Castellani
Lucia Duarte Moreira
Míriam Nunes da Fonseca
Alejandro Augusto S. V. A. Poinho (estagiário)

Editoração
Carlos Henrique Santos Vianna
Joanna Silvestre Friques de Sousa
Roberto das Chagas Campos

Brasília
SBS – Quadra 1 – Bloco J – Ed. BNDES,
9º andar – 70076-900 – Brasília – DF
Fone: (61) 315-5336
Fax: (61) 315-5314
Correio eletrônico: 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
Correio eletrônico: editrj@ipea.gov.br

Tiragem: 142 exemplares

PUBLICAÇÕES DO IPEA (TEXTOS) (2004/2005)

TEXTO PARA DISCUSSÃO - TD

Nº 1007 – **Os passivos contingentes e a dívida pública no Brasil: evolução recente (1996-2003) e perspectivas (2004-2006)**, Bolívar Pêgo Filho e Maurício Saboya Pinheiro, Brasília, janeiro de 2004, 51 p.

Nº 1008 – **Economia e valor de existência: o caso do parque nacional do Jaú (Amazonas)**, Ricardo Felix Santana, José Aroudo Mota, Brasília, fevereiro de 2004, 32 p.

Nº 1010 – **Considerações sobre o projeto de lei de Parceria Público-Privada (PPP) em face da experiência recente do Brasil**, Ricardo Pereira Soares, Carlos Álvares da Silva Campos Neto, Brasília, março de 2004, 19 p.

Nº 1011 – **O funcionamento do mercado de trabalho metropolitano brasileiro no período 1991-2002: tendências, fatos estilizados e mudanças estruturais**, Lauro Ramos e Marcelo Britto, Rio de Janeiro, março de 2004, 19 p.

Nº 1012 – **O levantamento de informações sobre direitos violados de crianças e adolescentes no Sistema de Informações para a Infância e Adolescência (Sipia - Módulo I): conteúdo e metodologia**, Santiago Falluh Varella, Brasília, março de 2004, 35 p.

Nº 1013 – **Challenges of the private health plans regulation in Brazil**, Carlos Octávio Ocké-Reis, Rio de Janeiro, março de 2004, 19 p.

Nº 1014 – **As fontes de rendimentos dos ricos no Brasil**, Marcelo Medeiros, Brasília, março de 2004, 28 p.

Nº 1015 – **Estrutura familiar e rendimentos do trabalho dos ricos no Brasil**, Marcelo Medeiros, Brasília, março de 2004, 18 p.

Nº 1016 – **Determinantes dos investimentos diretos externos em países em desenvolvimento**, Marcelo José Braga Nonnenberg e Mário Jorge Cardoso de Mendonça, Rio de Janeiro, março de 2004, 18 p.

Nº 1017 – **Condicionantes da produtividade da agropecuária brasileira**, José Garcia Gasques, Eliana Teles Bastos, Mirian P. R. Bacchi e Júnia C. P. R. da Conceição, Brasília, abril de 2004, p. 29 p.

Nº 1018 – **Accounting for Brazil´s growth experience: 1940-2002**, Edmar Lisboa Bacha e Regis Bonelli, Rio de Janeiro, maio de 2004, 28 p.

Nº 1019 – **Novas evidências sobre os determinantes do investimento externo na indústria de transformação brasileira**, João Alberto De Negri e Luciana Acioly, Brasília, maio de 2004, 37 p.

Nº 1020 - **Some stylized facts of the informal sector in Brazil in the 1980's and 1990's**, Fábio Veras Soares, Brasília, maio de 2004, 43 p.

Nº 1021 - **Do informal workers queue for formal jobs in Brazil**?, Fábio Veras Soares, Brasília, maio de 2004, 53 p.

Nº 1022 - **Governo que aprende: gestão do conhecimento em organizações do executivo federal**, Fábio Ferreira Batista, Brasília, junho de 2004, 108 p.

Nº 1023 - **Inovação, via internacionalização, faz bem para as exportações brasileiras**, Glauco Arbix, Mario Sergio Salerno, João Alberto De Negri, Brasília, junho de 2004, 34 p.

Nº 1024 - **Investimento em infra-estrutura no Plano Plurianual (PPA) 2004-2007 — uma visão geral**, Luiz Cezar Loureiro de Azeredo, Brasília, junho de 2004, 43 p.

Nº 1025 - **O setor de subsistência na economia e na sociedade brasileira: gênese histórica, reprodução e configuração contemporânea**, Guilherme Costa Delgado, Brasília, junho de 2004, 30 p.

Nº 1026 - **As oportunidades de ser rico por meio do trabalho estão abertas a todos**?, Marcelo Medeiros, Brasília, junho de 2004, 21 p.

Nº 1027 – **Geração de empregos e realocação espacial no mercado de trabalho brasileiro — 1992-2002**, Lauro Ramos e Valéria Ferreira, Rio de Janeiro, julho de 2004, 23 p.

Nº 1028 – **Integração regional e conteúdo de trabalho do comércio exterior brasileiro**, Marta Castilho, Rio de Janeiro, julho de 2004, 37 p.

Nº 1029 – **A geografia dos ricos no Brasil**, Marcelo Medeiros, Brasília, julho 2004, 22 p.

Nº 1030 – **Economic regulation and cost-efficiency in Brazilian urban public transport: the case of Belo Horizonte**, Alexandre de Ávila Gomide, Brasília, julho 2004, 17 p.

Nº 1031 – **Jovens e idosos nordestinos: exemplos de trocas intergeracionais**, Ana Amélia Camarano, Rio de Janeiro, julho 2004, 24 p.

Nº 1032 – **Mecanismos e experiências de correção do fluxo escolar no ensino fundamental**, Marta Maria de Alencar Parente, Heloísa Lück, Brasília, julho 2004, 38 p.

Nº 1033 – **A mobilidade social dos negros brasileiros**, Rafael Guerreiro Osório, Brasília, agosto 2004, 24 p.

Nº 1034 – **Dinâmica populacional brasileira na virada do Século XX**, Kaizô Iwakami Beltrão, Ana Amélia Camarano e Solange Kanso, Rio de Janeiro, agosto de 2004, 71 p.

Nº 1035 – **Pragmatic policy in Brazil: the political economy of incomplete market reform**, Armando Castelar Pinheiro, Regis Bonelli e Ben Ross Schneider, Rio de Janeiro, agosto de 2004, 55 p.

Nº 1036 - **Crédito rural e estruturas de financiamento**, José Garcia Gasques, Carlos Monteiro Villa Verde, José Arnaldo F. G. de Oliveira, Brasília, agosto 2004, 44 p.

Nº 1037 – **Regime *antidumping*: a experiência brasileira**, Honorio Kume e Guida Piani, Rio de Janeiro, agosto 2004, 22 p.

Nº 1038 – **Caminhos para a vida adulta: as múltiplas trajetórias dos jovens brasileiros**, Ana Amélia Camarano, Juliana Leitão e Mello, Maria Tereza Pasinato e Solange Kanso, Rio de Janeiro, agosto de 2004, 29 p.

No 1039 – **Evolução do emprego formal no Brasil (1985-2003) e implicações para as políticas públicas de geração de emprego e renda**, Rogério Nagamine Costanzi, Brasília, setembro 2004, 32 p.

No 1040 – **A nova maneira de se entender a deficiência e o envelhecimento**, Marcelo Medeiros, Debora Diniz, Brasília, setembro de 2004, 18 p.

Nº 1041 – **Evidências e modelos sobre a coexistência de hospitais com fins lucrativos e hospitais sem fins lucrativos no sistema único de saúde brasileiro**, Alexandre Marinho, Rio de Janeiro, setembro de 2004, 46 p.

Nº 1042 – **Endogenous foreign capital flow in a CGE model for Brazil: the role of international reserves**, Wilfredo Leiva Maldonado, Octávio Augusto Fontes Tourinho, Marcos Valli, Rio de Janeiro, setembro de 2004, 23 p.

Nº 1043 – **Análise da estrutura da previdência privada brasileira: evolução do aparato legal**, Kaizô Iwakami Beltrão, Fernanda Paes Leme, João Luís Mendonça e Sonoe Sugahara, Rio de Janeiro, setembro de 2004, 23 p.

Nº 1044 – **Inovação tecnológica, eficiência de escala e exportações brasileiras**, João Alberto De Negri, Fernando Freitas, Brasília, setembro de 2004, 20 p.

Nº 1045 – **Esforço fiscal dos estados brasileiros**, Marcelo Piancastelli, Rogério Boueri Miranda e José Romeu de Vasconcelos, Brasília, setembro de 2004, 39 p.

Nº 1046 – **Demand for locally provided public services within the median voter's framework: the case of the Brazilian municipalities**, Constantino Cronemberger Mendes e Maria da Conceição Sampaio de Sousa, Brasília, outubro de 2004, 24 p.

Nº 1047 – **Tábuas de mortalidade no mercado brasileiro de seguros — uma comparação**, Kaizô Iwakami Beltrão, Sonoe Sugahara, Danilo Cláudio da Silva e Elder Vieira Salles, Rio de Janeiro, outubro de 2004, 42 p.

Nº 1048 – **The term structure of sovereign spreads in emerging markets: a calibration approach for structural models**, Katia Rocha e Francisco A. Alcaraz Garcia, Rio de Janeiro, outubro de 2004, 14 p.

Nº 1049 – **People´s security survey in Brazil, Argentina and Chile: a regional comparative analysis**, Lauro Ramos, Rio de Janeiro, outubro de 2004, 46 p.

Nº 1050 – **Diagnóstico da previdência social no Brasil: o que foi feito e o que falta reformar?** Fabio Giambiagi, João Luis de Oliveira Mendonça e Kaizô Iwakami Beltrão e Vagner Laerte Ardeo, Rio de Janeiro, outubro de 2004, 44 p.

Nº 1051 – **Desenvolvimento econômico brasileiro: uma releitura das contribuições de Celso Furtado**, Constantino Cronemberger Mendes e Joanílio Rodolpho Teixeira, Brasília, outubro de 2004, 29 p.

Nº 1052 – **O vermelho e o negro: raça e gênero na universidade brasileira — uma análise da seletividade das carreiras a partir dos censos demográficos de 1960 a 2000**, Kaizô Iwakami Beltrão e Moema De Poli Teixeira, Rio de Janeiro, outubro de 2004, 47 p.

Nº 1053 – **Analyzing the environmental performance of the Brazilian industrial sector**, Ronaldo Seroa da Motta, Rio de Janeiro, novembro de 2004, 18 p.

Nº 1054 – **Acordo de livre-comércio Mercosul – União Européia: uma estimativa dos impactos no comércio brasileiro**, Honorio Kume, Guida Piani, Pedro Miranda, Marta Reis Castilho, Rio de Janeiro, novembro de 2004, 15 p.

Nº 1055 – **Um estudo sobre as filas para internações e para transplantes no sistema único de saúde brasileiro**, Alexandre Marinho, Rio de Janeiro, novembro de 2004, 39 p.

Nº 1056 – **O impacto da reforma tributária na economia brasileira: uma análise com o modelo CGE,** Napoleão Luiz Costa da Silva, Octavio Augusto Fontes Tourinho e Yann Le Boulluec Alves, Rio de Janeiro, novembro de 2004, 51 p.

Nº 1057 – **Technological learning systems, Competitiveness and development**, Eduardo Baumgratz Viotti, Brasília, novembro de 2004, 33 p.

Nº 1058 – **Alca: uma estimativa do impacto no comércio bilateral Brasil-Estados Unidos**, Honorio Kume e Guida Piani, Rio de Janeiro, dezembro de 2004, 17 p.

Nº 1059 – **Efficiency and regulation in the sanitation sector in Brazil**, Ronaldo Seroa da Motta e Ajax R. B. Moreira, dezembro de 2004, 19 p.

Nº 1060 – **Distribuição dos salários dos funcionários públicos: uma análise dos impactos da definição de tetos,** Kaizô Iwakami Beltrão, Sonoe Sugahara, Fernanda Paes Leme e João Luís Mendonça, Rio de Janeiro, dezembro de 2004, 49 p.

Nº 1061 – **O efeito da liberalização da conta de capital sobre a política fiscal: evidências para o caso brasileiro recente (1995-2000)**, Manoel Carlos de Castro Pires, Brasília, dezembro de 2004, 34 p.

Nº 1062 – **Crescimento agrícola no período 1999-2004, explosão da área plantada com soja e meio ambiente no Brasil**, Antonio Salazar Pessoa Brandão, Gervásio Castro de Rezende e Roberta Wanderley da Costa Marques, Rio de Janeiro, janeiro de 2005, 21 p.

Nº 1063 – **Questionário: Recomendações para formatação,** Marcelo Medeiros, Brasília, janeiro de 2005, 42 p.

Nº 1064 – **O pib dos municípios brasileiros: metodologia e estimativas — 1970-1996**, Eustáquio J. Reis, Paulo TafnerMárcia Pimentel, Rodrigo V. Serra, Luis Otávio Reiff, Kepler Magalhães, Mérida Medina, Rio de Janeiro, janeiro de 2005, 35p.

Nº 1065 – **Risco regulatório em telecomunicações: análise da polêmica sobre o reajuste das tarifas pelo IGP-DI**, Luis Claudio Kubota, Brasília, janeiro de 2005, 24 p.

Nº 1066 – **Mudanças nas condições de vida dos idosos rurais brasileiros: resultados não-esperados dos avanços da seguridade rural**, Kaizô Iwakami Beltrão, Ana Amélia Camarano, Juliana Leitão e Mello, Rio de Janeiro, janeiro de 2005, 17 p.