
The recent evolution of social security coverage in Brazil

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Abstract This article describes and assesses indicators of social security coverage in Brazil over the period 1992 to 2006 for employed workers and the elderly. While the coverage of retired workers has shown some degree of stability over the past years, that of employed workers changed significantly over the period, showing clear signs of deterioration between 1992 and 2002, and of recovery since then. Fewer self-employed persons in agriculture in rural areas (Special Insured Persons, workers with specific social security schemes) accounts for most of the deterioration. The economic recovery and an increase in new registered jobs accounts for most of the improvement in coverage between 2003 and 2006. Administrative and institutional factors also played a relevant role, especially in promoting the inclusion of domestic and self-employed workers as social security contributors.

Keywords coverage extension, social security reform, social insurance, labour market, Brazil

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Introduction

Two related themes are the main focus of current debate on the sustainability of social security systems, especially in countries such as Brazil with pay-as-you-go schemes: systems of financing and the extension of coverage. This article discusses the latter. We will discuss the evolution of social security coverage in Brazil, focusing on those factors that account for its recent behaviour.

The following analysis principally covers the period from 1992 to 2006. This is the period for which data following sufficiently consistent methodology are

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available from the National Household Sample Survey (*Pesquisa Nacional por Amostra de Domicílio* — PNAD) undertaken by the Brazil Institute of Geography and Statistics (*Instituto Brasileiro de Geografia y Estadística* — IBGE), the main source of the data for this article.¹ Wherever possible and useful, data are broken down by gender, race and geographic region.

The first set of indicators (concerning the themes of coverage and protection) are indicators of the formalization of the labour market and of coverage in the strict sense (employed population aged 16 to 59, and persons aged 60 or older). The second part offers hypotheses to explain the observed evolution of these indicators. Finally, in conclusion, the main points of the analysis are brought together.

The social protection system in Brazil

Indicators of coverage, together with demographic indicators, are among the most important with respect to social protection. This is because it is the function of any social protection system to protect insured persons, and their dependents, against life-cycle and labour market risks — for example, incapacity, disability, old age, maternity, survivorship and involuntary unemployment. The greater the proportion of employed workers enjoying social protection, the better the system fulfils its basic function.

In Brazil, social insurance — one of the three pillars of social security, together with health care and social assistance — is based on the pay-as-you-go financial system which embodies the principle of solidarity between generations.² Under this model, active workers pay contributions to finance benefits to others who are no longer active, in the expectation that future generations of contributors will do the same when the current contributors lose their capacity for work.

Private-sector workers belong to a social insurance scheme called the General Social Security Scheme (*Regime Geral de Previdência Social* — RGPS). Some specific groups of public servants also belong to the RGPS.³ Most public servants, and military personnel, are covered by their own social security schemes, with their own regulations and specific features, although recent reforms have reduced the differences between these schemes and the RGPS.

1. The National Household Sample Survey was not undertaken by IBGE in 1994 or 2000. The survey covers the entire country, with the exception, until 2004, of the rural area of the Northern Region (except for the state of Tocantins).

2. In Brazil, the Federal Constitution of 1988 established the broad concept of social security including rights in respect of social insurance, health care and social assistance (contribution to a scheme is not a condition of entitlement to benefits for health care and social assistance). In this article, all references to social security concern all the policies mentioned and social insurance refers to the pay-as-you-go pension system.

3. Public servants of Federal Units (FU) and municipalities that do not have their own social security schemes are required to contribute to the RGPS.

The RGPS is a public contributory scheme with compulsory membership for all employed workers not covered by their own social security scheme. At present, it pays some 22 million beneficiaries. Private insurance schemes based on capitalization provide benefits that serve to supplement RGPS benefits. Persons with low incomes who are not covered by contributory social security schemes receive benefits under a Continuous Welfare Benefit pension (*Benefício de Prestação Continuada* — BPC), which is currently set at the same level as the minimum monthly wage.⁴

Unlike the previous social security models that focused almost exclusively on registered workers, the Federal Constitution in its present form, adopted in 1988, makes possible the application of more flexible rules favouring the inclusion of other categories of contributors, especially voluntary contributors (for example, women without their own income performing household tasks) and independent workers (mostly self-employed persons). However, it is clear that the expansion of rural workers' entitlement to benefits has had the greatest impact on the extension of social security.

The new Federal Constitution established qualifying conditions for men and women in rural areas, reduced the minimum age for the award of retirement benefits to age 60 (men) or age 55 (women), and established a uniform minimum welfare benefit for all insured persons (rural workers had previously received old-age pensions at levels of up to 50 per cent of the minimum wage and their spouses and/or children had received survivor pensions limited to 30 per cent of the benefit paid or payable to the deceased).⁵

In addition, a category of Special Insured Persons was created. This brought the broad informal world of family farmers and independent farmers and their family helpers under the wing of social security.⁶ Contributions in respect of these workers are a percentage of marketed agricultural produce rather than wages (as is the case for formal sector workers). In practice, this opened the way for many low-income

4. The Federal Constitution of 1988, as expressed in the Fundamental Social Security Act (Act No. 8742 of 7 December 1993), established a minimum monthly payment to persons aged 65 or older and to those of any age assessed with a disability that makes it impossible for them to live independently or to work, if the per capita income of their family is less than one-quarter of the minimum monthly wage. The minimum monthly wage in July 2007 was 380 reais (In July 2007, 380 reais = US\$200.63 approx.; or €146.88 approx.). The BPC is paid by the National Social Security Institute (INSS), which is also responsible for paying social insurance benefits.

5. Men and women who work in urban areas can retire when they have accumulated a sufficient period of contributions (35 years for men or 30 years for women), or at age 65 (men) or age 60 (women). Urban retirement ages are five years higher than those in rural areas.

6. The Constitution establishes access for rural workers to social security, under a special scheme, with benefit entitlement set at a value equal to the minimum monthly wage, for producers, sharecroppers, land tenants, "garimpeiros" (persons prospecting for precious stones and metals) and traditional fishers, as well as their spouses performing economic activity in a family economy without permanent employees.

rural workers to gain entitlement to benefits where their previous activity was recognized, without individual contributions to the RGPS.

Regulations giving effect to this constitutional provision were adopted in 1991, and led to a uniform social security system, extending coverage to the elderly, and specifically including among its beneficiaries men and women whose careers and work were tied to rural activities. The socio-economic impact was significant. Apart from its immediate effects, measured in terms of access to the range of benefits and services offered by the RGPS, it considerably increased the share of social transfers in family incomes, especially in rural areas.

This particular feature of the Brazilian social protection system, compared to other Latin American countries, means that criteria used to measure coverage must also be specific. These criteria and the evolution of indicators are discussed in the next section.

Social protection coverage: Criteria and evolution

Social protection coverage and formality in the labour market

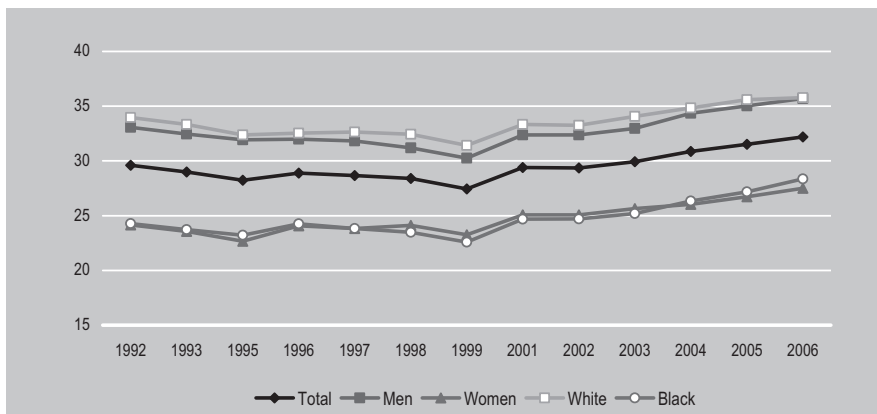
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As a general rule, the model of social security applied in Latin America since the early twentieth century was that of coverage related to formal employment. In the social security systems of these countries this has led to a dualism reflecting the dualism of the labour market. As a result, social protection was extended only to “the most advanced segment of the workforce, namely, workers with stable contracts of employment, formal, registered and compulsory contributors, or the self-employed with higher incomes” (Cruz-Saco, 2002).

In other words, just as workforces in other developing countries are characterized by a high proportion of self-employed workers, and persons working in agricultural activities, casual employment, subcontracting and family enterprises (Ortiz, 2000), the design of social security systems in Latin America has also resulted in low levels of coverage. Moreover, difficulties have been encountered in extending coverage. The linking of formal employment relationships (registered workers) with social security coverage makes an analysis of indicators of formality relevant.

It is appropriate to point out that the concept of “formality” in the labour market is not easy to define. For the purpose of this article, with regards to the concept of formality (and informality), three possible applications of the concept will be discussed: registered private-sector workers as a proportion of total employed workers; the most advanced segment of the workforce in the labour market (registered private-sector workers, public servants, the military, registered domestic workers and employers) as a proportion of all employed persons; and the total number of

Figure 1. Registered private-sector workers as a proportion of total employed workers, by gender and race (1992-2006) (percentage)



Source: PNAD/IBGE — Author's calculations.

contributors to public social security institutions as a proportion of all employed persons.⁷

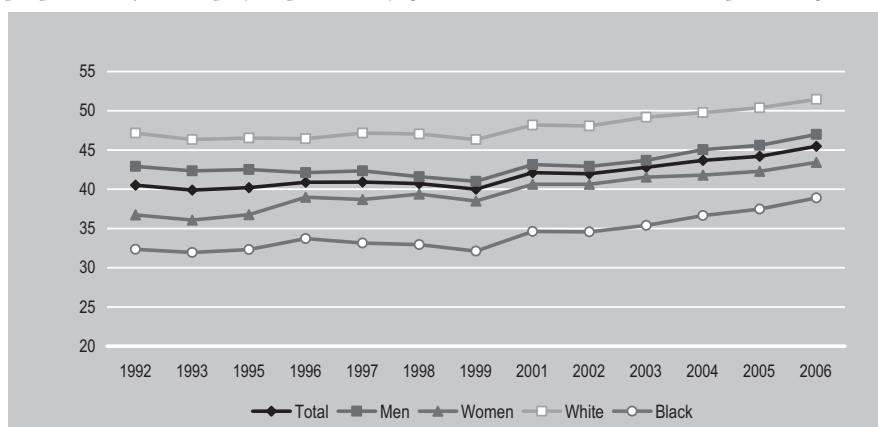
At the same time, attention is drawn to published analyses conducted in the early 2000s using data from the Monthly Employment Survey (*Pesquisa Mensal de Emprego* — PME) of the Brazil Institute of Geography and Statistics (IBGE), which pointed to a crisis in the formal labour market (Cardoso, 2000; Neri, 2003; Arbache, 2003). Although the PME covers Brazil's six major metropolitan regions, the findings were generalized for the country as a whole. Later studies, such as those by Paiva (2004), Ramos and Ferreira (2004), and Passos, Ansiliero and Paiva (2004), based on data from the National Household Sample Survey, showed that generalizations based on the Monthly Employment Survey should be made with caution. Moreover, the studies found that there was no "crisis of formality" in the 1990s in Brazil.

The data support this finding. Figure 1 shows that despite a slight variation in the 1990s between the maximum of 29.6 per cent (1992) and the minimum of 27.4 per cent (1999), the overall trend of registered private-sector workers as a proportion of total employed workers aged 10 years or older is upwards, although the level is still low (32.2 per cent in 2006).

Moreover, there is no significant variation either in terms of gender or race. In other words, women and Blacks — who account for much smaller proportions of registered private-sector workers than men and Whites — showed no significant

7. For a more detailed discussion of informality, see *Ministry of Labour and Employment, Labour Market Observatory* (2002).

Figure 2. Workers in the most advanced segment of the labour market as a proportion of all employed persons, by gender and race (1992-2006) (percentage)



Source: PNAD/IBGE — Author's calculations.

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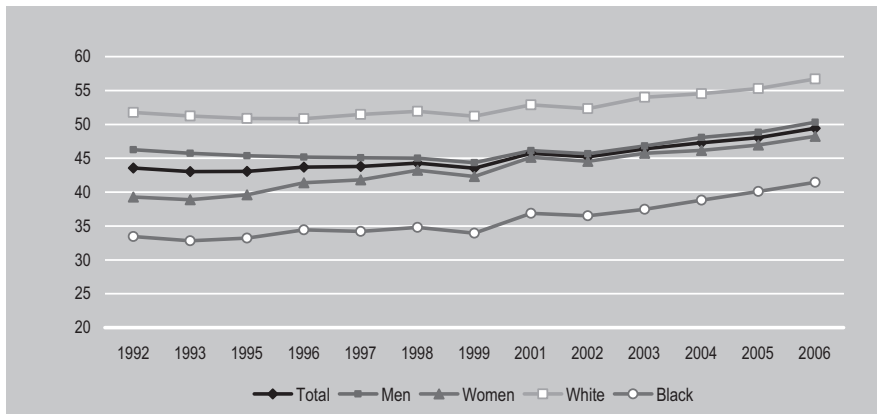
tendency towards relative improvement or deterioration in their proportions during the period under consideration.⁸

Evaluation of the most advanced segment of the workforce (including registered private-sector workers, public servants, the military, registered domestic workers and employers) strengthens the recent trend towards increased formality (Figure 2). While 40.5 per cent of workers belonged to this advanced segment of the workforce at the beginning of the survey period, the Figure had risen to 45.5 per cent by the end.

Analysis by gender and race shows a positive evolution in the proportion of women in this segment. The percentage of women has increased by 6.7 percentage points (from 36.4 per cent to 43.4 per cent), compared to 4.1 percentage points for men. Advances are also seen for Blacks: at the beginning of the survey period, 32.3 per cent were employed in this segment, compared to 38.9 per cent at the end, representing an increase of 6.6 percentage points (compared to an increase of 4.3 percentage points for Whites, rising from 47.2 per cent to 51.5 per cent).

8. We compare only groups that include Whites and Blacks, the latter being defined as those declaring themselves as “Black” or “Coloured” in the National Household Sample Survey. This practice is fairly well established in Brazilian academic literature giving breakdowns by race, and is justified since “pretos” (Blacks) and “pardos” (Coloured) show largely similar values for indicators concerning education and labour market participation, but substantially differing values from the indicators for Whites (Pinto and Neri, 2000). Pinto and Neri give figures of 49.7 per cent for Whites as a percentage of the total population and 49.5 per cent for Blacks. The remaining percentage is comprised of other colours and races (indigenous, oriental and undeclared).

Figure 3. Total number of social welfare contributors as a proportion of all employed persons, by gender and race (1992-2006) (percentage)



Source: PNAD/IBGE — Author's calculations.

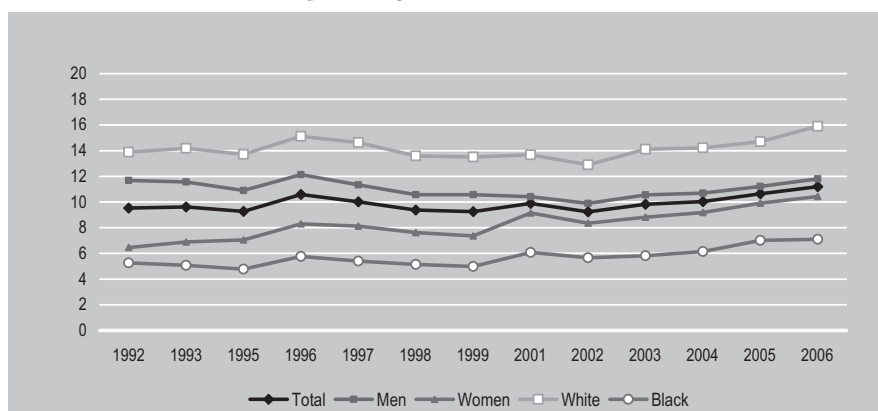
The same upward trend can be seen in the evolution of the numbers of workers paying social insurance contributions in proportion to all workers in general (Figure 3). While social insurance contribution (which should not be confused with the concept of “social protection”, since there are groups of “protected” workers who do not contribute) continues to be low in Brazil, it has increased from 43.6 per cent in 1992 to 49.4 per cent in 2006.

Here too there are greater increases for women (8.9 percentage points) than for men (4.0 percentage points), and for Blacks (8.0 percentage points) than for Whites (5.0 percentage points). Comparison between women and men shows that there is no longer any significant difference in terms of social insurance contributions: in 2006, 48.2 per cent of women contributed compared to 50.3 per cent of men.

The labour market structure, which is so important for social protection coverage, has not shown any significant deterioration over the past decade. On the contrary, while in Brazil at present there is a low degree of “formality”, the main trend over the period 1992-2006, and especially during 2001-2006, was clearly positive. Moreover, if the reference for the degree of formality is the percentage of contributing employees, social insurance coverage can be seen to have increased not only as a result of increased formal employment, but also from the inclusion of unregistered workers (workers without formal employment relationships) (Figures 1 and 3).

An important indicator is the number of workers who are not formally registered as a percentage of the total membership of the social security system. This indicator may be taken as a measure of the “attractiveness” of the system. Workers who are not

Figure 4. *Attractiveness of social welfare to those not formally registered in the labour market (1992-2006) (percentage)*



Source: PNAD/IBGE — Author's calculations.

registered represent a heterogeneous group. Some, such as unregistered private-sector employees or unregistered domestic workers, are working illegally since their employers should have formalized their employment relationships in order to enable them to contribute. Others, such as self-employed workers and employers, should contribute as independent workers as is required by the law. There are others whose contributions are optional since they do not engage in remunerated activity — such as workers without incomes, workers constructing property for their own use and workers in production for their own consumption.

Since, in practice, there is ample scope for unregistered workers not to contribute — despite efforts to include them by the Ministry of Social Security and the Ministry of Labour and Employment — their membership in the scheme is an indicator of the attractiveness of the RGPS. This indicator of attractiveness also reflects any increase in participation by employed workers who are not formally registered but who are contributing to the social security system — which rose from 9.5 per cent to 11.2 per cent between 1992 and 2006 (Figure 4). Despite the growing attractiveness of the RGPS, the percentage of those contributing within this group remains fairly low.

All subgroups considered here showed positive figures for this indicator: coverage for men remained relatively stable at 11.7 per cent to 11.8 per cent; for women it rose from 6.5 per cent to 10.4 per cent; for Whites it rose from 13.9 per cent to 15.9 per cent; and for Blacks it rose from 5.3 per cent to 7.1 per cent. If these trends continue, the same proportions of men and women who are not formally registered will be contributing to social security at the end of the next decade.

Social protection: Coverage of employed workers

In 2004 the Brazilian Social Security Secretariat proposed a new set of criteria to measure social protection coverage (Schwarzer, Paiva and Liberal, 2004). Previously, social protection coverage was measured considering the proportion of contributing workers within two spheres: the “total employed population”, that is, employees aged 10 or older, but excluding military personnel and public servants, and the so-called “specially defined” employed population (Pinheiro and Miranda, 2000).

The term “specially defined” employed population was used because workers younger than age 16 cannot legally contribute to social insurance (this is a major problem for programmes dealing with the elimination of child labour), persons older than age 60 are reluctant to contribute (since by contributing they will no longer be eligible for most benefits), and workers with low incomes have difficulty contributing. Thus, the “specially defined” employed population comprised employed persons between ages 16 and 59, excluding military personnel and public servants, with incomes equal to or higher than the minimum wage.

These concepts were pursued to obtain information on Brazilian workers covered by social security (and by inference those who are not). They can be divided into three groups:

- workers covered by specific statutory and military social insurance schemes (*Regímenes Propios de Previsión Social* — RPPS);
- workers who are Special Insured Persons (rural workers performing activities on an individual basis or as part of family enterprises who are covered by social insurance, but who do not make specific social insurance contributions since their contribution depends on the marketing of their produce;
- non-contributing workers who nevertheless receive some benefits.

Since the National Household Sample Survey does not differentiate between social assistance and social insurance benefits, the methodology proposed gives indicators of overall social protection, and not of insurance coverage.⁹

In addition, the restriction on existing income has been eliminated for the “specially defined” employed population category (that is, all employed workers are included regardless of the amount of their income, even if they are unprotected but eligible by virtue of their income). The lower and upper age limits have been retained (ages 16 and 59, respectively). This gives a clearer picture of whether workers who have not yet retired have some form of social protection, regardless of their income. Table 1 gives data for 2006.

9. In order to simplify the analysis and since social assistance benefits account for barely 11 per cent of all benefits paid (benefits awarded are treated as paid) by the RGPS, we refer to the amounts paid as social insurance transfers.

Table 1. *Social protection of the employed population between 16 and 59 years of age ** (2006)

Categories	Number of workers	%
RGPS Contributors (A)	36,931,870	45.6
RPPS Contributors (B)	5,637,203	7.0
<i>Military</i>	271,169	0.3
<i>Public servants</i>	5,366,034	6.6
Special Insured Persons ** (RGPS) (C)	8,049,773	9.9
Non-contributors (D)	30,319,474	37.5
Total (E = A+B+C+D)	80,938,320	100.0
Non-contributing beneficiaries *** (F)	1,285,007	1.6
Workers covered by social protection (A+B+C+F)	51,903,853	64.1
Workers without social protection (D-F)	29,034,467	35.9
<i>with incomes of less than 1 minimum wage</i>	13,277,493	16.4
<i>with incomes equal to or greater than 1 minimum wage</i>	15,429,425	19.1
<i>with unknown incomes</i>	327,549	0.4

Source: PNAD/IBGE — 2006 —SPS/MPs elaboration.

* Regardless of income criteria.

** Inhabitants of rural areas working in agriculture in the following categories: unregistered, self-employed, producing for their own consumption, building for their own use, and unremunerated.

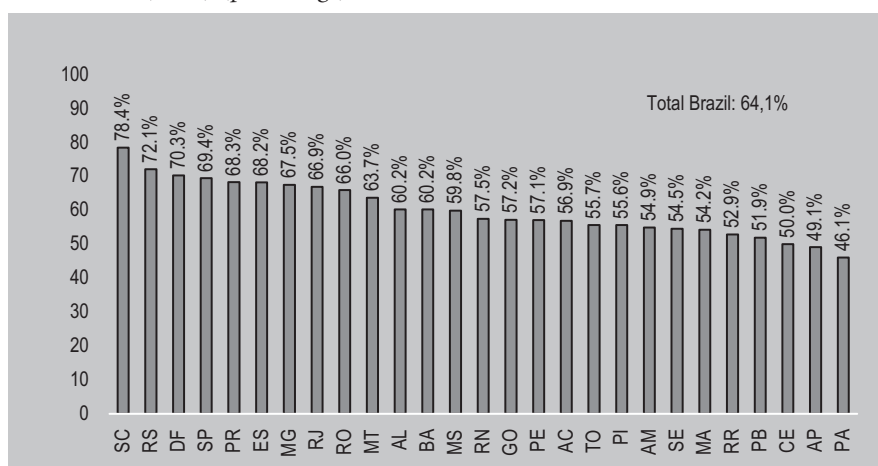
*** Employed workers (excluding special insured persons) who while not contributing receive welfare benefit.

The latest available figures show that 64.0 per cent of employed workers have social protection. There is considerable variation in the regions, with the states of the South and South-Eastern Regions among those offering greater coverage, while in the North-Eastern Region coverage is more limited (Figure 5).¹⁰ Since the legal framework of the RGPS is uniform throughout Brazil, the explanation for such disparities would seem to be the profound economic and social inequalities among the regions.

In the harmonized historical series (which from 2004 onwards excludes the rural population in the Northern Region, except for Tocantes), the level of social security

10. Brazil is divided into five major geographical regions comprising 26 states in addition to the Federal District (Brasília). Southern Region: Santa Catarina (SC), Paraná (PR), Rio Grande do Sul (RS). South-Eastern Region: São Paulo (SP), Rio de Janeiro (RJ), Minas Gerais (MG), Espírito Santo (ES). Centre-Eastern Region: Goiás (GO), Distrito Federal (DF), Mato Grosso (MT), Mato Grosso do Sul (MS). North-Eastern Region: Piauí (PI), Ceará (CE), Bahia (BA), Rio Grande do Norte (RN), Sergipe (SE), Paraíba (PB), Pernambuco (PE), Alagoas (AL), Maranhão (MA). Northern Region: Tocantins (TO), Pará (PA), Amapá (AP), Amazonas (AM), Roraima (RR), Rondônia (RO), Acre (AC).

Figure 5. Social protection for employed persons between 16 and 59 years of age, by Federal Unit (2006) (percentage)



Source: PNAD/IBGE — 2004 — Author's calculations.

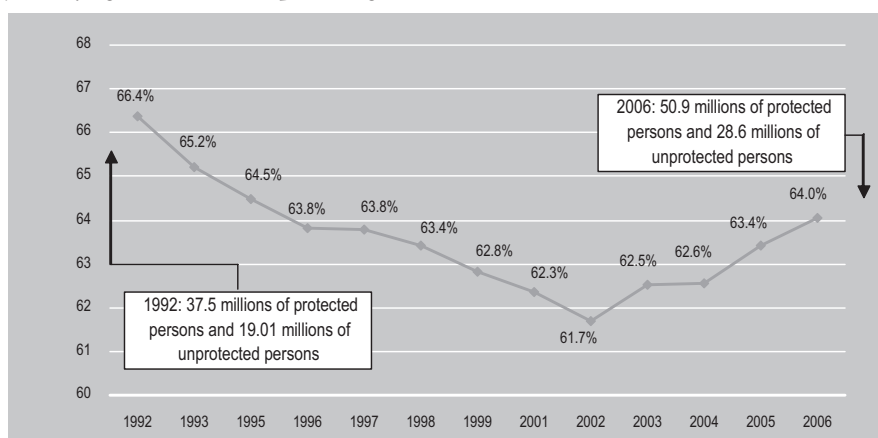
coverage using the current criteria shows a continuous decrease between 1992 and 2002, with some recovery in 2003 when the rate rose from 61.7 per cent to 62.5 per cent. This recovery was sustained and grew in the following years, to 62.6 per cent in 2004, 63.4 per cent in 2005 and 64.0 per cent in 2006 (Figure 6).¹¹ Although the absolute numbers of persons without coverage grew, since 2003 the protected employed population grew at rates higher than the total employed population. As a result, the level of social protection for all employed groups continuously improved.

While there are differences in the level of coverage, the trend between 1992 and 2006 is similar across the population subgroups observed: a reduction between 1992 and 2002 and clear signs of recovery from 2003 onwards (Figure 7). Between 1992 and 2006 the decrease in coverage for men was 3.6 percentage points (from 69.3 per cent to 65.8 per cent). For women, despite some fluctuations throughout that period, the level of coverage in 2006 is the same as was observed in 1992 (61.8 per cent). For Whites, the reduction was 2.1 percentage points (from 71.2 per cent to 69.1 per cent), and for Blacks it was 1.6 percentage points (from 60.2 per cent to 58.6 per cent).

The situation of women compared to men has improved, with the difference in coverage between them falling from 7.5 percentage points in 1992 to 3.9 percentage points in 2006. The situation for Blacks has shown virtually no change in relation to that of Whites, with the difference in the proportions of Blacks and Whites having

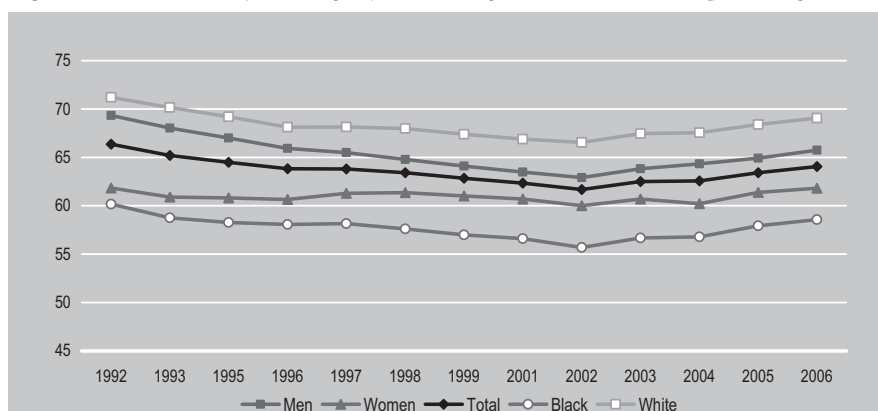
11. When the entire rural area of the Northern Region is included, the small difference in coverage is due to the fact that many of the region's residents are classified as Special Insured Persons.

Figure 6. Evolution of social protection for all employed persons between 16 and 59 years of age (1992-2006) (percentage)



Source: PNAD/IBGE — Author's calculations.

Figure 7. Social security coverage by race and gender (1992-2006) (percentage)

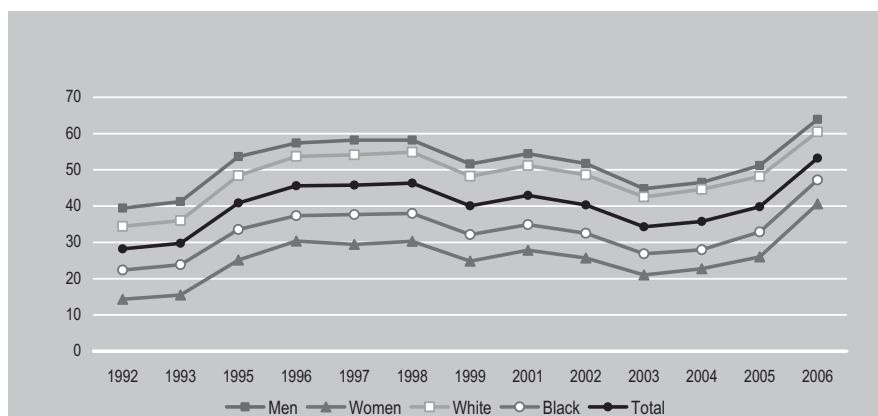


Source: PNAD/IBGE — Author's calculations.

access to social protection remaining relatively stable (11.0 per cent in 1992 and 10.5 per cent in 2006).

Despite the recovery shown by the indicators of coverage, the number of unprotected workers is alarming — some 29 million employed workers are not covered by any official social protection mechanism. In Brazil, the determining factor that in most cases is responsible for the lack of coverage, especially among self-employed persons, is inadequate income. This means that, when considering the key challenges involved in increasing coverage, an indicator is needed to measure the limits to the expansion of coverage by traditional methods, i.e. through contributions.

Figure 8. Potential welfare inclusion (unprotected persons with a monthly income equal to or higher than one minimum wage/total unprotected persons) — Minimum wage at September 2006 values for the NCPI (1992-2006) (percentage)



Source: PNAD/IBGE — Author's calculations.

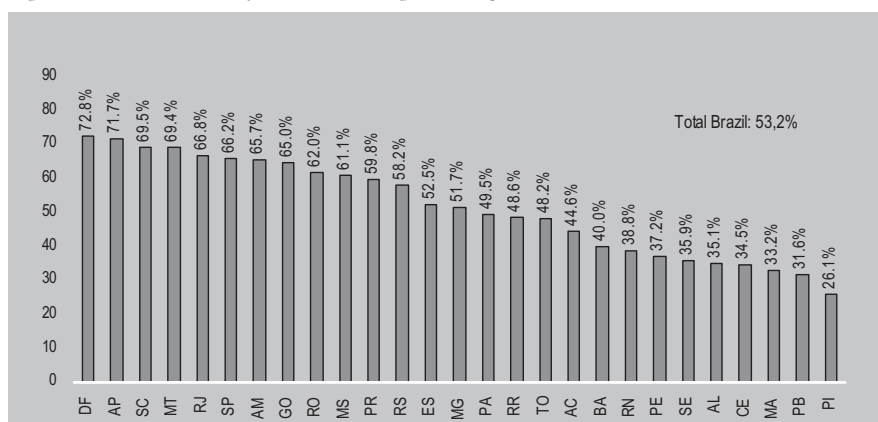
In this study we have adopted a definition of a specific level above which it is assumed an employed worker would be able to contribute. We then measured how many workers without social protection had incomes of at least that level. Since the minimum social security contribution is based on the national minimum wage, the value of the minimum wage for 2006 was taken as the threshold above which it would be possible for workers to pay social security contributions. Workers with income close to this level will tend to be the future recipients of social security benefits, whereas the rest will remain the focus of policies dealing with inclusion.

Figures 8 and 9 show trends in this indicator for the period 1992-2006, broken down by gender and race, and the indicator for individual Federal Units for the last year for which figures are available. To enable comparisons between years, values have been adjusted based on the national consumer price index (NCPI) up to September 2006, the reference period for figures available from the National Household Sample Survey.

Following the positive impact of the Real Plan in 1995, this indicator of potential inclusion fell throughout almost the entire period (from 40.9 per cent in 1995 to 34.3 per cent in 2003), but showed strong recovery from 2004 (35.7 per cent) to 2006 (53.2 per cent).¹² Throughout this period indicators for women and Blacks are

12. This indicator, calculated on the basis of the minimum wage, should be interpreted with caution, especially in view of the increase in the real value of the minimum wage from 1994 onwards. This increase in the real value of the minimum wage enlarges the estimated number of workers without capacity to contribute since this group is defined to be workers whose income adjusted in prior years by the consumer price index to 2006 is below the 2006 minimum wage threshold.

Figure 9. Potential welfare inclusion by Federal Unit — Minimum wage at September 2006 values for the NCPI (percentage)



Source: PNAD/IBGE — Author's calculations.

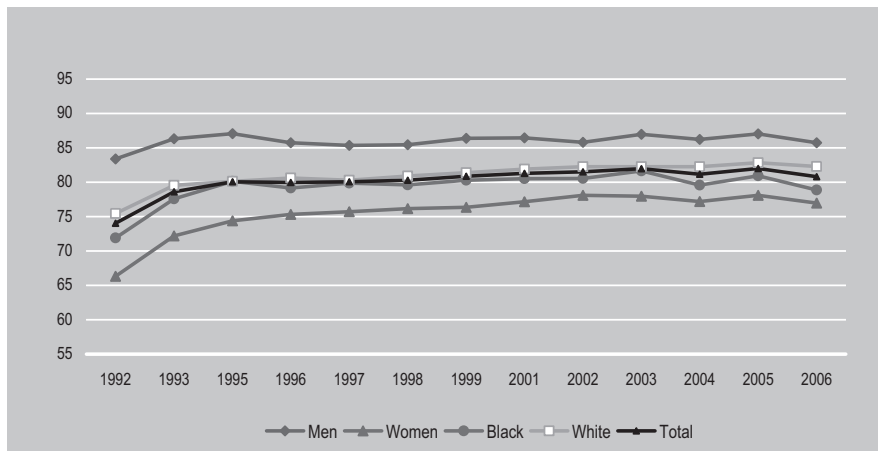
lower than that for all employed persons, showing that they have the least possibility of access to social protection. The comparison between men and women shows that there was some improvement, a reduction of 1.8 percentage points in the difference in the indicator between them, while the situation regarding Blacks and Whites worsened, showing an increase of 1.3 percentage points in the gap between the races.

Among the regions, the Federal District, Amapá, Santa Catarina, Mato Grosso, Rio de Janeiro and São Paulo have the greatest scope for the expansion of social security protection through contributions. Piauí, Paraíba, Maranhão, Ceará and Alagoas in the North-Eastern Region have the least possibility of increasing coverage in this way. Once again the social and economic discrepancies within Brazil are evident. As expected, the states with least social coverage for their employed workers also have the least potential to include them.

While the rate of coverage of employed workers is slightly less than 65 per cent, social protection of the elderly (defined to be elderly persons with access to social insurance or assistance benefits or who pay social insurance contributions as a proportion of the total population older than age 60) is greater than 81 per cent. Figure 10 shows the harmonized historical series for 1992 to 2006. The rural population of the Northern Region (except Tocantins) is not included for the period from 2004 to 2006.

Between 1992 and 2006 the coverage of women increased by 10.6 percentage points, whereas that of men rose by only 2.3 percentage points. The increase in the coverage of women is an important contributing factor for the increase in coverage of the elderly. As regards the races, despite the reduction in coverage in the final year

Figure 10. *Social protection coverage* of the elderly by race and gender (1992-2006) (percentage)*



Source: PNAD/IBGE — Author's calculations.

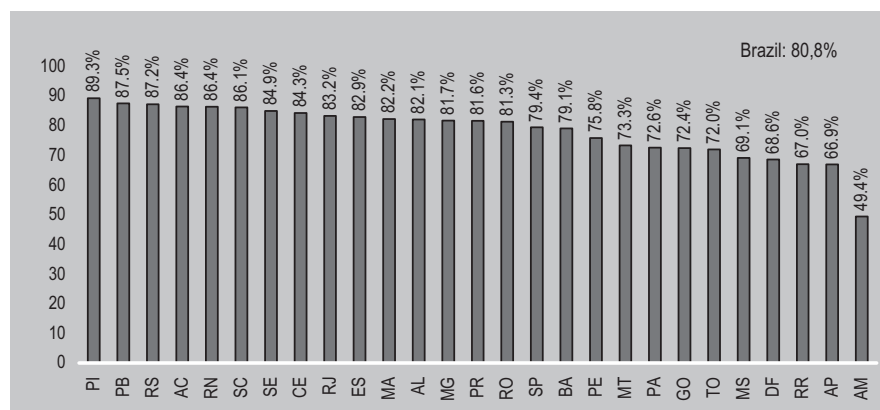
*Coverage is a measure of those receiving benefits or contributing to social welfare as a percentage of the total adult population.

for Blacks, coverage of Whites is generally approximately 3.4 percentage points higher than for Blacks. In 2006 some 82.3 per cent of elderly Whites received benefits or contributed to social security, compared to 78.9 per cent of Blacks.

The increasing coverage among elderly women seems to be the result of an increase in social security benefits paid in rural areas, which in the past had been almost exclusively paid to men. It would also seem to be due to the increase in the number of beneficiaries of social assistance transfers, especially the Continuous Welfare Benefit. All these factors helped close the gap in coverage between women and men, notably when compared to coverage of the employed population between ages 16 and 59, where the gap is much greater.

The continuing gap may be related to the fact that women's labour market participation, while showing continuous growth over the last two decades, is still lower than that of men. Elderly women now older than age 60 may have had even lower levels of participation. In addition, the unemployment rate among women has historically been higher than that for men. As a result, due to the high correlation between employment and social security contributions, this indicator probably only reflects the dynamics of the labour market that women who are now among the elderly experienced during their active lives.

In terms of race, the difference in behaviour is even greater than for indicators of coverage for the employed population. From 1992 to 2006, the average difference in the rates of social security coverage for White and Black workers (Graph 7) was 10.6 percentage points and, in the same period, the average difference in the rates of

Figure 11. Social protection for the elderly, by Federal Unit (percentage)

Source: PNAD/IBGE — Author's calculations.

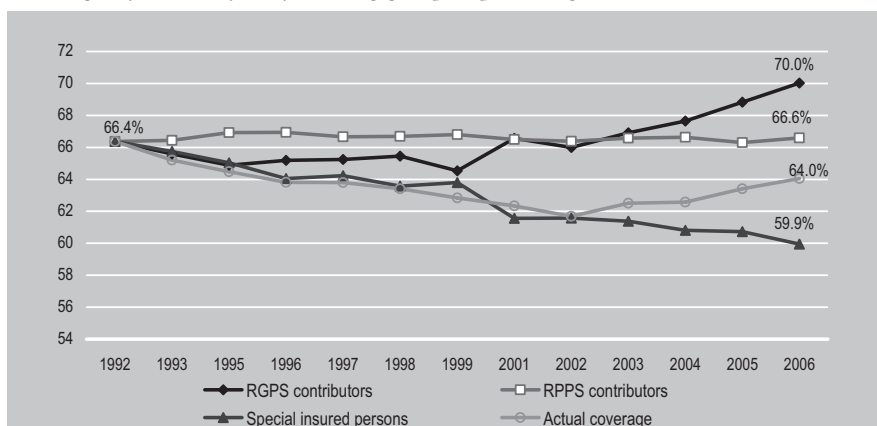
social security coverage for White and Black elderly persons (Graph 10) was 1.7 percentage points (that is, 6.4 times lower). Social assistance has undoubtedly had a positive impact on this difference, but the expansion of social security among rural populations, especially the inclusion of Black women, was the most important factor.

The rural population of the Northern Region was included in figures on social protection of the elderly by Federal Unit, but was not included in the previous analysis for the historical series (Figure 11). In regional terms, it can again be noted that social security coverage of the elderly does not have a strong relationship to coverage for employed workers (Figure 5).

Many Federal Units with levels of coverage for employed workers below the average have levels of coverage of the elderly that are higher than the national average, for example Piauí (highest coverage of the elderly in Brazil: 89.3 per cent), Paraíba, Acre, Rio Grande do Norte, Sergipe and Ceará. These figures are closely linked to rural social security coverage, since these Federal Units are among those with the greatest concentrations of Special Insured Persons.

These indicators demonstrate that, although social security coverage in Brazil is increasing, there are considerable regional disparities that must be taken into account in formulating social inclusion policies. Analysis of the gender and race aspects also leads to this conclusion. Although trends in the evolution of social protection are similar for men and women and for Whites and Blacks, the gap between levels of coverage of these groups shows that some structural factor — probably related to the degree of labour market participation — is responsible for the under-representation of women and Blacks among all workers enjoying social protection.

Figure 12. *What would have happened to coverage if other factors had remained unchanged, for each of the following groups? (percentage)*



Source: PNAD/IBGE — Author's calculations.

Factors responsible for the recent increase in coverage among employed workers

17

The increasing coverage of older people in the early 1990s can be explained by the creation and expansion of rural social protection benefits. The introduction of the Continuous Welfare Benefit, which is a social assistance benefit, is a notable example. A more intriguing issue concerns the factors responsible for coverage among employed workers. This is especially so in light of the increase in coverage of employed workers since 2002, including its development in terms of race and gender.

What factors are responsible for the recent increase in social security coverage of employed workers since 2002? To answer this question, it is necessary to provide a breakdown of coverage. Employed workers contributing to the RGPS and special social insurance schemes (for example, the RPPS covering military personnel and public servants) and Special Insured Persons are covered by social security.

Figure 12 shows the contribution of each of these groups of insured persons to the development of social security coverage over the past 13 years. Figure 12 breaks down the impact of each group, in each case by keeping the weight of the other groups at their 1992 level. This gives a picture of what would have happened to social security coverage for each group if other factors had remained unchanged except for those with an impact on the group in question.

The most critical factor appears to be the inclusion of Special Insured Persons, whose level of participation declined each year between 1992 and 2006 as a result of

Table 2. *What would have happened to coverage if the weight of each of the following groups had remained constant?*

Category	1992	2002	2006
RGPS contributors	66.4%	62.1%	60.4%
RPPS contributors	66.4%	61.7%	63.8%
Special insured persons	66.4%	66.5%	70.5%
Actual coverage	66.4%	61.7%	64.0%

Source: PNAD/IBGE — Author's calculations.

emigration from rural to urban areas and the increase in the productivity of rural activity over the last few decades. If the weight of the other employed groups is kept at its 1992 level, this fall in participation of Special Insured Persons is responsible for the reduction in coverage from 66.4 per cent (1992) to 59.9 per cent (2006), a fall of 6.5 percentage points.

To evaluate the impact of Special Insured Persons, the exercise can be reversed in order to measure what would have happened if the weight of Special Insured Persons had remained at its 1992 level while allowing all the other groups to vary. Table 2 shows that the fall in the participation of Special Insured Persons fully explains the observed reduction in coverage between 1992 and 2002. If the participation of Special Insured Persons is held at the level of the beginning of the period, this gives a rate of coverage for 2002 that is practically identical to that for 1992 (66.4 per cent in 1992 compared to 66.5 per cent in 2002).

If the participation of Special Insured Persons explains what happened between 1992 and 2002, what explains the increase in social security coverage between 2003 and 2006? The participation of Special Insured Persons fell by 1.6 percentage points between 2002 and 2006, while that for contributors to the RPPS schemes remained stable (see Figure 12). Hence, the explanation must be sought among the RGPS contributors.

Figure 12 shows that it was the increasing participation of contributors to the RGPS that led to the growth of coverage after 2002. In fact, if all groups except for RGPS contributors had kept their levels constant between 1992 and 2006, social security coverage would have increased by 3.6 percentage points, to reach 70 per cent of employed workers. This increase of 3.6 percentage points over the 1992 level is largely explained by an increase in participation by registered private-sector workers (+2.3 percentage points) and registered domestic workers (+1.0 percentage points) and to a lesser extent by an increase in participation by other RGPS contributors (+0.4 percentage points).

Two factors can explain the recent growth in social security coverage: measures taken to include workers in social security schemes (notably domestic workers) and the expansion of the formal labour market. Reference should be made to legislative initiatives to promote the formalization of domestic labour in Brazil — Article 24 of Act No. 8212/1991, which reduced social security contributions for the employers of domestic workers from 20 per cent (the standard rate for employers) to 12 per cent; and Act No. 11324/2006, which enabled the employers of domestic workers to claim contributions as a deduction in tax declarations.

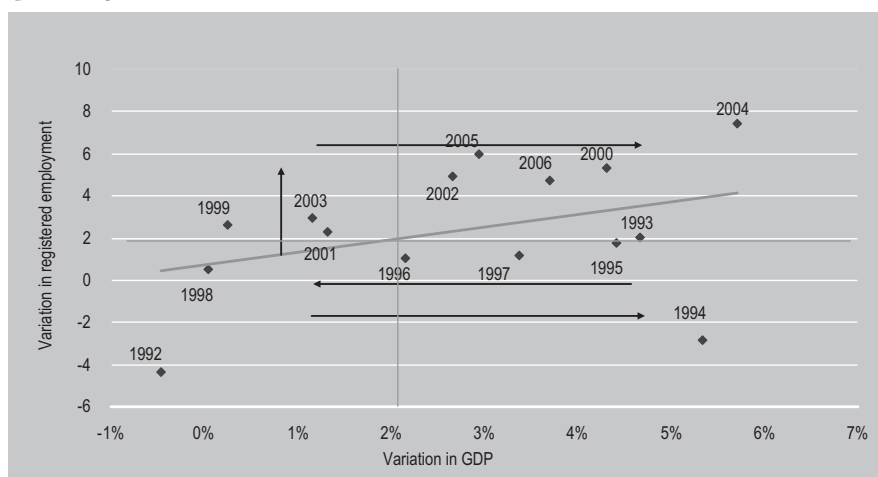
Since the coverage of domestic workers increased between 1992 and 2001, the first measure may be regarded as having had a positive impact. Data from the most recent National Household Sample Survey do not permit evaluation of the impact of the second measure, since they were collected in September 2006 (only a few months after the adoption of Act No. 11324). Nevertheless, it is clear why the difference between men and women in rates of social security coverage for all employed workers fell between 1992 and 2006 (Figure 7). Although, over the same period, the participation of women among registered private-sector workers did not improve in comparison with the participation of men (Figure 1), the increasing coverage for women compared to men is largely explained by the increase in the number of domestic workers registered.

In 2006, according to the National Household Sample Survey, women accounted for 93.2 per cent of all domestic workers in Brazil. The increasing coverage of domestic workers therefore led to an improvement in the situation of women's social security coverage. This increase in social security coverage for women is a positive factor, not least since this was largely due to an increase in the number of registered domestic workers, who are generally less well-paid and who have limited labour rights. Thus, in this instance, the coverage increase did not stem from the increased participation of women in higher-paid skilled jobs.

Consideration should also be given to why Blacks, who comprise the majority of domestic workers (59.1 per cent), did not show any relative improvement in social security coverage between 1992 and 2006 (Figure 7). The reason is that Blacks represent the majority of Special Insured Persons (64 per cent) and, as stated previously (Figure 12), coverage for this group has fallen. The overall result was that, with a slight decrease, social security coverage of Black workers remained relatively stable in comparison with that for White workers.

As regards self-employed workers, reference should be made to the probable impact of Act No. 10666 (adopted in 2003) that requires enterprises using the services of third parties (specifically self-employed persons who are classified by the RGPS as "individual contributors") to deduct and forward social insurance contributions of 11 per cent of the remuneration paid to these workers (subject to the maximum earnings on which social insurance contributions are due). In practical

Figure 13. *Variation in output x variation in formal (registered) employment (percentage)*



Source: National accounts/IBGE and RAIS/MTE. For 2006, figures for employment are from the CAGED/MTE — Author's calculations.

terms this means that contributions by self-employed service providers have now become compulsory.¹³

These developments have also been promoted by the Ministry of Social Security, through taxation measures. In turn, the Ministry has sought to make workers more aware of the need to respect their social security rights and obligations through educational measures. Another contributing factor explaining the increase in contributions by self-employed persons is the recovery of the real value of income from work, which had been falling since the late 1990s but then slowly recovered after 2004. The increase in the numbers of domestic and self-employed workers as social insurance contributors explains less of the recent increase in coverage than the increase in the numbers of registered workers in the private sector of the economy.

As regards the recovery of private-sector employment in the formal labour market, it is first necessary to emphasize that in Brazil's recent past (specifically since the late 1990s and early 2000s) there has been a change in the relationship between economic growth and the generation of formal employment. This is illustrated in Figure 13.

13. This measure also provides for the payment of an employer's contribution of 20 per cent of the remuneration paid by an enterprise to individual contributors. This change made the reduction of the individual's contribution rate to 11 per cent possible for this category of worker. Other individual contributors who do not supply services to legal entities have to contribute at the rate of 20 per cent.

From the early 1990s until 1998 there were significant variations in GDP, from negative figures such as in 1992 (−0.47 per cent) to high positive figures (+5.33 per cent) in 1994. There was however little real change in the number of new formal jobs, which had increased by 2 per cent in 1993. And growth remained below this level for the rest of the period. Consequently, in 1998, the number of formal jobs (19.2 million) was only 3.7 per cent higher than in 1992 (18.5 million). Accordingly, this was a period during which brief cycles of economic growth proved largely ineffective from the viewpoint of job creation or increasing formalization.

From 1999, formal employment began to increase faster than output. This was associated with more robust economic growth, and since 2003 growth that is generally more stable and predictable.

The changes that occurred at the end of the 1990s disproved two major theories that had been accepted throughout the 1990s: that Brazil was condemned to largely informal-sector manpower growth (not covered by social security) and that, in the economic cycle that began at the end of the 1990s, increases in output would have increasingly less impact on the generation of jobs on account of increases in productivity (Ramos, 2003). With the exception of 2003, since 2002 economic growth has been greater than that experienced throughout the 1980s and 1990s, and it has been more stable. Together, these factors may help explain the behaviour of formal-sector employment.¹⁴

The calculation of formal employment-output elasticity during the period under review illustrates the economic changes that occurred in Brazil. To measure these changes, we have defined three time periods in terms of macro-economic factors: 1992 and 1993, which were marked by the economic opening of Brazil; 1995 to 1999, during which there was continuing economic opening and a process of monetary stabilization as a result of the creation of an exchange rate “anchor”; and 2000 to 2005, when the effects of the changes in the exchange rate adopted up to 1999 could be perceived (Table 3).

The early 1990s was the worst period, with low growth in industrial output (+3.7 per cent) and services (+3.9 per cent), as well as a strong downsizing process (the number of formal jobs decreased by 6.1 per cent and 5.8 per cent for industry and services, respectively). The exception was livestock production, which showed a reasonable increase in output (+6.5 per cent). Employment data for this sector (an increase of 38.9 per cent), however, must be interpreted with care.¹⁵

14. The year 2003 was marked by major currency rate fluctuations (stemming from uncertainty following the election of a new government), with inflation resulting in a major increase in interest rates and consequent low economic growth.

15. The cited figures for formal employment are from the Annual Social Information Report (RAIS) of the Ministry of Labour and Employment. While the RAIS is probably the most reliable source of information on formal labour in Brazil, in the early 1990s (especially in 1994, which has not been included in calculations of elasticity) there was a major effort to improve the quality of definitions of

Table 3. *Formal employment-output elasticity*

	1992-1993	1995-1999	2000-2005
Registered employment Total/GDP Total	-0.58	0.70	1.68
Livestock	6.01	0.31	0.99
Industry	-1.63	-1.59	1.60
Services	-1.48	2.26	1.79
Industry			
Mining	6.56	-1.68	0.96
Processing industries	-1.31	-15.47	1.53
Industrial public utility services (SIUP)	0.27	-1.25	0.69
Construction	15.25	-0.27	9.46
Services			
Commerce	-0.42	2.13	3.36
Financial institutions	0.82	6.40	1.31
Property leasing	-0.02	2.85	1.71
Public administration	-2.70	-0.22	-1.71

Source: National accounts/IBGE and RAIS/MTE — Author's calculations.

Among industrial subsectors, only the public utilities industrial services (*Serviços Industriais de Utilidade Pública* — SIUP) showed a positive employment performance. The high positive elasticity encountered in the subsectors of mineral extraction and civil construction are the result of negative variations in output, and to a somewhat greater degree, in formal employment. All service subsectors also showed negative variations in formal employment during the first period.

The second period is marked by more extensive employment adjustment in industry, and a relatively poor performance in livestock production, due principally to the strategy of strengthening the Brazilian currency in order to control inflation. Nevertheless, services (whose subsectors are generally protected from the effects of exchange rates) showed a strong employment response. The exception to this was the financial services subsector that suppressed a quarter of jobs during this period.

sectors of activity. Thus, references to “unknown sector of activity” were significantly fewer in 1994, thereby increasing the number of references to specific economic sectors (in particular livestock production, where the information had been of poor quality). In the livestock production sector, efforts to improve the quality of information may have had some influence on data for 1992 and 1993, resulting in an over-estimation of employment in this initial period.

Overall, since 2000, the elasticity values are close to one (and higher), showing not only the beginning of an economic cycle that is generating a large number of jobs, but very probably has also announced a period of formalization of employment. Since the early 2000s the picture has been much more favourable for formalization and hence for social security coverage.

Among the factors explaining the recovery of formalization, and therefore of social security coverage, is the adjustment of the exchange rate in 1999. Until then, the aggressive commercial opening achieved in Brazil since 1992 (which since 1994 was combined with a considerable and deliberate strengthening of the Brazilian currency as a strategy to control inflation) led Brazilian industry (and, to a considerable extent, livestock production and the financial services subsector) into a period of “regressive specialization” (Kupfer, 2005), with serious consequences for formal employment.¹⁶

The end of the 1990s marked the end of the strategy of inflation control based on the exchange rate (the exchange rate “anchor”). It also probably marked the end of the cycle of employment downsizing, which largely accounts for the subsequent recovery in employment in industry and agriculture and in the financial services subsector.

Since the service sector more generally showed vigorous recovery in formal employment before 1999, and is only slightly affected by the exchange rate, the explanation for the increase in formal employment in this sector is difficult to link to changes in the exchange rate from early 1999 onwards. It should also be noted that services show figures for formal employment-output elasticity that are higher than one in two of the periods (1995-1999 and 2000-2005), which seem to indicate a process of formalization of existing employment, together with the creation of new jobs.

One possible explanation for the behaviour of employment in the service sector is the introduction of a simplified taxation system for micro- and small enterprises, (SIMPLES).¹⁷ Some commentators, such as Cechin and Fernandes (2000) and Pastore (2000), consider that SIMPLES helped formalize small enterprises, and thereby secured the registration of their workers, thanks to the reduction in the tax burden for micro- and small enterprises and the introduction of a simplified tax payment system.

16. Kupfer (2005) maintains that strategies involving major investments in research and technology resulting in sustainable improvements in productivity ultimately generate jobs rather than eliminating them, thereby leading to greater incomes and improved levels of social protection. However, during the 1990s, this was not the strategy pursued in the sectors most affected by changes. On the contrary, the aim was to reorganize production and adopt procedures to bring about only the control of costs. In this case, since there was no increase in output, the adjustment fell entirely on employment. This seems to be an accurate description of what happened during the 1990s.

17. Act No. 9317/1996.

The system was adopted in January 1997. Before then, according to the administrative registers of the Ministry of Social Security, all enterprises that later opted for SIMPLES employed some 773,000 workers. By 1999 this number of employees had increased to 3.5 million. Cechin and Fernandes (2000) attribute this increase (approximately 2.7 million jobs) more to the formalization of existing jobs than to the generation of new jobs.

Finally, the literature also includes references to greater labour inspection (Baltar et al., 2006) and to greater outsourcing of manpower (Cardoso, 2006). However, there is general agreement that while such administrative measures have an impact, it is small and cannot explain the recent process of formalization.

The outlook for the social protection of employed workers is largely promising. It is highly probable that the numbers of Special Insured Persons will continue to fall as a proportion of all employed workers. It cannot be excluded that the recent rise in the value of the Brazilian currency will not affect the industrial and livestock sectors. However, it is highly unlikely that this impact will be of the same magnitude as in the 1990s. Data on output, which grew by 3.7 per cent in 2006 and is estimated to increase by 4.7 per cent in 2007, show an economy experiencing greater and more sustainable growth than at any time in the last two decades. Moreover, figures for employment show that all economic sectors continue to generate formal jobs in a robust manner (Central Bank of Brazil 2007). Hence, it can be expected that the recent increases in social security coverage for employed workers will be maintained in the coming years.

Conclusion

Analysis of the formal labour market in Brazil over the last few years has shown that among all employed workers there has been a definite increase in the numbers of formal private-sector workers (+2.6 percentage points), all workers in the formal labour market (+5.0 percentage points) and, in turn, workers contributing to social security schemes (+5.8 percentage points).

Although more significant progress has not been realized, these developments should be regarded, nonetheless, as positive. After all, Brazil has endured two decades of low economic growth, which might have been expected to favour the expansion of informal employment. A further positive development is the reduction in the gap between men and women and between Whites and Blacks with regards to their participation in the formal labour market and as social security contributors. These gaps, especially between Whites and Blacks, are nevertheless relatively large and deserve special attention in addition to public policies to generate jobs.

Although contributions are the central element in coverage, there are other institutional features of the Brazilian model that provide coverage without

contributions. In particular, this refers to coverage for Special Insured Persons. The contributory capacity of this group is precarious since it depends on the marketing of their produce. However, Special Insured Persons enjoy access to virtually all social security benefits, except retirement pensions based on contributions.

Social security coverage of employed workers aged 16 to 59 rose in 2006 to 64.1 per cent (Figure 6). Historically, this figure for 2006 confirms the recovery in coverage levels that began in 2003. Between 1992 and 2002 there was a fall of 4.7 percentage points (from 66.4 per cent to 61.7 per cent). There was a reduction in the coverage gap between men and women, but not in the gap between Whites and Blacks. The regional disparities observed in Brazil in 2006 are significant. In Santa Catarina, a State with high levels of social protection, nearly eight out of every ten employed workers aged 16 to 59 have social security coverage, while in Pará this figure does not rise above five in every ten.

Then again, social security coverage for the elderly reached 80 per cent (Figure 10) for all those older than age 60 in the mid-1990s, and has stabilized since then. The high increase in coverage at the beginning of the 1990s can be attributed to the benefits paid to Special Insured Persons. A positive element is that social security coverage for elderly Whites and Blacks is largely the same, and that the gap between male and female elderly persons fell significantly. Between 1992 and 2006 the coverage of elderly women increased by 10.6 percentage points, whereas that for elderly men grew by 2.3 percentage points. As regards regional differences, there are still significant discrepancies in Brazil. In Piauí (the State offering the greatest coverage), nine out of every ten elderly persons receive benefits while in Amazonas (the State with the least coverage) only five of every ten elderly persons receive benefits. The increase in social security coverage of the elderly can largely be attributed to the benefits for rural populations that have been awarded under the 1988 Constitution.

The most interesting feature, for which an explanation has been sought in this article, is the variation in social security coverage for employed workers: the reduction in coverage over the period 1992-2002 (-4.7 percentage points) and the subsequent recovery between 2002 and 2006 (+2.3 percentage points).

A breakdown of levels of social protection by protected group shows a reduction in the participation of Special Insured Persons throughout the period under consideration. This reduction, which is probably due to the rural exodus during this period combined to some extent with an increase in the productivity of rural activity, fully explains the trends in social security coverage between 1992 and 2002. The increase in coverage between 2002 and 2006 was largely due to the increase in numbers of contributors to the General Social Security Scheme (RGPS).

Various factors combine to explain the increase in the numbers of contributors. On the one hand, there are institutional and administrative factors, and on the other hand, factors related to the dynamics of the economy and labour market. As regards

the institutional and administrative factors, there was the introduction of the simplified taxation scheme for micro- and small enterprises (SIMPLES), the reduction in the contribution rate for employers of domestic workers, changes in legislation on contributions of individuals providing services to enterprises, and improvements in inspection procedures (Baltar et al., 2006).

As regards the second set of factors, in addition to the recovery in the real value of incomes over the last few years, attention is drawn to the change in the relationship between economic growth and formal employment, especially since 1999. Whereas throughout the 1990s employment failed to show any positive response to brief periods of economic growth, since 1999 Brazil has begun to generate a large number of formal jobs, as a result of the shift from a controlled exchange rate to a floating system and apparent more stable economic growth.

Changes in the exchange rate had a major impact on the industrial and agricultural sectors that mostly produce tradable goods and hence are more sensitive to variations in the value of the currency. This assessment can be confirmed by an analysis of formal employment-output elasticity, such as that in this article. Sectoral elasticity also indicates that the service sector (which is little affected by the exchange rate) began to generate a large number of formal jobs in the second half of the 1990s. The explanation for the behaviour of formal employment in this sector must be institutional and in particular related to the introduction of SIMPLES.

The outlook for social security coverage seems promising for the immediate future, since the outlook for economic growth is solid and the generation of formally registered jobs continues to show a generally positive picture. Nevertheless, this recovery should not detract attention away from the profound, continuing differences in coverage levels in Brazil, as found on the basis of race and gender as well as across the country's regions. By pointing out these discrepancies we hope to contribute to the formulation of specific policies that will enable Brazil to move towards greater social cohesion.

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