

Departamento de Economía
Facultad de Ciencias Sociales
Universidad de la República

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Pay-Roll Contribution Financed Social Protection Programs in Uruguay

Alvaro Forteza, Anna Caristo,
Natalia Ferreira-Coimbra, Ianina Rossi.

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Resumen

En este artículo, analizamos el desempeño reciente, las perspectivas y algunas opciones de política para dos programas de seguridad social en Uruguay: jubilaciones (pensiones) y seguro de desempleo. Revisamos el impacto de estos programas en el gasto público, incluyendo las tendencias recientes y las tendencias que se esperan para el futuro, y en la desigualdad del ingreso. Realizando microsimulaciones, evaluamos el impacto fiscal y, en algunos casos, el impacto en equidad de algunas opciones de política.

JEL: H55, J14

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² Alvarof@decon.edu.uy, Anna@decon.edu.uy, Natalia@decon.edu.uy, Ianina@decon.edu.uy. Departamento de Economía, Facultad de Ciencias Sociales, Universidad de la República.

Abstract

In this paper we analyze the recent performance, perspectives and some policy options for two public social security programs in Uruguay: pensions and unemployment insurance. We review the impact of these programs on public expenditure, including recent and expected future trends, and on income inequality. Performing microsimulations, we evaluate the fiscal impact, and in some cases the equity impact, of some policy options.

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1 Introduction

In this paper we analyze the recent performance, perspectives and some policy options for two public social security programs in Uruguay: pensions and unemployment insurance. We review the impact of these programs on public expenditure, including recent and expected future trends, and on income inequality. We also evaluate the fiscal impact, and in some cases the equity impact, of some policy options.

Uruguayan governments have traditionally been very active in social protection. This orientation did not fade out despite the more liberal stance in economic policy that tended to be adopted in Uruguay, like in most Latin American countries, in the last two decades. On the contrary, public expenditure on social programs grew faster than GDP, and this was so not only during the recent recession in which GDP plummeted, but also during the period of rapid growth previous to the recession.

Pensions account for most of this expansionary trend. They were already the largest component of public social expenditure in the eighties, but in the early nineties the lagged indexation of pensions caused an enormous rise in the purchasing power of pensions during the disinflation process.

In 1995, the coalition government passed a law to reform the pension program, introducing individual savings accounts to complement the previous exclusively pay-as-you-go public system. The indexation mechanism was not touched though, for it would have been against the constitution to do that. Public expenditure on pensions did not rise as a percentage of GDP for a couple of years, but it did not fall either and it grew again as a percentage of GDP when the recession began in 1999. It was not until the 2002 devaluation caused a drastic fall in wages and thus in pensions that public expenditure on pensions significantly fell as a percentage of GDP.

In Uruguay the coverage of the pension programs among the elderly is wide by Latin American standards, but it also seems to be wide compared to other public social programs in Uruguay. Measuring coverage is not an easy task, and comparing coverage of different kind of programs can be risky, but there is some evidence that other programs reach the target population to a significantly lesser extent than do pensions.³ The incidence of poverty among the elderly is much lower than among any other age group (Forteza, 2004). The comparatively wide coverage and the rising value of pensions during most of the last two decades indicate that the expansion of public expenditure on this particular program was not just driven by demography. Rather it was a deliberate policy option that the country adopted during the democratic period that began in 1985. Accounts that we have of the Uruguayan economic policy process during that period support this view (Forteza et al 2004, among others).

³ This is indeed the case of unemployment insurance, the other program we analyze in this paper.

By its very nature, unemployment insurance is a program of a smaller order of magnitude than pensions. Even though it protects most workers against the risk of losing their jobs, only those workers who are actually made redundant are normally eligible to receive the benefit, and even then only for a limited period. But the small size of the program in Uruguay seems to go well beyond that. Like in other Latin American countries, most unemployed workers in Uruguay do not receive any unemployment benefit. There is awareness of the problem, and the government and several political and social actors have made proposals to reform this program.

After this introduction, in section 2 we briefly describe the recent trends in public social spending. In section 3, we analyze pensions and assess some policy options in terms of both public expenditure and equity. We evaluated several parametric changes one by one, rather than a whole policy package. This is partly because of the analytic goal of these exercises, but also because proposing a comprehensive reform was well beyond the scope of this project. In section 4, we analyze the unemployment insurance programs. Like in the pensions section, we briefly describe the programs, analyze recent and projected trends and study their impact on equity. There are several proposals to reform the existing programs in Uruguay. We summarized and compared these proposals and made a preliminary attempt at estimating their fiscal impact. These estimations are even more tentative than previous ones because the proposals we are considering have not yet been formulated as bills. Nevertheless, we think that we can give an idea of the orders of magnitude involved. We provide a summary and conclusions in section 5. The methodological details of some estimations are explained in the appendix.

2 Spending on Uruguay's Social Insurance Programs

Since 1985, total social expenditure has been over 50 percent of the total expenditure of the Central Government plus Public Social Security Institutions (CG-SS). Public social expenditure has been rising throughout this period, reaching 21 percent of GDP in 2002, almost 70 percent of the total expenditure of the CG-SS. It is worth noticing that the great majority of this expenditure is on social security and assistance, which also shows an expansionary trend (15.8 percent of GDP in 2002, over half the total expenditure). The other social programs, education, health, housing and other social services, are also tending to rise but they are still rather small programs and in all they account for less than 20 percent of total expenditure (Table 1).⁴

Over the whole period, the old age, survival and disability insurance programs (OASDI) amounted to between 77 and 80 percent of total public expenditure on social security. These programs rose much faster than GDP during the democratic period that began in 1985. Total expenditure on public and private OASDI programs came to 8.4 percent of GDP in 1986 and reached a peak of 14.9 percent of GDP in 2001. Other programs, such as unemployment insurance and health, have also been increasing, but they are still rather

⁴ According to other estimations, public social expenditure may have reached 25 percent of GDP. See Ferreira-Coimbra and Forteza (2004, box 1) for a discussion of different measures of public social expenditure in Uruguay.

small (0.6 and 1.6 percent of the GDP in 2002, respectively). It follows that the main cause of the rise in both social and total expenditure of the CG-SS is the growth of programs in the social security system, in particular the biggest one: OASDI (Table 2). Even stronger expansionary trends can be identified in private pension programs during the nineties (Table 3).

In Uruguay today, the Banco de Previsión Social (BPS) accounts for about 90 percent of total public expenditure on social security and about 75 percent of total private plus public expenditure on social security. The rise in the purchasing power of pensions and, to a lesser extent, the demographic trends in the country put growing pressure on the BPS budget during the nineties. The recession in the economy added to the difficulties between 1999 and 2003. The deficit of the BPS grew much faster than GDP in this period, reaching a maximum of almost five percent of GDP in 2002 (Table 4). The devaluation in June 2002 and the connected drop in the real wages pushed the purchasing power of pensions and expenditure on the social security institutions down during the last couple of years. The BPS deficit started to decrease in 2003 and it is expected to shrink even more in 2004.

3 Pensions

3.1 Description of the Program⁵

"In 1995, the Uruguayan parliament passed a bill for the reform of the main pensions program of the country. By that time, this program served almost ninety percent of all the pensions paid in Uruguay (Ferreira-Coimbra and Forteza, 2004). Starting in 1967, this program was run by a public body that was autonomous of the government called the Banco de Previsión Social (BPS). In the pre-reform program, there were defined benefits and a pay-as-you-go (PAYG) financial regime.

The reform initiated in 1995 introduced a savings account pillar and modified key parameters of the PAYG pillar. As a general rule, members with wages below a threshold continue to be served exclusively by the public-PAYG pillar unless they explicitly opt to deposit half of their personal contributions in a savings account. Up to now, most workers in this situation have taken this option, and they are currently contributing half and half to both pillars. Members with higher wages are obliged to make personal contributions to both pillars. Employers' contributions go exclusively to the public-PAYG pillar. Consequently, low-wage workers who did not opt for the savings accounts receive their full pension from the BPS, while other workers' pensions are financed by both the BPS and the funds accumulated in their savings accounts. According to estimations made in the BPS (Camacho, 1997), the public pillar will still be paying roughly three quarters of the pensions of this mixed program when the reformed system reaches maturity.

The public-PAYG pillar was reformed in several important ways. As a general rule, the accessibility conditions were tightened, both on paper and in practice. The required minimum age for women to receive a contributory pension was raised from 55 to 60, and

⁵ Taken from Forteza (2004).

the minimum number of years of effective contributions required to receive the pension was raised from 30 to 35 for both women and men. The administration of the system was significantly improved, which has meant, among other things, that the accessibility conditions are currently better controlled. The formulae used to compute the pension were changed. Minimum and maximum pensions paid by the public pillar were raised. The replacement rate was made more sensitive to retirement age and the years of contribution, i.e. it was reduced for workers retiring at the minimum required age and years of contributions and raised for workers who decide to retire later. Finally, the number of years of contributions considered in computing the initial pension was raised. Before the reform, the so-called "basic pension wage" (the figure that multiplies the replacement rate to produce the initial pension) was the average of the wages on which the last three years of contributions were made. After the reform, the formula takes into account the last ten years of contributions and the twenty years of highest contributions. With this change, the reformers aimed at reducing incentives to under-report earnings in most of working life and to over-report earnings in the last three years prior to retirement."

3.2 Projected Spending

One of the main motivations for the reform was the upward trend in public expenditure on pensions. Between 1990 and 1995, the government raised its total spending on social security by more than four percentage points of GDP, and most of this was for pensions. The lagged indexation of pensions to wages in a context of declining inflation was a key determinant of the growth in expenditure on pensions. Among other objectives, the reform designed in 1995 tried to put a stop to this expansionary trend.

It was expected that BPS spending would not decline immediately after the reform, because of its gradualism. Moreover, the BPS deficit was expected to rise initially due to the immediate reduction in contributions held by the institution, which was the counterpart of the re-routing of part of the contributions to the savings account pillar.

There have been several attempts to project the budget of the BPS with and without the reform (Camacho, 1997; Caristo and Forteza, 2003; Forteza, 2004; among others). Most studies tend to conclude that the reform is likely to reduce BPS spending very slowly and to temporarily raise the deficit, and only to start reducing it after several years (figure 1).

The sustainability issue is not definitely settled, though. There is of course the usual concern and warnings about the scope and validity of this type of exercise. Assumptions will never strictly hold completely and even if the researcher performs careful sensitivity analysis it is not easy to cover all the possibilities. But in the case of Uruguay, the difficulties in this type of exercise are particularly significant, mainly because of the big gap that existed before the reform between *de jure* and *de facto* pension policies. What simulation models usually do is to reproduce the behavior of the system under a certain set of norms, but it is very difficult to do this properly when policies in practice significantly differ from the norms on paper. In previous documents, we emphasized that most of the medium to long run expected improvement in the BPS budget after the reform stems from the projected decline in pensions paid to individuals who did not complete the contributions required to access the pension. The main reason to expect this improvement to take place is

that the scope for this type of manipulation of the benefits was drastically reduced with the organization of work history records. However, the saving this may produce in the future crucially depends on the magnitude of the overspending of the BPS caused by this type of abuse in the past, and this is something that we can only indirectly and very roughly estimate.

The recent economic crisis adds to the uncertainty of the existing projections. As is common practice, studies done on the Uruguayan pension programs are mostly meant to capture middle and long run trends, and not short run economic cycles. This is not necessarily a serious problem when the goal is to analyze fiscal sustainability, but it does introduce some noise that makes it more difficult to evaluate the accuracy of the existing projections. It is not obvious whether departures of the real figures from the projections can be ascribed to the economic cycle or should be taken as a signal that the system is in a trend different to what was expected. In particular, recent BPS deficits account for a greater share of GDP than was expected according to our projections. Most of this negative performance seems to be due to the deep recession that the country has gone through in recent years (Forteza, 2004), and as such it should be expected to reverse, but the situation requires further scrutiny.

To sum up, existing projections suggest that the expenditure and the deficit of the BPS will decline as a share of GDP in the near future. This declining trend should stem from the economic recovery and the gradual replacement of pensioners of the pre-reform regime by new pensioners. Nevertheless, there is enough uncertainty involved in these projections as to make it advisable to explore some policy options to reduce expenditure. We consider some of these options below, after analyzing the equity impact of the current pensions program.

3.3 Equity Impact

Public pension programs have the potential to perform significant redistribution of income. This is particularly so in countries like Uruguay in which the programs are large and cover a significant proportion of the population (Table 1). Almost half of the households received at least one pension, and pensions accounted for almost a quarter of total household earnings in 2003, according to the household survey (Table 5). The figures are higher for the upper deciles: the proportion of households receiving pensions was more than double and the proportion of pensions in household earnings was almost three times more in the tenth (highest) decile as compared to the first (lowest) decile. But, on the other hand, households receiving pensions were significantly more numerous and the average age of their members was significantly lower in the lower deciles, suggesting that pension earnings might spill over to other members of the family and particularly to children more in lower than in upper decile households (Table 6).

Public pensions usually redistribute income both across generations and across individuals of the same generation. We address inter-generational redistribution computing "generational accounts" (see, among others, Auerbach, Gokhale and Kotlikoff, 1994; Auerbach, Kotlikoff and Leibfritz, 1999; Kotlikoff and Raffelhuschen, 1999). This methodology basically consists of computing the present value of net transfers between

individuals and the pensions program. We also used generational accounting to analyze intra-generational redistribution, computing different accounts for different subsets of workers. We complemented this type of approach with an analysis of the contribution of the pensions program to income inequality.

There is ample evidence that PAYG pension systems have redistributed enormous amounts towards the initial generations, those who began the system, from the generations that followed. The programs currently face payment commitments well above the expected collection from social security contributions. One difficult issue the pension policy must deal with in most modern mature programs is how to distribute this inherited burden among current and future generations. In particular, regaining fiscal sustainability to a large extent involves raising the burden that current generations must bear to reduce the burden to be left to future generations.

In a recent study, Forteza (2003) concludes that the 1995 reform of the BPS pension program will significantly reduce the fiscal burden that future generations will have to bear, mainly because of the tightening of the conditions under which current generations access pensions. This tightening is more in practice than on paper and it has to do with administrative controls and particularly with work history. The main impact of the reform will be on individuals who under the old rules would have gotten a pension without having fulfilled the required conditions. They are not expected to get the contributory pension under the new regime.

Formal workers, those who strictly abide by the laws, will on average experience comparatively minor changes, although some groups will be considerably affected. The reform benefited males and negatively affected females. This is consistent with the reformers' goal of eliminating the preferential treatment that the old regime granted to females. As to income levels, the reform benefited low and, even more, high-income formal workers. The latter gained with the introduction of the savings pillar, the raising of the upper bounds on pensions paid by the public pillar, and the reduction in payroll taxes above a certain threshold. Low-income workers benefited because of the increase in minimum pensions and the bonuses granted to low paid workers who voluntarily adhere to the savings account pillar.

We also analyzed the contribution of pensions to income inequality. Unlike in generational accounting, this analysis does not provide an assessment of the lifetime transfers of the individuals to and from social security, but it gives more detailed information on current transfers than the study described in the paragraphs above. Besides, this analysis uses information from household surveys and does not depend so heavily on assumptions made to build a simulation model. The Uruguayan household survey does not distinguish different pension programs, so this analysis mixes the BPS programs (including the relatively small non-contributory old age BPS pension program) with other programs in Uruguay (the BPS handles about 90 percent of total recipients and about 80 percent of total payments of pensions in the country). We estimated the contribution of different sources of income to total inequality, using the methodology proposed by Shorrocks (1982). In order to consider the whole effect of the social programs, we measured pensions and other

government social programs as net transfers, i.e. as benefits received minus taxes paid to finance the programs (see the methodological appendix for details).

According to the results summarized in Table 7 (left panel: Estimation 1) pension programs in Uruguay contributed to reducing inequality by 12 percent in 2003. This effect can be explained in terms of the negative correlation of *net* pensions to total earnings (both measured as per capita household earnings). In other words, high-income households received on average lower pensions *net* of taxes paid to finance the program than low-income households. Besides this, unlike other transfers programs, pension programs are big enough, and present sufficient variation across households, to decisively impact on inequality (the standard deviation of net pensions is almost a quarter of that of total earnings). The impact of pensions on inequality was smaller in previous years: about -10 percent in 2001 and -11 percent in 2002.⁶

The household survey does not provide information on taxes paid and so we had to make some simple assumptions to estimate net transfers. The estimations presented in the left panel in Table 7 are based on the assumption that households pay indirect taxes in proportion to their total earnings, but it is probably more realistic to assume that indirect taxes are proportional to household spending. If the rate of savings were an increasing function of earnings, and taxes were proportional to spending rather than to earnings, the first assumption would overestimate the taxes paid by richer households. The contribution of pensions to reducing inequality would thus be lower than what the above estimation shows, for richer households would not be contributing as much as is assumed in that estimation.

In order to evaluate this possible bias, we did a second computation in which we estimated an expenditure function and assumed that payments of indirect taxes are proportional to spending rather than to earnings. The expenditure function was estimated on data from an expenditure survey conducted by the INE in 1994 (this is the most recent information we have). The estimated expenditure function is presented in the methodological appendix. As expected, households with higher income have smaller expenditure-earnings ratios. If indirect taxes are roughly proportional to spending, the estimated expenditure function means that indirect taxes are regressive in the sense that the share of earnings devoted to pay these taxes is a decreasing function of the households' total earnings.

Grau and Lagomarsino (2002) arrived to similar conclusions, doing a more detailed analysis of taxation than we did. They estimated the tax payments of households in different deciles, considering separately three indirect taxes: IVA (value added tax), IMESI (sales tax) and IRP (income tax). Considering the consumption baskets and the sources of earnings of households in different deciles, they estimated the tax payments due by these households. Table 8 summarizes their main results. The aggregate of these three taxes is regressive, basically because of the value added tax (IVA).

⁶ For the sake of brevity, we do not report detailed results for 2001 or 2002, but they are available upon request. We did not perform these estimations for previous years because of changes in the household survey that would make comparisons risky.

However, even when indirect taxation is regressive, the pensions program that is to a significant extent financed with these taxes turns out to be progressive, according to our computations. The right panel in Table 7 presents the contribution of pensions to inequality computed taking into account that indirect taxes are regressive. As expected, the contribution of the pension program to reducing inequality is lower in this estimation than in the previous one, and this is so mainly because of a smaller correlation between net transfers of the program and total earnings. But still, the program continues being progressive.

3.4 Some policy options

Several parameters could be adjusted to produce a reduction in BPS expenditure on pensions. In this study, we considered three types of adjustments. The first is the indexation mechanism. While most countries use CPI or a mix of CPI and wages to adjust pensions, Uruguay and few other countries use wages (Table 9). In the 1989 plebiscite, the Constitution of the Republic established that pensions would be indexed to wages in Uruguay.⁷ We evaluated two options: a) indexing pensions to the consumer price index (CPI), b) indexing pensions to a mix of CPI and wages (with equal weights).

The second adjustment evaluated was to extend the wage base period on which benefits are calculated. Before the reform, only the last three years of contribution-related wages were considered. In the 1995 reform law this was extended to the last 10 (or the best 20). We now evaluate an extension to the whole work history of the worker.

Finally, we considered a set of scenarios in which some parameters are automatically linked to life expectancy. In one of these scenarios, we linked the minimum age for retirement to life expectancy. In a second one, we assumed that the average age of retirement adjusts with life expectancy. In this case, we did not specify which parameters should be changed to effect this voluntary change in the normal retirement age. We just wanted to answer the relatively simpler question about the implications that the postponement of retirement as life expectancy increases would have. In a third scenario, we modified the replacement rates with life expectancy. The main assumptions in each of these scenarios are summarized in Table 10.⁸ In all cases, we assume that the policy changes are adopted in 2005 and hold from then on.

The indexation of pensions to CPI would cause a reduction in BPS expenditure in the order of 9 million dollars during the first year (Table 11). The discounted sum of savings over the period 2005-2050 would be in the order of 1.4 billion dollars. The impact *per year* would

⁷ In fact, the indexation of pensions to wages had already been the usual practice for several years when the constitution was reformed, but the plebiscite raised this practice to a constitutional norm and, above all, established that pensions should be increased when civil servants' wages were increased. The opportunity for the adjustment of pensions had been a contentious issue in the preceding years.

⁸ Assumptions maintained through all the scenarios: a) annual rate of growth of real wages = 1.1%; b) annual real interest rate = 3.8%; c) annual rate of growth of population: approximately 0.6%, but varying according to CELADE's demographic projections.

be about 30 million *on average* in this same period.⁹ The savings stem from replacing an indexation formula that raises pensions with wages with a formula that keeps the purchasing power of pensions constant. The assumption that real wages grow during the simulation period is thus crucial for this result. The reduction in BPS expenditure would be roughly one half of those figures if the new index were a mix of CPI and wages with equal weights, rather than just CPI. There are some second order effects on the resources of the BPS as well, for the yield of value added tax undergoes some marginal changes in this scenario because of changes in consumption. Low-income workers tend to lose proportionally more than high-income workers with the simulated changes in the indexation mechanism (Table 12). The estimated long run impact of changing the indexation mechanism is greater the smaller the discount rates and the greater the rates of growth of real wages.

It is worth mentioning here that the significant rise in the purchasing power of pensions that took place during most of the last fifteen years would also have occurred if pensions had been indexed to CPI rather than to wages. Pensions grew in real terms in this period mostly due to the combination of lagged indexation and disinflation. The choice of the index had a second order impact on the trend of the purchasing power of pensions in this specific period. Be this as it may, the purchasing power of pensions was more volatile and more pro-cyclical with the indexation to wages than what it would have been had pensions been indexed to CPI (Figure 2).

Extending the period considered to compute the initial pension to entire work history could cause a negligible reduction in expenditure in 2005 and an accumulated reduction of about 800 million dollars, equivalent to 18 million per year, in the 2005-2050 period (Table 11). Pensions are reduced with this formula because wages tend to be lower at the inception of working life. This policy change would take several years to fully impact on reduced BPS spending, for pensions granted before the policy change are not affected. This policy reform tends to impact more on middle-income workers than on either high- or low-income workers (Table 12). Many high and low income workers are constrained by the minimum and maximum pensions, which are not affected by changes in the pension base wage.

Adjusting the parameters of the pensions program with life expectancy would have almost no effect in the very short run, because longevity is not expected to jump in the near future. This was just to be expected, for reforms of this sort are not designed to effect a drastic immediate change in the balance of the pensions program. This type of reform is meant rather to provide mechanisms for automatic adjustment to demographic changes, which tend to be slow and take time to become fully manifest. The idea is to avoid repeating the situation in the past in which pension programs did not react to demographic changes.

The automatic adjustments to longevity could reduce the accumulated BPS deficit over the 2005-2050 period in the order of three to five hundreds million dollars (Table 11). However, raising the minimum retirement age when life expectancy rises would have relatively minor effects, basically because this constraint does not seem to be binding for

⁹ The impact would be significantly greater in the very long run. The steady state effect would be in the order of 0.45 percent of GDP.

most workers.¹⁰ If, in turn, the average retirement age adjusted with longevity, the BPS would spend almost 300 million dollars less and collect about 380 million more over the 2005-2050 period. The increase in resources is mostly explained by higher payroll taxes, because of longer working life. Shifting the rate of replacement with longevity could reduce accumulated spending by about 550 million in the same period. The impact on the deficit is smaller because of a reduction in the yield of value added tax, but this second effect is of a much smaller magnitude, so that the next effect is a reduction in the accumulated deficit by about 500 million.

The automatic adjustments to longevity would naturally impact more on younger generations, for these are the people whose life expectancy is longer (Table 12). Middle-income workers tend to lose relatively more than low- and high-income workers with these policy changes (except for males of the 2000-2009 generations in the scenarios with ages of retirement moving with life expectancy).

To sum up, changing the indexation of pensions to the consumer price index is, among the reforms evaluated in this study, the one with strongest impact. It is the policy reform that reduces the BPS expenditure the most. It is also the policy option that causes the highest loss among low-income female workers. These workers are among the few who are receiving a positive and significant lifetime net transfer from the BPS pension program. Reducing the benefit would therefore impact on them proportionally more than on other groups of workers.

4 Unemployment Insurance

4.1 Description of the Program

The main unemployment insurance program in Uruguay is managed by the Banco de Previsión Social (BPS), and regulated by decree-law 15.180 passed in August 1981. There is also a smaller separate program for bank employees, administered by the Caja de Jubilaciones Bancarias, created by law 17.613 passed in December 2002. This law re-structured the banking sector after a crisis that involved the closure of several private banks.

The BPS unemployment insurance program provides a monthly cash transfer to workers in the private sector who are fired from a formal job performed for an employer (self-employment is not covered). The program does not have a separate well-identified funding system and it is to a large extent financed out of general taxes, but workers must have paid payroll taxes to social security in order to be eligible to receive unemployment benefit. Hence, the program excludes workers in the informal sector.¹¹ Also, no unemployment insurance program covers domestic service workers. To be eligible, the worker must have been separated against his or her will and not for disciplinary reasons. Workers who have

¹⁰ We could compute the impact of changing *minimum* retirement ages on *mean* retirement ages using information from a sample of work history recently released by the BPS. The sample covers 80 thousand workers over 1996 to July 2004.

¹¹ To be eligible, workers must have been legally registered in the labor office for at least six months in the year before the claim.

not been dismissed but whose working time has been reduced by 25 percent or more are also eligible for the benefit. Separation does not have to be permanent to access the program: workers who are temporarily separated (or “suspended”) and continue as employees of the firm have the right to receive unemployment benefit. A significant share of the current recipients of the benefits belongs to this category (we will say more about this below).

The ordinary BPS unemployment benefit amounts to 50 percent of the average wage during the last 6 months. However, the benefit cannot be lower than half the national minimum wage (SMN) or higher than eight times the national minimum wage.¹² The benefit paid to workers who suffered a reduction in working time is roughly proportional to this reduction. Workers who are married or support relatives receive an additional 20 percent.

As a general rule, the BPS pays unemployment benefit for six months, and the worker cannot access the benefit again until no less than twelve months have elapsed since the previous period in which he or she received benefit. However, the Executive Power can mandate the BPS to extend the period of payment by up to twelve months. These extensions are selective (not universal) and by law they are left to the discretion of the Executive Power, with the only condition that the Executive should provide substantiated reasons for the extension. In several cases, Parliament has passed laws that granted the benefit for even longer periods for specific groups of workers (laws 16.623, 16.792, 17276, 17288, 17293, 17325, 17346, 17553 and 17594).

The unemployment insurance program for banking employees grants benefits to workers who have contributed to the Banking Sector Retirement Program for no less than six months before separation. The replacement rate is 50 percent, like in the BPS general program, but the maximum payment amounts to 20 (rather than 8) SMN. As a general rule, the benefit is paid for six months, but it can be extended up to a maximum of eighteen months. Unlike in the program administered by the BPS, the authorities of the Banking Sector Retirement Program decide the extensions. The unemployment program is financed with a complex mix of general taxes and payroll taxes in the banking sector.

International agreements and ILO conventions have contributed to forging a common basic model to which most unemployment insurance programs in the world have adapted. Nevertheless, the agreements and conventions are flexible enough to allow for some important differences across countries. For example, ILO accepts that some groups of workers can be excluded, like the self-employed, domestic service, public employees, workers in seasonal activities, some age groups, temporary workers and family labor (Bucheli and Diez de Medina, 2002). The period for receiving benefits and the amount of the payment also vary considerably across countries. But probably more important than these differences in the norms are the differences in their implementation. For example, the effective coverage of the unemployment insurance program varies widely across countries, and the differences in norms do not seem to explain most of this variation. Different structural realities in labor markets and different capabilities to effectively implement the

¹² In July 2004, the national minimum wage was approximately equal to 40 dollars per month or 13 percent of per capita GDP.

norms are likely to be more important explanatory factors for the diversity in practice than differences in the wording of the norms. Besides, similar norms are likely to produce different results in different countries.

4.2 Projected Spending

After reaching a peak in 2002, BPS expenditure on the unemployment insurance program fell significantly in 2003 (Table 13).¹³ We expect the economic recovery to push this figure further down in the next few years. Assuming that GDP will recover only 7 percent in 2004 and 3 percent from next year to 2012, we estimated that expenditure on the unemployment insurance program could go down to figures in the order of 0.15 to 0.17 percent of GDP by 2012, if the program is not reformed.

Economic growth would reduce the rate of unemployment and thus the number of applicants for benefits. Replicating the behavior of unemployment over the ten year period that followed the 1982 crisis and projecting it to the ten years that will follow the 2002 crisis, we projected a rate of unemployment of about eleven percent by 2012. The number of recipients of unemployment benefit would then drop by about 20 to 33 percent (depending on the specific assumptions made, see the appendix for the details). The amount of the benefit is projected to grow 7 percent from 2003 to 2012.¹⁴ Therefore, with these assumptions, BPS spending in real terms on this program would be between 15 and 29 percent less in 2012 than in 2003. We are assuming that GDP will grow about 36 percent in this period. Combining the smaller real spending with the greater GDP, we get a ratio of expenditure in the unemployment insurance program to GDP that is much smaller in 2012 than in 2003. The involved figures are relatively small however, given the small size of this program. According to these projections, the BPS would be spending about 0.1 points of GDP less in 2012 than it did in 2003.

4.3 Equity Impact

It has been argued that unemployment insurance programs do not make a significant contribution to the reduction of inequality. Benefits paid are positively correlated to previous earnings and hence, the argument goes, high paid workers receive high unemployment payments. Feldstein¹⁵, for example, found that only 17 percent of unemployment benefits went to families earning less than half the average income in 1970 in the US. Also, more than 15 percent went to families earning more than twice the average income. Mazza (1999) makes a similar point for Argentina: "... the population served is typically not the lowest income levels and this is true in the Argentine case (...) only 6% of beneficiaries made 300 pesos/month or less (February 1998). The majority of applicants

¹³ The incipient economic recovery that began last year could explain part of this reduced spending on unemployment benefits, but there seems to be something else. The fall in the number of unemployed workers was not large enough to explain such a drastic fall in the expenditure of this program. It might also be the case that many unemployed workers who received benefits in 2002 lost the right to continue receiving it during 2003.

¹⁴ This projection is based on a regression of the benefit on a moving average of real wages and an assumed growth in real wages of 2 percent per year between 2004 and 2012. See the appendix for the details.

¹⁵ Quoted by Browning and Browning (1994)

(51%) are in the range 300 – 600 pesos per month, but surprisingly 17% of recipients had salaries in excess of 1000 pesos a month, more than three times the maximum benefit level they receive from unemployment insurance”(…).“Fewer and fewer low-income people benefit from the program ... in 1992 11% of recipients had previous incomes of the minimum wage or below. By 1997, this percentage has been cut in half, with only 5.9% at this income level. Nearly 12% earn more than five times the minimum wage”.

On top of that, some analysts argue that unemployment insurance programs fail as social protection devices in countries in which labor markets are to a large extent informal. For example, Islas (2002) observes that the poorest workers do not access benefits because they do not fulfill the requirements. Furthermore, he claims that an unemployment insurance program with strong government financing would make income distribution more unequal, and would have low impact on the poorest workers. Heckman and Pagés (2000) make a similar point for job security provisions in general.¹⁶

It has also been argued that contributory unemployment insurance programs are not designed to perform redistribution but to provide insurance. Velásquez (2003a) observes that developed countries combine contributory unemployment insurance programs with assistance programs. The former redistribute earnings over time, from periods in which the worker is employed to periods in which the worker is unemployed, and they serve insurance rather than a redistribute purpose. It is the task of the assistance programs to perform redistribution.

In order to empirically assess the impact of unemployment insurance and other government transfer programs on inequality, we computed the inequality decomposition indexes proposed by Shorrocks (1982). Using data from the household survey, we were able to calculate the contribution of government transfer programs to total inequality, treating these programs as separate sources of income. The survey provides direct data on benefits received by different individuals from government programs, but it does not provide information on contributions paid by individuals to finance the programs. If the programs are assessed according to benefits alone, i.e. without explicitly taking contributions into account, the results obtained are very much in line with the results quoted above: unemployment insurance programs increase inequality because richer households receive higher benefits. But this assessment looks incomplete, for the effect of the program on income distribution depends not only on benefits received but also on taxes paid to finance the program. If richer families received higher benefits but paid much higher contributions, the programs could still contribute to reduce inequality. Therefore we evaluated the programs considering net rather than gross transfers (see the appendix for the details).

¹⁶ “Our evidence suggests that job security provisions are an extremely inefficient and inequality-increasing mechanism for providing income security for workers. They are inefficient because they reduce the demand for labor; they are inequality-increasing because some workers benefit while many others are hurt. Their impact on inequality is multi-faceted: job security increases inequality because it reduces the employment prospects of young, female and unskilled workers. It also increases inequality because it segregates the labor market between workers with secure jobs and those with very little prospect of becoming employed. Finally, job security provisions increase inequality if, as predicted by some theoretical studies and most of the available empirical evidence, they increase the size of the informal sector” (Heckman and Pagés, 2000).

According to the results summarized in Table 7, unemployment insurance programs made a small contribution to the reduction of inequality in Uruguay in 2003.¹⁷ These programs contributed with no more than – 0.26 percent to total inequality.¹⁸ The programs reduced inequality, because net transfers received by households through this program tended to be negatively correlated to total income. In other words, benefits received net of direct and indirect contributions paid to finance the program were larger for poor than for rich households. However, this program has made a modest contribution to the reduction of inequality, and this was mostly because the program is small. The standard deviation of the net transfers of the unemployment programs amounted for only 1.3 percent of the standard deviation of total income.

These computations are only rough approximations to the contribution of the unemployment insurance programs to inequality. First, there is a data problem. The social security institutions do not provide micro data on these programs, and the household survey does not seem to fully capture the benefits paid by the social security institutions. The number of recipients of unemployment benefit estimated from the household survey represents only two thirds of what the social security institutions report, and the benefits reported by respondents to the household survey represent about sixty percent of what the BPS reports. A second problem derives from the lack of direct data about taxes paid to finance the program. We had to make some simple assumptions to distribute the burden of financing the program across households. This notwithstanding, the qualitative results looked robust to sensitivity analysis (see the appendix). A third point the reader should be aware of is that these are only accounting estimations. There is no economic model behind these computations. The government transfer programs are likely to induce changes in private agent behavior, and these changes might alter income distribution. If, for example, workers receiving unemployment benefit made less of an effort to search for jobs, the net effect of the benefit on the workers' earnings would be lower than what our computations suggest. But estimating these indirect effects is not easy, and it seems doubtful that they could be of a magnitude to significantly change the qualitative results.

4.4 Some Weaknesses of the Current Program

Several problems have been identified in the current unemployment insurance program: (i) low coverage, (ii) bad focus, (iii) extensions of the period of benefits are discretionary (iv) insufficient coordination with other programs, (v) incentive distortions.

(i) Low coverage. The Uruguayan unemployment insurance programs cover a small fraction of unemployed workers. According to the household surveys, in the last decade, recipients of unemployment benefit *who were actually unemployed* never reached seven percent of total unemployed workers (column 2 in Table 16). But there is also a significant number of recipients of benefits who were not registered as being unemployed (see column

¹⁷ For the sake of brevity, we present these computations only for 2003, but we obtained similar results for 2001 and 2002. These results are available from the authors upon request. We did not compute these indexes for other years because of the changes in the methodology of the household survey in 2001.

¹⁸ This contribution reduces to – 0.13 if the indirect taxes are assumed to be proportional to household expenditure rather to income. See the appendix for the details.

3). This peculiar situation seems to be mostly explained by the so called "causal suspension", i.e. the fact that workers in activities that are temporarily suspended are eligible for benefit even if these workers are not computed as unemployed in the official statistics (see more on this below). Yet, even after adding these recipients who are employed, the total figures from the household surveys are well below the administrative records of the social security institutions (columns 4 and 5). This gap suggests that the surveys underestimate the number of recipients, and hence actual coverage is likely to be larger than what the figures in column 2 show. This notwithstanding, the total number of recipients of benefits, according to the social security institutions, is still small compared to the number of unemployed workers. Even if all these unemployment benefit payments had been granted to workers who were actually unemployed, the program would have never covered more than 18 percent of unemployed workers (column 6).

The low coverage of the unemployment insurance program seems to be a hard fact stemming from the structure of the Uruguayan labor market and the design of the program. Table 17 shows that more than 85 percent of unemployed workers in 2002 could not access unemployment benefit, according to their answers to the household survey, because they would not meet the requirements: (i) 17 percent were searching for a job for the first time, (ii) more than 35 percent had not contributed to social security in their previous job, (iii) 31 percent had not been working for more than one year and (iv) about 2 percent were workers in the public sector or self employed. Of the remaining 14.5 percent of unemployed people, only 6.2 were receiving benefits. Another 8.3 percent of unemployed workers did not receive benefits despite having had no job for less than a year, having performed as dependent workers in a private job and paying social security contributions. Many of these workers may still not be eligible and there are several reasons for this, like having already received 6 months of benefits, having been dismissed for disciplinary reasons or not having been dismissed. In any case, it seems interesting to notice that this group involves 15.7 thousands workers, whereas the unemployment insurance program was paying benefits to 10.5 *employed* workers in the same year (the "causal suspensión").¹⁹

The coverage of the unemployment insurance program can be analyzed from the perspective of employed workers as well. Obviously, employed workers are not currently suffering unemployment, but some of them are protected by the program, i.e. they would receive benefits in the event of becoming involuntary unemployed. Table 18 shows that the program covered at most 27 percent of employed workers in 2002 (the "Others" row). The program did not cover (i) workers in the public sector (16.1 percent of total employment), (ii) self-employed and domestic service workers (11.5 percent), (iii) employees in the banking system (0.9 percent), or workers who were not contributing to social security (44.6 percent). In 2003, a new unemployment insurance program began to cover employees in the banking system. This is not a large sector, so this innovation did not change the coverage of the Uruguayan unemployment insurance programs significantly.

¹⁹ The qualitative results remain valid for other years. In 2003, for example, at least 89 percent of the unemployed workers were not eligible to receive unemployment benefits, according to their answers to the household survey. First time job seekers and workers who lost their last job more than a year before rose as a share of total unemployed workers in 2003 with respect to 2002, which explains the rise in the proportion of unemployed workers who could not be covered by the program (and despite the reduction in the proportion of informal workers).

The previous analysis suggests that the informality of the labor markets (in the sense of the lack of contributions to social security) and the prevalence of workers who have lost or quit their job more than a year ago have been two key determinants in the low coverage of the unemployment insurance programs in Uruguay.

Nevertheless, the coverage of the Uruguayan unemployment insurance program is not low by international standards. Even though comparing these figures across countries is a delicate matter, the data we have suggest that the low coverage problem is even more severe in other Latin American countries (Table 19). Furthermore, in Uruguay the ratio of recipients of contributory unemployment insurance benefits to total number of unemployed workers is similar to the OECD countries (Table 20). The difference lies in the assistance programs: unemployed workers receive support from other non-contributory programs in the OECD countries, while there is nothing comparable in Uruguay.

(ii) Focus. There is some evidence that the BPS unemployment insurance program has been extensively used to finance seasonal activities. The program grants benefits to workers that (a) have been dismissed, (b) work in activities that have been temporarily “suspended”, or (c) have suffered reductions in working time. Workers stop working while the activities are “suspended”, but they are still listed as employees of the firm, and they are not counted as unemployed. Roughly half of the workers receiving the unemployment insurance benefit are not unemployed, according to the household survey (Table 16). The BPS does not report the total number of recipients discriminated according to the reason given for applying to the program, but it does provide the number of new recipients discriminated in these categories. More than half the new recipients claimed under “suspension” of the activities (Table 21). There is also anecdotal evidence that some sectors with pronounced fluctuations in their activity from season to season systematically use the unemployment insurance program.

The unemployment insurance program is supposed to protect workers against the risk of losing their jobs. It is not meant to provide income to support workers in the off season. Employees and employers should in theory look for other instruments to smooth out earnings across the seasons. If the unemployment insurance program is used in this way, then it will end up subsidizing seasonal activities.

The program also fails to reach the target population if recipients of benefits work and do not report it. The information in Table 16 suggests that this problem could be sizeable in Uruguay. Also, according to Velásquez (2003b), the fact that more than fifty percent of recipients do not drop the program until the right to receive benefits has expired suggests abuse (see Table 14).

Coverage is higher among heads of households, older workers and males than among other members of households, young workers and females, which suggests that the program has been focused on family members who provide the main support for their families (Table 15). However, even among these groups, the coverage is still very low: only 14 percent of unemployed heads of household were receiving the subsidy in 2002. Other aspects of the focus of the program could be more worrisome: the South of the country is better covered

than the North, and middle and high income workers are better covered than low income workers.

(iii) Discretionary extensions. The law gives the Executive the power to extend the period in which specific groups of workers can receive unemployment benefits by up to twelve months (which doubles the original period). There are no specific rules, though, the law only says that the extensions must be grounded in "reasons of the public interest".

Parliament has also passed several laws that extended the unemployment benefit period for some workers beyond the twelve-months extensions granted by the Executive. In some cases, the extension included in these laws reached twelve additional months, meaning that the total period of benefit payments was thirty months for the workers in question (the original six plus the twelve-month extension granted by the Executive, plus the twelve-month extension in the law), i.e. five times the period in the general regime. There are cases in which the extension period was left open.²⁰

Analysts and political actors have expressed concern about the extension of the benefit period (Trylesinsky 2001; Velásquez 2003b; EPFA, 1999; PN, 2004a). Velásquez (2003b) cites Trylesinsky (2001) who estimates that about thirty percent of recipients and fifteen percent of total expenditure in the program can be explained by these extensions. Velásquez argues that this is too much for an instrument that was included in the initial law to cater to exceptional situations. The lack of clear guidelines about extensions is an additional cause for concern since this leaves an open window for lobbying. More than one proposal to reform the program addresses these concerns.

(iv) Coordination. Several observers argue that Uruguayan unemployment insurance program, like others in Latin America, has not been properly coordinated with other programs and instruments. In Argentina, Islas (2002) criticizes the lack of coordination between unemployment insurance and training programs, and Mazza (1999) points out that workers in the unemployment program do not receive help to facilitate their search for a new job. Bertranou (2001) makes a similar point for the region in general. Velásquez (2002b) also emphasizes that the unemployment program must not only provide earnings replacement but also give help with finding a new job. Political parties have also expressed this type of concern in Uruguay. For example, the Partido Nacional proposed subsidizing the hiring of workers on the unemployment insurance program.

Special concern has been expressed about the lack of coordination of unemployment insurance and severance payments in some Latin-American countries. Mazza (1999) asserts "severance and other termination benefits may be so substantial in some countries as to dwarf, and make irrelevant, any unemployment insurance program". Bertranou (2001) advocates an expansion of the unemployment insurance programs at the expense of severance payments. He argues that while both serve the purpose of replacing lost earnings, severance payments are a disincentive to hiring to a greater extent than unemployment insurance. Bertranou also emphasizes the anti-cyclical pattern of unemployment insurance

²⁰ See laws 16792, 16623, 17276, 17288, 17293, 17325, 17346, 17553 and 17594 (<http://www.parlamento.gub.uy/>). In the first four, the extension period was left unspecified.

expenditure. Without saying whether one causes more distortion than the other, Velásquez (2003a) mentions that the overlapping of these two instruments represents a "double cost" for the employer, and this may negatively affect hiring and the duration of labor contracts. Nevertheless, he warns that unemployment insurance programs cannot fully replace severance payments, for these programs have different characteristics. Unemployment insurance provides protection against temporary reductions in employment and hence the benefits are limited to a period that is usually related to the average duration of unemployment. Severance payments try to protect workers from being dismissed for temporary reasons, and hence the payment rises with the seniority of the worker. In spite of this, it is doubtful whether severance payments seriously interfere with unemployment insurance in Uruguay, given that these payments are relatively low in the country, at least by Latin-American standards, according to Heckman and Pagés (2000).

(v) Moral Hazard. The classic warning against unemployment insurance programs is that they reduce the incentives workers have to actively search for work and accept job opportunities (Browning and Browning, 1994; among others). These concerns have not been so prominent in Latin America because of the low coverage and low replacement rates of the systems in the region. Nevertheless, the point should be considered in the event of reformulations of the programs that involve higher coverage.

A related form of abuse of the system is people accepting a job only so that they may enjoy unemployment benefits later on. This opportunistic behavior is usually controlled through requirements of a long enough period of contributions prior to access to benefits. It is worth noting that the period of contributions required to access unemployment benefit is comparatively short in Uruguay. Velásquez (2003b) also argues that the current required period of contributions looks insufficient in the light of some institutional weaknesses that affect the monitoring capacity of the administration in terms of both previous required contributions and the lack of job opportunities during the period the worker is receiving the benefit.

It has also been argued that workers could force dismissal just to get the subsidy. However, this risk seems to be controlled with the condition that workers who are dismissed for disciplinary reasons are not eligible for the unemployment benefit.

4.5 Options for Reform

4.5.1 Some current reform projects

There are several proposals to reform the BPS unemployment insurance program from the government, the political parties, the trade unions and a consultant from the ILO (Velásquez, 2003b).²¹ None of these proposals are a complete and fully articulated bill, but they address some of the issues raised above. In order to summarize the information and facilitate comparisons, we have organized these proposals in a table with rows representing the main parameters of the program and columns for the different proposals (Table 22). The

²¹ The project from the Executive Power is not directly available. We have only been able to learn about it through Velásquez (2003b).

first column summarizes the current program, and the others register the changes to the current program proposed in each project. Needless to say, this tabulated presentation is by its very nature sketchy and does not fully capture the richness of the proposals.

There have been several proposals to change the eligibility conditions to make them more demanding than the current ones in some cases, and less demanding in other cases. The latter proposals, from the left wing parties and the central trade union, aim at broadening coverage to incorporate groups of the population that are not currently legally covered (domestic service) and to reduce the requirements for access to benefits. It has also been argued that the former, that is to say the proposals to tighten the conditions for access to benefits, will serve the purpose of raising coverage, but through improving the focus of the program to cater to workers who really are unemployed, and in some cases to supplement the unemployment insurance program with assistance programs. Both the Executive Power and Velásquez (2003b) propose extending the period of contributions required to become eligible. They also make proposals that could limit and even eliminate the "causal suspension" as a reason to access unemployment benefit. The Executive Power proposes that employers contribute to financing the benefits with a month's salary when the claim is based on "suspension of activities". Velásquez (2003b) proposes eliminating this reason for accessing unemployment benefits.

Some of the reform packages propose changing the ordinary period for receiving benefits. The Minister of Labor proposed extending this period to nine months, but without changing the total amount paid (El Observador, 2004). The Executive Power's project is to link the period for receiving benefits to the "credit" the worker has in his unemployment "account". Velásquez (2003b) proposes keeping the current six-month system.

There have also been proposals to limit the discretion that the Executive Power currently has to extend the periods of benefit payments. The Partido Nacional (the Alianza Nacional faction) proposes reducing the extensions to six rather than the current twelve months, and specifying the conditions that firms should meet to be eligible for this extension. The central trade union proposes that the BPS, rather than the Executive Power, be allowed to extend the period for up to twelve months, and again under some pre-specified conditions. Velásquez (2003b) proposes eliminating discretionary extensions of the period of unemployment benefit payments altogether. He suggests that the authorities have often been pushed to extend the period of unemployment benefit payments for some groups of workers because of the lack of other options to deal with problems of persistent poverty. Velásquez proposes means-testing and non-contributory programs to meet these needs.

The central trade union proposes raising the amount of the benefits paid. Both the Minister of Labor and Velásquez (2003b) propose a system whereby the payment is reduced over time without changing the current average. Velásquez also proposes having the minimum and maximum benefits indexed to the private sector average wage rather than to the SMN, and computing the benefit using twelve rather than six months, to discourage abuse.

As to the financing, the Minister of Labor proposes that firms should contribute in according with the use they make of the program. Others have expressed concern on this question, but no specific proposals could be drawn from the documents.

4.5.2 Quantifying the proposals

It is not easy to estimate how much the government would spend on the unemployment insurance program under the reform proposals described. Some proposals lend themselves better to this type of exercise than others, so the estimations are inevitably partial. We chose not to estimate some of them just because of the difficulties involved in doing so. In this section we aim to provide some rough numbers to at least give the orders of magnitude involved in some of these proposals.

Velásquez (2003b) already provides some estimation of the costs/savings of his proposals. He computes the "implicit contribution rate" to finance the program, i.e. the rate of the payroll tax that recipients of unemployment benefit would have to pay if they fully financed the program with the contributions required to be eligible. The current implicit rate is estimated to be 3.6 percent. Velásquez estimates that his proposal to extend the period of contributions to be eligible would reduce this number to 2.7 percent. It should be mentioned, however, that the reduction in this rate is just the result of dividing the same burden over a longer period of contributions, and hence there is no real savings here. Velásquez estimates that the elimination of the extensions of the period for receiving benefits would mean an additional reduction in the implicit contribution rate to 2.3 percent. This is a real saving derived from a cut in a benefit. The elimination of the "causal suspensión" to access benefits causes no reduction in expenditure because the author assumes that the savings that would arise are exactly counterbalanced by the expansion of the non-contributory programs proposed to cater to the long term poverty problems. Finally, Velásquez estimates that having benefits that decrease over the period reduces the implicit contribution rate to 1.9 percent.

In order to assess the "causal suspensión", we estimated the direct impact on public expenditure of reducing the number of recipients of benefits on these grounds by fifty and by a hundred percent. In the first scenario, the expenditure is reduced from the current 0.54 percent to 0.41 percent of GDP (2002 figures). In the second scenario, which means the elimination of the "causal suspensión", the expenditure in the unemployment insurance program is reduced to 0.28 percent of GDP. Other proposals to tighten eligibility conditions are likely to lead to some additional savings, but we cannot tell to what extent that will be so.

The proposals made by the PIT-CNT union are expansionary. We estimate that public spending on the unemployment insurance program would rise from the current 0.54 to about 0.75 percent of GDP if these proposals were implemented (again, 2002 figures). This increase would result from a double effect. There is, first, a rise in the number of recipients of benefits because of the extension of legal coverage to domestic service. If all domestic servants with less than one year of unemployment received the subsidy, the number of recipients would rise by 16 percent.²² Second, the unions propose to raise the subsidy per capita by approximately 20 percent. The accumulated effect is the 39 percent rise in the estimated expenditure in the program.

²² The number of recipients would rise by 12 percent if the expansion were proportional to the rise in the number of employed workers who are legally covered.

It is worth noting that none of the evaluated proposals to reform the unemployment insurance program would significantly modify the currently low coverage of the program.

5 Summary and Conclusions

In this paper, we revised the working and perspectives of the main contributory social security programs in Uruguay. Pensions are by far the largest government program, representing roughly one half of total government spending. We briefly summarized the existing projections of the balance of the BPS, the main social security institution of the country, and concluded that the dominant view is that its expenditure and deficit will very gradually decrease over the next few years. Nevertheless, expectations of future improvement in the balance of the BPS rest to a large extent on indirect estimations of the amounts of benefit granted on irregular basis in the past. There seems to be little doubt that these practices are disappearing, but it is still difficult to estimate the fiscal impact of this change. Also, the recent recession obscures the monitoring of the performance of the reformed pensions program. Recent performance has been worse than expected, and this seems mostly due to the severe recession that Uruguay has suffered. As such, it might be a temporary phenomenon, but these results could also partially respond to the program being on a different track than what was expected. On top of that, the crisis has left the government in a delicate situation, with gross public debt now amounting to about 110 percent of annual GDP. Besides this, the social situation deteriorated dramatically during the crisis and it seems likely that the government will feel the need to implement new social programs or expand some of the existing ones, so the pressure on public spending will continue to be high. Therefore we evaluated the fiscal and equity impact of some policy options that have been considered in other countries to reduce spending on pensions.

Before moving on to the policy options, we estimated the equity impact of the current pensions programs.²³ The main conclusion is that pensions are currently contributing to reducing income inequality. Even though richer households receive higher pensions, they also make higher contributions to finance the program. According to our estimations, the latter outweighs the former.

We considered three sets of pension policy options that have to do with: (i) indexation mechanisms, (ii) period of contributions considered to compute the initial pension, and (iii) longevity adjusted parameters. Uruguayan pensions are currently indexed to wages. We estimate that replacing the consumption price index for wages would cause a reduction in public spending in the order of only 9 million dollars in the first year and an accumulated reduction of about 1.4 billion dollars over the following 45 years (2005-2050 period).²⁴

The other pension policy options evaluated in this study have smaller expected fiscal impact. The short term effects are very small. Changing the initial pension, either through the "pensions base wage" or the rate of replacement, would have a small immediate impact

²³ The data did not allow us to distinguish different pension programs and thus these results are about the aggregate.

²⁴ All these figures are measured in 2003 dollars.

because the BPS would continue for several years to serve mostly pensions computed under the current rules. It is only when "old" pensions are replaced by "new" pensions that this type of policy change has an effect.

Nevertheless, according to our estimations, even in the long run these policy reforms would impact on the BPS budget to a smaller extent than the change in the indexation rules. Changing the minimum age for retirement in accordance with to the evolution of longevity would be the least effective among the evaluated policies. Two factors explain our result. First, minimum ages do not currently seem to be binding constraints for most workers, for they retire at higher ages.²⁵ Second, the changes in longevity are long term phenomena that take place very gradually. If the increase in life expectancy impacted one to one on the average (rather than on the minimum²⁶) retirement age, the impact on the deficit of the BPS accumulated over 2005-2050 would be in the order of 660 million dollars. Shifting the rates of replacement as life expectancy rises could cause a reduction in the accumulated deficit in the order of 500 million dollars over the same period. This impact is not very impressive, but it should be mentioned that according to our simulations the BPS might be spending about 0.4 percent of GDP less in these two scenarios by 2050. The impact from then on would thus be significantly greater than in the period of our current simulation. Extending the period that we considered to compute the base wage to the whole work history period might reduce expenditure by about 800 million dollars accumulated in the 2005-2050 period.

The equity impact of these policy changes looks moderate and no simple pattern emerges. Changing the indexation mechanism would impact more on low than on high-income workers. Extending the period to compute the initial pension to the entire work history would impact more on middle-income workers than on either low- or high-income workers. The patterns however are not neat and we think that these results might be too sensitive to some assumptions and even to the structure of the simulation model. Further research is needed to come to robust conclusions on this front.

The main problem often mentioned in the Uruguayan unemployment insurance program is its limited coverage. Furthermore, the analysis suggested that it would not be easy to protect the majority of workers against the risk of suffering unemployment, given the structural problems of Uruguayan labor markets. Changing the design of the existing contributory programs could help in the margin, but it will hardly solve the main problems, which are mostly related to informality (evasion of contributions), workers lacking employment for long periods, and unemployment of individuals searching for a job for the first time. International comparisons reinforce this view. Countries that have been more successful in protecting their population against the unemployment are mostly developed countries in which informality is much less prevalent. Even in these countries, high coverage has been accomplished combining the contributory unemployment programs with other assistance or non-contributory programs.

²⁵ This observation is based on a preliminary analysis of a data base of work history recently released by BPS.

²⁶ Average retirement age is not a variable the government or the BPS can directly control. In this sense, this is not strictly a simulation of a policy option. Nevertheless, this exercise may be useful to evaluate to what extent policy options designed to induce later retirement impact on fiscal accounts.

A careful revision of the existing "causal suspension" to grant the subsidy seems in order. In Uruguay, about half of current recipients of unemployment benefit are not "technically" unemployed, which seems a contradiction in terms. Furthermore, this is not because they work in the informal economy, but because firms are legally allowed to "suspend" an activity and send workers to claim unemployment benefits. The workers remain with the firm, but they are temporarily out of work and receive payments only from the unemployment insurance program (in theory). There is ample evidence that this mechanism is working as a subsidy for seasonal activities. Re-directing these funds towards the genuinely unemployed would not fully solve the problems of low coverage that we have, but it would be enough, for example, to finance the extension of legal coverage to domestic service.

According to our computations, the unemployment insurance program makes a small contribution to the reduction of inequality in Uruguay. Benefits received net of contributions paid to finance the program tend to be greater in low than in high-income households, and hence the program reduces inequality. Nevertheless, the impact is small mostly because of the small size of the program.

6 Methodological Appendix

6.1 The contribution of transfer programs to inequality

We assess the contribution of transfer programs to inequality using the decomposition of inequality indexes in terms of sources of income proposed by Shorrocks (1982a). We treat each transfers program as a specific sources of income computed as the transfer received by each individual *net* of the direct and indirect payments that individuals make to finance the programs. Because of the lack of micro-data on direct and indirect contributions, we had to make some assumptions to compute *net* transfers. This appendix describes these assumptions and the computation procedure in detail.

Let y_{ij} be the earnings of individual j from sources i , and y_{Ij} be the net transfer the government program pays to or collects from j . Since row I of the matrix of earnings registers both benefits received from and contributions and taxes paid to finance the program, the earnings registered in other rows must be measured *before taxes* paid to finance the transfers program.

For the transfer program to be complete, the records on row I of the earnings matrix must sum zero: someone else must pay for benefits received by an individual. Formally,

$$\sum_j y_{Ij} = 0 \tag{1}$$

The contribution of the transfer program to inequality can be computed regressing the net transfers in row I on total income. The slope of the regressions of the sources of income (or

income factors) on total income is the proportional contribution of the income factor to inequality (Shorrocks, 1982a and b).

We used micro-data from the household survey and some aggregated data from administrative records of social security programs to build the matrix with elements y_{ij} . The household survey provides individual data on several sources of income, including benefits paid by some social protection programs, but it does not provide information on contributions and taxes paid to finance the program. We know from the social security institutions that these programs are financed with a complex mix of payroll and general taxes. Among the latter, indirect taxes are by far the biggest factor, with value added tax accounting for a significant share of the whole package. We distinguish thus payroll taxes a_{ij} and indirect taxes t_{ij} .

Labor earnings in the household survey are reported *after payroll taxes* (y_{ij}'). Hence, we added payroll taxes to get *pre-tax* labor earnings:

$$y_{ij} = y_{ij}' + a_{ij} ; i \neq I \quad (2)$$

Naturally, a_{ij} must be zero if the source of income i is non-labor income. Given that other social security revenues are mostly indirect taxes, we did not need to add other taxes to the survey's reported earnings to get pre-tax earnings. Hence, indirect taxes satisfy the following condition:

$$t_{ij} = 0 \forall i \neq I; t_{Ij} = t_j \geq 0 \quad (3)$$

The transfer program row was computed as:

$$y_{Ij} = b_j - t_j - a_j \quad (4)$$

where b_j stands for the benefit received by individual j from the transfer program and a_j stands for total payroll taxes paid by individual j ($a_j = \sum_i a_{ij}$).

Equations (2) and (4) determine the matrix of earnings organized to assess the contribution of the transfer program to inequality, but we do not have direct data on some of the variables involved. The household survey does provide the *after payroll tax* earnings (y_{ij}') and the benefits paid by the transfer programs (b_j), but it does not provide direct data on payroll taxes (a_{ij}) and indirect taxes paid to finance the transfer programs (t_j). We know from (1), that total taxes paid to finance the program must be equal to total benefits paid by the program, but we need information on *individual* contributions. The institutions of social security provide *aggregate* information on their sources of financing which can be used to determine the shares of payroll and indirect taxes in funding the programs we are

evaluating. Let A^{SS} be the share of total spending of the social security programs financed with payroll taxes. Then, estimated individual payroll taxes and indirect taxes should satisfy the following conditions:

$$\sum_j a_j = A^{SS} \sum_j b_j \quad ; \quad \sum_j t_j = (1 - A^{SS}) \sum_j b_j \quad (5)$$

In order to “distribute” these aggregates among individuals, we assumed that (i) payroll taxes are proportional to labor income, provided the individual does contribute to social security, and (ii) indirect taxes are proportional to total income. More specifically, we made the following assumptions:

(A1) Individual payroll taxes:

$$a_{ij} = \begin{cases} ay_{ij}' & ; a > 0 \text{ if } i \in LI \text{ and } j \in FJ \\ 0 & \text{otherwise} \end{cases}$$

where LI stands for the subset of labor sources of income and FJ stands for formal workers, i.e. those individuals who declared to the household survey that they pay payroll taxes. Notice that the rate of payroll taxes a is a weighted average of the rates paid by different categories of workers, in accordance with their answers to the household survey. Also notice that this rate multiplies *post-tax* labor income, which is not the ordinary way of presenting the rates of payroll taxes in social security legislation.²⁷

(A2) Indirect taxes:

$$t_j = t \sum_i y_{ij}' \quad (6)$$

We are assuming here that individuals pay indirect taxes in proportion t of their total earnings. This assumption is of course a rough approximation. If richer households saved more and thus paid proportionally less of their income in the form of value added tax, the proportionality assumption would be flawed. In this case, it would be more appropriate to assume that households pay taxes in proportion to their expenditure, and that household expenditure is a non-linear function of their earnings.²⁸ The household survey does not provide information to estimate this function, but we could test this hypothesis using information from the expenditure survey. The alternative expression is thus:

$$t_j = t^* ex_j = t^* \beta_0 * \left(\sum_i y_{ij}' \right)^{\beta_1}$$

²⁷ We chose this notation to avoid the distinction between employee and employer contributions, a distinction we are not interested in. Total payroll tax rates on post-tax labor income can be computed using ordinary legal tax rates such as: (employer rate + employee rate)/(1-employee rate). The tax rate a is a weighted average of these transformed tax rates.

²⁸ We thank José Cuesta for this remark.

(7)

where ex_j stands for total expenditure of family j . Obviously, equation (6) is just a particular case of (7).

The tax rates a and t can now be computed combining equations (5) and assumptions (A1) and (A2):

$$a = A^{SS} \sum_j b_j / \left(\sum_{i \in LI} \sum_{j \in FJ} y_{ij}' \right)$$

$$t = \begin{cases} (1 - A^{SS}) \sum_j b_j / \left(\sum_i \sum_j y_{ij}' \right) & \text{if (6)} \\ (1 - A^{SS}) \sum_j b_j / \left(\beta_0 \sum_j \left(\sum_i y_{ij}' \right)^{\beta_1} \right) & \text{if (7)} \end{cases}$$

(8)

Using these tax rates and assumptions (A1) and (A2), we computed individual tax payments a_{ij} and t_j . We then computed individual earnings y_{ij} using these estimated individual tax payments in equations (2) and (4).

In order to implement the option that makes use of equation (7), we regressed household expenditure on earnings, using micro-data from the expenditure survey conducted by the INE in 1994 (unfortunately, there is no recent survey of this kind). We got the following results:

	Coefficient	Standard Error	t	$P > t $
$\ln(\beta_0)$	1.558722	0.0558687	27.90	0.000
β_1	0.8231034	0.0075899	108.45	0.000

Number of obs = 3746
 F(1, 3744) = 11760.84
 Prob > F = 0.0000
 R-squared = 0.7585
 Adj R-squared = 0.7585

We report the estimated decomposition of inequality in Table 7. The left panel was computed assuming that indirect taxes are proportional to income (equation (6)), and the right panel was computed assuming that indirect taxes are proportional to expenditure (equation (7)). The results are similar, even though the government transfer programs look less redistributive in the second option, as should be expected.

The role of taxes

It is worth mentioning that, according to our results, it is the combined effect of benefits *and taxes* what makes government transfer programs reduce inequality. If we assess the programs looking only at the benefits they grant, we find that pensions and unemployment insurance raise inequality, which is the most common result in the literature. It is thus the inclusion of taxes in the analysis what renders these programs progressive.

To illustrate this point, consider the following representation of total earnings and pensions across households (Figure 3). It turns out that households with higher per capita earnings tend to have higher per capita pensions as well, so the slope of the regression line is positive. Hence, Shorrocks' measure of the contribution of pensions to inequality is positive in this case, and it makes intuitive sense, because richer households receive higher pensions.

Consider now taxes paid to finance the pensions program. If households with high total earnings pay more taxes than households with low earnings, then the *net* transfer will have a lower correlation with total earnings than the *gross* transfer. Furthermore, net transfers would be *negatively* correlated to total earnings if, as earnings rise, taxes paid increased more than benefits received. In this case, the program assessed with net rather than gross transfers would look progressive rather than regressive. This is exactly the case represented in Figure 4 and it is also the case of our computations with the Uruguayan data.

Our results may seem to contradict the generally accepted hypothesis that taxes are regressive in Uruguay (Lagomarsino and Grau-Pérez, 2002), but there is in fact no contradiction. What Lagomarsino and Grau-Pérez claim is that rich households pay a lower share of their earnings as taxes than poor households, and this is exactly the case we assumed in Figure 4.

According to these results, assessing the impact of government programs on inequality looking only at one side of the balance (either expenditure or taxes) could be completely misleading. We showed a real world case in which both expenditures and taxes "look" regressive when analyzed separately, and yet it turns out that the program reduces inequality.

6.2 Projecting the Expenditure of the Unemployment Insurance Program

Total expenditure in the unemployment insurance program (G_t) can be decomposed into the number of recipients (N_t) times the individual benefit (B_t): $G_t = N_t \times B_t$

1) Projecting the number of recipients

We assumed a recovery in economic activity in the next few years, to project the evolution of the number of unemployed workers and the number of recipients of benefits. We specifically assumed that GDP will grow 7% during 2004 and 3% from 2005 to 2012. In the decade after the 1982 crisis, the rate of unemployment dropped by about 0.6 percentage points per year while GDP was growing by about 3% per year. Assuming a similar relationship between unemployment and GDP growth in this cycle, we got an expected decline of the rate of unemployment of 1.3 percentage points in 2004 and 0.6 percentage points per year from 2005 to 2012. We then projected the number of unemployed workers (U_t) multiplying the estimated rates of unemployment times the forecasts of the economically active population issued by the National Institute of Statistics (INE). Finally,

to project the number of recipients of benefits (N_t), we regressed $\ln(N_t)$ on $\ln(U_t)$ both in levels and in first differences, using annual data for the period 1993-2002. The estimated elasticity of recipients to unemployed workers was 1.1 and 0.6, with the regressions in levels and in first differences respectively. Needless to say, these estimations are at most indicative given the number of observations available, and we decided to present both to give an idea of the sensitivity of these projections.

2) Projecting the benefit.

The unemployment subsidy is a function of the wages paid to recipients of the benefit in previous months. We approached this relationship assuming the following function:

$$\ln(B_t) = \beta_2 + \beta_3 \ln\left(\frac{w_t + w_{t-1}}{2}\right)$$

where w = real salary, and B_t = unemployment benefit. We estimated this equation using annual data for the period 1993-2002, getting $\beta_2 = 0.8$, $\beta_3 = 0.7$. Finally, we assumed that real wages will grow at 2% between 2004 and 2012.

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Table 1: Expenditure of the Central Government and Public Social Security Institutions by Function (in percentage of GDP)

Year	Education	Health	Social Security and Assistance	Housing	Other Social Services	Total Social Expenses	No Social Expenses	Total
1985	1.5	0.9	8.9	0.0	0.2	11.5	9.3	20.8
1990	1.7	1.3	10.4	0.0	0.2	13.7	8.7	22.4
1991	1.6	1.4	11.3	0.0	0.2	14.6	8.1	22.6
1992	1.7	1.5	12.2	0.1	0.2	15.6	8.1	23.8
1993	1.9	1.5	13.5	0.1	0.2	17.2	7.9	25.0
1994	2.0	1.9	13.4	0.1	0.1	17.5	7.8	25.3
1995	1.9	1.8	13.9	0.5	0.2	18.3	7.2	25.6
1996	1.8	1.8	14.0	0.5	0.3	18.4	6.7	25.0
1997	1.8	1.8	13.8	0.4	0.3	18.1	7.0	25.1
1998	1.8	1.9	13.8	0.5	0.3	18.3	7.1	25.4
1999	2.2	2.0	15.6	0.5	0.2	20.5	8.1	28.6
2000	2.2	2.0	15.8	0.5	0.4	21.0	8.1	29.0
2001	2.4	2.2	15.9	0.5	0.4	21.4	9.3	30.8
2002	2.4	1.9	15.8	0.4	0.4	20.9	10.4	31.3

Notes: (1) Medical subsidies of Family Allowances given by the BPS are included since 1989.
(2) Data from CGN was substituted by data from Public Social Security Institutions (BPS, SRPM, SRPP).
(3) Social Assistance Expenses of the Central Government are included since 1999.
(4) Total Expenditure of the BPS does not include illness insurance (DISSE) nor medical subsidies of Family Allowances program.

Source: Based on data from BPS, INE and BCU.

Table 2: Expenditure of the Social Security System by Function (in percentage of GDP)

Year	OASDI	Unemployment	Health	Family Allowances and Maternity	Administration and Investment	Special Funds	Other Transferences	Other Expenses	Total
1986	8.4	0.1	0.8	0.6	0.6	0.0	0.0	0.1	10.7
1990	9.8	0.2	1.1	0.5	0.5	0.2	0.0	0.0	12.3
1991	10.8	0.2	1.3	0.4	0.6	0.2	0.0	0.0	13.6
1992	11.8	0.2	1.2	0.4	0.6	0.2	0.0	0.0	14.5
1993	12.9	0.3	1.5	0.4	0.8	0.2	0.0	0.0	16.1
1994	13.1	0.3	1.5	0.4	0.8	0.3	0.0	0.0	16.3
1995	13.5	0.4	1.6	0.4	0.8	0.2	0.0	0.0	17.0
1996	13.5	0.3	1.5	0.5	0.9	0.2	0.0	0.0	17.0
1997	13.6	0.3	1.7	0.5	0.8	0.2	0.0	0.0	17.1
1998	13.6	0.3	1.8	0.5	0.8	0.2	0.0	0.0	17.3
1999	14.7	0.4	1.9	0.5	0.9	0.2	0.0	0.0	18.7
2000	14.7	0.5	1.8	0.6	0.9	0.2	0.0	0.0	18.8
2001	14.9	0.5	1.8	0.5	0.9	0.2	0.0	0.0	19.0
2002	14.7	0.6	1.6	0.6	1.0	0.1	0.0	0.4	19.0
2003	12.7	0.3	1.5	0.5	1.0	0.1	0.1	0.2	16.5

Source: Based on data from BPS, INE and BCU.

Table 3: Expenditure of the Social Security System by Institution (in percentage of GDP)

Year	Total	Public System				Private System			
		Total Public	Army	Police	BPS	Total Private	Banks	Professionals	Notaries
1985	Na	9.7	0.9	0.5	8.3	Na	Na	Na	Na
1990	12.3	11.4	0.8	0.5	10.2	0.9	0.6	0.2	0.1
1991	13.6	12.5	0.7	0.4	11.4	1.0	0.7	0.2	0.1
1992	14.5	13.4	0.8	0.4	12.2	1.2	0.8	0.3	0.1
1993	16.1	14.8	1.1	0.6	13.1	1.3	0.8	0.3	0.1
1994	16.3	14.9	1.0	0.6	13.3	1.4	0.9	0.3	0.1
1995	17.0	15.5	1.1	0.6	13.8	1.5	1.0	0.3	0.1
1996	17.0	15.5	1.1	0.6	13.8	1.5	1.0	0.4	0.1
1997	17.1	15.5	1.1	0.6	13.7	1.6	1.1	0.4	0.2
1998	17.3	15.6	1.2	0.6	13.8	1.7	1.1	0.4	0.2
1999	18.7	16.9	1.2	0.6	15.0	1.8	1.2	0.5	0.2
2000	18.8	16.9	1.2	0.7	15.0	1.9	1.2	0.5	0.2
2001	19.0	17.0	1.3	0.7	15.0	2.0	1.3	0.5	0.2
2002	19.0	16.7	1.3	0.7	14.7	2.4	1.3	0.9	0.2
2003	16.4	14.4	1.1	0.6	12.7	2.0	1.3	0.5	0.2

Source: Based on data from BPS, INE and BCU.

Table 4: Own Resources, Expenditure and Deficit of BPS (in percentage of GDP)

Year	Own Resources		Expenditure	Deficit
	Contributions and other incomes	Affected taxes		
1985	5.6	0.0	8.3	2.7
1990	7.8	1.6	10.2	0.8
1991	8.6	1.4	11.4	1.4
1992	9.2	1.5	12.2	1.5
1993	8.8	2.0	13.1	2.2
1994	8.7	2.1	13.3	2.6
1995	8.5	2.1	13.8	3.1
1996	8.2	2.1	13.8	3.4
1997	8.0	2.2	13.7	3.6
1998	8.0	2.3	13.8	3.5
1999	8.6	2.3	15.0	4.2
2000	8.4	2.1	15.0	4.5
2001	7.9	2.6	15.0	4.6
2002	7.2	2.7	14.7	4.9
2003	6.1	2.8	12.7	3.8

Source: Based on data from BPS, INE and BCU.

Table 5: Households receiving pensions (2003)

Decile	Incidence (in percent)	Pensions as a share of total earnings (in percent)	
		All households	Pensioners' households
1	24.4	10.3	42.4
2	35.2	14.6	41.5
3	39.3	18.3	46.6
4	49.5	23.3	47.1
5	54.1	26.4	48.8
6	55.3	27.7	50.2
7	57.7	29.9	51.8
8	59.2	30.2	51.1
9	56.7	30.6	53.9
10	54.3	28.1	51.8
Total	48.5	23.9	49.3

Source: Own computations based on the household survey.

Table 6: Size and age of households receiving pensions (2003)

Decile	Distribution of number of members of the household (in percent)			Average age of the household
	1	2	More than 2	
1	0.7	8.9	90.4	33.4
2	2.8	16.5	80.7	41.4
3	8.4	28.0	63.6	49.6
4	13.1	34.1	52.8	54.1
5	17.1	41.7	41.3	57.4
6	23.5	42.8	33.7	60.2
7	33.2	40.2	26.7	63.5
8	36.0	38.7	25.3	63.5
9	42.0	36.1	21.9	64.1
10	47.9	35.3	16.8	66.0
Total	25.4	34.6	40.0	57.6

Source: Own computations based on the household survey.

Table 7: The Contribution of Several Sources of Income to Total Inequality (2003)

Sources of Income	Estimation 1: Indirect Taxes Proportional to Total Earnings			Estimation 2: Indirect Taxes Proportional to Expenditure		
	Contribution to Inequality ^{a/} (in percent)	Correlation Coefficients	Ratio of Standard Deviations	Contribution to Inequality ^{a/} (in percent)	Correlation Coefficients	Ratio of Standard Deviations
Labor Income, dependent formal workers	8.23	0.23	0.35	7.31	0.23	0.32
Labor Income, dependent informal workers	0.03	0.01	0.05	0.02	0.00	0.05
Labor Income, self employed	0.04	0.02	0.03	0.04	0.02	0.02
Unemployment Insurance ^{b/}	-0.26	-0.21	0.01	-0.13	-0.11	0.01
Pensions ^{b/}	-11.99	-0.48	0.25	-5.01	-0.24	0.20
Family Allowances ^{b/ c/}	-0.08	-0.55	0.00	-0.04	-0.36	0.00
Other Government Transfers ^{b/ d/}	-3.70	-0.52	0.07	-1.91	-0.32	0.06
Other Sources of Income ^{e/}	107.71	0.97	1.11	99.71	0.97	1.03
TOTAL	100.00	1.00	1.00	100.00	1.00	1.00

Notes: a/ The contribution of the income source Y_i to total inequality is the slope in the regression of Y_i on Y . See Shorrocks (1982)
b/ Government transfers are net of taxes. i.e. benefits minus taxes paid to finance the program (see appendix B for the details)
c/ Based on an estimation done by INE.
d/ Donations, subsidies, scholarships, accidents compensations, divorce contributions, "hogar constituido".
e/ Interests, rents, profits, severance payments, gains, remittances from abroad, other sources of income.

Source: Own computations on the household survey

Table 8: Taxes paid as a share of households' earnings (in percent)

Deciles	IVA	IMESI	IRP	Total
1	9.1	1.6	0.6	11.3
2	8.2	1.3	1.3	10.7
3	7.7	1.5	1.4	10.6
4	7.3	1.6	1.6	10.5
5	7.1	1.5	1.8	10.4
6	6.5	1.4	1.8	9.7
7	6.9	1.6	2.1	10.5
8	6.7	1.4	1.9	10.0
9	6.5	1.4	1.7	9.6
10	5.7	1.3	1.3	8.3

Source: Grau and Lagomarsino (2002)

Table 9: Old Age pension indexation in selected Lac and OECD countries ^{a/}

LAC	Indexation system	OECD	Indexation system
Argentina	AD	Austria	AD
Bolivia	P	Belgium	P
Brazil	P	Canada	P
Chile	P	Denmark	W
Costa Rica	P/W	Finland	P/W
Colombia	P	France	P
Guatemala	P/W	Germany	W
Ecuador	P/W	Ireland	AD
El Salvador ^{b/}	P	Italy	P
México	P	Japan	P
Nicaragua	W	Luxembourg	P
Panama	AD	Netherlands	W
Paraguay	P	Norway	P/W
Perú	P	Portugal	P
Rep. Dominicana	W	Spain	P
Uruguay	W	Sweden	P/W
Venezuela	P/W	Switzerland	P/W
		United Kingdom	P
		United States	P

Notes: W indicates indexation to wages, P indicates indexation to prices, P/W a mix of price and wage indexation, and AD indexation ad hoc system.

a/ Indexation rule of pensions for people already in retirement in the large system.

b/ Guaranteed minimum pension is adjusted annually according to changes in the average salary

Sources: Based on data from: Social Security Programs Throughout the World: Europe, 2002, and The Americas, 2003.

Table 10: Description of Simulated Scenarios for Pensions a/

	Base	Indexation		Base Wage	Automatic adjustment to life expectancy		
	1	2	3	4	5	6	7
1. Indexation of pensions	wages	prices	Wages/prices	wages	wages	wages	wages
2. Wage base /b	Last 10/best 20	Last 10/best 20	Last 10/best 20	All work history	Last 10/best 20	Last 10/best 20	Last 10/best 20
3. Minimum age for retirement							
3.1 Males	60	60	60	60	Age of death –16	60	60
3.2 Females	60	60	60	60	Age of death –20	60	60
4. Work history of males							
Actual working ages /c	24 to 65/66	24 to 65/66	24 to 65/66	24 to 65/66	24 to 65/67	24 to (age of death –11)	24 to 65/66
Declared working ages	29 to 63/64	29 to 63/64	29 to 63/64	29 to 63/64	29 to 63/65	29 to (age of death –13)	29 to 63/64
Age when the pension is granted	60/64	60/64	60/64	60/64	64/66	Age of death –12	60/64
5. Work history of females							
Actual working ages	24 to 60/64	24 to 60/64	24 to 60/64	24 to 60/64	24 to 60/65	24 to (age of death –17)	24 to 60/64
Declared working ages	27 to 59/63	27 to 59/63	27 to 59/63	27 to 59/63	27 to 59/64	29 to (age of death –18)	27 to 59/63
Age when the pension is granted	60/64	60/64	60/64	60/64	60/65	Age of death -17	60/64
6. Rate of replacement	Law 16.713	Law 16.713	Law 16.713	Law 16.713	Law 16.713	Law 16.713	Adjusted to life expectancy
Notes: /a Variations with respect to the base scenario are highlighted in bold. /b Wage base on which benefits are calculated. /c 65/66 means that some generations work until they are 65 and some do it until they are 66. Analogous for other parameters of the work history.							

Source: Own computations.

Table 11: Fiscal Impact of several policy changes to the pensions program (millions of 2003 dollars)

	SHORT RUN (2005)			LONG RUN (2005-2050) ^{a/}			Political Difficulty ^{b/}
	Expenditure	Resources	Deficit	Expenditure	Resources	Deficit	
1. Indexation of pensions (currently to wages)							
1.1 Pensions indexed to CPI	-9	1	-10	-30	0	-30	3
1.2 Pensions indexed to (0.5*CPI+0.5*W)	-5	0	-5	-15	0	-15	3
2. Pension Base Wage							
Whole work history	-2	-2	0	-18	-1	-17	2
3. Life-expectancy adjusted parameters							
3.1 Minimum retirement age	0	0	0	-1	3	-4	2
3.2 Average retirement age	0	1	-1	-6	8	-15	2
3.3 Rate of replacement	0	-2	2	-12	-1	-11	2
Notes: a/ Average impact <i>per year</i> discounted at an annual rate of 3.8%. b/ 0=little or no political difficulty (can be done administratively without arising much opposition) 1=moderate difficulty (needs strong determination by executive branch; may or may not require change in legislation) 2=difficult (typically requires change in law and faces strong opposition to the extent where losers may have to be compensated in some way to make it politically feasible to implement; vigorous public relations campaign will also be necessary in most cases) 3=very difficult (requires a major change in culture, laws and/or constitution and has strong opposition from vested groups – will require very strong leadership feasible to implement and is likely to take years to build up consensus)							

Source: Own computations.

Table 12: Equity impact of several pensions policy reforms (Change in the generational account caused by the policy reform measured in years of wages at 55 years old. Positive values mean losses for the worker)

	MALES			FEMALES		
	High income	Medium income	Low income	High income	Medium income	Low income
1. Indexation of pensions (currently to wages)						
1.1 Pensions indexed to CPI						
Average generations 1940-1949	0.24	0.34	0.34	0.33	0.45	1.46
Average generations 2000-2009	0.16	0.34	0.41	0.19	0.40	1.53
1.2 Pensions indexed to $(0.5 \cdot \text{CPI} + 0.5 \cdot \text{W})$						
Average generations 1940-1949	0.12	0.18	0.18	0.17	0.23	0.75
Average generations 2000-2009	0.08	0.17	0.21	0.10	0.21	0.79
2. Pension Base Wage						
Whole work history						
Average generations 1940-1949	0.00	0.43	0.11	0.00	0.26	0.00
Average generations 2000-2009	0.00	0.31	0.18	0.00	0.22	0.00
3. Life-expectancy adjusted parameters						
3.1 Minimum retirement age						
Average generations 1940-1949	0.00	0.00	0.00	0.00	0.00	0.00
Average generations 2000-2009	0.22	0.34	0.40	0.18	0.23	0.01
3.2 Average retirement age						
Average generations 1940-1949	0.00	0.00	0.00	0.00	0.00	0.00
Average generations 2000-2009	0.46	0.71	0.77	0.28	0.38	0.09
3.3 Rate of replacement						
Average generations 1940-1949	0.00	0.00	0.00	0.00	0.29	0.00
Average generations 2000-2009	0.25	0.53	0.18	0.30	0.63	0.00

Source: own computations.

Table 13: Projection of the Expenditure of the BPS in the Unemployment Insurance Program (in percentage of GDP)

Year	Estimation 1	Estimation 2
2002	0.52	0.52
2003	0.28	0.28
2004	0.22	0.23
2005	0.21	0.22
2006	0.20	0.22
2007	0.19	0.21
2008	0.18	0.20
2009	0.17	0.20
2010	0.16	0.19
2011	0.16	0.18
2012	0.15	0.17

Source: own computations. See the appendix for the details.

Table 14: Duration of the unemployment subsidy

(Number of new recipients of the unemployment subsidy classified by duration of the subsidy)

Year	Annual average			Percentage		
	Less than 2 months	From 2 to 4 months	More than 4 months	Less than 2 months	From 2 to 4 months	More than 4 months
1993	770	676	2707	18.54	16.28	65.18
1994	590	591	2923	14.38	14.40	71.22
1995	679	803	3717	13.06	15.45	71.49
1996	530	576	3120	12.54	13.63	73.83
1997	429	398	3127	10.85	10.07	79.08
1998	608	486	3212	14.12	11.29	74.59
1999	1029	719	3939	18.09	12.64	69.26
2000	896	600	4438	15.10	10.11	74.79
2001	917	637	4553	15.02	10.43	74.55
2002	1027	733	5955	13.31	9.50	77.19

Source: BPS

Table 15: Share of the unemployed who were receiving the unemployment subsidy (2002)

	Coverage (in percent)
Role in the family	
Heads of household	14.0
No heads of household	4.2
Gender	
Males	8.9
Females	4.2
Region/Income level	
Montevideo	7.8
Low income	6.2
Low-middle income	7.9
Middle-high income	9.5
High income	7.4
Rest of the country	3.3
Age	
Less than 20	0.3
20 to 39	4.7
30 to 39	10.0
40 and more	9.5

Source: Own computations on the household survey.

Table 16: Recipients of Unemployment Subsidies (annual average)

Year	Source of data: household surveys (ECH) ^{a/}					Sources of data: BPS, Caja Bancaria	
	Recipients of the subsidy who are ...					Recipients of the subsidy	Recipients of the Subsidy/Unemployed
	Unoccupied		Occupied ^{b/}		Total ECH		
	(1) (Individuals)	(2) (% of unemployed)	(3) (Individuals)	(4) (% of occupied)	(5)=(1)+(3) (Individuals)	(5) (Individuals)	(6) (% of unemployed)
1993	2635	2.50	5086	0.44	7721	16070	15.25
1994	3124	2.58	5697	0.48	8821	18107	14.95
1995	6201	4.51	8563	0.71	14764	21686	15.77
1996	7844	4.93	7754	0.66	15598	19258	12.10
1997	8075	5.33	4221	0.36	12296	17100	11.29
1998	5323	4.30	4856	0.44	10179	17652	14.26
1999	6431	4.67	8981	0.83	15412	23384	16.98
2000	7027	4.19	8754	0.82	15781	26200	15.62
2001	10993	5.69	8717	0.81	19710	31340	16.22
2002	13143	6.22	11733	1.13	24876	37302	17.65
2003	9633	4.62	7224	0.70	16857	22767	10.92

Notes: a/ The design of the sample was changed in January 1998.

The percentages are computed using the ECH and the number of individuals are obtained multiplying those percentages by the number of unemployed (occupied) workers reported by the INE in "Uruguay en Cifras 2004".

b/ Recipients of the subsidy who alleged "suspension of the activities" ("causal suspensión").

Table 17: Unemployment Categories (2002)

	Number of individuals	Percent of the unemployed
1. Searching job for the first time	35836	16.96
2. Unemployed that do not receive the subsidy	162321	76.82
2.1. Had not been working for less than one year	96839	45.83
2.1.1. Public Sector	2451	1.16
2.1.1.1. Informal	1226	0.58
2.1.1.2. Formal	1225	0.58
2.1.2. Private Sector	94388	44.67
2.1.2.1. Informal	74948	35.47
2.1.2.2. Formal	19440	9.20
(i) Self-employed and firm owners	1902	0.90
(ii) Dependent	17538	8.30
2.2. Had not been working for more than one year	65482	30.99
3. Unemployed receiving the subsidy	13143	6.22
4. Total	211300	100.00
Note: The percentages are computed using the ECH and the number of individuals are obtained multiplying those percentages by the number of unemployed workers reported by the INE in "Uruguay en Cifras 2004".		

Source: Own computations from the household survey.

Table 18: Employment

	2001		2002		2003	
	Number of individuals	Percent of the Occupied	Number of individuals	Percent of the Occupied	Number of individuals	Percent of the Occupied
1. Public Sector	75371	15.2	178012	16.1	174274	16.2
2. Private Sector	78076	84.8	926273	83.9	903551	83.8
2.1. Formal Sector (contribute to SS)	82982	41.9	433897	39.3	401437	37.2
2.1.1. Dependent	86983	33.6	343344	31.1	321682	29.8
(i) Domestic Service	40936	3.5	36061	3.3	36174	3.4
(ii) Employees in the Banking System	10088	0.9	10292	0.9	8183	0.8
(iii) Others	335959	29.1	296991	26.9	277325	25.7
2.1.2. Self-employed and firm owners	95999	8.3	90553	8.2	79755	7.4
2.2. Informal Sector (do not contribute to SS)	495094	42.9	492376	44.6	502114	46.6
3. Total	1153447	100.0	1104285	100.0	1077825	100.0

Source: Own computations from the household survey.

Table 19: Coverage of the Unemployment Insurance Programs in Latin America

(Percentage of total unemployed according to administrative records)

Country	Year	Coverage
Argentina	1995-2000	10.0
Brazil	2000	11.8
Chile	2000	6.7
Uruguay	1995-2000	14.3
	1995	15.8
	1996	12.1
	1997	11.3
	1998	14.3
	1999	17.0
	2000	15.6
Venezuela	1999	7.2

Sources: Velásquez (2003a). and own computations based on information from BPS and INE.

Table 20: Coverage of the Unemployment Insurance Programs^a in selected OECD countries

(Percentage of total unemployed according to administrative records in 1999)

Country	Coverage
Australia	11.27
Austria	14.10
Belgium	9.81
Canada	10.02
Denmark	9.79
France	6.31
Germany	11.08
Ireland	17.30
Japan	2.93
Netherlands	15.90
New Zealand	12.96
Slovak Republic	3.15
Spain	3.91
Sweden	7.18
United Kingdom	6.38
United States	3.83

Note:
a/ Unemployment benefits refers to benefits – except for those which are primarily disability or lone parent benefits – that are paid conditional upon the person being available to work. Means-tested benefits are not included here. Only periodic benefits that are paid in the event of a loss of earnings are included, which are referred to as earnings or income replacing benefits. Lump sum cash benefits are not included.

Source: Own computations based on information from OECD.

Table 21: Number of new recipients of the unemployment insurance subsidy

(annual average)

Year	Application founded on:		
	Dismissal	Suspension	Reduction
1993	1496	2601	56
1994	1859	2194	51
1995	2161	3012	26
1996	2065	2130	32
1997	2218	1713	23
1998	2283	1999	23
1999	2518	3152	18
2000	2555	3372	5
2001	2266	3839	2
2002	2541	4511	662

Source: BPS.

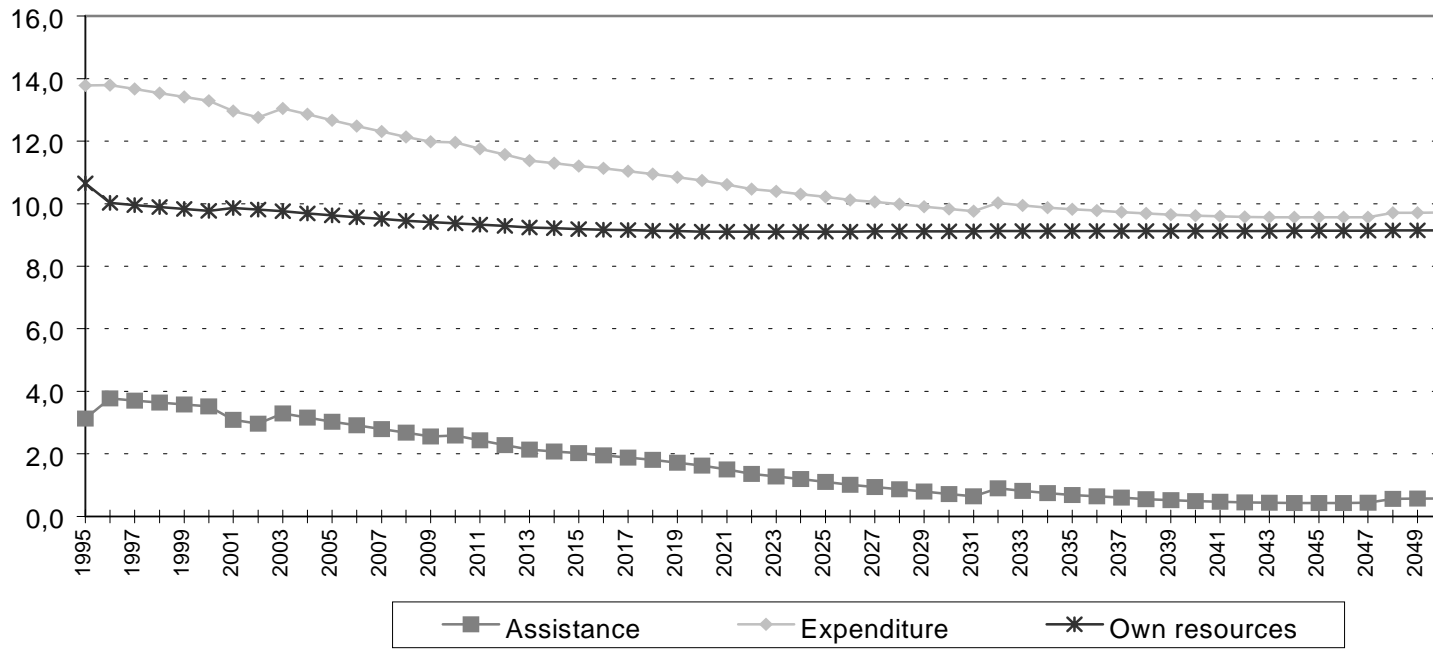
Table 22: Proposals to Reform the BPS Unemployment Insurance Program

	Current law a/	Bill of the Executive b/	Minister of Labor c/	Velásquez (OIT) d/	Stand by WB e/	ERT-BPS f/	Encuentro Progresista g/	Partido Nacional (Alianza Nacional) h/
Coverage	Dependent workers in the private sector. save domestic service.					All dependent workers in the private sector.	Add domestic service workers.	
Eligibility	(i) Worker is fired; or (ii) working time is reduced by 25% or more; or (iii) the firm "suspends the activity". Contributions during 6 of the last 12 months. No other sources of income.	Contributions during 9, rather than 6, of the 12 months previous to unemployment.		Eliminate the "suspension" cause (iii). Contributions during 12 months (either continuously or discontinuously). Assistance-means-tested new program.	Workers who received severance payments of 100 SMN or more are not eligible.	Workers must have contributed no less than 6 of the last 24 months (the BPS can raise this figure to 36). After using the whole period, workers become eligible again after 6 months contributing.		
Amount	The subsidy is equal to half the average wage during the 6 months previous to unemployment. with a lower bound of half the national minimum salary (SMN) and an upper bound of 8 SMN.		The amount of the subsidy is decreasing along time, so initial payments are larger. The discounted sum remains unchanged.	The amount of the subsidy is decreasing along time. Minimum and maximum subsidy indexed to private wages rather than to the SMN. The last 12 wages are used to compute the subsidy.	The amount of the subsidy is decreasing along time.	The replacement rate is raised to 60% and the BPS is authorized to raise it further up to 80%. The minimum subsidy is 5 UR and the maximum is 50 UR.		

	Current law a/	Bill of the Executive b/	Minister of Labor c/	Velásquez (ILO) d/	Stand by WB e/	ERT-BPS f/	Encuentro Progresista g/	Partido Nacional (Alianza Nacional) h/
Period	The subsidy is paid during 6 months. but the government can extend this period 12 additional months.	"Account" that registers the number of months the worker is entitled to enjoy the subsidy: one month per year of age above 20 and half a month per year of contributions. The account is reduced when the worker receives the subsidy. Subsidy paid after severance payments. in case of separation.	Nine months. A worker who never used the program. can get 36 months as anticipated retirement.	Six months and no extensions.	Six months and no extensions. No more than 36 months receiving the subsidy along lifetime.	The BPS can extend the period up to 12 months for workers aged 50 or more. belonging to households with income below 24 UR. or workers of insolvent firms (or firms with labor debt).	Extensions for workers who face difficulties to find a job.	Maximum extension: 6 months.
Funding	Payroll and general taxes.	The employer must pay a special contribution equivalent to a month of salary. if the application is based on the suspension of the activity.	Firms contribute according to the use they make of the program.					
Other			Recipients of the subsidy should participate in community service or training programs.		Recipients of the subsidy must participate in community services and training programs.	Recipients of the subsidy must participate in training programs and actively search for jobs.	Extensions or special subsidy programs for elder unemployed.	Subsidize the hiring of recipients of the unemployment subsidy.

Sources: a/ Decree-law 15.180. b/ The project of the Executive Power is not directly available. We could only learn of it through Velásquez (2003b). c/ Article from El Observador (2004) based on a press conference given by the Minister of Labor. d/ Velásquez (2003b) e/ The document is not directly available. We could only learn of it through Oiz Marquéz (2002) f/ Equipo de Representación de los Trabajadores en el BPS (1999) g/ Encuentro Progresista – Frente Amplio (1999) h/ Partido Nacional (2004).

Figure 1: The budget of the BPS. Base Scenario (In percent of GDP)



Source: Forteza (2004)

Figure 2: The purchasing power of pensions with two different indexation schemes
(March 1990=100)

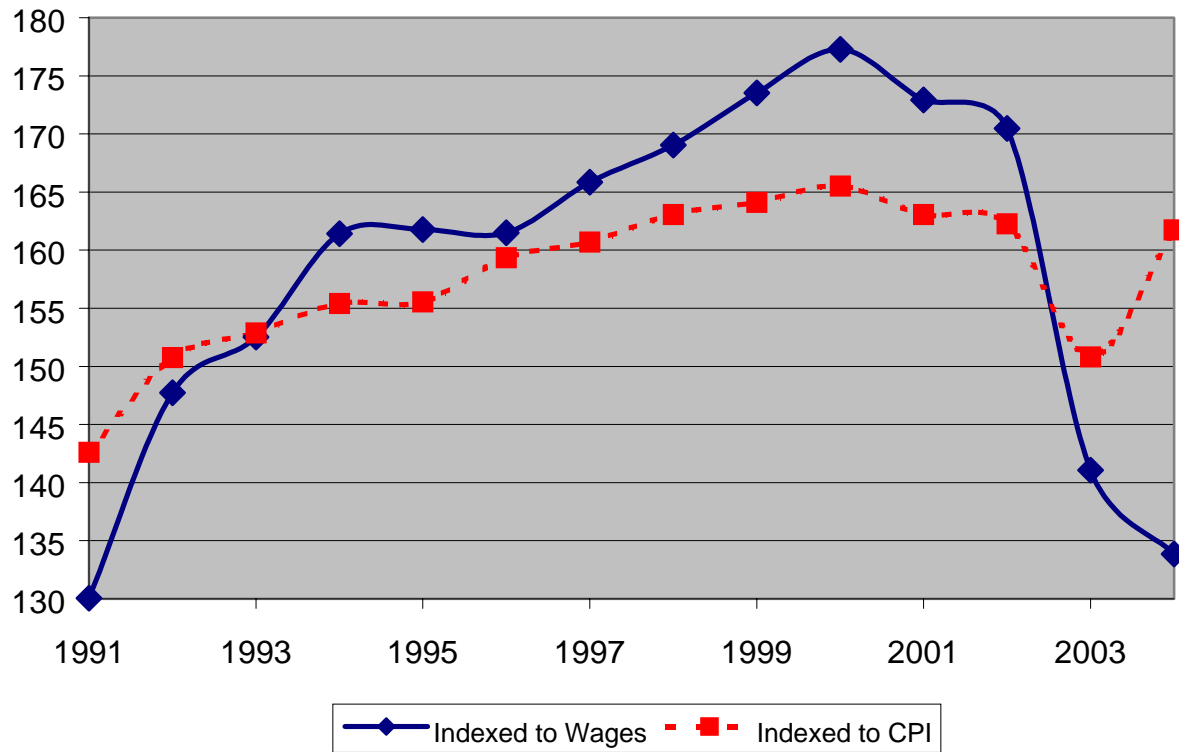


Figure 3: The Contribution of Pensions to Inequality Computing only Gross Transfers

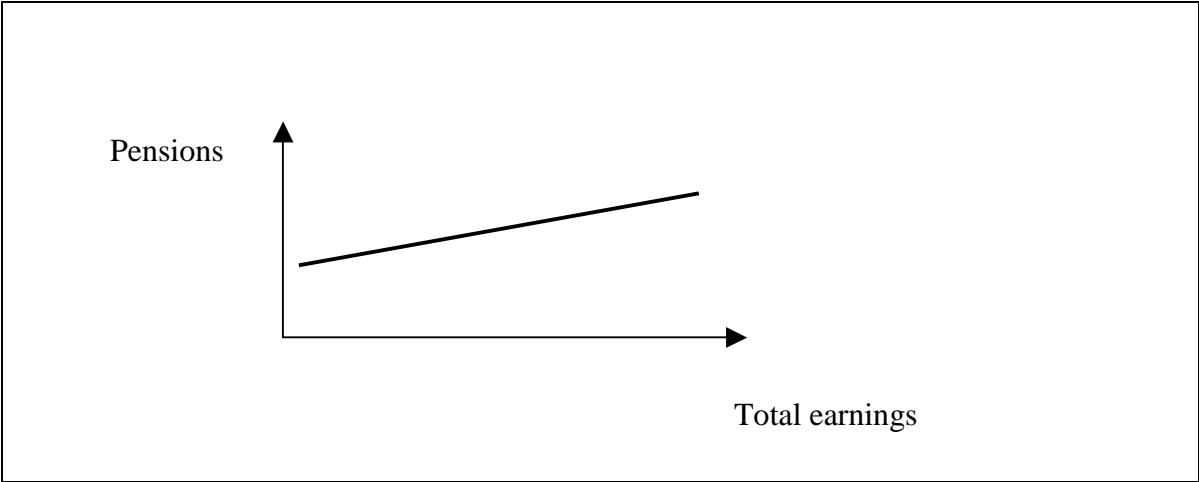


Figure 4: The Contribution of Pensions to Inequality Computing Net Transfers

