THE WASHINGTON CONSENSUS AND THE PENSION REFORM PACKAGE FOR LATIN AMERICA: THE URUGUAYAN CASE

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Abstract

This paper is a critique to the World Bank assistance strategies and also an assessment of the structural pension reforms in Uruguay. Despite the lack of a coherent support from the Bank, Uruguay managed to introduce a private second pillar which has been fairly accepted by Uruguayan workers. We test empirically the probability of participation of the labor force into the reformed social security system using PROBIT estimators. Our analysis suggests that the Bank underestimated the reforms efforts of Uruguay and failed to assess the attractive features of the mixed pension reform in this country.

I. Introduction: The Washington Consensus and the pension reform in Latin America.

After the collapse of the communist block and the end of the Cold War, for the first time some kind of agreement and possible intellectual convergence in policy making was perceived. In early 1990's the concept of "Washington Consensus" was coined by Prof John Williamson to suggest the liberal and rational economic policy making that may help reduce poverty in Latin America. The term "Washington Consensus" then was interpreted as the basic policy measures that must be implemented to achieve economic development.

The basic policy reforms recommended for Latin America were: fiscal discipline and tax reform, redirection of public expenditure to education, health care and infrastructure, liberalization of financial and exchange markets, liberalization of trade and foreign investment, privatization, deregulation, among others. These recommendations are also part of the policy reform package to the developing countries from Washington-based institutions like the World Bank, Inter-American Development Bank (IDB), The International Monetary Fund, the US Treasury, etc. During 1990's many Latin American government adopted the reforms proposed by these institutions and moved forward to more competitive and liberal economies.

As many other sectors in the economy, the social security systems in Latin America were also

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considered for reform. Special attention was paid to the pension schemes were the fiscal deficit was important. Furthermore, the demographic unbalances in some countries also began to put high pressure on long-term fiscal stability. In this context, the World Bank policy recommendations were focused on long-term fiscal stability in order to overcome the aging population problem.

The publication by the World Bank of [redacted] in 1994 offered the first detailed exposition of what might be the best policies to protect the elderly from the risk of old age poverty. [redacted]'s approach was to implement multi-pillar pension schemes in the following form: One first pillar of public PAYGO type pensions for low income workers which may reduce income inequality among the elderly; a second pillar of privately run and fully funded pensions to increase savings, diversify financial markets and promote economic efficiency; and a third pillar of voluntary pensions. After a decade of pension reforms in Latin America the main result is a diversity of pension schemes all over the continent. Every country adopted in general a multi-pillar system but with heterogeneous components.

The varying degree of success of economic reforms, including pensions, and the change in political conditions in Latin America resulted in a new interpretation of the concept toward a more populist content. This the second and widespread interpretation of the concept came from a populist view of understanding the Washington Consensus as the mandatory measures that developing countries must abide in order to get financial assistance from Washington-based institutions. Some Latin American governments repudiated the so called "Neoliberal reforms" and began to reverse many reforms proposed by the Washington-based institutions. This is call for a more detailed revision on the policy reforms of 1990's in order to assess both, the policy making and financial support by Washington-based institutions and also the implementation of such reforms by the recipient countries.

In this paper we took interest in the pension reform of 1995 in Uruguay. This is a case were the World Bank support fall short to supply a flexible advice and financial resources to address Uruguay's concerns and needs. Despite the bad rating of the Uruguayan pension reform by the Bank, the Uruguayan pension reform seems to be fairly accepted by the entire working population, even though the fiscal and demographic imbalances are still present.

The main aim of this paper is to expand the research on pension reforms in Latin America in the context of the World Bank assistance to the pension reform. We decide to analyze Uruguay in its way toward implementation of a structural pension reform that materialized

with the inclusion of a second pillar of private retirement accounts (PRA) in 1996.

During the last decade the analysis on pension reform in Latin America has focused mainly on macroeconomic and fiscal issues. Indeed more papers and reports have been written about fiscal sustainability and transitions costs than detailed analysis of specific conditions of income distribution and individual preferences. The World Bank also addressed the fiscal outcome as the more important factor for supplying aid and financial support.

At the end of 1990's almost all Latin American countries carried out important reforms to the old pension schemes. Mexico, Argentine, Uruguay, Colombia, Peru, Bolivia, Ecuador, El Salvador, Dominican Republic, Nicaragua and Costa Rica introduced partially or totally a second pillar of private retirement accounts, some of them with the support from international organizations like the Inter American Development Bank and the World Bank. Indeed pension reforms were a part of structural adjustment policies recommended by international financial institutions in order to improve the fiscal and financial situation of the old PAYGO schemes. Chilean pension reform of 1981 was the "first structural reform" in the continent and captured the attention of policy makers around the world.

Other research topics also focused in financial diversification in the private scheme, coverage, and institutional organization. Rofman (2005) is one of the papers where we can find descriptive information on the coverage of the pension reform in Latin America. Usami (2004) is an institutional analysis on the pension reforms and Queisser (1999) is a review of the main pension reforms in Latin America. Bertranou et al (2001 and 2002) described the conditions in coverage and provision after the reforms in Argentine, Chile, Uruguay, Brazil and other countries. Arenas (2000 and 2005) made the deep and broad examination for the Chilean pension reform of 1981 as well as the Uruguayan reform of 1996.

Some researchers like Mesa-Lago (2005) had done a lot of work synthesizing and systemizing the pension reforms in Latin America. From him we have an available classification of pension reforms in Latin America as follows:

1. The substitutive reform. The PAYGO scheme is substituted completely by the fully funded privately managed scheme. Chile, Mexico, Bolivia, El Salvador, Dominican Republic and Nicaragua adopted this scheme.
2. The mixed reform which is a case where the fully funded privately managed scheme complements the old PAYGO. In some countries workers are compelled to contribute to both schemes. Examples are Argentine, Uruguay, Costa Rica and Ecuador.

3. The parallel reform. The second pillar competes with the PAYGO scheme and individuals are allowed to joint to one scheme only. Here only Peru and Colombia have carried out such reform.
4. The remaining countries have not carried out any reform or just parametric reforms which are just adjustments to the old PAYGO to produce realistic actuarial predictions and improve financial viability.

In the words of Mesa-Lago (2005) [illegible]. In this respect the first three reforms above are known as "structural reforms" while the last one is just an actuarial and financial adjustment of the old PAYGO scheme.

The above classification makes emphasis on the "privatization" of the public pension schemes in Latin America. This privatization is not by all means "liberalization" in the form of voluntary pensions freely determined between firms and workers but the introduction of private retirement accounts (PRAs)-fully funded style mandatory and privately managed scheme. Private management is usually carried out by private trust firms that specialize in retirement funds management. For Latin American governments the primary objective of these reforms was to reduce amounting deficits in public schemes. Other accepted arguments in favor of privatization was the possible increase in national savings and investment, development of capital markets, formalization of the labor force and insulation of pension benefits from mismanagement, among others. However, these outcomes are still greatly debated and some researches coincide that they may not finally occur.

A paper by Stiglitz and Orszag (1999) was an interesting exercise to demystify this excessive optimism. They delineated ten myths on what appear to be misleading perceptions on the outcomes of pension reforms. Mesa-Lago (2002) later published a paper to debate about the myths that surround pension reforms in Latin America, where he agrees that some expected outcomes may not be realized at all.

The social security reform of 1995 in Uruguay has produced important analysis focused mainly in the fiscal long term balance. Forteza (1998, 1999, 2003) made an analysis on the fiscal deficit after the reform and constructed a macroeconomic simulation with a general equilibrium model. Noya & Laens (2002) also made a simulation on the fiscal deficit of the BPS using partial information of a population sample. Both agree that the fiscal deficit may continue to grow until 2020's and then will decrease. However the fiscal deficit may never

disappear with this reform because still maintain the PAYGO scheme in it. Arenas de Mesa & Bertranou (2005) made an inspection of the reform highlighting the information and institutional problems in the social security scheme. Bucheli ed al (2006) analyzed the reform and the individual probability of fulfilling the requirements for retirement. Their main conclusion is that only 1/5 of the participants in the BPS may fulfill all the requirements for being able to claim a pension benefit.

This paper is a microeconomic analysis which estimates individual contribution to the pension schemes before and after the pension reform, complementing the literature in the subject. The central argument is that Washington-based institutions like the World Bank has stressed the implementation of second pillar in Latin American using as an argument the enormous fiscal deficit of the public pillars without considering the specific institutional and micro economic conditions.

This analysis is similar to the works of De la Rica and Lemieux (1993) and Auerbach et al (2005). The first one is a study on the participation of workers in social security in US and Spain. Auerbach et al (2005) is a microeconomic analysis for participation in social security in Latin America but it does not include Uruguay case for estimation.

We use PROBIT and LOGIT regression to analyze two data sets from the Family Income Survey (FIS) of Uruguay. The FIS contains information of urban households from 1991 to 2005 however the methodology changes in 2001 then it is not possible to apply the same regression to the whole period after 2001. Then we test two different independent variables, first we estimate the probability of being a worker in precarious occupations (PPO). This is an indirect method used by the FIS designers to estimate the population that might not be covered with social security and then unable to receive future benefits. After 2001 the variable of contribution to the pension scheme becomes explicit and we are able to estimate directly the probability of participation in the pension scheme.

With the most recent data and as an additional exercise we compare two countries that have carried out pension reforms almost at the same time but with different approaches: Mexico and Uruguay. Mexico carried out a substitutive reform in 1997 while Uruguay did a mixed reform in 1996. We analyze the changes in individual preferences to social security and participation in both countries for salaried and independent workers.

We use our findings to criticize the role of the World Bank in Latin America, specifically the

lack of support to the Uruguayan pension reform. As an example Mexico received strong financial and technical support form the World Bank for the implementation of the substitutive pension reform while Uruguay did not. We also suggest that the lack of a comprehensive strategy from the Bank toward the particular needs of any country will cause misunderstanding and unnecessarily spread the populist concept of the Washington Consensus. This makes more difficult for Washington-based institutions to promote efficient policies among their clients.

In this introduction we have made an overall review of the pension reforms in Latin America. The section two is a description of the pension reform in Uruguay and the third section describes the structural problems in the social security system. In section four we make a brief revision of the World Bank role in supporting the pension reform in Uruguay. In the fifth section we run an empirical analysis to test the probability of participation in the social security system and make some comparative analysis. The last section includes our comments and findings.

II. The pension reform in Uruguay.

Uruguay has one of the oldest social security systems in Latin America. The first pensions were approved in 1829 to support those who fought the independence war. Ten years later pensions benefits were also granted to public servants. In 1919 the first non-contributive pensions were provided to the common citizens.

The beginning of the XX century also witnessed the establishment of retirement mutual associations (RMA) called "cajas de jubilaciones y pensiones". These RMA were independent organizations that manage pension funds for specific groups of workers. They invest their pension funds in a diversified portfolio and pay for health insurance and pension benefits to their members. There are currently three mutual associations in Uruguay which are independent entities of public interest: 1) The RMA of Bank employees, which is the oldest and was founded in 1925; 2) The RMA of public notaries, established in 1941; and 3) The RMA of university graduates, established in 1954. There are also two RMA which manage the pension benefits of military and police forces which are public entities with autonomy and receive financial support from the Uruguayan government.

Actually the most important institution in charge of the social security benefits is the Social Security Bank (BPS) which was established in 1967 with the aim of incorporating most of the dispersed RMA in a single entity. The BPS was entrusted with the task of managing the public

social security programs, including pension benefits for employees and workers in the private sector, agriculture and public servants. Little after its foundation the social security in Uruguay had almost achieved universal coverage. At present the BPS manage 89% of the total pension benefits granted in the whole system.

The BPS and the RMAs comprise the first pillar of the Uruguayan social security system. This first pillar is also known as "pillar of intergenerational solidarity" because is based on intergenerational transfers PAYGO type. The PAYGO scheme is also known as defined benefit scheme because all individuals know the value of their pensions before retirement. However this scheme implies that younger generations may also pay for the future deficits in the form of higher taxes or contributions.

With the social security reform approved in 1995 the Uruguayan government created a new pillar called "Personal Retirement Accounts" (PRA). This second pillar transformed the social security in Uruguay into a mixed system where the old PAYGO and the new fully funded schemes complemented each other. The second pillar is managed by private financial firms called AFAP (pension fund management firms) which are supervised by the central bank. There are three AFAP of private capital and one of public capital, all under the supervision of the Central Bank. The AFAP of public capital is managed by the BPS, which makes the BPS the most influential and important institution in the area of social security in Uruguay.

Currently the employers' contributions to the pension system are 10.5% of the wages and salaries while employees are 15%. In order to introduce the new pillar three brackets of income were to be considered in the contribution structure. Workers with the low income will contribute compulsory to the public scheme with the option to contribute 50% of their savings to the private system. Middle income workers contribute compulsory to the private pillar. Finally, high income workers are left free to make voluntary contributions to the private pillar.

The retirement age was raised to 65 years and was made the same for men and women and a vesting condition of 35 years of work was also added. Workers that do not comply with these vesting conditions will get an old age pension benefit that will be granted after the 70 birthday with 10 years of contributions[2]. If none of the above cases are fulfilled then there is the option

[2] In Uruguay there are two kinds of pension benefits with different translation to Spanish. The first is "pension" which means old age pension benefit with no vesting conditions. The other is the normal pension benefit called "jubilacion" which is usually larger in amount and is granted once the workers meet all vesting requirements.

of a non-contributive pension which is a welfare subsidy by the Government.

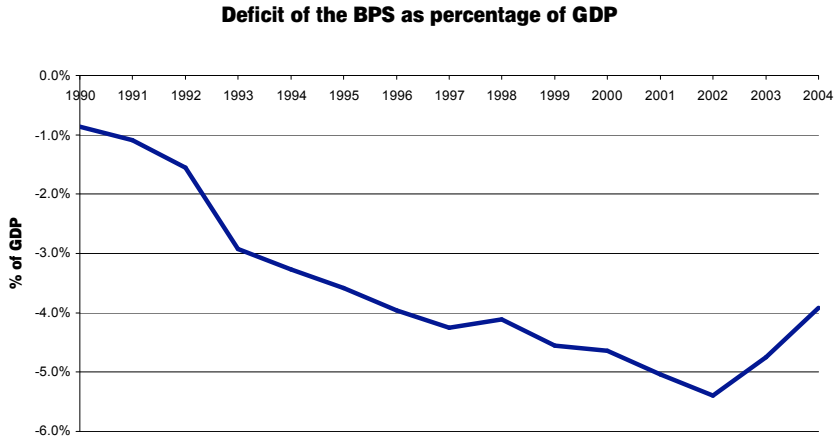
III. Structural Macroeconomic problems of the Social Security System.

i. Fiscal deficit.

In the year 2005 the GDP of Uruguay was ranked 90th in terms of international dollars (PPP method) of 34,305 millions and was ranked 65th in terms of the GDP per capita. The size of the economy is small compared with other neighbor countries but its per capita income is above the Latin American average. According with the human development index by the United Nations, Uruguay is a country with high human development ranked 46th.

The fiscal picture of the Uruguayan Government has shown some cycles in the last decade. The primary deficit was almost 6% of the GDP in 1984 and after that Uruguay began to experienced economic growth again until a modest surplus was obtained in 1990-1992. In 1999 a strong economic recession began and lasted until the year 2002 when the primary deficit become 5% of the GDP. In the latest economic shock of 1999-2002 the accumulated fall of the real GDP was 19% what is considered and historic crisis. Uruguay's economy is strongly linked to those of their neighbors like Brazil and Argentine, then suffered from the contagion effect of the Argentinean recession and foreign exchange crisis.

Much of the deficit in the government finance is caused by the government subsidy to the BPS. Social security accounted for 3.8% of total expenditure in 2004. In the same year the deficit of the BPS was about 4% of the GDP, less than the 5.4% at the end of the recession in 2002.



Graph 1.- Deficit of the BPS (primary balance)

Source: Band of Social Security (BPS) of Uruguay.

There are several factors that explain the deficit in the BPS. First we may explain this deficit in the side of dire management of the pension fund. Before the reform almost all the funds were invested in public bonds with fixed return which rendered negative real return after long periods of high inflation. The lenient requirements for claiming a pension benefits also increased the number of pensioners with doubtful rights. The referendum of 1989 also allowed al pension benefit to be indexed to the salaries of public servants. Additionally tax evasion is also a concern that adds pressure to the BPS expenditures.

There are some economic simulations about the future performance of the fiscal deficit. Forteza (1998) made a macroeconomic simulation using a general equilibrium model in which he describes the patterns of consumption, savings and fiscal balances after the pension reform of 1995. Noya & Laens (2000) analyzed the deficit in the BPS with a partial estimation. Both studies agree that the deficit may continue to grow until 2020's and then decrease. This is because the second pillar will mature and will begin to pay benefits. But under the present pension reform the deficit of the BPS may never disappear because of the PAYGO component in the mixed pension scheme. According with the above analysis the deficit of the BPS may decrease to less than 3.5% of the GDP in 2050 under different scenarios of economic growth and return.

ii. Aging population

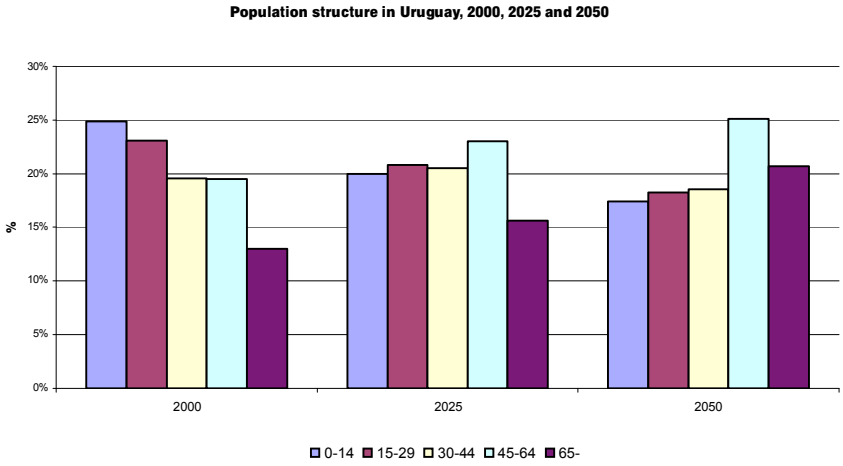
Another relevant factor behind the fiscal unbalance is the age structure of the labor force that contributes to the BPS. Uruguay is the country with the highest ratio of old population in Latin America. Although the number of people with pension benefits is relatively constant the number of participants is decreasing. In 1995 there were 1.3 workers contributing to the BPS per each individual receiving a pension benefit from the BPS. In 2003 this ratio was just 1.2 workers per one retiree.

In 2005 there were 4.7 individuals in working age for every individual with more than 65 years old. The situation is similar to countries with strong ageing population phenomenon like Japan which had ratio of 3.6:1 in 2000. At present most of the South American countries enjoy by far younger populations than Uruguay, which may enable them to continue with intergenerational transfers PAYGO type. In 2005 the elderly population ratio was 6.2:1 in Argentine, 8.5:1 in Chile, 10.8:1 in Brazil, 12.7:1 in Bolivia and 15.7:1 in Paraguay.

Argentine and Uruguay has a relatively old population and both implemented mixed reforms last decade. Other countries like Brazil only made some actuarial adjustments to the old

PAYGO scheme. Chile, Mexico and Bolivia substituted the old PAYGO scheme by the fully funded but both countries are structurally different.

It is clear that population ageing is a necessary but not a sufficient condition for the reform. In the case of Uruguay demographics is a relevant factor because the aging population is already in high levels. Currently the Uruguayan population with more than 65 years old is 13% from the total and would be 20% in 2050.



Graph 2.- Population structure in Uruguay.

Source: INE.

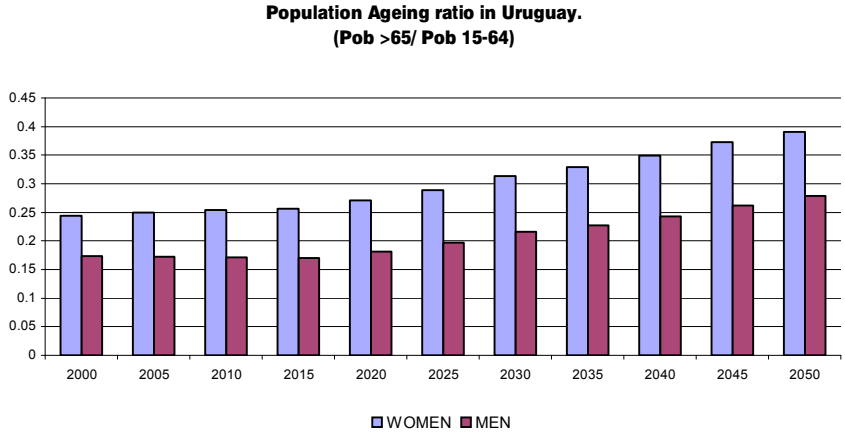
iii. Gender inequality

Higher income per capita and technological progress has raised the life expectation of Latin Americans. Currently the life expectation in Uruguay is 70.5 years for men and 78 years for women. According with projections of United Nations, in the next 45 years the life expectation may increase 8 years for men and 6 years for women.

One of the affected variables in the pension reform of 1995 is gender. The pension reform of 1995 increased the retirement age of women and made it the same as men. The replacement rate was also set at the same levels for both. This ended the distributive policies towards women implemented long before. Although women have a longer life span the working conditions, income and opportunities are not the same as men. Bucheli et al. (2006) analyzed a sample of 70 thousands participants in the present pension scheme using the information of the period 1996-2004. Their results show that only 30% of men and 26% of women will complete the vesting condition of 35 year of work in their 65 birthday

According with the statistics of the BPS the distribution of benefits is still favorable to men rather than women. For those women who met all requirements in 2004 for a full benefit, 58% got less than 5 times a minimum salary and only 42 % got a benefit above 5 minimum salaries. Those who did not meet all the requirements 96% were women which got a benefit for old age retirement which is about half of a full pension. Those who may be able to get a full pension benefit are usually public servants with stable job. Usually those working in the private sector are less likely to get a stable job and then are likely to get a partial benefit when old, and women are the gross part of this labor force. Women not also live longer but also work less time, have lower quality jobs and also get lower salaries and wages. Under the present situation is possible that most of the women will receive a low benefit when old.

Furthermore Uruguay women are ageing faster than men. In 2005 there were 25 women with more than 65 years old for every 100 women in working age (between 15 and 64 years old). The same ratio was 17 for men. According with the projection of the INE this ratio will increase to 39 women and 28 men for the year 2050. Graph 6 shows the trend in both.



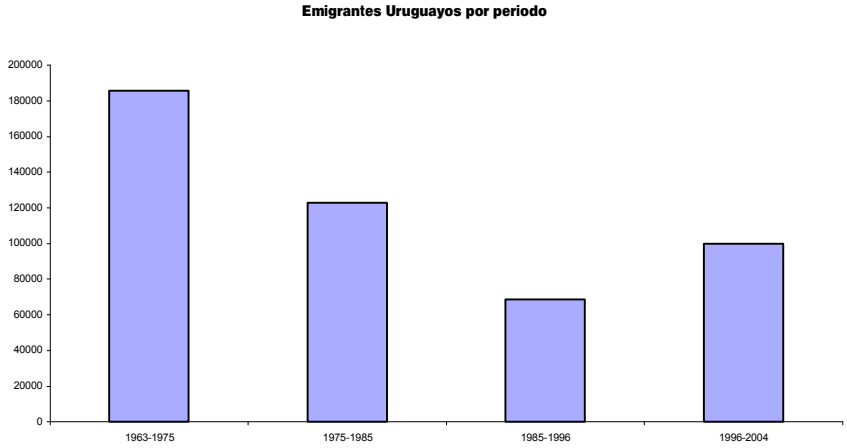
Graph 3.- Ageing Population ratio in Uruguay.

Source: INE of Uruguay.

iv. Immigration.

Another phenomenon that affects the natural growth of the Uruguayan population is immigration. The only official statistics available on this topic are the Census of Population and the Family Income Survey. From this information we observe that the migration from Uruguay was about 180 thousands people during the period of 1963-1975. This was a period of high political instability and this exodus was balanced between both women and men and about 30% of the migration was of young people between 20 and 29 years old.

Twenty years later the migration was reduced to 69 thousands individuals in the period of economic recovery. This was the lowest level of emigrants but this time the quality of the immigration was different. From the total number of immigrant 57% were young people between 15 and 29 years old and 62% were men.



Graph 4- Uruguayan emigration.

Source: INE of Uruguay. For the period 1996-2004, estimates by Pellegrino & Cabella (2005) and Pellegrino & Vigorito (2005).

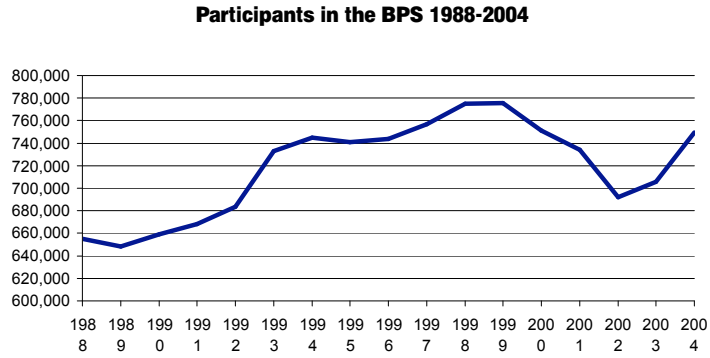
The last migration wave was in the period 1996-2004 which was estimated by Pellegrino & Cabella (2005) and Pellegrino & Vigorito (2005). According with those sources the last migration wage was about 100 thousands people. This last migration was made mainly by young people with education level higher than the average. This was a response to the last economic crisis that forced many well educated young people to leave the country in search of better opportunities for a job and better income. For a population of only 3.3 millions this immigration represents a hard blow to the demographic balance. The fact that many young people leave the country means that less people will contribute to the BPS and then future intergenerational transfers are in serious doubts.

v. Coverage

One of the main problems when analyzing the social security system in Uruguay is the lack of information in the coverage since the implementation of the reform. The BPS manage the information of the participants in the pension scheme but some of them also contribute to the AFAP which are independent agents supervised by the central bank of Uruguay. The reality is that the number of participants has decreased due to the economic recession and the demographic factors explained in the last section, and is still difficult to have an overall

picture of the system with this double accounting. This fact was noticed by Arenas & Bertranou (2005). In 2004 the number of participants in the BPS was about 750 thousands and the number of participants in the AFAP was about 650 thousands. According with information in Arenas & Bertranou (2005) about half of the participants in the AFAP also participate in the BPS. This gives us a total of 1.075 millions of participants. If we include the participants in the other mutual associations which are about 120 thousands, then the total participants in the pension scheme in Uruguay are about 1.195 millions. The labor force in Uruguay is about 1.7 millions then total coverage is about 70% which is a little less than before the reform.

Even though the participation may appear high the contribution rate is far less than the total number of participants. Some sources like Crabble et al (2005) claim a contribution rate of only 22% of the labor force in 2004, this means that the effective participants are no more than 400 thousands. However this may be because public servants are the only participants that may contribute constantly due to the permanent characteristic of their jobs. Worker in the private sector face higher mobility and then contribution to the pension scheme is more volatile. Private sector workers' participation is more sensible to macroeconomic conditions than public workers.



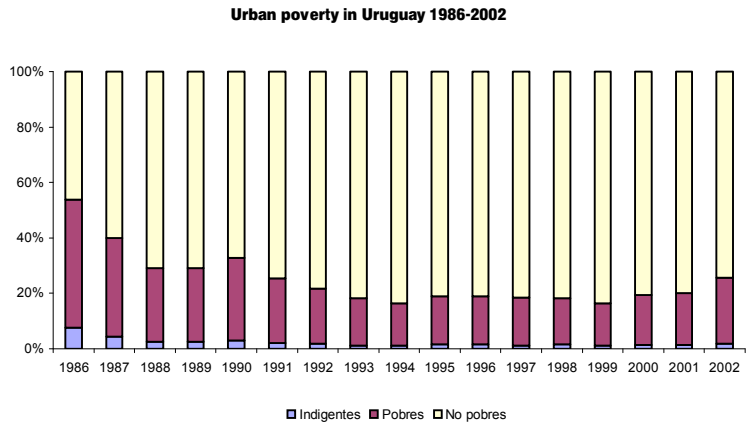
Graph 5.- Number of participants in the BPS 1988-2004.

Source: BPS.

Still, half a million people do not participate and do not contribute in any form to the pension scheme this is about 1/3 of the labor force. In 2006 the number of pensioners in the BPS was about 711 thousands. From those only 9.5% were receiving a non-contributive pension (welfare assistance) and 52% were individuals who got a full pension benefits after complete all vesting requirements. The remaining 38.5% are those individuals that could not satisfy all the requirements and got a old age benefit, which is about half the value of a full pension.

vi. Poverty

The great majority of Uruguayans live in urban areas. Currently 93.5% of the population lives in the cities and towns, and 41% is concentrated in the Montevideo area. This is the main reason that most of the Uruguayan statistics use samples from urban areas. Poverty levels are shows a strong contrast in urban areas an currently 25.7% of the urban population was considered below the poverty line in 2002. This is a return to the poverty level of 1991. The extremely poor are about 2% of the urban population and have remained constant over time. Despite this worrisome statistics, Uruguay is the Latin American country with the lowest level of poverty.



Graph 6. Urban poverty in Uruguay as percentage of total population.

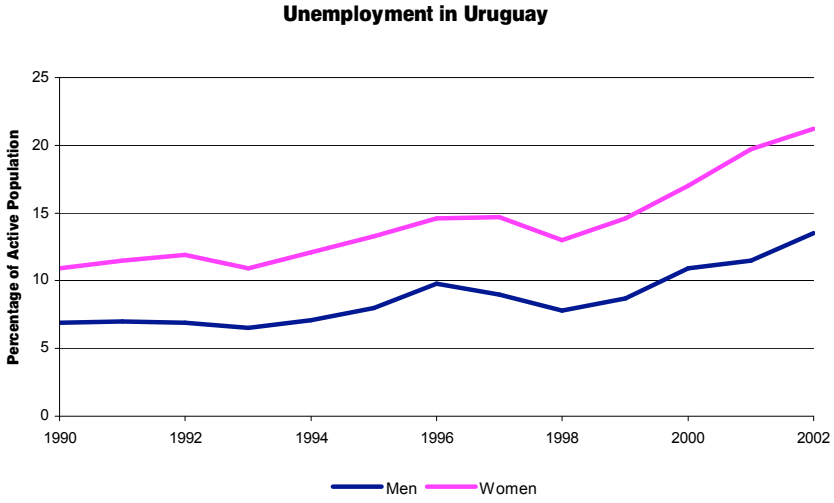
Source: Forteza & Fereira-Coimbra. (2004).

vii. Unemployment and informality.

In recent times the fiscal deficit may also be explained by unemployment and informality caused by the economic recession. The higher contribution rates and more difficult requirements to get pension benefits may also discourage participation and then expand fiscal evasion. The unemployment rate toped 17% of the labor force (active population) in 2002 for men and 21% for women. The total unemployed population in that year may be about 285 thousands. However is difficult to distinguish how many of them are temporary out of the pension scheme or permanently working in informal occupations. Informal economy in Latin America is widely known to be a big proportion of the working force.

The above calculation of coverage in the pension scheme gives us some insights about the size of the informal economy in Uruguay. Half a millions workers are outside the pension system, which means that they are either in long-term unemployment or employed in informal activities and deliberately evading social security taxes. Some employers also evade taxation

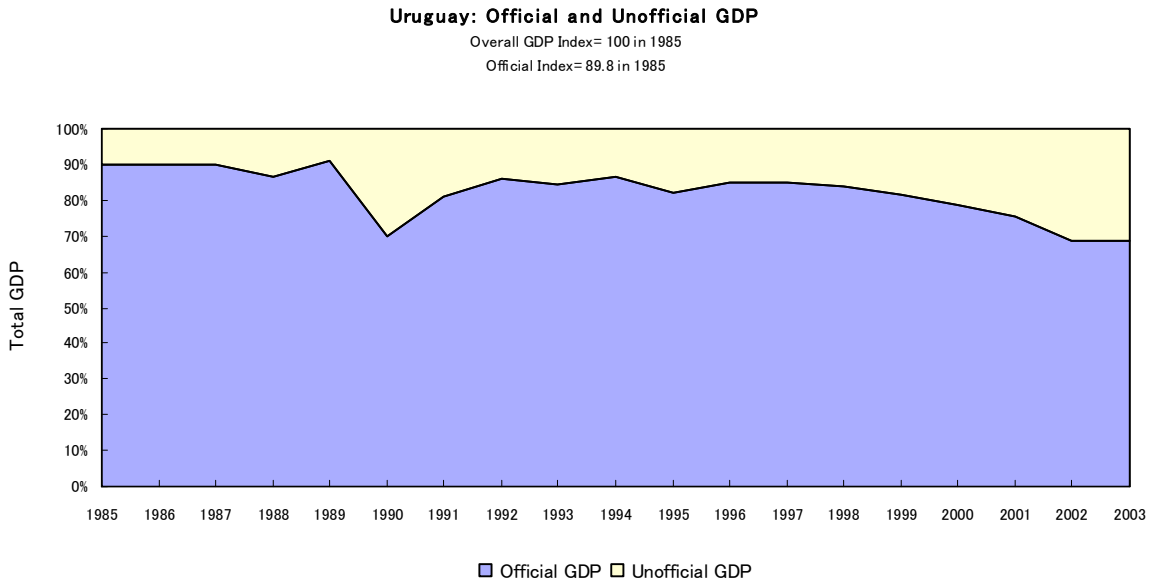
together with employees which makes things worse for the BPS.



Graph 7.- Unemployment in Uruguay.

Source: Forteza & Fereira-Coimbra (2004).

To estimate the size and evolution of informal economy we used the macroelectric approach of Kaufmann & Kaliberda (1996). This approach compares the growth on electric consumption and the GDP of the economy. The electric-power consumption is regarded as the best physical indicator of economic activity which includes both formal and informal activities, while the official GDP is only a proxy because only includes statistics from the formal economy. The difference in the growth rate index in both may then reflect the magnitude of the unofficial economy which can not be measured by the official GPD. Using this methodology we are able to estimate the magnitude of the informal or unofficial GDP every year. Assuming an elasticity of one between electricity consumption and GDP, the results are shown in graph 11. The unofficial economy was about 1/4 of the total economic activity before the pension reform and 1/3 in 2003. These figures are similar in proportion to informal workers and non-participants in the pension scheme.



Graph 8. Official and Unofficial GDP in Uruguay 1985-2003.

Source: FMI and Energy Information Administration USA.

IV. World Bank support to the pension reform.

The above macro problems in Uruguay may lead us to the conclusion that a critical and structural pension reform is needed. The question is what kind of structural reform is needed when such structural problems threaten the pension scheme? The demographic unbalances are the strongest than in any other Latin American country. Rising unemployment, informally, immigration and economic dependency from neighbor countries are also important problems to consider.

Because of the magnitude of the problems, the sole parametric reforms of rising retirement ages and increasing taxation were considered insufficient by the World Bank staff before 1996. The political process in Uruguay also offered slow implementation to any reform.

The discussion paper of Kane (1995) is a call of attention of the dangers of the PAYGO scheme in Uruguay and the urgent need for a capitalization scheme. The background paper by San Martino (2007) already assess the position of the Bank respect to the Uruguayan pension reform: there was not a clear strategy of assistance. The social security in Uruguay was immersed in serious imbalances that required radical solutions. In the other hand, Bank staff was given leeway to advice and to negotiate with the recipient countries the kind of reform and the policy design. The report of San Martino points out that the approach of the Bank was not appropriate.

During the first half of 1990's there was not financial assistance to support a pension reform in Uruguay. There was not specific financial support for implementing the pension reform of 1996 in Uruguay and most of the resources for implementation came from the IDB. The Bank was very critical of the Uruguayan pension reform and did not provide financial assistance to this policy until 1998 when approved a Contractual Savings Structural Adjustment Loan for USD $100 million. The technical and financial support from the Bank to Uruguay came mainly after the pension reform was implemented and was directed to support the new second pillar already in place. This position is quite different when dealing with other countries.

For example, Mexico received two large structural adjustment loans of USD $400 million each for the implementation of a nation-wide substitutive pension reform in 1995 and 1996. Additional to them, resources for technical preparations and assistance were also granted. With the advice from Bank staff the Mexican government managed to implement a substitutive pension reform in 1997. The Mexican government exercised the loans even before they were approved, perhaps under the huge pressures caused by the Peso Crisis of 1994-95 and under dim political conditions. Despise the problems, the reform of the Mexican National Institute of Social Security (IMSS) was carried out without delay and the privatization of the pension scheme for 3/4 of the formal workers was completed. The only workers that remained outside the new private pillar were public workers, the military and those in large public companies.

Argentine also received substantial assistance from both the World Bank for the pension reform. In a shared operation received USD $300 million from the World Bank and USD $320 million from the IDB in a Provincial Pension Reform Adjustment Loan in 1996. Additional to it, Argentine also received resources for technical assistance for strengthening the national pension system.

Other countries benefited from the Bank's financial support and advice. But the dialogue between Bank staff and Uruguayan official addressed mainly the critical problems of long-term sustainability. There was little confidence whether a mild reform might overcome the difficulties of the whole system.

The above facts send a mistaken interpretation of the primary objectives of reform policies and incite misunderstanding which damages the Bank position in the region. The lack of support in the part of the Bank may also renovate the populist concept of the Washington

Consensus. San Martino (2007) agrees that the Bank underrated the reforms efforts and suggest that the pension reform was carried out successfully by the Uruguayan Government. He also points out that the Bank performance and support effort was poor.

A simulation made by economists from the World Bank, Asta Zviniene and Truman G. Packard, using the PROST toolkit suggest that Uruguay pension reform may help to decrease the long term pension debt up to 50%. Despite the strong macroeconomic imbalances the Uruguayan pension reform may be relatively successful after all.

V. Empirical analysis

i. Contribution to social security: Regression 1.

We use econometric techniques in order to test whether social security became attractive after the pension reform of 1996. What we are trying to test are individual preferences toward social security policies and the changes in preferences over two periods: One period before the reform which goes from 1991 to 1995 and a second period after the reform from 1997 to 2000. We skip the year 1996 which is the year of the implementation of the reform. Our hypothesis is that individual preferences for social security improved after the reform and then the probability that a worker participate and expect benefits from it will increase.

A normal method to test individual preferences is the use of qualitative regression in the form of PROBIT and LOGIT. After estimation we may be able to describe the change in individuals' behavior after some policy adjustments. Our model follows the works of De La Rica and Lemiuex (1993) and Auerbach et al. (2005) though we use different variables and data sources. A major difference between this paper and Auerbach et al. (2005) is that we do include Uruguay in the analysis. Another difference is that, instead of analyzing for participation in the social security system, we indirectly estimate the probability of belonging to the population with precarious jobs (PPO). That is we estimate for the probability of no contribution to social security. We do this because the data from 1991 to 2000 does not contains explicit information on contributions to pension scheme. The general model applied can be expressed as:

$$P_{it} = (\alpha_0 + \alpha_1 + \alpha_2 + \alpha_3 + \alpha_4 + \alpha_5)$$

Here the independent variable P_{it} is the probability for an individual i member of the labor force in the period t of being part of PPO. We applied the above equation to the total labor force. We designed the model as to control for gender and marital conditions with a vector of variables G. We also included age controls in vector A, education level in E, type of work or

sector in S and income controls in vector Y. We assume that F represents a cumulative distribution function of a standard normal variable and assume that both types of workers respond to the similar demand and supply factors.

Data

One limitation we found is the available data. In this regression we use individual microdata from the FIS from 1991 to 2000 for urban workers. The problem is that the continuity breaks down in 2001 when the FIS changes methodology and then we are not able to test with the same source after that year. For that reason we tested in the first regression only until the year 2000.

The other limitation is that there is not direct and explicit information about participation on the pension scheme or social security. The only way to go around this problem is to calculate the number of workers that do not have social security and then do not receive pension benefits. This was already foreseen by the survey designers. Under the advice from the International Labor Organization, the National Institute of Statistics designed the FIS in order to estimate workers that are outside social security through indirect questions. This method was adopted because many workers have the incentive to give false statement. Many workers and employers do not abide to regulations and usually avoid taxation, receive pension benefits while having other works, or hide information in order to secure some benefits. The FIS then was designed to estimate social security benefits from indirect questions in order to facilitate respondents' cooperation in truthfully answering the questions. One method to estimate the amount of workers outside social security is to look for the number of workers without health insurance, or those lokking for job because their present job offers bad conditions, or those workers that declare no income as they work for other family member or relative. This is what the FIS call Population in Precarious Jobs (PPO) which can be calculated from specific information from the year 1991 to 2000. We decided to estimate the people outside social security estimating the PPO instead the people that receives social security benefits. The PROBIT and LOGIT estimates are included in the appendix A.

Results

An interesting finding is that men have a positive chance to be part of the population that is not covered by social security. Women tend to have a positive probability of contributing to social security and then enjoy benefits from it. For a male married worker the changes in probability are negative which explains that marriage status also increases the chances to participate in social security system.

In the controls for education, the only significant parameter which shows the possibility of participation in social security is university education. Individuals with university education will in general be included and receive benefits from social security.

The negative sign in the "log income" parameter shows that an increase in income will be accompanied by a positive change in the probability of contribution to social security (Remember that we are estimating the probability of no contribution or probability of a worker being in PPO). The income brackets controls also shows that for low income workers the probability of being part of PPO is higher than for workers with higher salaries.

The estimation of the probability of participation for the average worker shows the change in preferences between the two periods. For example, a married male worker, household head, between 25 and 29 years old, working in the manufacture sector 39.4 hours a week and earning between 1 and 3 minimum salaries had a probability of belong to the PPO of 12.3% before the reform. This probability for the same worker after the reform decreased to 4.1%. This result shows that for the average worker with the above characteristics the chances to contribute to the social security increased after the reform. Similar estimates can be obtained by direct calculation using the information of appendix A and A.1.

ii**. Contribution to pension scheme: Regression** 2**.**

The FIS methodology changes from the period 2001 to 2005. From this period we are able to obtain direct information about the workers that participate in social security and also those that are entitled pension benefits. The improved features of the FIS for the most recent period also give us the opportunity to compare the present condition of the pension scheme with other countries that implemented reforms in the same time but with different approaches and different support from the World Bank.

We estimate the probability of participation in the pension scheme for the most recent period using a similar regression model. We use similar vectors of variables but the dependent variable is now the probability of a worker to be entitled with pension benefits from his work.

$$\Phi^{-1}(\quad) = (\beta_0 + \beta_1 \quad + \beta_2 \quad + \beta_3 \quad + \beta_4 \quad + \beta_5 \quad)$$

The above model was applied for the working population, specifically to two types of workers : salaried and independents. The subscript now represent an specific year instead of a period.

Data

We use the more complete data from the FIS of Uruguay for the years 2002, 2004 and 2005. This data give us the chance to compare the present situation of pension scheme in Uruguay with other pension schemes with similar information. For example, it is possible to run the same model to two sets of data with the same methodology from two different countries. We tried this for Mexico and Uruguay to observe the differences between individual preferences in two different pension schemes.

The data from Mexico comes from a similar FIS with a nation wide sample that includes both urban and rural households. It is easy to disaggregate the data to get similar sets and then run the PROBIT regression in both countries. In this form we are able to observe the differences between two pension schemes. Instead of running an entire period we decided to run regressions by year for the salaried and independent workers. The results of this regression are in appendix B and C.

Results

The empirical estimation above offers interesting conclusion about the reasons for participation in the reformed pension schemes in Mexico and Uruguay. The first is that a mixed reform that reaches workers in many sectors is more attractive than a limited substitutive reform. Both salaried and independent workers will have a higher probability of contribution in a mixed reform like in Uruguay. The reason is that the Uruguayan reform was directed to those workers with high income and with possibility to participate in a second pillar. The public pension scheme remained in place allowing participation of workers with lower income. The mixed reform just diversified the social security system instead of replacing the entire PAYGO scheme. This is one reason why Uruguay pension scheme is more attractive.

In the other hand, a structural substitutive reform that only targets some groups of workers in some sectors will have lower probability to attract more workers and then increase coverage, especially those self employed workers. The substitutive reform in Mexico was a replacement of the old public scheme by a private one. The contribution structure of the system remained the same and only management changed. Sectors where informality is high, including agriculture and construction, the change in probability of participation is negative. The Mexican pension scheme remains strictly bismarknian and it focuses mainly to salaried workers.

Voluntary participation of independent workers in Mexico is scant which shows that the new pension scheme is not attractive for this group of workers. Participation of independent workers is decided mainly on terms of individual characteristics like gender, education or age rather than labor market conditions.

iii. Income distribution toward the elderly population

The results from the PROBIT and LOGIT estimates shows that the average Uruguayan worker has a weak but higher preference for the present scheme, and that is better off compared with workers in other countries that experiences more drastic reforms. But we must not forget that individual preferences are not static, and we can not assign complete causality to the reform itself. We must also explore other explanations to higher preference for social security. One way is to detect changes in income inequality and distributive preferences among age groups. The problem is that the new pension scheme is not mature enough to capture the entire changes. Even though the comparison with other pension reform like the Mexican one may give us some clues about the relative size of Uruguayans inequality aversion.

We must use a decomposable inequality index that describes the distributive effects among groups. The best index of this kind is the Theil index. This index allows for decomposition of inequality in groups and then sum up the estimates to get the total inequality parameter. The main interest is to observe how the elderly are performing relative to other groups and how the same workers are doing respect to others in a different scheme. We use the same information from the FIS to estimate inequality in the labor force for Uruguay and Mexico for selected years. The main findings are summarized in graph 9.

Graph 9.- Theil Index in Uruguay and Mexico

Theil Index	Uruguay		Mexico
	1995	2002	2002
In every age group	0.211	0.275	0.334
14-25	0.021	0.020	0.027
25-49	0.118	0.162	0.217
50-64	0.059	0.081	0.067
64-over	0.013	0.012	0.022
Among age groups	0.023	0.031	0.011
Total index	*0.234*	*0.306*	*0.345*

Source: Own construction with data from the FIS of Uruguay and Mexico.

The information from the Theil index for Uruguay shows that despite the increase of the overall income inequality after the reform, income inequality among the elderly decreased and it is still rather low compared with other countries like Mexico. Working population of middle age still absorbs the largest change in income inequality but inequality for the elderly is lower. The pension scheme in Uruguay is more generous and has an important distributive function.

The overall income inequality index also shows that the Uruguayan workers have a higher inequality aversion than the Mexicans. This may also be a reason why Uruguayans voted for a mixed reform instead of a substitutive one. Workers in Uruguay enjoy more transfers toward the elderly than the Mexicans and the public first pillar is an important policy instrument for achieving lower income inequality.

VI. Conclusions.

This paper contributes to the present literature in two aspects. First it supports with more detailed information San Martino's (2007) analysis on the performance of the World Bank in Uruguay. The empirical analysis provides more information about workers' preferences for the pension reform. Secondly, it also expands the microeconomic analysis of Auerbach et al. (2005) by introducing partially the Uruguayan scheme.

The empirical analysis not only confirms the relative and moderate success of the Uruguayan pension reform but also the good features of the social security system in Uruguay in general. Despite the structural problems Uruguay was able to stand in a middle ground between long-term sustainability and generational solidarity. The mixed reform allowed poor workers to receive pension benefits through the public system while giving the change to other workers to improve life time income smoothing. The success of the reform is found in the balance between two extreme objectives.

The World Bank role in promoting efficient economic policies must consider every country's specific conditions. Workers in different countries have different preferences for intragenerational and intergenerational transfers. Some countries are willing to substitute the PAYGO pillar by a capitalization one while others may be better off just diversifying the present options. Fiscal sustainability must be one of the several policy objectives.

The Bank did not provide enough assistance to Uruguay to implement its pension reform and lacked a consistent strategy. The Bank underestimated the Uruguayan reform and did not have an overall strategy to suggest appropriate corrections. A consequence of this inconsistent

approach is the spreading out of the populist concept of the Washington Consensus. The repudiation of some World Bank policies in Latin America is a consequence from this inconsistent approach.

The pension system in Uruguay is the oldest in Latin America, one of the most generous and wider in coverage. However this scheme came into crisis because of several factors, including fiscal deficits and demographic unbalances. For making things worse, Uruguay experienced the worse economic recession in 1999-2002 which added more problems and worsened the structural unbalances. Despite these problems, the second pillar is popular among workers. Uruguay opted for diversification instead of substitution because the public pillar has important distributive functions in the economy. Our results show that Uruguayan workers do like the present pension scheme despite the severe economic conditions.

In general income, education and age are important elements that influence workers' decision for participation in the pension scheme. But the sole improvement of these factors will not be enough to induce formalization of the labor force. The above estimation and analysis shows that a more diversified pension scheme will definitively offer better options for a heterogeneous range of workers in the economy.

VI. References

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