Public transfers to elders and children in Uruguay

Marisa Bucheli ▪

Cecilia Gonzalez ▪

Cecilia Olivieri ▪

▪ Departamento de Economía, Facultad de Ciencias Sociales,Universidad de la República de Uruguay

ABSTRACT

Uruguay is in an advanced demographic transition stage compared to Latin-American standards and since 1950s is considered an aging society. The country has been traditionally part of the group of lowest levels of inequality and poverty in Latin-America. However, figures indicate a persistent increase in income inequality since the 1990s. In particular, the proportion of poor among children is higher than the proportion of poor among the elderly. This situation raised the issue of the public resources distribution among ages. In this paper we depict the public transfers to children and the elder and their role in financing consumption, using estimations provided by the NTA system for 1994 and 2006. Transfers to elders dominate public spending and children consumption depends on family resources.

1. Introduction

Uruguay is in an advanced demographic transition stage compared to Latin American standards and it is considered an aging society since the 1950s (Pellegrino, 2003). In 2006, the total fertility rate is 2.03 and life expectancy at birth is 75 years. People older than 60 make up 18% of the population whereas children under than 14 are 22%.

Another distinguishable characteristic is that Uruguay has been traditionally part of the group with the lowest levels of inequality and poverty in Latin America, as revealed by several indicators (ECLAC, 2008). This performance is linked to a long tradition of social programs. In 2006, social public spending is 21% of GDP, ranking the country in the third position in Latin America. It should be borne in mind that this relatively high performance is achieved in a developing region that, according to several socio-economic indicators, has the highest levels of inequality in the world (de Ferranti et al, 2004). Additionally, Uruguayan figures indicate that there has been a persistent increase in income inequality since the 1990s.

As in most Latin American countries, in Uruguay the proportion of poor among children is higher than the proportion of poor among the elderly. In 2008, 40% of children between 6 and 12 years live in poor households whereas 6% of people aged more 65 do (INE, 2009). It is worth noting that fertility behavior is heterogeneous: women with lower education levels, labor participation and access to resources have a greater fertility rate than the rest (Varela, 2007). Population pyramids by deprivation indicate an early stage of the demographic transition among the poor, which implies that the population growth occurs basically in the most vulnerable sectors of society (Calvo, 2000).

An extensive pension program helps explain this picture. Although the improvement of its benefits has been very popular in the last decades, the disparity between the proportion of children versus that of the elderly living in poverty raised the issue of the distribution of public resources among age groups. Many academics and politicians point out that the greater ability of the elderly to express demands could operate to the detriment of the youth and children.

In this paper we depict the allocation of public transfers among age groups and their role in financing consumption in Uruguay. We use data obtained from estimates of the National Transfers Account (NTA) system for 1994 and 2006.

In the second section we review the main features of social policies in Uruguay. The main characteristics of social policies have remained largely unchanged between 1994 and 2006. We may summarize the changes in five features. First, in the mid 1990s there was a restructure of public spending that sought to increase spending on education. Second, in 1996 the government passed a reform of the social security system. Third, a minor modification was introduced to the health benefits system in 1997. Fourth, there were two modifications to the family allowances program for it to target the poorest children. Finally, in 2005 the government created some programs aimed at alleviating poverty.

In the third section we present the most important aspects of the methods that lie behind the construction of the NTA system. The NTA Project is an international collaborative project which includes 28 member countries. In this context, it has developed a methodology to measure the reallocation among age groups for a certain period, typically the calendar year. This makes it possible to have a system that provides information on intergenerational transfers at the aggregate level that is consistent with National Accounts.

We discuss the results in the fourth section and, finally, we conclude.

2. Institutional background

The educational system of Uruguay boasts an extensive tradition, and for this reason it is ranked among the best locations in Latin America. The proportion of children attending primary school is close to one hundred percent, although the situation is less favorable for those aged between 13 and 19 (CEPAL, 2007).

Compulsory primary school (six years of schooling) was introduced in 1877 and full enforcement was achieved by the middle of the 20th century. Currently, the literacy rate for men is 97% and 98% for women. Since 1973, compulsory education comprises 9 years of schooling. The marked difficulty in achieving this target and worries about

high repetition rates justify some reforms passed in the second half of the 1990s. For example, in 1996 compulsory education was extended to pre-school for children aged 5 and in 2006, it became mandatory for children aged 4.

However, in 2008, a quarter of the 24-29 age group still hasn't completed the educational level mentioned. Around 25% of primary school students and 20% of secondary school students are affected by grade repetition, a phenomenon that is linked to early dropout. Unsurprisingly, grade repetition and early dropout are more likely for children living in disadvantaged households. Since these children are more likely to be studying in the public schools system than in the private one, those facts basically describe the situation of public education.

Public education consumption increases 66% between 1994 and 2006 (Table 1), thus its share in public spending rises from 8% to 14%. Although the effect of the public resources reallocation towards education has not been assessed, some programs have. For example, Berlinski et al 2007 evaluate the mid-1990s universal pre-school education program and find a positive effect in the reduction of dropout rates. Raw figures indicate a decrease of teenage dropout rates between 1995 and 2006: about 27% of the 14-17 age group does not attend school in 1994 and 19% in 2006.

Table 1: Public spending in 1994 and 2006. Constant prices 1994 (%)

	Share in public spending		**Variation 1994/2006**
	1994	**2006**	
Public education	8,1	13,8	66
Public health	12,1	16,8	36
In cash	5,8	7,5	27
In kind	6,3	9,3	45
Other public goods (non-age related)	36,0	34,3	-7
Public Pensions	39,6	31,5	-22
Family and Children	1,1	1,6	46
Other social protection (in cash)	1,5	1,5	-1
Others	1,6	0,6	-65
Total	100	100	-2

The country also fares better in health indicators compared to others in the region. For example, the infant mortality rate is 13.1 per thousand births, which places Uruguay in the fourth position behind Cuba, Chile and Costa Rica (CEPAL, 2008).

The public health care system provides medical services, medicines, in-hospital care, etc. at no charge to poor people. In table 2 we identify this component as "in-kind" public health care. Besides, public sector pays the insurance premiums for private medical care of the labor force ("in-cash" public health care). In the second half of the 1990s, the in-cash health care program was extended to retirees.

Between 1994 and 2006, spending in health grows up 36% (table 2). Most of this increase is due to the raise of the population that demands in-kind public health care. This demand increase is intensive among children. In 1994, 55% of people younger than 18 years old use public services; this figure increases to 71% in 2006. On the other, individual older than 65 years old who use public services are 32% in 1994 and 38% in 2006.

The social security system was created at the end of 19th century and since the mid-20th century covers the whole labor force. The public sector manages assistance and contributory programs. The most important one is the pensions program. Until 1995, it was based in a pay-as-you-go financial regime. A 1996 reform replaced it with one that combines a social insurance and an individual account system.

Although informality is quite extended (around the 42% of workers do not contribute to the system) most of the elderly receive a pension (90% in both 1994 and 2006). The main reason for this unbalance is the laxity in eligibility requirement controls for pensions. Indeed, a labor history registry wasn't created until 1996.

The social security system also covers the risk of death, unemployment, maternity and sickness of formal workers. In addition, there is a contributory family allowances program that was universal (to contributors) until 1994. In 1995, a reform targeted it to the poor (among contributors). In the 2000s, an assistance program aimed at the non-poor contributors was created. An evaluation of 2005 indicates that the effect of this coverage extension is very limited because both the transfer and the threshold are quite low (Vigorito, 2005).

Adding up public consumption and social security spending, between 1994 and 2006 public transfers increased by 2%.

The tax and contribution system has not had major changes between 1994 and 2006. However, there the share of contributions in revenues drops, mainly due to the reform of the social security system that channeled part of them to individual accounts. Indeed, the share of taxes increased from 67% in 1994 to 74% in 2006 (table 2).

Most of the revenues come from indirect taxes (48% in 1994 and almost 54% in 2006) and more specifically from the Value Added Tax (VAT). The VAT, with a standard rate of 22% in 1994 and of 23% in 2006, represents around a third of the revenues.

Table 2: Distribution of taxes and contributions in public revenues (%).

	1994	**2006**
Indirect Taxes	48.1	53.6
Direct Taxes	19.1	20.4
Contributions	32.7	26.0
Total	100.0	100.0

Source: estimations based on CGN (1994, 2006) and BPS (2007)

3) Data and research methods

The NTA system consists on estimations of economic flows by age based on the methodology proposed by the National Transfer Account Project (http://www.ntaccounts.org/)[1]. To build up these indicators, we estimate the age profile using micro-data available from household surveys, and we make the aggregate values to be consistent with the National Income and Product Accounts (NIPA). The methodology is largely described in the project's web site. The specific aspects of its application to Uruguayan estimations for 1994 and 2006 are presented by Bucheli et al (2007) and Bucheli et al (2009). Next, we summarize some methodological aspects that help to correctly interpret the analysis of the following sections.

[1] The NTA lead institutions are the Center for the Economics and Demography of Aging, University of California at Berkeley and the Population and Health Studies Program, East-West Center.

First, the public consumption estimation is broken down in three components: education, health and other consumption. Using the micro-data we assign the two first ones who people that use the education or health system, respectively. On the other hand, the "other consumption" is not assigned to any particular person. Thus, it is not related to age, while education and health are.

Second, social security estimations discriminate between different programs. For each one, we assign the benefit to the person who receives it. It should be noted that beneficiaries of the family allowances program are children but it is an adult who actually receives the support. According to the NTA methodology, benefits of this type are assigned to the head of the child's household. In the case of Uruguay, where subsidies targeting children are very low, the age profile of social security transfers remains unchanged when they are charged to children instead of the heads of the households.

Third, the NTA system assumes that indirect taxes are paid by all individuals. In other words, children pay indirect taxes because of their consumption of taxed goods. On the contrary, wealth taxes are charged to the head of the household. Other taxes, as work-related ones, are assigned to the individuals that pay them.

Fourth, we discriminate private transfers into two kinds: those among persons in different households (*inter-household transfers*) and those between household members (*intra-household transfers*). Official estimations of the aggregate amount of inter-household transfers are not available. Thus, we estimate them but are aware that they are not entirely accurate. In order to estimate intra-household transfers, we follow the NTA Project methodology. Intra-household transfers arise within a household when some of the members consume more than their disposable income and others consume less than their disposable income. Those who are consuming more are receiving intra-household transfers from those who are consuming less. Disposable income is defined as labor income plus net public cash transfers plus net inter-household transfers. If the total household disposable income exceeds its total consumption, we assume that the surplus is transferred to the head of the household, who saves it. If income is lower than consumption, the head of the household finances the deficit using capital income or savings of prior periods.

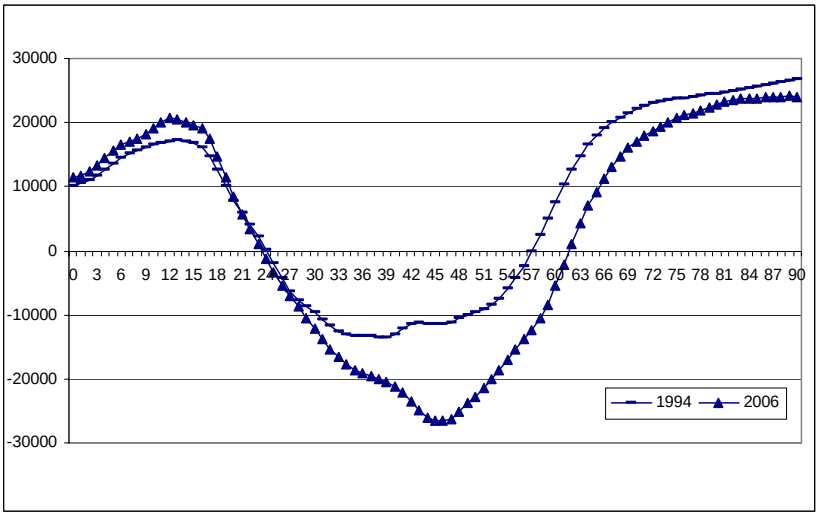
Finally, to make the comparison between 1994 and 2006 possible, we deflate the data using the consumer price index (IPC).

4. Results

In Figure 1 we depict the Life Cycle Deficit (LCD) by age. The LCD is the difference between consumption and labor income. Therefore, LCD is positive when individuals need additional resources to finance their consumption. Figure 1 shows that there are two positive LCD stages that involve two extreme age-groups: childhood/youth and the elderly.

The LCD comparison for 1994 and 2006 shows some differences. The LCD moves to the right in 2006. This change indicates a later start of the old-age dependence stage in 2006 than in 1994 (61 and 57 years old respectively). The shift could be a result of the Social Security Reform implemented in 1996, in which the minimum retirement age was increased from 55 to 60 years old. Since the end-age for youth dependence is not altered, the surplus stage grows from 32 years in 1994 to 37 years in 2006. Besides, the LCD has a minor increase in 2006 among people younger than 20 years old.

Figure 1: Life Cycle Deficit, per capita profile (constant prices 1994)

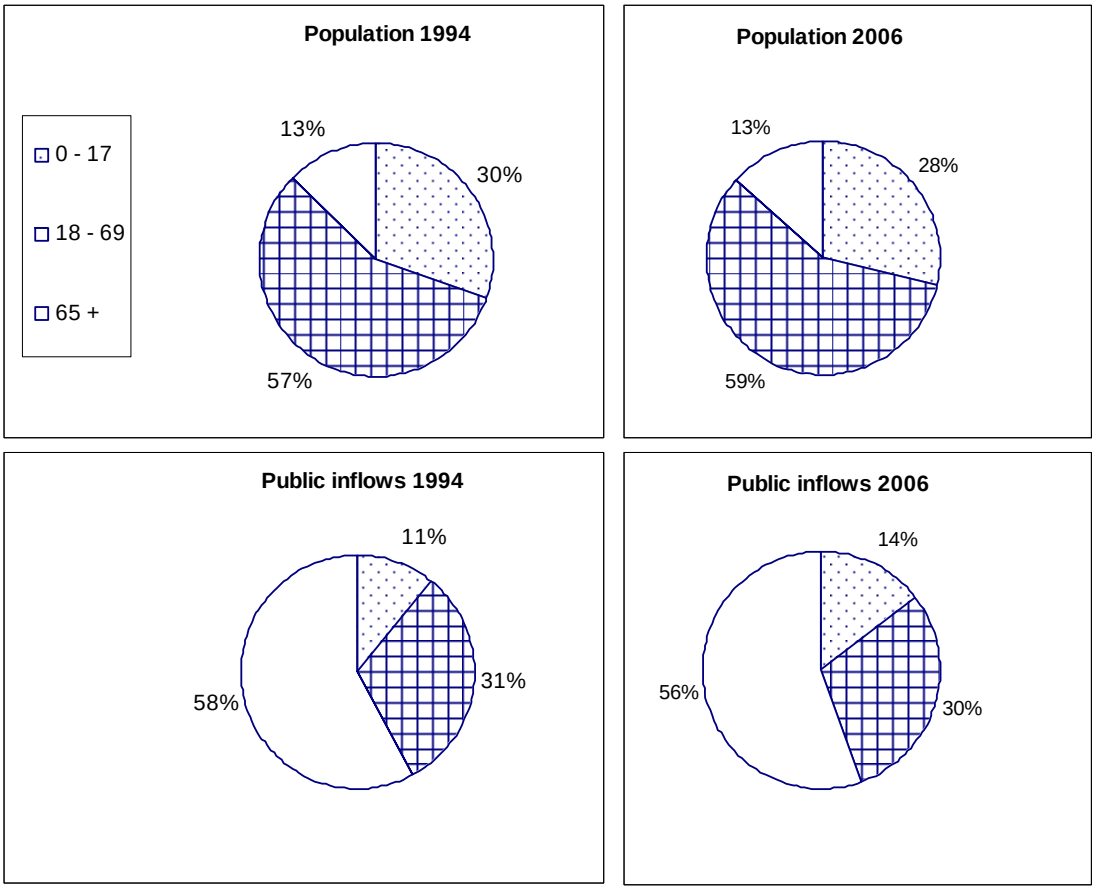


Following the NTA methodology, those on the dependency stage finance their consumption through public transfers, private transfers or asset reallocations.

- Public transfers are pro-elderly

The first major feature is that gross public transfers are biased towards the elderly as illustrated in Figure 2. Persons older than 64 years old are around 13% of the population and receive almost 60% of public benefits. In other words, the average per capita public inflow is higher for the elderly (Figure 3). Although spending on children has a promising increase in 2006, the elderly still are the main beneficiaries.

Figure 2: Population and public inflows by age groups

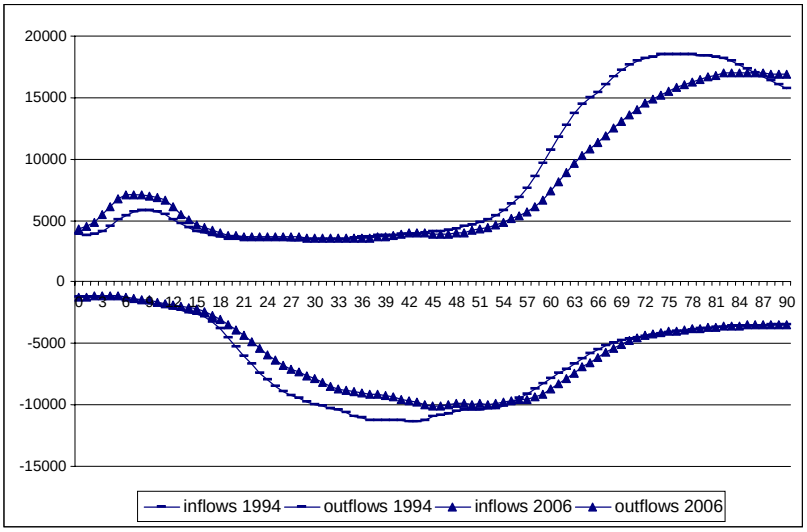


Flows from individuals to government (public outflows) include contributions to the social security system and taxes. As depicted in Figure 3, outflows rely on the working age population (aged between 25 and 65). This pattern is mainly explained by the social security contributions' profile, and the age profile of taxes helps to reinforce this pattern. On one hand, direct taxes are mainly paid by working age people. On the other, the indirect taxes' profile is quite similar to the consumption profile, although the

consumption of children and the elderly is intensive in tax-exempt goods. As consumption of children is lower than that of the elderly, taxes related to childhood are lower than the ones paid by other age groups.

Figure 3 also shows a sliding of the 2006 curve in relation to the 1994 curve. Transfers from working-age people to government diminish mainly due to a drop in social security contributions. This trend is connected to the creation of the individual account pillar in 1996. Although taxes paid by this group grew in 2006, the increase is neutralized by the contributions' effect.

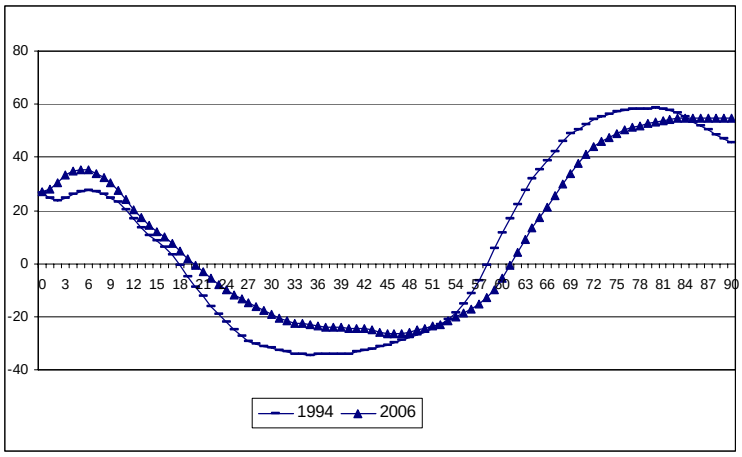
Figure 3: Public transfers: inflows and outflows per-capita profiles (constant prices 1994)



Subtracting outflows from inflows, we obtain net public transfers which are positive for people younger than 18 years old in 1994 (20 in 2006) and older than 58 in 1994 (61 in 2006). In 1994, the top values for the elderly are six times the top values for children. This ratio falls to two in 2006.

Curves in Figure 4 show the share of consumption financed by net public transfers. In both years, net public transfers play a greater role in financing consumption of the elderly than of children. However, the profile of the curves is somewhat different. In particular, the ratio elder/children top values decreases in 2006.

Figure 4: Net public transfers as a share of consumption (per capita profile)



- Social programs for children and the elderly differ

In-kind transfers are more intensive among children under 18 years old, whereas for the elderly, in-cash transfers predominate (Table 3).

Note that because of the methodology, in-cash transfers to children are assigned to the head of the household. As monetary transfers focused on children are nearly 2% of aggregate public inflows in 2006 (1% in 1994), the methodological decision does not affect the overall picture of the in-cash / in-kind transfers.

The elderly basically receive monetary transfers through the pension system. In both years, pensions are about three quarters of public inflows received by people older than 60 years old.

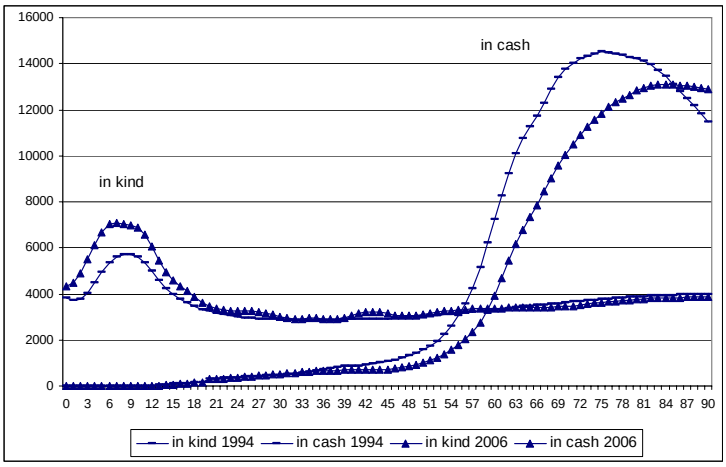
Children, on the contrary, receive basically goods and services. Age-related inflows come through the educational and health care systems. The share of public education increases from 31% in 1994 to 45% in 2006, becoming the main channel of public transfers (table 3).

Finally, public health care is 10% of public transfers received by the elderly (table 3). As mentioned in section 2, part of these transfers is received through a subsidy of the premium in health care in private institutions. This is not the case for children who are not covered by this type of program. They receive public benefits through free health care in public facilities, which accounts for 18% of their total benefits.

Table 3: Aggregate values of social programs' public transfers by age groups (%).						
	1994			2006		
	0 - 17	70 +	Total	0 - 17	70 +	Total
Public education	31,2	0	8,1	44,6	0	13,8
Public health	18	8,3	12,1	18,2	9,9	16,8
In cash	5,6	4,8	5,8	4,9	6,3	7,5
In kind	12,3	3,5	6,3	13,4	3,6	9,3
Other public goods and services	48,8	12,8	36	36,3	13,4	34,3
Public Pensions	0,4	76,9	39,6	0,3	75,9	31,5
Family and Children	0	0,3	1,1	0	0,2	1,6
Other social protection (in cash)	0	0,1	1,5	0,1	0	1,5
Other	1,6	1,6	1,6	0,6	0,6	0,6
Total inflows	100	100	100	100	100	100

Figure 5 shows the age profile of both types of transfers received by individuals. In-kind transfers' profiles are basically determined by education and health profiles in lower ages. On the contrary, in-cash profiles are strongly determined by pension profiles in older ages.

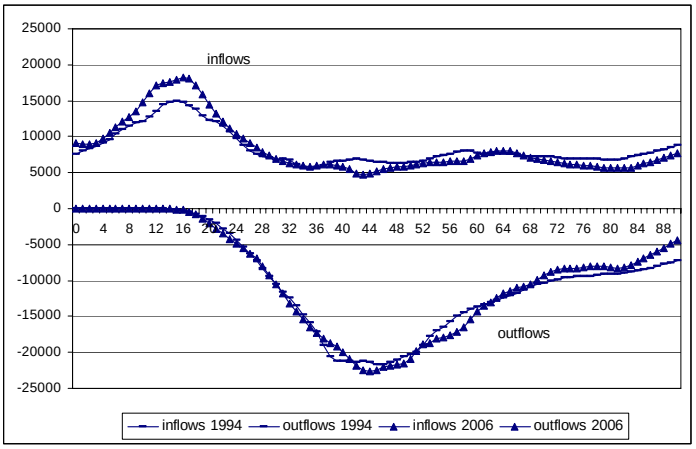
Figure 5: Public transfers – inflows (constant prices 1994)



- Children's well-being depends on their families' support

Private transfers (intra and inter household) also play an important role. Individuals receive family resources throughout their entire lives. Nevertheless, these inflows are especially important among young people, as shown in Figure 6. On the other hand, people make transfers through private channels from 18 years of age onwards..

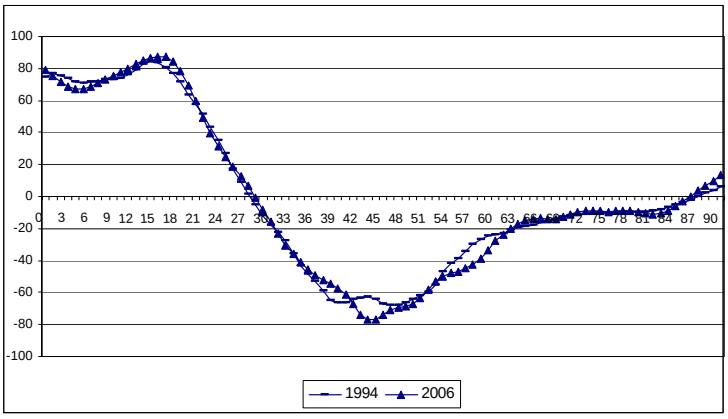
Figure 6: Private transfers: inflows and outflows per-capita profiles (constant prices 1994)



Net private transfers are obtained subtracting outflows from inflows. The age profile shows that only individuals aged less than 29 are net recipients of private transfers. However, the elderly are net givers of private transfers, and therefore, they contribute to the support of younger generations.

Moreover, children's consumption depends on families' support: for ages lower than 18, private transfers support at least 70% of the consumption of the age-group. This result appears in Figure 7 which shows the share of consumption financed by net private transfer profile.

Figure 7: Net private transfers as a share of consumption (per capita profile)



If all sources of financing consumption are taken into account (Table 4), we find that children consumption is supported almost totally by transfers. Public transfers, on the other hand, did not play an important role. On the contrary, the share of private transfers accounts for almost 80% of total consumption.

Public transfers are an important resource among elderly, as mentioned above. They support 50% of their consumption, but the elder are net givers through private channels.

Table 4: Sources of financing per capita consumption (%)

	1994		2006	
	0 - 17	70 +	0 - 17	70 +
Public Transfers	18	54	23	51
Private Transfers	76	-6	78	-5
Labor income	5	4	4	9
Asset reallocations	2	48	-5	45
Total consumption	100	100	100	100

5. Conclusions

The main objective of this work is to depict the public transfers to children and the elderly. The comparison between 1994 and 2006 using the NTA system shows some structural features.

Public reallocations involve significant transfers from middle-aged people (trough taxes and social contributions) to children and the elderly. Programs for the elderly dominate public transfers, and the elderly receive higher per capita transfers than children. However, there is a decline of the age group-gap between 1994 and 2006 that

can be, at least in part, explained by the increase of resources committed to public education.

Among children, in-kind transfers are predominantly given through education and health care services. On the other hand, in-cash transfers dominate spending for the elderly, basically through pensions. Although between 1994 and 2006, in-cash public resources directed at children from the government were increased, the mentioned pattern is not altered. However, it is worth noting that as the NTA methodology does not assign monetary subsidies to children but rather to the head of the household, this broad conclusion stems from alternative estimations.

Private reallocations involve important transfers from middle-aged people to children and the youth. Children finance their consumption basically trough family transfers (around 80%). Thus, children's consumption depends on family resources. The public/family transfers patterns could have some impact from the perspective of income distribution and mobility. This is quite important in Uruguay because of the incidence of poverty among children.

Elder people are net givers through private channels, although to a lesser extent than working-age people. Besides, the elderly are net receivers of public transfers. Thus, the elderly receive in-cash public transfers through the social security system and contribute to the support of younger generations through intra and inter-household transfers.

Finally, we may compare Uruguayan estimations with the ones provided by other countries. It is possible to see that the described Uruguayan patters are similar to other Latin American countries: social programs for the elderly dominate public transfers whereas children's well-being depends mainly on the resources of families. This picture is the same in Costa Rica and Chile and is even more marked in the case of Brazil, where public transfers account for around 80% of per capita consumption of the elderly (Bravo and Holz, 2007; Turra and Queiroz, 2005). . This is not the case for some Asian countries like Thailand or Taiwan, where public transfers to the elderly are lower than transfers to children, and the role of private transfers in the support of the consumption of the elderly is very important (Miller and Saad, 2009).

References

ANEP. Observatorio de la educación. Administración Nacional de Educación Pública: www.anep.edu.uy/observatorio,

Arenas de Mesa, Alberto; Fabio M. (2005). "Previsión social: ¿Reformular o consolidar el modelo mixto?", in Uruguay: Empleo y protección social. De la crisis al crecimiento, ISBN 92-2-317102-2, Organización Internacional del Trabajo, Santiago de Chile, pgs. 397-421.

Ferreira-Coimbra, Natalia; Forteza, Alvaro (2004). "Protección Social en Uruguay. Financiamiento, Cobertura y Desempeño 1990-2002", Organización Internacional del Trabajo, ISBS 92-2-315497-9, Santiago de Chile.

INE (2007), "Evolución de la pobreza en Uruguay 2001-2006". Instituto Nacional de Estadística, Uruguay. (http://www.ine.gub.uy)

INE (2009), "Informe sobre pobreza e indigencia. Primer semestre de 2008". Instituto Nacional de Estadística, Uruguay. (http://www.ine.gub.uy)

BPS (2006), Boletín estadístico 2006. Asesoría General en Seguridad Social, Asesoría Económica y Actuarial, Banco de Previsión Social, Uruguay.

Bravo, Jorge; Holz, Mauricio (2007). "Inter-age transfers in Chile 1997: economic significance", ECLAC, CELADE-Population Division Santiago, Chile

Bucheli, Marisa; Ceni, Rodrigo; González, Cecilia (2007a). "El sistema NTA: método de estimación para Uruguay (1994)". Documento de Trabajo Nº03/07, Departamento de Economía, Facultad de Ciencias Sociales, Universidad de la República.

Bucheli, Marisa, Ceni, Rodrigo; González, Cecilia (2007b). "Transferencias intergeneracionales en Uruguay", DT Nº 05/07, Departamento de Economía, Facultad de Ciencias Sociales, Universidad de la República.

Bucheli, Marisa, Ceni, Rodrigo; González, Cecilia (2007c). "The Public Transfers Flows between generations: Uruguay (1994)", WP07-05, http://www.ntaccounts.org

Bucheli, Marisa; González, Cecilia; Olivieri, Cecilia (2009). "Flujos económicos entre edades: Uruguay 2006", DT Nº07/09, Departamento de Economía, Facultad de Ciencias Sociales, Universidad de la República

ECLAC (2008), Panorama social de América Latina 2008, LC/G.2402-P/E, Santiago de Chile.

De Ferranti, David; Perry, Guillermo E.; Ferreira, Francisco (2004). "Inequality in Latin America and the Caribbean. Breaking with History?", Washington, World Bank.

Lee, Ronald; Donehower, Gretchen; Miller, Tim (2007). "Transfers and the Economic Life Cycle in the US", Fourth Meeting of the Working Group on Macroeconomics Aspects of Intergenerational Transfers, Berkeley, January.

Mason, Andrew; Lee, Ronald; An-Chi Tung; Mun-Sin Lai; Miller, Tim (2006). "Population aging and intergenerational transfers: introducing age into national accounts", Working Paper 12770, National Bureau of Economic Research, December.

Miller, Tim and Saad, Paul (2009) “Cuentas Nacionales por edad: una mirada a la economía generacional”, presented in “Transferencias intergeneracionales, envejecimiento de la población y protección social, Montevideo, mayo 2009,

OPP (2004). “El gasto público social en el Uruguay (1999-2003)”, Asesoría Técnica en Políticas Sociales, Oficina de Planeamiento y Presupuesto, Presidencia de la República.

Paredes, Mariana; Varela, Carmen (2005). “Aproximación socio-demográfica al comportamiento reproductivo y familiar en Uruguay”, DT Nº 67, Unidad Multidisciplinaria, Facultad de Ciencias Sociales, Universidad de la República.

Pellegrino, Adela; Vigorito, Andrea (2003). “Informe sobre emigración y remesas en Uruguay”, Informe de consultoría realizado para el Banco Interamericano de Desarrollo.

Turra, Casio; Queiroz, Bernardo (2005). “Intergenerational Transfers and Socioeconomic Inequality in Brazil: a First Look”, Workshop: Transformaciones Demograficas, Transferencias Intergeneracionales y Proteccion Social en America Latina, División Población - Comisión Económica para América Latina y el Caribe, CELADE, Santiago, Chile , July.

Varela Petito, Carmen (2007). “Fecundidad. Propuestas para la formulación de políticas”. In: Diagnóstico y perspectivas de la situación demográfica del Uruguay y alternativas para la construcción de políticas públicas. Fundación Rumbos, Uruguay (en imprenta).

Vigorito, Andrea (2005). "El impacto de las asignaciones familiares sobre la pobreza y la distribución del ingreso en los años recientes", in Unicef (ed.) Asignaciones familiares, pensiones alimenticias y bienestar de la infancia en Uruguay, UNICEF, Montevideo.