

# **In Opposite Directions: Demographic Transition and Old-Age Pensions in Peru<sup>1</sup>**

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## Introduction

The Hispanic tradition combined with the patrimonial legacies in Latin America and the Caribbean (LAC) preserve the family as a tight social network and a fundamental social unit. Families satisfy needs and support the well-being of children, older parents and other relatives – young and old, who often co-reside in the home, and capitalize opportunities to enhance the living standard of the entire household. Typically, the extended family lives together, smoothes consumption of children and older parents and grandparents, assists with child rearing and baby-sitting, and seeks income supplements to flatten the volatility of earnings during economic downturns. In contrast to industrialized countries, there is more financial support from adult children to parents, grandparents and older relatives and more co-residence of parents and adult children. The cohesion and solidarity that families exhibit in LAC is an important common denominator that has remained quite strong despite socio-economic and ethnic diversities, multiculturalism, rapid modernization, economic growth and market liberalization. At the same time, family structures are changing rapidly due to the variability of ties between generations, pressures for women to work actively, intensification of the demographic transition, important out-migration flows, and structural changes in social protection schemes and in the age distribution of the population.

This paper explores the emergence of new trends in intergenerational exchanges in the context of rapid demographic change. The case study was chosen for the following reasons: The Peruvian society possesses a strong tradition of solidarity within the extended family; this basic social unit is resilient to sharp economic and socio-political shocks; the demographic transition is moderate but accelerating due to a drastic decline in fertility rates particularly in urban areas; the number of migrants to diverse destinations has increased dramatically; in 1992, the national pension system was reformed and a new mandatory privately administered funded scheme was introduced that co-exists with an old pay-as-you-go unfunded scheme<sup>3</sup>; and remittances have increased sharply.

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<sup>3</sup> See Cruz-Saco 1998, 1999, and Morón 2003.

Section 1 reports briefly on the demographic changes affecting LAC and Peru in particular. Intergenerational transfers and the complexities associated with measuring them are discussed in Section 2. Remittances, pensions and health care offered by the social security system are analyzed in Sections 3-5. Section 6 briefly reports on efforts to create local networks for older people. Conclusions and questions for future research are presented at the end.

### 1. Demographic transition

The demographic transition in LAC is caused by a combination of lower child mortality, higher life expectancy at birth, widespread use of contraceptive methods and out-migration. While the fall in fertility rates varies among and within countries (according to geographic region, socio-economic class and ethnicity), the average fertility rate has decreased from 5.9 in 1950-55 to 2.4 in 2005-10 (ECLAC 2005a, p.19). One of the outcomes of lower fertility rates is the drop in the total dependency ratio<sup>4</sup> which has been decreasing from its peak of 88.5 percent in 1965 to 56.2 percent in 2005. It continues to fall and will level off at 49.6 percent in 2025 (ECLAC 2005a, p. 26).

The proportion of children 0-15 has been falling from 40 percent in 1950 to 32 percent fifty years later, and it will continue to fall to 18 percent in 2050. This process shows a major change from an expansive population pyramid to a slimmer geometric figure reflecting a narrower base that will continue to shrink with a simultaneous widening of the top. Then, the rapid aging of the region will cause a reversal in the total dependency rate by 2025-30 (up to 52 percent in 2040 and 56 percent in 2050). At that point, the rate of growth of older people will be higher than the reduction of younger people, the dependency rate will increase and the potential for the so-called “demographic dividend” will end.

Rather than homogeneity, the demographic transition of LAC reflects its unique diversity. A few countries in the region are experiencing moderate transition rates, for example, Guatemala, Honduras and Paraguay, whose demographic growth rates are slightly above 2.0 percent. Others, such as Costa Rica, Ecuador, El Salvador, Haiti, Panama and Peru, with growth rates around 1.5 percent, have faster rates of transition. At the other end, a small group of countries including Argentina, Chile, Cuba and Uruguay, with growth rates below 1 percent are experiencing an accelerated transition (ECLAC 2005a p18, 2005b). Cuba, with a demographic growth rate of 0.16 percent in 2005-10, is the first country in the region that will experience a reduction in its population size (ECLAC 2005a, p.18).

In the last century, LAC has been a net exporter of migrants to the rest of the world, notably to the United States. The United States is the most important destination for most Mexican, Caribbean and Central American migrants except Costa Rica, and out-migration from South America to other South American countries, Europe and the United States has been important at different times for Argentina, Bolivia, Chile, Colombia,

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<sup>4</sup> The ratio between those of working age and those of non-working age. Typically calculated as the population 0-14 plus the population >65 over the population 15-65.

Ecuador and Peru. The estimated regional migration rate as reported by ECLAC 2005 in 1990-2020 is presented in table 1:

Table 1  
LAC: Estimated Migration Rates by Quinquennium, 1990-2020

	Migration rates (per thousand)					
	1990-95	1995-00	2000-05	2005-10	2010-15	2015-20
LAC	-1.5	-1.4	-1.4	-1.3	-0.9	-0.7
El Salvador	-2.1	-1.3	-1.2	-1.1	-1.0	0
Peru	-1.7	-4.0	-2.6	-2.2	-1.4	-0.6

Source: ECLAC 2005a, p.24

Migration rates for El Salvador and Peru show an underestimation of migration that in both cases seems to be at least four and six times larger than the figures quoted above (Seminario and Alva 2007). For example, according to ECLAC estimates, total migration would have been approximately 730 thousand people in 2006 (-1.3 per thousand \* 560 million Latin American and Caribbean people). But the net outflow of El Salvadorians and Peruvians together is already around 600 thousand according to the information from their national immigration offices.<sup>5</sup> More recent population census in El Salvador and Peru found that the total population was less than predicted by previous census thus showing the need to revise their methodologies in the calculation of the rates of crude birth, crude mortality and migration. Coloma and Florián (2006) indicate that in Peru, the 2005 census determined that the total population was 27.1 million instead of the estimated 28 million and that the gap is explained by errors in the calculation of the net out-migration.

In 2006, the annual outflow of Peruvian migrants was of the order of 250-300,000 (INEI 2006). If 610,400 Peruvians are born (28 million \* a crude rate of 2.2 percent) minus 168,000 deaths (0.6 percent crude mortality) minus 39,200 migrants (-0.14 percent migration), the net addition of Peruvians would be 403,200 or 1.44 percent demographic growth rate as recorded in ECLAC 2005 (p. 18). If we correct the rate of migration, however, and deduct 250,000 instead of 39,200<sup>6</sup>, then, the new net addition of Peruvians would be 192,400, and the revised demographic growth rate is 0.7 percent (instead of 1.44 percent, i.e., half the reported size). According to the latter, Peru would fall in the category of countries with accelerated demographic transition. It would also mean that the dependency rate would reverse its trend earlier thus shortening the demographic dividend period. This situation is yet to be clearly recorded in official statistics that continue to underestimate out-migration (for example ECLAC 2005, p.24).

In Peru, the fertility rate has dropped slightly more than proportionally to the average for LAC. In 1950-55, the regional average fertility rate stood at 5.9, and Peru's was at 6.9

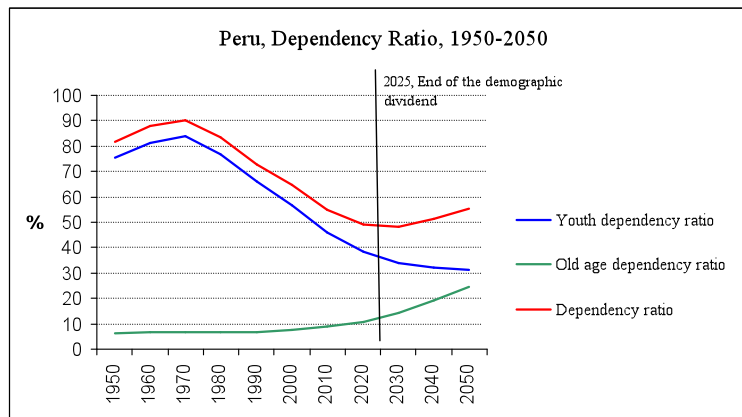
<sup>5</sup> For El Salvador, the balance of net migration was -244,900 in 2004 and -161,600 in 2005 for January-May only (UNDP 2005, p.39) and for Peru, the annualized figure was approximately 300,000 in 2006 (INEI 2006).

<sup>6</sup> The actual rate of migration is -250,000/28 million = -0.9 percent instead of the officially recorded -0.14 percent, i.e. 6 times higher.

(17 percent above the regional average), while in 2000-05, the regional fertility rate was 2.6 and Peru's, 2.9 (11 percent above). This national average, however, hides a sharp gap between the fertility rate in rural and urban areas. The latter is consistent with differences in urban and rural poverty, estimated at 46 percent and 70 percent respectively.

Figure 1 shows youth, old age and total dependency rates in Peru. Similarly to the regional trend, the end of the fall in the dependency ratio seems to take place in 2025-30. It should be noted that Peru's dependency ratio is analogous to the dependency ratio for the developing world (WB 2006). In the latter, in 2005-25, the labor force will continue to grow, although at a smaller pace, while the dependency ratio falls. At the same time, in the industrialized world, the labor force will shrink or is shrinking, and the dependency ratio is increasing.

Figure 1

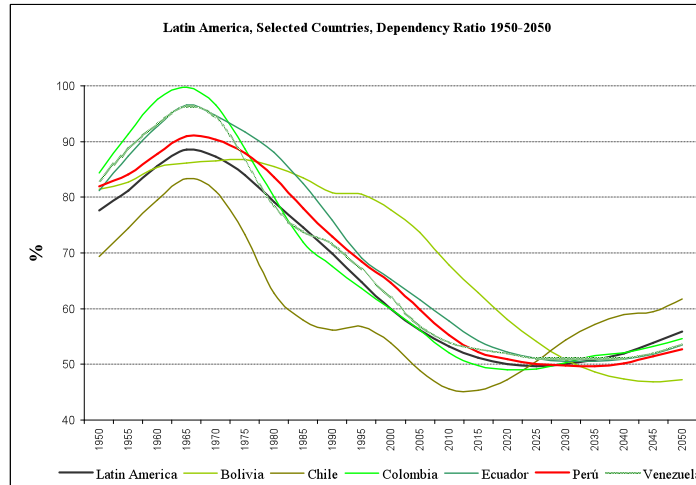


Source: UNFPA (2007)

In figure 2 the dependency ratios of the Andean countries are presented. The fall in this variable has been characterized as a unique window of opportunity for countries to prepare for the aging of their populations. They can benefit from high economic growth, large labor forces, combined with lower current commitments to fund their dependents. Chile is about to end this phase, while the rest of countries in the sample will continue to enjoy this opportunity until 2025-30. Bolivia's ratio continues to decrease until 2045.

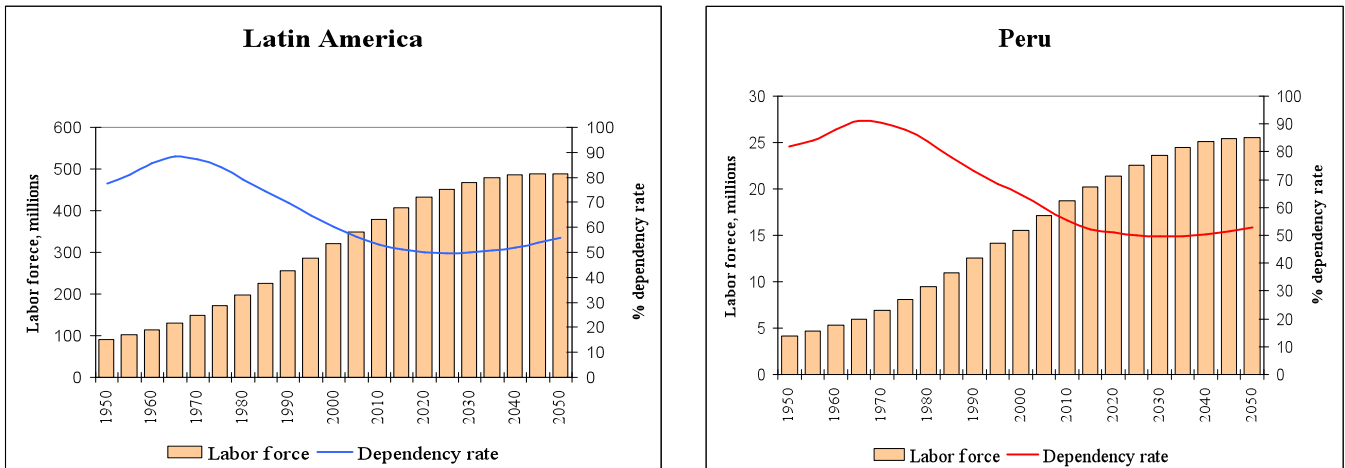
Figure 3 shows the dependency ratios and the labor force (proxied by the economically active population). It can be observed that Peru has the identical pattern than Latin America: a steady increase in the size of its labor force and the fall in the dependency ratio until 2025-30.

Figure 2



Source: ECLAC 2005a.

Figure 3



Source: ECLAC 2005a.

The main points of this section can be summarized as follows:

- The demographic transition in many countries of LAC may be more accelerated than anticipated due to the underestimation of out-migration.
- The fall in the dependency ratio creates a window of opportunity (savings may grow at a faster rate because transfers to the non-working population decrease) that ends in 2025-30 (or earlier). In countries with accelerated aging, Chile for example, the dependency ratio is reversing its downward trend.
- The labor force in LAC countries continues to grow and the demand for foreign workers in highly industrialized countries increases.
- In 2030, the Peruvian population under 15 will be 34 percent and the population over 65, 15 percent. In 2050, the percents will be 31 and 24 respectively.
- In Peru, the drop in fertility rates is driven by falls in urban areas because fertility continues to be high in rural settings.

## 2. Intergenerational transfers

Transfers are unilateral cash payments to persons that take place typically through the family and the public sector. They allow life course divergence of earnings and consumption so that dependents, both children and older persons, can be net consumers. Within the family, these payments are inter-age transfers and are used for a variety of purposes. They are delivered in heterogeneous ways from financial and time transfers to transfers paid when people are alive or dead, and transfers that have a specific timing because they are received during early childhood, young or old adulthood. Transfers can be from older to younger persons (downward flows) or from young adults to older persons—for example, to parents, grandparents and older relatives (upward flows). Examples of the first type include: child rearing, gifts and bequests, paying for education and health care, while examples of the second type include supporting older parents and co-residence. The motivation for transfers is also varied, including altruism among well integrated and harmonious families, exchanges or reciprocity that are driven by self-interest and indirect reciprocities that go from parents or grandparents to younger children in the form of bequests and gifts. Transfers of larger amounts of assets including bequests support an intergenerational chain of wealth transmission that often reinforces structures of economic and financial concentration.

Remittances from migrants to their families at home are another modality of intergenerational transfers that play an important role in securing the well-being of families left behind, including young children and older people. A steady flow of remittances can boost financial intermediation through the expansion of markets for banks and the creation of new instruments that have the potential of promoting economic growth.

In the public sector, transfer payments go from tax payers who are typically in the 20-64 age group to younger and older persons (according to the proportions of non-working people, children and older persons). Government expenditures in public education, health care, recreation, social assistance and so on, and the payment of social security benefits (old age, disability, survivors' pensions; family allowances; basic, non-contributory pensions; and poverty reduction programs) are funded with general revenues and social security contributions respectively. The analysis of public spending in the provision of public (and semi-public) goods disaggregated by age groups becomes increasingly tedious due to the large size of records that would be needed. In the case of social security contributions of unfunded systems (pay-as-you-go) and special poverty reduction programs (for example conditional cash transfers), it is relatively straightforward to determine the upward and downward flow of transfers.

Private foundations, official and multilateral agencies, and non-governmental and community-based organizations may provide cash or non-financial transfers to specific vulnerable groups. Modalities can include grants, food allowances, social services, educational and vocational training, technical assistance, and health care, which are net transfers to targeted beneficiaries.

When the family is taken as a single decision unit, attention is placed on the disposable income, consumption and savings of the entire household. When the focus is placed on income and consumption along the life-cycle of an individual, transfers need to be identified to determine how individuals make inter-temporal decisions regarding their present and future consumption and the implications these decisions have on their desired savings. In the case of Peru, the national survey of households module on employment (Encuesta Nacional de Hogares, ENAHO) records answers to questions relative to transfers to the household, but there is lack of information regarding the uses of these transfers.

The complex dimensions and changing nature of intergenerational transfers imply that it is difficult to provide a strict definition or typology. The demographic transformations that are taking place in the region are undoubtedly affecting how families and governments confront the impact of changing patterns in the age distribution of communities and the emergence of new needs and challenges. In addition, the influence of new institutions in the provision of coverage for short- and long-term social contingencies is another dimension in which these new trends are unfolding. The relevance of both family and public transfers is manifested in multiple forms, for example, in national debates regarding the future of social security and in the anticipation of the implications of the accelerated aging on labor markets and the future well-being of older people. The following quotation from Arrondel and Masson (2006, p. 1037) illustrates this point:

“The central message of this literature is that key policy issues, such as the future of social security and the debate between pay-as-you-go retirement schemes and private pension funds, cannot be analyzed only by comparing the relative efficiency of the State and the market in securing old-age needs: *family* intergenerational relations and specific motives for transfers do also matter when assessing the effects of government transfer policies.”

It has been hypothesized that public transfer programs in industrialized countries enable the current and future elderly “to live well at the unfair expense of today’s youth and tomorrow’s newborns” (Lee 2005). Lee (2000) also argues that public and private transfers combined go upward in industrialized countries but still downward in the developing world. For many countries in LAC, including Peru, this observation seems to hold true: most transfers go downward due to several reasons such as the impoverishment of older persons in view of the collapse of social security systems in the 1980s, long episodes of hyperinflation and stagnation that eroded the wealth of older generations, and incipient capital markets.

To reduce poverty levels and promote economic growth, Latin American governments have adopted a number of social programs that emphasize the nutrition and health of children and help families in extreme poverty. Recently, the Peruvian government has increased the funding and commitment to enhance the living conditions of the very poor through new instruments that have as a key incentive conditional financial transfers. CRECER ([http://www.andina.com.pe/edpespeciales/especiales/2007/julio/crecer/crecer\\_eng.html](http://www.andina.com.pe/edpespeciales/especiales/2007/julio/crecer/crecer_eng.html)) is a national strategy that was created in 2007 to support 400,000 families with infants and small children (0-5) who live in extreme poverty and with chronic malnutrition. The objectives

of CRECER are: to reduce maternal and infant mortality, malnutrition, illiteracy; to increase the health status of the targeted population; to provide identity (through the granting of IDs); and to increase basic services to this population. The strategy implies horizontal linkages with relevant ministries (such as the ministry of education, finance, health, women and development, housing) and the vertical integration of national, regional and local government offices in collaboration with civil society. CRECER aims to reduce chronic malnutrition from 24.1 percent to 19 percent by 2011 and benefit 3 million people of which 1 million are children at risk.

As part of CRECER, the intra-governmental strategy, JUNTOS (<http://www.juntos.gob.pe/intro.php>, translated as Together)<sup>7</sup> is a national conditional cash transfer program that provides cash benefits to the poorest families in areas of extreme poverty and exclusion. Often, these families were victims of violence during the armed insurgency of the Shining Path in the 1980s and early 1990s. The finance ministry established four criteria for eligibility: victims of violence, with unmet basic needs, targeted as extremely poor, and with chronic infant malnutrition. The program targets families that are preferably headed by women, who receive a monthly cash transfer of approximately \$30 and commit to participate voluntarily in health, nutrition, education and identity programs as a condition for the benefit. With a goal of 200,000 beneficiaries for 2006-7, including pregnant mothers, male widows, old persons and sponsors of children 14 and younger, the total budget of the program was approximately \$50 million in 2006. The “Mining Program in Solidarity with the People,” that is funded with 3.75 percent of the benefits of 43 mining companies (that have pulled together \$200 million annually) will collaborate in the funding of activities promoted by CRECER. The Mining Program has poverty reduction initiatives of its own. The government has set a goal of reducing chronic malnutrition from 24.1 percent to 19 percent by 2011 and benefit 3 million people of which 1 million are children at risk.<sup>8</sup>

In addition, the Peruvian government continues to invest in several social programs that include FONCODES, the national cooperation fund for social development that seeks to promote capacities and initiatives among the poor; PRONAA, the national program of food assistance; PRONAMA, the national program of mobilization for literacy; PRONASAR, the national rural water and sanitation program; PIN, the integrated nutritional program; SIS, the comprehensive health insurance for the poor; and the program Wawa-wasi that offers integrated service to pre-school children from low income families. These are all administered by the Presidency of the Council of Ministers (PCM), the ministry of women and social development, the ministry of education, the ministry of health and the ministry of housing and construction. The “Vaso de Leche” (the glass of milk) program is another major national effort based on local grassroots organizations mainly led by women (with public and international support) that has helped strengthen solidarity and build organizational capacities among local families.

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<sup>7</sup> Similar programs in LAC include OPORTUNIDADES (Mexico, [www.progresas.gob.mx](http://www.progresas.gob.mx)), PUENTE (Chile, [www.programapuente.cl](http://www.programapuente.cl)) and HAMBRE CERO (Brazil, [www.brasil.gov.br/espanhol/programas/social/hambre](http://www.brasil.gov.br/espanhol/programas/social/hambre)).

<sup>8</sup> President Alan García’s 2007 annual message to the people of Peru delivered on July 28, 2007 in Lima.

According to Vásquez (2004) since the nineties, Peru has increased its public investment in health infrastructure (drinkable water, sewerage and new establishments for primary care) and health services targeted at the poor and their children. During the years 2000-2003, public spending in the health of children fell, due in part to a change in government, although nutrition programs for children continued to target vulnerable groups. In the 1990s, the per capita public spending in education grew, but this effort notwithstanding, it was the lowest per capita spending in the region (Saavedra and Suárez 2001). Vásquez' main conclusion is that these social policy initiatives have been short of reducing the high incidence of extreme poverty in rural areas.

Of the various types of intergenerational transfers, the following have been selected for a more in-depth analysis: remittances, pensions, and health care through the social security system.

### 3. Migration and remittances

Migration from developing to industrialized countries has increased in the last three decades driven by the differential in per capita expected income and foreign demand for labor. The World Bank (WB 2006, p.27) estimates that total immigrants to industrialized (high-income) countries increased at approximately 3 percent (it was 2.4 percent in the 1970s) thus doubling its size in the last 30 years. For many industrialized countries (Germany, Italy, Sweden) immigrants retarded the drop in the size of their native populations. It is anticipated that the flow of migrants will remain constant in the next two decades as the demand for both skilled and less skilled labor in highly-industrialized countries increases. The example of El Salvador is illustrative: One fifth of its total population (6.8 million) resides in high-income countries, mainly in the United States. In 2004, their combined income represented 127 percent of the GNP of El Salvador (UNDP 2005, p.11).

Undoubtedly, in the case of Peru, migrants leave the country seeking higher life cycle earnings. The decision seems to be an individual one, but in reality, households are making portfolio decisions about their most important asset, their human capital, and encouraging younger members of the family to leave and find jobs abroad. To this end, households invest in the education of their younger members, which increases their skills, thereby enhancing their likelihood of finding productive jobs at their destination countries. The household strategy to send a migrant abroad is carefully developed in order to decide on the optimal allocation of family workers to potential productive activities and maximize future income (Palloni et al, 2001, p. 5). The strategy seeks to minimize the cost of migration and creates the first link in the migration chain. Palloni et al. (2001, p. 35) show that Mexican immigrants who had an older sibling in the United States faced a probability to out-migrate that was three times higher than persons without a migrant sibling.

The reasons pushing migrants to new destinations, in addition to the per capita income (or wage) differential, include: High poverty levels combined with inequality and high income volatility at home; pervasive capital market imperfections that limit access to credit and insurance for the majority of the population; the fact that savings are

discouraged due to low real returns on fixed income instruments, high risk on variable income instruments and excessive transaction costs of retirement savings in the private pension system; and low labor absorption and inadequate opportunities for productive employment. Although the Peruvian national office of immigration has improved its information and record keeping, Coloma and Florián (2006, p. 25) consider that by the year 2025 the total population can be overestimated by a rate of 24 percent due to errors in the calculations of annual migration flows.<sup>9</sup>

The decision to migrate has important financial costs including the income foregone at home and the lack of support to the family immediately after migrants leave. In addition, migrants will have to pay for services at home including pay-back of the migration investment, care of assets left behind, and other current and future services. At their destinations, migrant networks connect migrants, former migrants, and non-migrants to one another through relations of kinship, friendship, and shared community of origin (Palloni et al, 2001, p. 4). These networks reduce the costs of international migration and enhance the opportunities of work, expected income, and probability of sending remittances home. The internet has enabled real life connections between families, migrants and their communities at home (“transfamilies”). Diasporas and migrant networks facilitate chain migration between communities at home and new communities abroad providing assistance to new migrants and contributing to community projects at home (Altamirano 2000, 2006; Schiller 1996).

In recent years, multilateral organizations, international financial institutions, central banks, and scholars have devoted much attention to the issue of remittances, the other side of migration.<sup>10</sup> With the successful insertion of millions of migrants in the labor markets of industrialized countries, remittances to the developing world have surged from \$31.2 billion in 1990 to \$167 billion in 2005, a change of 73 percent (WB 2006, p. 88). According to the WB more than half of the increase is explained by remittances to China, India and Mexico. For LAC, the WB’s estimate was \$5.8 billion in 1990 and \$42.4 billion in 2005, also a change of 74 percent. Remittances in developing countries have become increasingly more important and in many cases they are higher than foreign private investment and official development assistance. In 2004, remittances to Mexico were \$18.1 billion, to Brazil, \$3.6 billion and to Colombia, \$3.2 billion. Although lower in value, the proportion of remittances over GDP was 25 percent in Haiti, 17 percent in Jamaica, 16 percent in El Salvador and Honduras, 13 percent in the Dominican Republic and 12 percent in Nicaragua. There are many complexities involved in adequately estimating remittances, and official agencies and central banks are refining their methods to improve data collection. The surge in remittances is certainly correlated with an increased number of migrants to the industrialized world mostly as unskilled workers (approximately one tenth is represented by skilled workers who are perfect substitutes to

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<sup>9</sup> For example, Coloma and Florián (2006, p.24) estimate that by 2025, 5 million Peruvians would have emigrated while the INEI’s estimate is only 350 thousands. There is anecdotal evidence that 1 million Peruvians are presently living abroad i.e., 3.5 percent of the total population.

<sup>10</sup> See Acosta 2007; Altamirano 2006; BCRP 2007; Choy 2005; Cox 1996; Fajnzylber and López, 2007; Kanaiaupuni and Donato 1999; IADB-MIF 2007; UNDP 2005; Rapoport and Docquier 2006; Rodriguez 2006; and WB 2006.

their native colleagues) but also, with the lowering of transfer transaction costs, the loss in dollar value that has increased the number of dollars that is transferred and the risk of being deported that increases the remittances of total savings.

Remittances have important implications for the receiving countries as well. Clearly, they increase net foreign asset and only for that reason, they are important to central banks. They are also transfer payments to households that help alleviate the incidence of poverty (IADB-MIF 2007). Remittances per capita are highest in Jamaica (\$550 per capita), Barbados (\$400 per capita) and El Salvador (\$128 per capita) where they constitute major supplements to household income (Fajnzylber and López 2007). There is evidence that remittances positively affect the health and mortality of communities by changing resources and investment patterns of individuals, families and communities. For example, a study on migration and health changes in 25 communities located in central Mexico showed that infant mortality increased at the beginning when migration rates intensified. Thereafter, when remittances to communities and migration became institutionalized over time, mortality fell (Kanaiaupuni and Donato 1999). For a sample of eleven LAC countries, Fajnzylber and López (2007) estimated that their joint remittances increased their share in GDP from 0.7 percent in 1991-95 to 2.3 percent in 2001-05 leading to an increase of 0.27 percent in the per capita GDP growth. According to these authors, remittances play an increasingly important role, although their direct impact on economic growth has been small in the immediate past.

Household surveys provide information on access to remittances by profile of household. These surveys include questions about remittances that can help measure their impact. In the Philippines, in 1991, of more than 11 million families, 17 percent reported having received some sort of income from abroad, which represented 8 percent of the country's household income. In the same year, more than 665,000 workers left the country mostly as contract workers (Rodriguez 1996). In Peru, Cox, Ezer and Jiménez (1998) found that 25 percent of Peruvian households received income from abroad representing 22 percent of their income. Fajnzylber and López (2007, p. 22), however, have a different estimate. They estimate that only 3 percent of Peruvian households benefited from remittances. Instead, they found that Haiti is the country with the highest access, 25 percent of the households reported that they received remittances in 2001; between 10 and 25 percent of households in the Dominican Republic, El Salvador, Nicaragua and Honduras; between 5 and 10 percent in Mexico and Guatemala; and between 3 and 5 percent in Bolivia, Ecuador and Paraguay.

The distribution of remittances by quintiles in eleven countries of LAC shows that in some cases they are distributed in a slightly more regressive way than income. For example, Fajnzylber and López (2007, p. 9) show that the poorest 60 percent of the population (first three quintiles) receive only a quarter of total remittances, while the top quintile receives on average 54 percent of those flows. In Mexico, El Salvador, Guatemala and Paraguay remittances are distributed more equally, but in the other seven countries of the sample, the first three quintiles receive only 16 percent of total remittances, compared to 26 percent of total income. According to Fajnzylber and López (2007), in Peru, fewer than 6 percent of the households that receive remittances belong to

the lowest quintile while 40 percent belong to the top quintile, and more than 75 percent of recipients are now in the top quintile of the income distribution.

Table 2, calculated from Peruvian household surveys in 2004-2006 (ENAHO 2004-2006), shows the percent of individuals who access domestic transfers (child alimonies, various types of pensions – old age, disabilities, survivors, cash payments, gifts, and other types of grants) and remittances. These estimates seem to be more consistent with Fajnzylber and López (2007) than with Cox, Ezer and Jiménez (1998) in that less than 5 percent of the total population access remittances (in these calculations individuals rather than households are used). In contrast, approximately one fifth of the population reports to have received domestic transfers. The small number of persons accessing remittances seems to reflect a reluctance of individuals to report their actual access and it may be the case that they are reporting these transfers as if they were domestic.

Table 2  
Percent of individuals with access to transfers, 2004-2005

Año	Access of persons to transfers	
	Domestic:	Remittances:
2004	36.4%	4.0%
2005	23.5%	3.2%
2006	22.8%	4.8%

Source: ENAHO 2004-2006, and author's calculations

Based on the ENAHOs, table 3 shows total domestic transfers and total remittances. Note that the reported total remittances, \$0.8 billion, represent approximately 44 percent of the total remittances estimated by the Central Bank (\$1.8 billion in 2006, see table 4). It can be seen that for those who reported that they obtained cash transfers from abroad, their level of transfers in 2006, \$568.20 (or \$47.40 per month) was as high as individuals who got domestic transfers, \$565.90. Also note that ENAHO results show that a typical household receiving remittances in 2006 has 4.2 members including: 1 member 0-14, 2.7 members 15-65, and 0.5 member over 65.

Table 3  
Total and per capita domestic transfers and remittances, 2004-2006

Año	Population (in 000)	Access of persons to (in 000)		Total domestic transfers (in billions \$)	Total remittances (in billions \$)	Per capita domestic transfers	Per capita remittances (in \$)
		Domestic transfers	Remittances from abroad				
2004	27,547	10,038	1,110	3,198	542	318.60	488.24
2005	27,947	6,568	901	3,229	509	491.64	565.32
2006	28,349	6,460	1,354	3,656	769	565.93	568.20

Source: ENAHO 2004-2006.

Peru's balance of payments is presented in table 4. Remittances are part of current transfers and they are shown in italics. Since 2001, remittances explain an important portion of the change in foreign reserves. The Central Bank estimates that they increased by 11 percent in 2007-06 to approximately \$2 billion (BCRPa). This translates into a

remittances per capita of \$77 per year, the average was \$102 per capita for Latin America in 2006 (Fajnzylber and López 2007).

Table 4  
Peru, Balance of Payments, 1995-2006

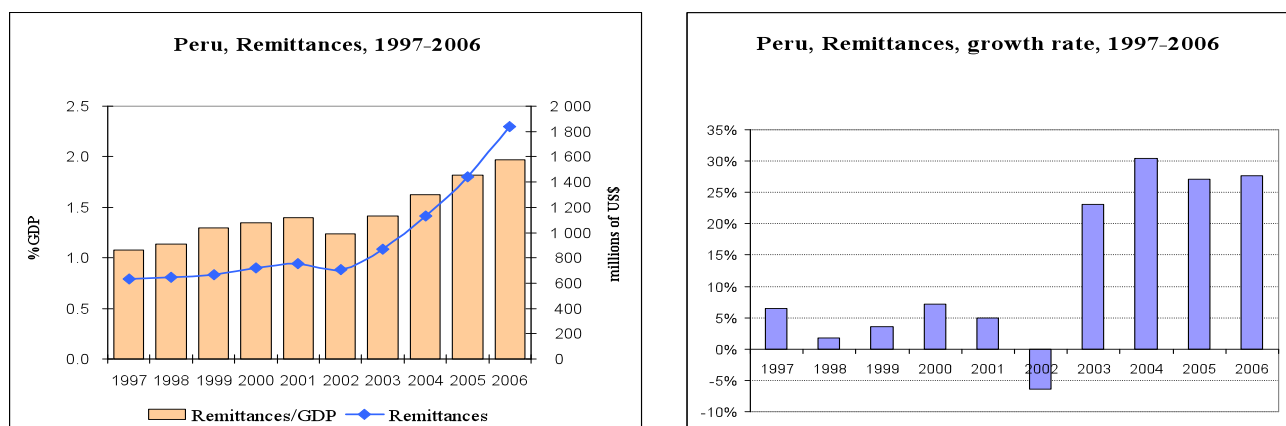
millions of US\$	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>I. Current account result</b>	<b>- 4 625</b>	<b>- 3 646</b>	<b>- 3 368</b>	<b>- 3 336</b>	<b>- 1 380</b>	<b>- 1 546</b>	<b>- 1 203</b>	<b>- 1 110</b>	<b>- 949</b>	<b>19</b>	<b>1 148</b>	<b>2 589</b>
a. Trade balance	- 2 241	- 1 991	- 1 711	- 2 462	- 623	- 403	- 179	321	886	3 004	5 286	8 934
i. Exports	5 491	5 878	6 825	5 757	6 088	6 955	7 026	7 714	9 091	12 809	17 368	23 800
ii. Imports	- 7 733	- 7 869	- 8 536	- 8 219	- 6 710	- 7 358	- 7 204	- 7 393	- 8 205	- 9 805	- 12 082	- 14 866
b. Services and income from factors	- 3 215	- 2 570	- 2 609	- 1 861	- 1 700	- 2 144	- 2 064	- 2 451	- 3 044	- 4 418	- 5 910	- 8 529
c. Current transfers	832	914	952	987	943	1 001	1 040	1 019	1 209	1 433	1 772	2 185
<i>Of which: Remittances</i>	599	597	636	647	670	718	753	705	869	1 133	1 440	1 837
<b>II. Capital account</b>	<b>5550</b>	<b>5578</b>	<b>5101</b>	<b>2330</b>	<b>605</b>	<b>1353</b>	<b>1652</b>	<b>1944</b>	<b>1425</b>	<b>2332</b>	<b>480</b>	<b>164</b>
<b>III. Change in International Reserves</b>	<b>- 923</b>	<b>- 1 899</b>	<b>1 629</b>	<b>- 986</b>	<b>- 780</b>	<b>- 224</b>	<b>433</b>	<b>985</b>	<b>596</b>	<b>2 437</b>	<b>1 466</b>	<b>3 178</b>

(increase appears with negative sign)  
Source: BCRP 2007c.

Figure 4 shows remittances/GDP and the growth rate of remittances in 1997-2006. It can be seen that as a proportion of GDP their relevance is increasing, representing 2 percent in 2006. Their rate of growth has increased markedly since 2003.

The InterAmerican Development Bank (IADB) estimated a higher level of remittances than the Central Bank: \$2.5 billion in 2005 that has grown to approximately \$3.3 billion in 2007. The IADB's estimate assumes that 40 percent of remittances are sent through informal channels. Instead, the Central Bank considers that informal channels account for only 8 to 15 percent. In contrast to Central American countries, Peruvian migrants have diversified their destinations. Remittances are sent from the United States (52 percent), Spain (14 percent), Italy (10 percent), Argentina (5 percent), Chile (4 percent), Ecuador (2 percent), other (12 percent) (Choy 2005). In 2007, it is estimated that remittances will represent one third of non-traditional exports, 37 per cent of total imports of capital goods and approximately 8 percent of total exports (BCRP 2007b p.48)

Figure 4



Source: BCRPc 2007.

Estimating remittances is complex due to the illegality of a critical mass of migrants who do not want to be identified. Peru's Central Bank has helped create a mechanism that enables fund transfer companies to be registered with the Superintendency of Banks and Insurance Companies (SBS). Since 2003, fund transfer companies and banks report net transfers to the SBS which the Central Bank believes has notably improved their estimation. In addition, the Central Bank includes transfers from cooperatives that operate in Japan and other agencies (for example travel agencies). In 2005, 54 percent of the remittances were channeled through fund transfer companies, 27 percent by banks and 19 percent by other means (Choy 2005). This improvement notwithstanding, the Central Bank calculates that between 10-15 percent of all transfer flows remain unregistered. Other experts, including the IADB, argue that the proportion of unreported transfers is much larger.

In a recent study disseminated by the IADB-MIF (2007), it was stated that money transfer costs have fallen by more than 50 percent. Also, the study suggests that the financial system can provide "transnational families" with more options for the use of their funds. For the United States alone, the study indicates that 73 percent of approximately 17 million migrants send \$46 billion p.a. to LAC. Half of these remittances are transferred through the financial system but only a small percentage of them go to bank accounts. A number of financial products that could be developed for migrants are life or health insurance for relatives in LAC, savings account, collaterals for home mortgages or home construction loans, education payments, payment of microfinance or agricultural loans (in accounts of microfinance institutions) and direct transfer payments to grocery stores and other establishments to cover basic household expenses.

In many Central American countries, an entirely new intermediation technology to secure transfer of remittances has developed. Progress has been made in facilitating these transfers through formal channels that aim at reducing the transaction costs and promote the use of the Financial Information Exchange (FIX) protocol for international real-time exchange of information. FIX allows banks, broker-dealers, exchanges, institutional investors and other traders and providers to share a common language for automated trading of any financial instrument, security or derivative including remittances. The goal for banks is to use the FIX to continue to lower transactions costs and increase their market share.

The analysis of the impact of remittances on economic growth, for example, on the rate of investment and on productivity growth, and its impact on short-run variables (consumption expenditures), is only in its initial phase. In Peru, accurate information about the distribution of remittances and their uses is needed in order to better understand their wider role, including how they affect intergenerational solidarity.

The evidence on migration and remittances reviewed here shows:

- Remittances grow at a two-digit rate. They fund households' expenditures and increase the quality of life of relatives left at home.

- Increasingly, they are transferred through the formal financial system and generate opportunities for intermediation at home.
- There is, however, a proportion of remittances that is not channeled through the financial system whose size is difficult to estimate.
- National household surveys, focus groups, and surveys in destination countries are beginning to shed light on access to remittances and their use. Information is needed to conduct accurate analysis on the precise impact of remittances on economic growth and development.
- In Peru, in 2006, approximately 5 percent of the total population received an average of \$570 in the form of remittances. Households where these individuals reside include: 1 member 0-15, 2.7 members 15-65, and 0.5 member over 65. The probability that the individual receiving remittances is young (0-15) was 24 percent and the probability that the person was old, 12 percent.

#### 4. Pensions

The implicit debt per capita (the difference between anticipated future pension contributions and anticipated future benefits) will increase with aging thus requiring new old-age pension schemes to fund an increasing number of older people. These schemes can be based either on savings (funded programs such as the privately administered system) or on transfers such as the traditional pay-as-you-go). In addition to raising the implicit debt in unfunded public transfer systems, population aging increases the cost of pension provision and can lead to the actuarial imbalance of the public system if rates of contribution and benefits are not appropriately adjusted. Proposals for changing benefits include reducing pensions, changing eligibility and employment rates, and increasing the retirement age. These combined with higher contributions rates could mitigate the magnitude of the imbalance. In contrast to industrialized countries, LAC has fewer publicly run early retirement programs, long-term care, and child and family benefits.

In Peru, the National Pension Office (ONP), created in 1992 after a major reform of the social security system, administers a pay-as-you-go unfunded system (SNP) of defined benefits. This system affiliates approximately one million workers, but only 576 thousand contribute regularly, which is 4.5 percent of the labor force. It pays approximately half a million pensions. The ONP administers a fund of \$3 billion that helps generate a portion of the revenue needed to pay the benefits. But more than two thirds of the pensions are funded out of the government's general stream of revenues.

The private pension system (SPP) is administered by four pension fund managers (AFP); it affiliates 3.9 million individuals, of which only 1.4 million contribute regularly, and pays only a fraction of the SNP pensions, 67 thousand (the system is 17 years old).<sup>11</sup> The rate of affiliation has decreased from 13 percent in 1998-99 to 6.5 percent in 2003-06 (BCRPc, 2007). Presently, the SPP covers 11 percent of the labor force (contributors/labor force). In the SPP, contributions are defined and each affiliate contributes to his/her own retirement fund (in the last two years real returns on investments have averaged 22 percent in real terms per year). There is zero

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<sup>11</sup> For an in-depth analysis of the genesis of the SPP see Cruz-Saco 1998; for an assessment of its evolution and cost, Cruz-Saco and Ivachina 1999, Morón and Carranza 2003.

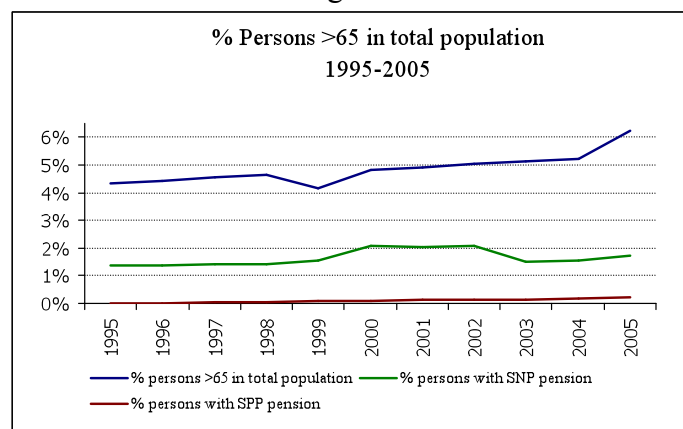
intergenerational transfer in the SPP with the exception of the minimum pension<sup>12</sup> that is paid with a government transfer.

Both, the SNP and the SPP cover less than one fifth of the labor force, mainly the salaried and urban worker who works in modern, formal establishments. The majority of the affiliates to the SPP (80 percent) are < 44 years and two thirds are male. The SNP covers workers with relatively lower salaries who expect a pension that would be higher than one obtained at the SPP; workers with higher salaries have affiliated in the SPP.

Figure 5 shows the percent of individuals older than 65 in the total population, and the percent that receives a pension from either the SNP or the SPP. Approximately one third of the population >65 received a pension in the last few years. This means that two thirds of the older persons in Peru have not earned a pension from any contributory system; they are supported by their extended families.

It can be seen that the aging of the population begins to increase more markedly after 2004, which is consistent with estimates that the population older than 65 will represent 8.8 percent in 2010, 10.9 percent in 2020, 14.5 percent in 2030, and 24.4 percent in 2050. Since affiliation to pension programs is facing structural barriers to expansion, the proportion of elderly without a pension from a contributory system will increase. Assume that the number of pensions in the SNP will remain constant at 1.5 percent of the population (a rather optimistic assumption given the decrease in affiliation), while the percent of pensions paid by the SPP increases to 0.50 percent, 1 percent and 2 percent respectively in 2010, 2020 and 2030. The percent of people >65 without a pension will increase from an average of 67 percent in 2003-05 to 77 percent in 2010-30. Note that the number of people >65 will double in this time period.

Figure 5



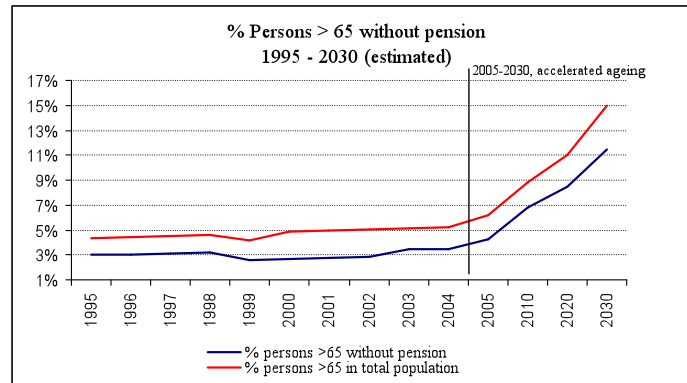
Source: INEI, ONP, and SAFF, author's calculations

Figure 6 shows a projection of the percent of the population older than 65 who will not receive a pension in 2005-30. Note the sharp increase in the size of this age group and in the percent of older persons without a pension. Families, local communities and the

<sup>12</sup> The minimum pension is \$100/month for both SNP and SPP.

Peruvian government will need to anticipate this structural situation of financial insecurity of older people. Strategies to address this need may include, again, family cash transfers, in-kind support from local communities or municipalities (particularly in the areas of nutrition, health care, personal advice) and consideration of how to design and implement a social pension program for the elderly poor.

Figure 6



Source: INEI, ONP, and SAFP, author's calculations

Average pensions paid by the SNP and the SPP are shown in table 5 (in current soles, the Peruvian currency, S/.). What is important to notice here is first, that the average pension rate for both systems are converging; and second, that the average pension is stabilizing around the minimum wage rate. By the end of 2006, with an exchange rate of 3S/. per 1US\$ the pension of the SNP, SPP and the minimum wage per month were respectively \$180, \$187, and \$167.

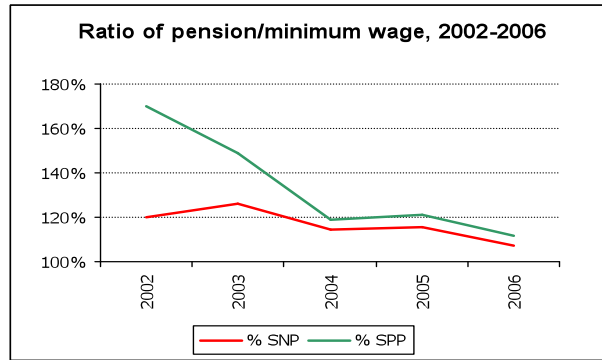
Table 5  
Monthly average pension and minimum wage, SNP and SPP, 1997-2006

	Dec-97	Dec-98	Dec-99	Dec-00	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06
SNP (S/.)	281	302	361	369	425	493	517	526	533	536
SPP (S/.)						698	611	547	557	560
Min. wage (S/.)	345	345	345	410	410	410	410	460	460	500
% SNP	81	88	105	90	104	120	126	114	116	107
% SPP						170	149	119	121	112

Source: ONP and SAFP, author's calculations.

The drop in the real value of the average pension vis-à-vis the minimum wage can be seen in figure 7. The decline has been sharpest in the average pensions paid by the SNP.

Figure 7



Source: ONP and SAFF, author's calculations.

Important evidence in this section suggests:

- By 2025, the proportion of older people without a pension will increase to more than three quarters of the population over 65.
- The average pension in both the SNP and SPP is converging around the minimum wage.
- Pensions in the SNP are for the most part net transfers from tax payers to SNP pensioners.
- Structural barriers in the expansion of pension coverage will continue to exert pressure on families to continue to support their older persons.
- The lack of income security for older persons will be more severe in rural areas and among individuals who work in informal activities.
- To address this situation, families and local communities will need to anticipate what is the required level of family transfers and non-monetary transfers, and the government will need to address the situation of income insecurity for a large portion of older persons.

#### 5. Health Care for Insured Older Persons

EsSalud is the social security program funded through tripartite contributions from employers, employees, and the government that provides health care to insured workers, their families, and pensioners. Through a national system of health care posts, clinics and hospitals, EsSalud delivers from primary to tertiary care. Approximately 6.5 million people including active workers, their eligible family relatives and pensioners have access to EsSalud (23 percent of the total population).<sup>13</sup>

PADOMI, an office of EsSalud, is the residential health care program that benefits 30 thousand disabled pensioners (> 65) in Metropolitan Lima and its districts. They represent 1.8 per cent of the population > 65. The program was created initially for persons >80 who were disabled, but in the last few years, it has expanded its coverage to persons > 65. They are visited monthly by one physician and twice a month by a certified nurse (in some cases more frequently depending on the condition of the patient). Prescribed medicines must be picked up from the central office by a relative or friend and

<sup>13</sup> The other 84 percent include a small proportion of persons that use private health care, and the vast majority is covered by the ministry of health.

are distributed at no cost. If the older person experiences an emergency, PADOMI has an emergency unit that can provide assistance at home or transport the patient to one of EsSalud hospitals.

One of the goals of PADOMI is to educate families and care-givers about the health condition of the patient and incorporate them into the health team. A small percent of the patients do not have relatives and their care is delivered by friends, neighbors or another older person whose health is as precarious as the registered patient. Occasionally, PADOMI staff has identified situations of abusive behavior against their patients or cases of abandonment. For the most part, however, the experience is one of collaboration among care-givers and relatives. PADOMI doesn't discriminate by gender, socio-economic class or ethnicity of their patients. The staff is aware that due to high congestion of health facilities it is often difficult to secure a hospital bed for a patient who needs emergency care. PADOMI's staff includes 500 employees of which 130 are physicians, with only five of them trained in the field of geriatrics. The program owns four transportation units and three ambulances for all of Metropolitan Lima and its districts. The wait period after an emergency call can be anywhere from 24 to 72 hours depending on other emergencies and availability of staff.

EsSalud has also organized a system of Centers for Older Persons that have been designed to enhance the quality of life of older persons (> 60 and pensioners) in physical spaces and environments that are conducive to intergenerational dialogues through the development of cultural, social and productive activities, recreation, and so on. They are located in several districts of Metropolitan Lima and in many provinces. These centers are housed in a variety of spaces, offices and sometimes in small houses. When the physical space is large, they have food service in a kitchen, a small health club, hair cutting services, a legal counselor, a basic health care unit, cafeteria; the house may have a small shop or class-room for training and educational workshops in simple productive activities (knitting, ceramics, etc.); and also, the house may organize cultural and social activities.

## 6. The Peruvian National Plan for Older Persons

As part of the Peruvian government's efforts to implement the agreements of the Madrid Plan (National Plan for Older Persons), the Office of Older Persons (ministry of women and social development) has implemented a National Network for Older Persons. One of the goals of the national network is the establishment of a series of local networks for the promotion of their self-care. These networks are collaborations of civil society (for example, the Sociedad de Beneficiencia de Lima), international organizations (UNFPA) and local municipalities that will coordinate with other government-led strategies such as the Centers for Older Persons administered by EsSalud.

As part of the research, we organized visits to Programs for Older Persons in five important municipalities in Lima<sup>14</sup> showed the following: These programs have successfully engaged older persons who reside in the district and who are excited about

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<sup>14</sup> Based on interviews to program officers in Ate-Vitarte, Jesús María, Miraflores, San Isidro and Santiago de Surco in the months of September and October 2007.

the various activities that enable them to acquire new skills and training; they spend quality time with other neighbors, and feel a sense of reassurance of their right to age with dignity and in welcoming environments. Programs are relatively new and have small budgets. Beneficiaries and administrators, however, are seeking funds in a creative manner because they believe that their programs add enormous value to communities. Interaction of residents with staff members is beginning to increase public awareness about the living conditions of older people, their needs and opportunities. Districts varied in the activities and workshops that they have designed, in the number of beneficiaries, and in the co-payment needed for the sustainability of the initiatives. All districts offer programs in physical and health education, development skills for income-generating activities, on how to use computers and the internet. All are committed to finding better spaces for the Home of the Older Person and if possible with enough room and beds to house individuals who are homeless. Staff members in all districts emphasize the need to promote increase awareness of the rights of older people and how communities can be better prepared to promote their active engagement.

### Conclusions

Out-migration introduces volatility into the estimations of Peru's demographic growth rate. Calculations of out-migration based on reported data to the INEI in 2006 show that the demographic growth rate is 0.7 percent rather than the published rate of 1.4 percent. Lower fertility rates are dropping the dependency rate and creating an opportunity for a "demographic dividend" that ends around 2025-30. At that point, longer life expectancies reverse the trend and the dependency rate increases. During the period of the "demographic dividend", savings may increase as the number of working individuals reaches their peaks in income. This situation combined with lower transfer payments for children and old parents give this generation an opportunity to increase their savings and for pro-active public policies.

The demographic changes and the lack of income security of older persons affect the perception of financial solvency of the economically active population 15-64. This generation perceives a reduction in its disposable income due to transfer payments to their own children, their older parents, and mandatory contributions to any of the two pension systems (an additional incentive not to affiliate). The existing private funded pension scheme, without intergenerational transfers, can provide income security for older people who contribute. But unresolved structural barriers to the expansion of coverage limit its effectiveness. In fact, the rate of affiliation in the private pension system has dropped by half, from 13 percent p.a. to 6.5 percent p.a. With only one third of the affiliates actually contributing, the effective rate of affiliation is 2 percent.

As expected, the drop in the affiliation rate in the SNP worsens the sustainability of the pay-as-you-go public pension system that is currently already in actuarial disequilibria with a dependency rate of 1:1. Presently, public pensions are almost fully paid with government transfers.

By 2025, 77 percent of persons >65 will not have a pension. They will need to be supported by their families. The government should consider options to address the

income insecurity of a large segment of old people. Policy makers however are given priority to the reduction of chronic malnutrition among children 0-5 and the reduction of rural poverty (emphasizing the mother-child relationship), also an essential social goal that will help attain the Millennium Declaration Goals. The CRECER strategy accompanied by the cash transfer program JUNTOS are expected to enhance social indicators in rural areas. In view of limited governmental resources and pressing social needs, policy makers and other stakeholders that participate in social protection schemes will need to strategize most effective ways to enhance living conditions for old people using an intergenerational lens.

The social security system provides health coverage to 18 percent of the total population including one third of older persons who earn a public pension. Only 1.8 percent of older people benefit from the special residential health care program for the disabled. A National Plan for Older People has been implemented that includes the establishment of local networks of support. While still small and new, these networks can promote the rights of older people and prepare communities for their rapid aging. Remittances may be an income flow that can help support young and old, reduce the incidence of poverty and promote economic growth. Despite its rapid growth, it benefited 5 percent of the total population with an average transfer of \$570 in 2006. But, an important flow of remittances may not be registered. It is not clear how remittances are distributed by age and within the family and more research is needed to answer important questions about its uses.

This paper has opened up new questions for future research. For example:

- How are families changing their patterns of intergenerational transfers and intra-household production, investment, and consumption strategies? (Examples are do parents follow altruistic or exchange justifications for transfers to their children? What is the rationale for investment on real estate, business, education and out-migration within the family? How are families coping with income insecurity and co-residence? How are older people taken care of? Is there commitment or neglect with regard to the wellbeing of older persons? How are intergenerational ties mapped out?)
- What is the impact of the change in the age structure of the population on productivity growth and total savings?
- How will households smooth consumption and income over the life cycle given changes in the age structure of the population?
- Can remittances alleviate the necessary increase in productivity growth when aging accelerates?
- How is the demographic transition affecting the distribution of poverty by age?
- What are the obstacles that are being faced in the implementation of the National Plan for Older People?

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