

***Population Ageing,
Sustainable Development and Food Security
in Rural Areas of Bolivia and Chile***

by

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Summary

The simultaneous processes of demographic transition and urbanization currently underway in Latin America are having a significant impact on rural population ageing in the region. This phenomenon is affecting the demographic composition of rural households, the structure of the rural labour force and the supply of agricultural labour. Rural population ageing thus represents a major issue for rural communities and the sustainability of agricultural/rural development in Latin America.

This study is a first step towards better understanding the scope and nature of rural population ageing in Latin America, as well as the implications of this phenomenon for rural development and food security. The report focuses on two countries, Bolivia and Chile, which can be contrasted in terms of their economic and social development, ethnic composition and degree of modernization of the agricultural sector. Based on information provided by recent population censuses, systematic efforts are made to deepen the analysis by comparing different rural settings within each of these two countries: Altiplano, Valleys and Plains in the case of Bolivia and two regions in Chile.

Trends in population ageing

The analysis begins by examining processes of demographic transition and population ageing both at the national level and in urban and rural contexts (Chapter II). One of the study's main findings is that population ageing has produced a significant reduction in the "dependency ratio" in both countries. This is evidenced in Chile between 1975 and 2000 and in Bolivia between 2000 and 2025. This phenomenon has created favourable demographic conditions for social and economic development. At the same time, however, these "favourable demographic conditions" have also created a challenge: how to provide decent, productive employment to a rapidly growing labour force.

Internal migration also appears to be a critical factor. Both countries have lost a significant share of their rural populations as a result of rural-urban migration. This is evidenced in the moderate

net growth of Bolivia's rural population and in the negative growth of the rural population in Chile. An important finding of this study is that these significant rural to urban population transfers are correlated with age and sex. Female elderly have migrated to cities more than male elderly and return to rural areas less than their male counterparts. This suggests that a "masculinisation" of the rural elderly population seems to be taking place, in particular in Chile.

The rapid increase in the dependency ratio of the elderly (defined as the number of elderly per 100 people of productive age (15 to 59 years of age)) is a consequence of specific patterns of ageing in the rural areas of Bolivia and Chile. In Bolivia, for instance, the dependency ratio of the elderly is estimated to be approximately 65 percent higher in rural areas than in urban areas between 1990 and 2025. In Chile, it is estimated to be around 19 percent higher in rural areas. This finding suggests a demographic structural disadvantage for the rural elderly.

The social profile of rural elderly and their food security in different contexts

Chapter III discusses some of the social characteristics of the rural elderly population in both countries as of the beginning of the current decade. Two main concerns related to the well-being and food security of the elderly drive this analysis: (a) How much support are elderly men and women likely to receive from their families and in the households in which they live? (b) How well equipped are the elderly to sustain themselves? This analysis is based on tabulations of both population censuses paying special attention to the gender gap and to the rural-urban gap, as well as to differences between regions in terms of rural development and ethnic composition.

Some of the main findings are as follows:

The largest proportion of elderly was found in the Bolivian Altiplano, a less developed rural area with the highest concentration of indigenous peoples.

The study finds that in terms of support received by the elderly such support seems to be greater in the Bolivian Plains than in other rural areas. One reason may be that in the Bolivian Plains the average size of households is larger than in other rural areas and, as a result, a larger proportion

of elderly in the Bolivian Plains may live in households headed by adult sons, daughters or other relatives who are able to provide care and support. In contrast, elderly in the Bolivian Altiplano appear to be especially vulnerable. In considering the social status of the elderly, significant differences appear between men and women. The findings indicate that men were able to draw on family support more than women insofar as a large proportion of men had a wife or partner to help and accompany them, whereas women were quite often widows.

How well equipped are the elderly to sustain themselves? When the educational capital of the elderly is examined considerable gaps appear between men and women, between rural and urban areas, as well as between countries and among regions within them. As expected, education levels among the rural elderly are significantly lower than those of their counterparts in urban areas. *Ceteris paribus*, Chilean elderly are more educated than those in Bolivia. There is no gender gap among the Chilean rural elderly, whereas in Bolivia there is a significant gender gap in both urban and rural areas. Interestingly, findings indicate that there is a close association between the gender education gap and the prominence of indigenous groups in the population. The largest gender education gap, for instance, is found in the rural Bolivian Altiplano in which 95 percent of the elderly population are indigenous. In contrast, the smallest gap – with elderly women showing a slightly higher level of education than men — is found in the Zona Huasa of Chile where the indigenous presence is less than one percent. The study also examines the working/income status of the elderly and finds that in Chile a significant proportion of rural elderly benefit from a pension or rent, whereas in rural Bolivia this source of income is almost unknown and a significant proportion of the elderly are forced to work in order to survive. The findings also indicate that significant differences appear among rural areas, particularly when the working status of elderly women is examined. In rural Chile, for instance, the proportion of elderly women who are economically active is insignificant. In the case of Bolivia, however, the proportion of economically active elderly women varies from 25 percent in the Plains to 50 percent in the Altiplano.

Rural elderly and food security: access to land and poverty

The fourth section, working within the demographic and social framework provided by the previous chapters, attempts to examine the linkages between rural elderly and food security. The status of food security in both countries is examined. However, since information on food security is scarce, an indirect approach is taken by considering two proxy factors, namely access to land and incidence of poverty.

Chile and Bolivia have been following diverging paths as far as food security is concerned. Chile has benefited from a sustained surplus of food supply and a declining incidence of poverty, in particular among the elderly. This is evidenced in both urban and rural areas. In contrast, Bolivia's improving trends in terms of food supplies have not been sufficient to overcome a precarious surplus which, when considered in conjunction with the widespread poverty in the country particularly in the rural areas, has resulted in a high incidence of hunger and malnutrition. These findings suggest that Chile appears to be relatively stable in terms of food security, whereas Bolivia is in a situation of chronic food insecurity which seems to be particularly acute in the traditional rural settlements of the Altiplano and the Valleys. The food insecurity of the rural elderly in Bolivia thus appears to be as a result of a situation affecting a large segment of the rural population rather than being related to a specific age group.

The expansion of the agricultural sector in the Plains region of Bolivia meant that by 2000 the country was similarly situated to Chile in terms of arable land and permanent crop areas per capita in the rural areas. However, access to land appears to be quite different in these two countries. In the case of Bolivia, most rural households possess land, but it is of a very small size and a rather low productivity. In Chile, only four out of every ten rural households possess agricultural land. Nevertheless, the majority of these households are small entrepreneurs with exploitations of around twenty hectares of irrigated land or equivalent and access to capital and modern technology. Thus, in Bolivia, subsistence farming is the most frequent condition, while modern market-oriented farming is the dominant form of agriculture in Chile.

The incidence of poverty is lower among the elderly than in the total population in both countries. The findings indicate that children are more affected by poverty and indigence than the elderly. One reason may be that the demographic composition of indigent households is younger than those households which are out of poverty. There is no significant gender gap as far as poverty is concerned in either country. There are, however, a slightly higher proportion of women in indigence in Bolivia, whereas the contrary appears to be the case in Chile. There is also no urban-rural poverty gap in Chile, whereas in Bolivia incidence of poverty is much higher in the rural areas than in the urban ones. This is the case both at the national level and within each ecological region. In Bolivia, the Aymaras and Quechuas, as well as the rural population in the Altiplano and the Valleys, are most affected by poverty with approximately 70 percent of households living in conditions of indigence. The most challenging situation in terms of food security seems to be in the rural Altiplano in which seven out of every ten households live in extreme poverty and parcels of agricultural land owned by peasants are very small and with low productivity. There is a significant difference between the two countries in terms of social security for the rural population. While in Bolivia less than ten percent of the rural population is granted social security, in Chile it is almost universal, even among those living in extreme poverty.

The relationship between access to land, poverty and food security appears to be a kind of “vicious cycle”, particularly for the rural Altiplano population in Bolivia. In the context of widespread poverty and limited access to institutional social security, access to land is a crucial factor in creating favourable conditions for subsistence agriculture and hence food security. At the same time, however, it is important to recognize that promoting access to land as a sole solution for eradicating food insecurity is problematic in the context of widespread poverty: conditions of extreme poverty render land ownership insufficient even for subsistence farming because in such situations households lack access to conditions which would support their exploitation of the land (credit, technical assistance, access to technology and markets). In contrast, in Chile, it would appear that there is a kind of “virtuous cycle”. This is because in Chile there has been a consolidation of a large number of small market-oriented farms which are able to produce food and income well beyond subsistence needs and, as such, are contributing to the

generation of employment and demand for services which, in turn, is helping to reduce poverty levels in rural areas.

Policy implications

Access to adequate food is a human right. In fact, one of the objectives of the *UN Millennium Development Goals* is to “*eradicate extreme poverty and hunger*”. In this context, Chile can be considered a success story and Bolivia as one of the most challenging situations, at least within Latin America.

The social profile of the rural elderly described in chapter III offers some opportunities for policy interventions. Although the majority of the rural elderly live in medium-size households (defined as between three and four members), most remain heads of larger families with many surviving children. Consequently, measures aimed at strengthening intergenerational solidarity could be considered. Literacy programs aimed at increasing the human capital of the elderly and enlarging the coverage of social security are also discussed as potential areas for policy intervention.

The Bolivian government has recently (March 2004) issued a Declaration of Principles on Population and Sustainable Development. This document is concerned with (1) “territorial planning” issues with the aim of better organizing the use of natural resources and occupation of national territory in the country and (2) the creation of favourable conditions for the full exercise of people’s sexual and reproductive rights. In the context of population policies, three areas of action are identified. The first area of action suggests the development of demographic scenarios of population distributions. These demographic scenarios could be used to estimate the size of the labour force that could be productively absorbed on a sustainable basis in given rural areas. This would allow for the identification of rural areas that are over-populated and those that are under-populated and, as such, could be considered as suitable destinations for rural-to-rural migrants. The second area of action would be to encourage the elderly presently living in poor and stagnant rural communities to migrate to cities in order to live closer to or with their children who have already migrated. The benefits of such a programme would be twofold: First, the elderly would receive support from their families and would be able to access better healthcare services and

enjoy more opportunities for an active social life. Second, land would become available to those who remain in the countryside. The third area of action suggested is the creation of favourable conditions for the exercise of the reproductive rights, particularly in rural areas. The rationale behind this recommendation is that preventing unwanted pregnancies will result in smaller families with larger economic capacities and, as such, children would be able to support their elderly parents when they reach an advanced age.

The final chapter examines the Chilean government's strategy for overcoming poverty and the impact of social expenditures on income distribution, as well as other government policies and programmes which specifically address the elderly. It is possible to draw some relevant policy lessons from the Chilean experience. However, it would be naive to think that these can be mechanically applied in the Bolivian context.

The last section of the final chapter discusses a proposal made by the UN Economic Commission for Latin America and the Caribbean (ECLAC) which aims to empower young adults through improving access to land as a way of introducing innovations, improving management and coping with gerontocracy. An earlier intergenerational transfer of property or effective control on agricultural assets would be a key factor for this change. The discussion concludes by suggesting that in some rural contexts, such as in the Bolivian Altiplano, where peasants' properties are unable to sustain a household because of its small size and deteriorated condition of the soil, an alternative approach may be more appropriate. In an overpopulated rural area, such as the Bolivian Altiplano, promoting and facilitating in the migration of the elderly to the cities where they can live with their grown children may serve as a more effective strategy for improving access to land for young adults. In this approach, the transfer of property and control of land from an older to a younger adult is not necessarily between a parent and child, but to any young adult already in control of agricultural land who can in this way increase his/her assets to a sustainable size.

I. Introduction

Population ageing has emerged as a global phenomenon in the wake of the now virtually universal decline in fertility and mortality. The process may be confidently predicted for decades to come. The shift towards older age structures has recently gained increased importance in developing regions where a number of countries have started worrying about the long-term implications of population ageing, both for the society as a whole and for the elderly population itself. Actually, the global concern on rapid population growth that dominated the international scene during the 1960s, 1970s and 1980s has given place during the 1990s and these first years of the XXI Century to a growing global concern about population ageing.

The international community is aware that the reduction in the demographic dependency ratio during the early and intermediate stages of the ageing process can be seen as a favourable condition for development in developing countries. Nevertheless, there is concern about the satisfaction of basic needs and quality of life of the rapidly growing population of old people as well as the increasing pressure that this population is expected to put on social services and social security systems in the long run. The importance given to these issues is clearly expressed in the declaration and plan of action adopted by Second World Assembly on Ageing convened by the United Nations (Madrid, April 2002). That assembly adopted a positive approach when considered ageing as the natural consequence of a major achievement of Humankind – rising life expectancy- and looks at it as a challenge more than as a problem.¹ Among the central themes addressed by the Plan of Action are: “*the achievement of secure ageing, which involves reaffirming the goal of eradicating poverty*”, “*empowerment of older persons*”, “*enjoyment of economic, social and cultural rights*” by them, “*gender equality*”, “*provision of health care, support and social protection*” and “*recognition of the situation of ageing indigenous persons*”.

The Plan of action addresses rural ageing as part of the issue of “rural development, migration and urbanization” and –in that frame- stresses that “*Policies and programmes for food security and agricultural production must take into account the implications of rural ageing*”. Although there is a rather long list of guidelines for action organized around two main objectives –improvement of living conditions and alleviation of marginalization-- there is not a clear strategy. This task was expected to be undertaken, in the case of Latin America, by the Regional Intergovernmental Conference on Ageing: Towards a regional strategy to implement in Latin America and the Caribbean the Madrid International Plan of Action on Ageing (ECLAC, Santiago, Chile, 19-21 November 2003). Following the priority directions given by the Madrid International Plan of Action, the proposed regional strategy adopts objectives and recommendations for action in three wide areas: (1) “*older persons and development*”, where issues such as poverty eradication and social security are addressed; (2) “*advancing health and well-being into old age*”, and (3) “*ensuring enabling and supportive environments*”. Nevertheless, the strategy does not go into the specific needs and conditions of rural populations and, consequently, does not propose specific objectives and guidelines for action different from the general ones, which seems to mainly respond to the needs and conditions prevailing in the urban settings.

¹ **Report of the Second World Assembly on Ageing**, (Madrid, 8-12 April 2002) **Political Declaration Article 2**: “We celebrate rising life expectancy in many regions of the world as one of humanity’s major achievements. We recognize that the world is experiencing an unprecedented demographic transformation and that by 2050 the number of persons aged 60 years and over will increase from 600 million to almost 2 billion.... The increase will be greatest and most rapid in developing countries where the older population is expected to quadruple during the next 50 years. This demographic transformation challenges all our societies to promote increased opportunities, in particular opportunities for older persons to realize their potential to participate fully in all aspects of life.”

A. *The issue: The ageing of rural populations and its implications for development policies*

In developing countries, population ageing often starts earlier and proceeds faster in rural settings than in the cities. This is because rural-to-urban migration can sharply reduce the proportion of adults and therefore increase the proportion of older persons 'left behind' in the villages. Migration of retired urban residents to their villages of origin can also contribute to rural ageing.

Rural population ageing inevitably affects the demographic composition of households, the structure of rural labour force, the supply of agricultural labour and its division by age and sex. Ageing can thus represent a major challenge to rural communities and the sustainability of agricultural/rural development. Thus, rapid ageing can produce new types of households, e.g. households consisting of only the elderly, or only grandparents and grandchildren. In a context of rapid social and technological changes, population ageing tends to undermine the traditional high status of the elderly, while the capacity of the households to adapt to modernisation and technological innovations may diminish. Furthermore, in the absence of institutionalised support systems, older people may find themselves without adequate support and even become an unsustainable economic burden for their families. Older rural women may be especially disadvantaged.

On the other hand, the ageing-induced changes pose new and potentially beneficial economic, societal and policy opportunities. The elderly are a significant resource as care-givers, guardians of old traditions, and a source of knowledge and community memory. The policy context should enable them to play an active role in rural development. Likewise, return migration of older persons to rural areas can represent a significant input for the rural economy in terms of capital and expertise, and policies should therefore be geared towards maximising developmental benefits that return flows of older persons can generate.

Given the expected demographic dynamics in developing countries, rural development will be increasingly dependent on older persons. Therefore, the agricultural sector urgently needs (a) to develop a sound understanding of the linkages between population ageing, food security and agricultural/rural development in different contexts; and (b) to ensure that food and agriculture strategies are designed and implemented in ways that take into account the challenges and opportunities brought about by rural ageing.

This study is a first step in a long road towards a better understanding of the nature, dimensions and magnitudes of population ageing in rural areas of Latin America and its implications for rural development and food security, which might be useful for policy making.

B. *Focussing on two countries: Bolivia and Chile*

Latin America is too diverse to be treated as a whole. Thus, this exploratory study will focus into two countries of the region, Bolivia and Chile, which are in different stages of socio-economic development and demographic change.

Chile is more advanced than Bolivia in terms of demographic transition and urbanisation and, consequently, in the process of population ageing. These differences --that will be analysed in following chapters-- are mainly the demographic expression of different levels of economic and social

development. As it can be seen in table I-1, the Chilean GDP per capita is five times the Bolivian one. With a higher income per capita, Chile is able to spend eight times what Bolivia is spending on health per inhabitant. This larger capacity to invest in human capital is also apparent in the indicator of education: the Chilean enrolment in high school almost doubles the Bolivian's one; furthermore, the percentage of illiterate among women is four times larger in Bolivia than in Chile and twice larger in the case of men. These facts reveal a significant gender gap in the case of Bolivia, as far as access to education is concerned.

The incidence of poverty in both countries expresses the big differences between Bolivia and Chile in terms of economic development and their national capacity to meet the basic social needs of their peoples. Around the year 2000, the percentage of rural households below poverty line was in Bolivia four times higher than in Chile. Furthermore, in the case of rural Bolivia, eight out every ten poor households were living in extreme poverty, while in Chile they represented only a small proportion. These differences are dynamics, since the situation in Bolivia around the year 2000 seems to be rather stable and chronic, while in Chile it is only a moment in a relatively sustained process of poverty reduction.

Table I-1. Bolivia and Chile: Indicators of social and economic development		
<i>Indicator</i>	<i>Bolivia</i>	<i>Chile</i>
Total Gross Domestic Product (million US dollars) year 2000	8,356	75,516
GDP per capita (US dollars) year 2000	1,003	4,965
Importance of Agriculture in GDP - 2000	14.3%	5.6%
Public expenditure on health as % of GDP - 1997	1.7%	2.5%
Public expenditure on health per capita (US dollars) - 1997	17	142
Illiteracy in population 15 and over years old – 2000		
Women	20.6%	4.5%
Men	7.9%	4.1%
Gross enrolment rate in secondary level of education - 1997	48%	82%
Poverty in rural areas circa year 2000		
Poor households	76%	19%
Indigent households	60%	7%
Source: ECLAC, Anuario Estadístico de América Latina y el Caribe 2002		

Further to the above considerations, it is worth noting that there is fresh demographic information on both countries provided by their recent population and housing censuses, conducted in Bolivia in 2001 and in Chile in 2002.

3. *The purpose of this study*

The present study is aimed at analysing the ageing process in these two contrasting national and rural settings, as well as exploring its implications for food security and rural development. The analysis will flow through three levels: (a) contrasting the ageing process and the social profile of the elderly population in rural areas with the urban areas in both countries; (b) comparing rural populations of both countries, and (c) trying to deepen the analysis by comparing different rural settings within each country. Thus, in the case of Bolivia the rural population will be divided according to the already

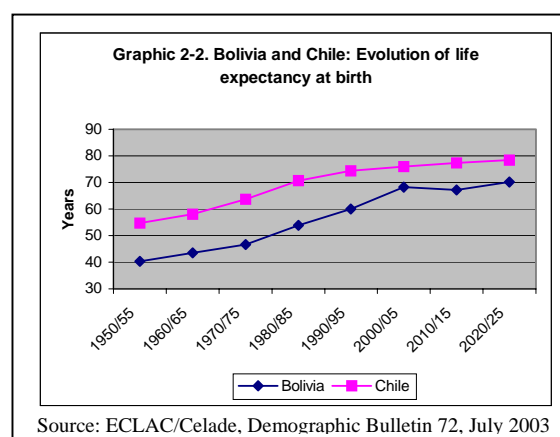
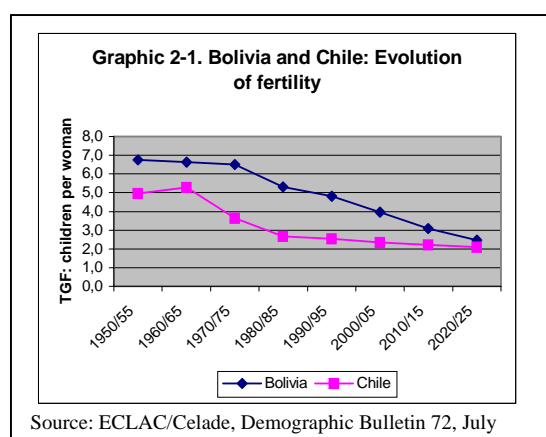
traditional distinction of ecological layers: The Altiplano or Highlands, the Valleys and the Oriental plains. The two first are the traditional settlement areas of indigenous peoples (Aymaras and Quechuas) and are basically rural societies of peasants; while the latter, settled mainly during the second half of the last century by domestic migrants, is the most dynamic region of the country and the centre for the export oriented modern agriculture. In the case of Chile, a comparison will be made between a southern area, traditional lands of the Mapuche indigenous people, with relatively high incidence of poverty (regions VIII and IX) and an area closer to Santiago, dominated by export oriented agriculture and with relatively lower incidence of poverty (regions VI and VII). In order to make easier the reading, we will label the first group of regions as “Araucania”, which means the territory of the “araucanos”, name given by the Spaniard conquerors to the Mapuche people. The second group of regions will be labelled as “Zona Huasa”, being the “Huaso” the Chilean cowboy, although with a cultural tradition quite different from the American cowboy.

This introductory chapter will be followed by an analysis of the ageing process in Bolivia and Chile from a demographic point of view (chapter II); the comparative analysis of the social profile of the elderly populations in different rural contexts (chapter III); a discussion about the implications of ageing for food security and rural development (chapter IV) and, finally, some policy oriented conclusions of the study (chapter V).

II. Population ageing in Bolivia and Chile¹

A. Demographic transition and population ageing at national level

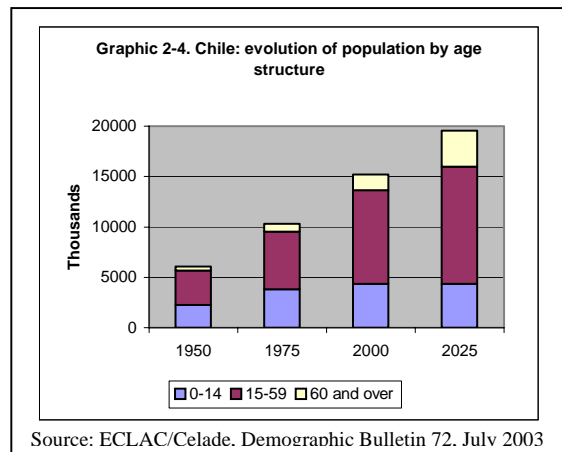
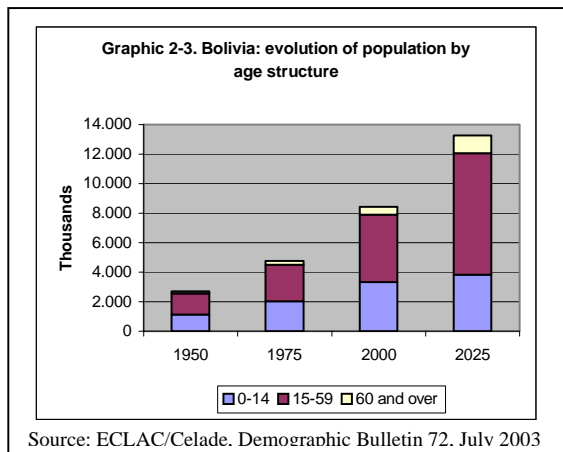
As it can be expected from their different paths and degrees of advancement in terms of economic and social development, Chile has had an earlier and in some way faster demographic transition than Bolivia. In Chile, fertility decline started already in the 1930s, with a rapid fall from the late 1960s onward. Bolivia maintained a very high level of fertility --close to seven children per woman-- until the mid 1970s, starting then a sustained fall in its fertility levels. (See graphic 2-1 and supporting data in the statistical annex)



Mortality decline and its most significant consequence --increase in life expectancy at birth-- happened also considerably earlier in Chile than in Bolivia. (See graphic 2-2)

Roughly speaking, there is a delay of about thirty years between the demographic transitions of both countries.

¹ Population projections used in this chapter are taken from “Latin America and the Caribbean: Population Ageing 1950-2050”, published in July 2003 by UN Economic Commission for Latin America and the Caribbean (ECLAC) and the Latin American and Caribbean Demographic Centre (CELADE), which is its Population Division. The population estimates and projection for Bolivia correspond to those published in “Bolivia: estimaciones y proyecciones de la población 1950-2050” OI series No. 202, La Paz, December 2002, prepared jointly by the Bolivian National Institute of Statistics, CELADE and UNFPA. The population census of 2001 was the most recent source of information used. The population estimates and projections for Chile correspond to those published in “Chile: Estimaciones y proyecciones de población por sexo y edad. Total del país. 1950-2050” OI series, NO. 97, Santiago, Chile, which were prepared jointly by the Chilean National Institute of Statistics and CELADE. In these projections it is assumed that life expectancy at birth will converge in the countries of the region around 80 years in the final quinquennium of the projection (2045-2050). Thus, it is assumed that in the case of Bolivia it will raise from a current estimated level of 63.8 years to 76.4 years by the end of the period. In the case of Chile, the expected change is from 76 years now to 80.7 near 2050. As far as fertility --the most influential variable in the projection-- is concerned, these projections assume that after reaching the “replacement level” of 2.1 TFR in Chile at 2025-2030 and in Bolivia 10 years later, it will stabilize at a TFR of 1.85 children per woman --the level reached by Cuba already in the early 1980s-- first in Chile (2030-2035) and 15 years later also in Bolivia.



These differences in timing and path between the demographic transitions of Bolivia and Chile have obviously affected their processes of population growth and ageing. In the case of Bolivia, population growth remained relatively high (around 2.3% per year) during the last four decades of the XX century; while in Chile, it declined during that period from 2.4% at the beginning of the 1960s to an estimated 1.2% during the current quinquennium.

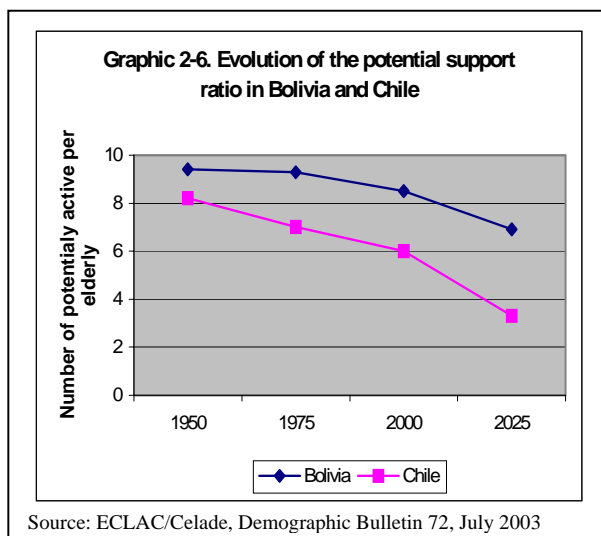
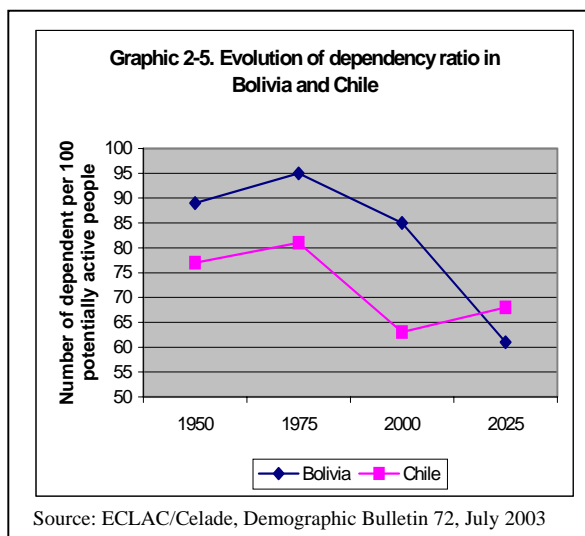
Population growth rates are expected to have a sustained decline in both countries during the first half of the current century, although they will be always significantly higher in Bolivia than in Chile.

The process of ageing is also more advanced in Chile than in Bolivia, as shown in the graphics 2-3 and 2-4. Actually, strictly speaking, the age structure of the Bolivian population started “ageing” only after 1975, since during the previous 25 years its children population (0-14) was growing at a faster rate (2.4%) than its adult population (2.1%) and than the elders (2.2%). In the case of Chile, the ageing process was already on during the period 1950-1975, since its elderly population was growing at a faster pace (2.7%) than its adult population (2.0%) and its children population (2.1%).

As far as the future is concerned, the faster phase of the ageing process is expected to take place in Chile during the current quarter of century, when the elderly population is likely to be growing at a rate of 3.3 per cent per year, much higher than the 0.9 expected for the adult population and the 0.0 foreseen for the children. In the case of Bolivia, the pick is likely to occur during the second quarter of this century, when the elderly population would be growing at 3.4 per cent per year, the adult population, at 1 per cent and the children population at a negative rate of -0.5 per cent.

Thus, while the elderly population was estimated to represent 10.2 per cent of the total population of Chile by the year 2000, its share of the total population of Bolivia was only 6.4 percent. By the year 2025 these values are expected to increase to 18.2 and 9.0 respectively.

Absolute numbers assess better the challenge of population growth than percentages or rates. Thus, in 2000 the elderly population of Bolivia was estimated to be 535,500 people, with an annual net increase of 16,000. For Chile, these figures are 1,550,300 people, with an annual increase of around 48,000.



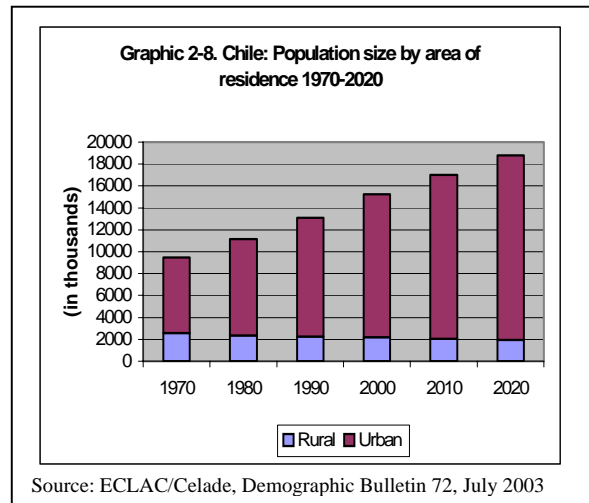
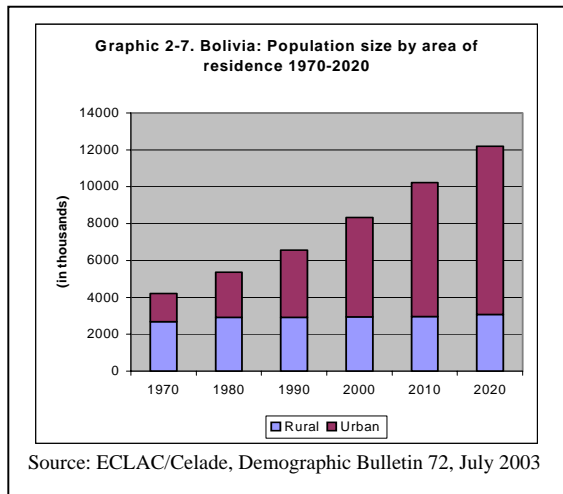
Do these changes in the age structure facilitate or hamper social development? The behaviour of the Dependency Ratio (DR) gives us a first approach to answer. The DR is the number of persons assumed to be economically dependent because of their age (0-14 plus 60 and over) per one hundred people in productive age (15-59 years old). The evolution of the DRs in the figures below show that (a) DR has been considerably lower in Chile than in Bolivia since 1950 until the present days, although near 2025 this situation will change; and (b) the ageing of the population has produce a very significant reduction of the DR, in the case of Chile between 1975 and 2000 and in the case of Bolivia also through out the period 2000-2025, creating favourable demographic conditions for social and economic development. Nevertheless, these “favourable demographic conditions” imply a big challenge: to provide decent, productive employment to a rapidly growing labour force.

The “Potential Support Ratio” (PSR) offers a complementary angle to look at this issue. It focuses only on the ratio between the elderly and the population in working age, ignoring the children population. As seen in the graphic above: (a) the PSR has been declining and will continue to decline in both countries, with a sustained reduction in the average number of potential productive people per old person; and (b) the number of potential supporters per old person has been and will continue to be consistently lower in Chile than in Bolivia.

B. The process of ageing in the rural and urban contexts

Urbanisation has gone hand in hand with demographic transition in Latin America along the last five decades. On one side the rural areas showed to be unable to absorb the rapid growth of the rural population resulting from high levels of fertility and declining mortality. From the 1950s through the 1980s large numbers of rural people migrated towards urban areas, mainly looking for a job. On the other side, the urban environment, with better education and health services as well as growing working opportunities for women –particularly in the tertiary sector—,

facilitated the adoption of the small family norm by an increasing number of couples and, consequently, the reduction of both fertility and mortality.



Urbanisation in Bolivia started later than in Chile. Actually, Bolivia is expected to reach only by 2015 the level of urbanisation that Chile had reached already in 1970 (73% of people residing in urban areas). In other words, when Chile had in 1970 close to $\frac{3}{4}$ of its population living in urban areas, Bolivia was still a predominantly rural country, with only 36 per cent of urban population.

As seen in the graphics 2-7 and 2-8, in both countries the size of rural populations remained almost stable between 1970 and 2000, and they are expected to remain almost unchanged for the coming twenty years. In contrast, along the same three decades the urban population of Bolivia has grown from 1.5 million to 5.4 million, which means 3.5 times. During the same period, the urban population of Chile has passed from 6.9 million to 13.0 million, which means 1.9 times. This means that all the natural population growth of rural areas has been transferred to urban areas mainly through rural-urban migration.² This is a major issue, since natural population growth in rural areas (births less deaths) was --at least in the case of Bolivia-- very fast. As recently as 1994 a fertility survey found that the observed TFR of the rural population in the Andean areas (Altiplano and valleys, where more than 80 per cent of the rural population live) was as high as 6.4 children per woman, and in the plains in the East of the country, it was even higher: 7.1 children per woman.³

A recent study done at the UN Economic Commission for Latin America and the Caribbean (ECLAC/Celade) provides interesting findings with regard to the role of rural-to-urban migration in urban growth for the population 10 years old and over.⁴ In the case of Bolivia, migration is accountable for 62.8 percent of the increase of the male population in urban areas along the period 1980-1990 and 65.3 percent in the case of women. These values decrease considerably in the following decade, being 27.7 and 30.4 respectively. In the case of Chile, which is in a much

² It must be taken into consideration that part of the urban growth and rural reduction in population size result from the re-classification of localities, which -- because of their own population growth-- become "urban".

³ Encuesta Nacional Demográfica y de Salud (ENDSA) 1994

⁴ Rodríguez Vignoli, Jorge. "Migración interna en América Latina y el Caribe: estudio regional del período 1980-2000", ECLAC/CELADE, Santiago, Chile, January 2004.

more advanced stage of urbanisation, these figures are 20 per cent both for men and women for the period 1990-2000.

Nevertheless, the question in this study is how much rural-urban migration has affected population growth and age structure in rural areas. Data and findings from the same study and estimates build on them, shown in the table 2-1, lead to the following conclusions as far as the population of 10 year old and over is concerned⁵:

- As expected, the more advanced is the process of urbanisation, the larger is likely to be the demographic impact of rural urban migration on the rural population and the smaller its impact on urban growth. Thus, in the case of Chile during the 1990s, while the 383 thousand net transfer of people from rural areas to urban areas made grow the latter by only 3.8 per cent, it implied a lost of 18.4 percent of the rural population.
- The impact of rural-urban migration has been very important in Bolivia, particularly during the 1980s, when it was large enough to more than neutralise the population growth, leading to a negative balance of 100 thousand people. Amazingly, in only ten years that segment (10 and over) of the rural population lost almost one quarter.

<i>Population 10 years old and over (in thousands)</i>	<i>Chile</i>		<i>Bolivia</i>	
	<i>1990</i>	<i>2000</i>	<i>1990</i>	<i>2000</i>
total	10.294	12.240	4303	5878
Size of urban population (observed)	8.510	10.537	2516	3691
Size of rural population (observed)	1.783	1.703	1.787	2.188
Expected urban population without migration during previous 10 years	(a)	10.155	1950	3349
Expected rural population without migration during previous ten years	(a)	2.085	2.353	2.529
Net rural-urban migration estimated during 1980-1990 and 1990-2000	(a)	383	566	342
Net gain by migration in urban areas during 1980-1990 and 1990-2000	(a)	3,8%	29,0%	10,2%
Net lost by migration from rural areas during 1980-1990 and 1990-2000	(a)	18,4%	24,1%	13,5%
Observed increase in rural population along 1990-2000	NA	-81	NA	400
Estimated increase in rural population without migration along 1990-2000	NA	302	NA	742
Annual natural growth rate 1990-2000	NA	1,58%	NA	3,54%
Annual net growth rate 1990-2000	NA	-0,46%	NA	2,05%

Source of data: CELADE, Rodriguez 2004
(a) These figures are not shown because Chile changed in its 1992 census the definitions of rural and urban and, consequently, migration estimates for period 1980-1990 are not fully comparable with other periods and countries.

- During the 1990s, there is a large difference between these countries in terms of estimated natural population growth, with Bolivia growing very fast (3.5%) and Chile at a slower pace

⁵ Information on migration is not collected in the censuses for people younger than 10 years old.

(1.6%), clear sign of the advanced stage of its demographic transition. Nevertheless, both countries lost a significant share of its rural population because of rural-urban migration (13.5% and 18.4% respectively), which resulted in moderate net growth of rural population in the case of Bolivia and negative growth in the case of Chile.

A critical finding for this study is that these massive transfers of population from rural to urban areas have been selective by age and sex. The data in the table 2-2, based on the same CELADE's study, show the contribution of migration to urban growth and, by defect, its impact on rural population.

Age groups	Bolivia				Chile			
	1980-1990		1990-2000		1980-1990		1990-2000	
	women	men	women	men	women	men	women	men
10 and over	65	63	30	28	12	8	20	20
Elderly								
60-64	39	30	7	-12	-1	-6	13	10
65-69	49	50	6	-17	1	-5	7	8
70-74	45	39	10	7	4	5	8	9

Source of data: CELADE, Rodriguez, 2004

A first conclusion, consistent with the accumulated knowledge on this matter, is that the contribution of the elderly migrants to the growth of their respective age groups in the urban areas was in these two countries and during the two periods under consideration significantly below the contribution of the population 10 and over. Actually, figures not shown in the above table indicate that the higher migration rates are in the age groups between 15 and 29 years old.

During the 1980s the two countries behaved in a very different way. In the case of Bolivia, the contribution of the elderly rural migrants to the growth of their respective age groups in the urban areas was as high as 50 per cent for the age group 65-69. Consequently, there was an important lost of old people in the rural population of Bolivia due to migration. Nevertheless, since young people migrated in an even higher proportion, the net effect was the ageing of the rural population structure. The same happened in Chile during the 1980s, although in that case there was apparently a return migration to the rural areas among the men 60-69 years old.

During the 1990s these trends changed drastically in direction and magnitude. In Bolivia there was a strong reduction in the propensity of the rural elderly to migrate towards urban areas, with a net gain for the male rural population in the groups 60-69; while, in Chile, the propensity to migrate increased during this period, with small differences between men and women.

Three main conclusions seem to arise from these data:

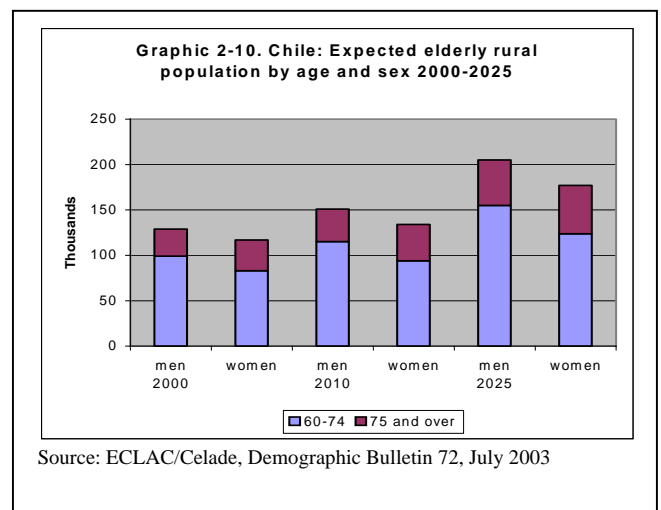
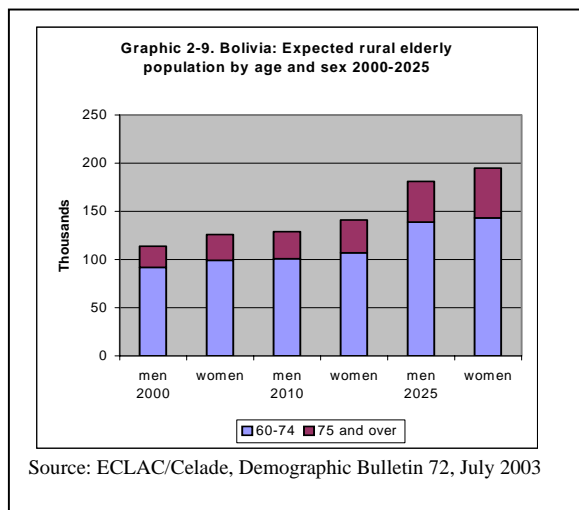
- Firstly, even with drastic changes in direction and magnitude, rural-urban migrations have been contributing to the ageing of the rural population.
- Secondly, at least during some periods and particularly in ages 60-69, women seem to have a higher propensity than men to leave rural areas and lower propensity to return to rural areas. This phenomenon is very clear during the 1990s in Bolivia and during the 1980s in Chile.

- Finally, return migration to the rural areas seems to be significant among men 60-69, but not among men 70-74, who are the most vulnerable. This phenomenon could imply a “masculinisation” of the rural population.

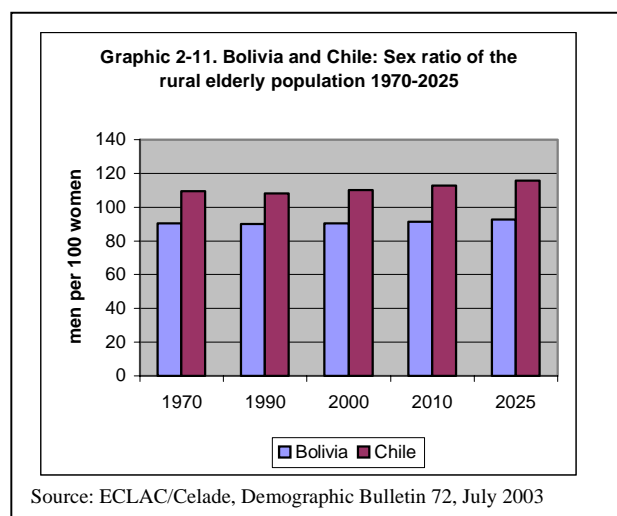
C. Trends of the elderly rural population in Bolivia and Chile

Demographic projections give us an idea of what is likely to happen with the elderly population residing in rural areas of Bolivia and Chile in the years to come.

Graphics 2-9 and 2-10 show similarities as well as differences between Bolivia and Chile. While the total rural population is expected to have small changes in size during the first quarter of the current century in both countries – increase of 7 per cent in Bolivia and decrease of 13 per cent in Chile—their elderly segment is expected to grow 58 per cent in the former and 56 per cent in the latter during the same period.

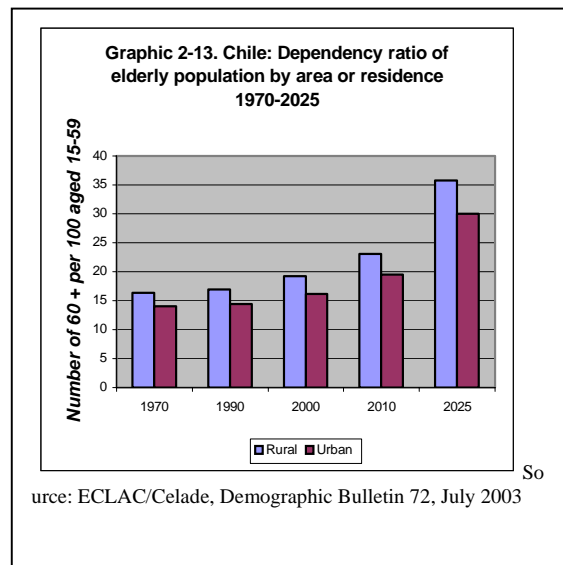
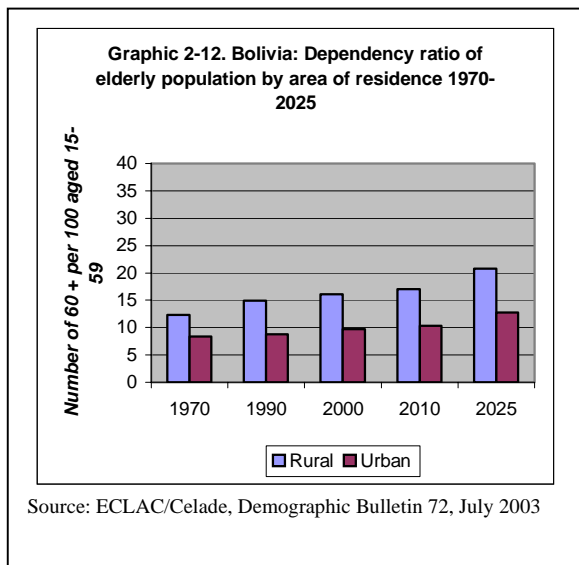


Nevertheless there is an important difference: In Bolivia the population of old women is larger than the one of men and will remain larger, while in Chile old men in rural areas are more in numbers than women and the difference between sexes is expected to increase. These imbalances are clearly expressed in the sex ratio of the rural elderly population (see graphic 2-11). Thus, in Chile a “masculinisation” of the elderly is expected, with the excess of men over women increasing from 8 percent in 1990 to 16 percent in 2025. In Bolivia, instead, there is a deficit of men, which is likely to decrease from 10 percent to 7 percent.



A third meaningful finding is that the relative importance of the eldest among the elderly – the age group 75 and over years old—will increase in the case of Bolivia, particularly among women (from 22% in 2000 to 27% in 2025), while in Chile is likely to remain almost unchanged during the same period (24% for men and 30% for women). It is worth noting that, because of the higher life expectancy of women, there are more women than men in this age group also in Chile, where there are more men than women in the rest of the rural population.

The rapid increase of the dependency ratio of the elderly, id est, the number of old people per 100 people in working ages (15-59 years old) is a meaningful consequence of these specific patterns of ageing in the rural areas of Bolivia and Chile, highly affected by selective migration by age and sex. As shown in the graphics 2-12 and 2-13, the dependency ratio for the elderly population has been --and is likely to be along the first quarter of the current century-- significantly higher in rural areas than in the urban areas of both countries. Although Bolivia is at an earlier stage than Chile in terms of demographic transition and population ageing, has a larger difference between urban and rural dependency ratio than Chile. Actually, along the period 1990-2025 the dependency ratio of the elderly has been or is likely to be around 65 percent higher in rural areas than in urban areas in the case of Bolivia and around 19 percent higher in the case of Chile. This is, certainly, a demographic structural disadvantage for the rural elderly, particularly acute in the case of Bolivia because of the gap between rural and urban areas and in Chile also because of the advanced stage of population ageing.



III. Social profile of the rural elderly population

The previous chapter focused on the process of ageing in Bolivia and Chile, paying special attention to the rural population. This chapter will focus on the elderly people in rural areas, using information provided by the population censuses conducted in these two countries in 2001 and 2002 respectively^{1,2}

A. Purpose and approach

Two main issues related to the well being and food security of the elderly will lead this analysis: (a) how much support are the old men and women likely to receive from their families and in the household where they live? Variables such as the size of the household, the relationship of the elderly with the head of the household, their civil status and the number of surviving children will be examined in an attempt to respond this question. And (b) how well equipped are the elderly to sustain their lives by themselves? To answer this question attention will be paid to literacy and education level attained by the elderly as well as to their current economic activity and protection by social security schemes.

While looking at these variables, attention will be paid to the gender gap and to the rural-urban gap. An attempt will be also made to compare the social profile of the elderly between regions of the two countries, which differ in terms of rural development and ethnic composition.

B. Contrasting rural contexts

For this analysis, Bolivia will be divided into three ecological regions, which are the Altiplano or highlands, the Valleys and the Oriental Plains. The two first are the traditional settlement areas of indigenous peoples (Aymaras and Quechuas) and are basically rural societies of peasants; while the latter, settled mainly during the second half of the last century by domestic and foreign migrants, is the most dynamic region of the country and the centre for the export oriented modern agriculture. In the case of Chile, a comparison will be made between a southern area –the “Araucania”-- traditional lands of the Mapuche indigenous people, with relatively high incidence of poverty (administrative regions VIII and IX) and an area closer to Santiago, the capital city, dominated by export oriented agriculture and with relatively lower incidence of poverty (regions VI and VII), which will be called “Zona Huasa”.

1. Bolivia³

Stretching in a broad arc across western Bolivia, the Andes define the country's three geographic zones: the mountains and Altiplano in the west, the semitropical Yungas and temperate valleys of the eastern mountain slopes, and the tropical plains (llanos) of the eastern lowlands.

The “Altiplano” is a lofty plateau 805 kilometres long and 129 kilometres wide, around four thousand meter above sea level, which lies between the western range (Cordillera Occidental) and the eastern range (Cordillera Oriental) of the Andes. For statistical purposes this region consists of three

¹ The information provided by these censuses is basically comparable since they have followed the methodology recommended by the UN and both countries participated in the workshops organized by the “Mercosur” (International organization looking for the economic integration of the countries of the Southern part of Latin America) previous to the 2000 round of population censuses, aimed at increasing data comparability.

² Both censuses define *rural* as human settlements with less than 2000 inhabitants, although Chile excludes from that category those settlements between 1001 and 1999 where at least 50% of its economically active population work in secondary activities.

³ Internet, The World Factbook 2002, Country Profiles, Bolivia.

departments –La Paz, Oruro and Potosi—where the three cities of the same names are located. La Paz is the larger city of the country and government’s headquarters. The Altiplano concentrates 39 percent of the urban population of the country and 46 percent of the rural population, which is predominantly Aymara.

The Valleys region is located on the eastern slopes of the Cordillera Central, which descends gradually in a series of complex north-south ranges and hills, with rivers draining to the east. The valley floors range from 2,000 to 3,000 meters above sea level and this lower elevation means milder temperatures than those of the Altiplano. Two of Bolivia's most important cities, Sucre and Cochabamba, are located in basins in this region. For statistical purposes the departments of Cochabamba, Chuquisaca and Tarija form this region. As far as population is concerned, the cities of this region concentrate one fourth of the urban population of the country and its country side, one third of the rural population of Bolivia, which in this region is predominantly Quechua.

The Plains include all of Bolivia north and east of the Andes. Although comprising over two-thirds of the national territory, the region is sparsely populated and, until recently, has played a minor role in the economy. Differences in topography and climate separate the lowlands into three areas. The flat northern area, made up of Beni and Pando departments, consists of tropical rain forest. The central area, comprising the northern half of Santa Cruz Department, has gently rolling hills and a drier climate than the north. Forests alternate with savannah, and much of the land has been cleared for cultivation. Santa Cruz, the largest city in the lowlands, is located here, as are most of Bolivia's petroleum and natural gas reserves. The south-eastern part of the lowlands is a continuation of the Chaco of Paraguay.

The economic dynamism of Santa Cruz City and the expansion of the agriculture frontier have attracted migration towards the Plains, with its population growing much faster than the other two regions. At present the three departments included in this region –Santa Cruz, Beni and Pando—contain 35 percent of the urban population and only one fourth of the rural population of Bolivia.

2. Chile

Chile has a territory 4,200 kilometres long and only 177 kilometres wide in average, oriented North-South between the Andes and the Pacific Ocean, with a variety of climatic conditions. Most of its population live in the so call Central Valley, a one thousand kilometres long fertile strip of land between the Andes Cordillera to the East and the Cordillera of the Coast, close to the ocean. The central Valley is densely populated, with a chain of medium size cities between Santiago --the capital city with more than five million inhabitants-- in its northern extreme, and Puerto Montt in the extreme south, where the valley plunges into the sea and the Cordillera of the Cost becomes a multitude of islands.

The two rural contexts selected for this study are located in the central/south (the Araucania) and central/north (the Zona Huasa) parts of the Central Valley. Although neighbours, these two contexts are different in terms of climate, agriculture and ethnic composition. Regions VI and VII, called here “Zona Huasa”, are subhumid, with 5 to 6 months dry. Most of its fertile land is used for intensive irrigated agriculture, orchards, vineyards and annual crops. Regions VIII and IX –called in this study “Araucania”⁴—has a humid climate, Southern natural forest, pine-trees plantations, pastures for cattle and annual crops.

⁴ Araucanía is the name officially given to region IX, which here, for practical purposes, is extended to region VIII.

In terms of population, the “Araucania” has around 2.5 million inhabitants, with about one fourth of them belonging to the Mapuche indigenous people. “Zona Huasa”, instead, has a smaller population (1.5 million), without indigenous settlements. As far as poverty is concerned, the administrative regions composing the “Araucania” showed in 2000 the highest incidence of poverty in the country (region VIII, 27.1% and region IX, 32.7%), while the “Zona Huasa” had a lower incidence, closer to the national average of 20.6% (region VI, 20.6% and region VII, 25,3%).

C. Demographic distribution and ethnic composition of the elderly

The elderly population is unevenly distributed among these different contexts. In the case of Bolivia, 58 percent of the rural elderly population reside in the Altiplano, 30% in the Valleys and only 12% in the Plains. In the case of Chile, the Araucania concentrates 31% of the total rural elderly population and the Zona Huasa, 25 percent. (See table III-1)

1. Ethnic composition

The elderly populations of these regions are very unlike in terms of ethnic composition (see table III-2).

In Chile, the Mapuche population, although the larger among the indigenous peoples⁵ of the country, represents only 3.5 percent of the national elderly population and –even in the case of the Araucania, their original territory, they represent no more than 25 percent of old men and 28 percent of old women.

The presence of indigenous peoples is certainly much more important in the case of Bolivia, particularly in the rural areas of the Altiplano and the Valleys, where they used to live already when the Spaniard conquerors invaded their territories and submit them. The Aymara people have a strong presence in the rural elderly population of the Altiplano (60%) where they are concentrated. The Quechua people --the largest ethnic group of the Valleys (74%) -- represent the second ethnic group of rural Altiplano (22%), being an important minority in the elderly population of the rural Plains. The third group in importance in the rural elderly population cannot be consider properly as an “ethnic group”, since it includes all those people who declared in the census to have Spanish as their language in childhood. Among them are descendants of the Spaniards who colonised Latin America, of “mestizos” and of acculturated indigenous people who adopted the dominant language for their daily life. This heterogeneous group of “Spanish speakers from their childhood” is the dominant one among the elderly rural population of the Plains (66%), is an important minority in the Valleys (22%) and is almost absent (5%) in the Altiplano. Finally, it is only in the Plains where there are significant minorities of other indigenous ethnic groups and of foreigners (those who spoke a foreign language in their childhood)

2. Numeric importance of the elderly populations

As shown in table III-1, the percentage of elderly in the total population is higher in rural areas than in urban areas at national level in both countries. This finding is also valid for Bolivia (there are no data

⁵ There are also Aymara people, settled mainly in the northern region of Chile, close to the border with Bolivia, and the “Pascuenses”, from Easter Island)

for Chile) at regional level, where the proportion of old people is also higher in the rather stagnant rural areas than in the dynamic ones. Thus, the lowest proportion of old people is found in the urban area of the Plains (4.4%) and the highest, in the rural area of the Altiplano (11.6%). This finding is consistent with the general hypothesis that the more expulsive is a locality in terms of migration, the older tends to be its population structure. This is the expected result of a larger propensity to migrate among the youth and young adults than among the elderly, as shown in chapter II.

3. Sex ratio

Elderly men and women are also unevenly distributed among contexts. Data in the last column of table III-1 permit to conclude that in all these regions, in Bolivia and in Chile, sex ratio is higher in rural areas than in the urban ones. This happens in the total population as well as in the elderly population. It is worth noting that in the rural areas of Chile and in the Plains region of Bolivia old men exceed old women in number. Thus, even though at the national level there are 14% more old women than old men in Bolivia and 21% more in the case of Chile, in the rural areas of the latter there are 13% more old men than old women, while in the Bolivian Plains this figure is as high as 33 percent.

There is, certainly, a “masculinization” of elderly populations in rural areas, which might find divers explanations. In some cases, along decades, women have migrated more than men from rural areas towards urban areas. This seems to be an explanation valid for Chile and perhaps also for the Altiplano and Valleys in Bolivia. In other cases –as the region of the Plains in Bolivia—sustained in-migration flows of predominantly male workers from other regions of the country looking for a job, either in the export-oriented modern agricultural sector or as small farmers in the settlement programs for peasants, have resulted in the observed high sex ratio among the elderly. It is worth noting that the Plains have higher sex ratios than the other two ecological regions of Bolivia both in urban and in rural areas. Actually, if compared with the Valleys, the difference is as high as 15 percentual points between urban areas and 47 point between the rural areas of both regions.

Previous analyses of the 1976 and 1992 population censuses on internal migration in Bolivia, as well as a recent study based on the 2001 census,⁶ support this explanation. Thus, the latter shows that the Altiplano has had a net lost of 10.6% of its population because of life inter-regional migration. In the case of the Valleys, that figure is very low (only 1.8%) because this region has been like a bridge, losing many people (14.2% of out-migration) but receiving even more (16.0% in-migration). The Plains is the winning region: its net migration rate is 14.6 percent and almost one fourth of its population was born in another region.

4. In summary

- The rural elderly population of the Altiplano – where six out of every ten Bolivian rural old people live— is composed almost exclusively by indigenous people, predominantly Aymara, and has the highest proportion of persons 60 and over years old in the country.
- The rural elderly population of the Valleys –only half the size of the Altiplanian one—is composed mainly by indigenous Quechua people, although with a significant minority (22%) of Spanish speaking people. Its population age structure is younger than the Altiplanian one, but significantly older than the age structure of the rural Plains.

⁶ Vargas, Melvy. 2003. Unpublished draft report of a study on internal migration in Bolivia.

- The Plains region contains only 12 percent of the rural elderly population of Bolivia. This rather small group—only 32 thousand people in 2001—has a multiple ethnic composition, dominated by the internally heterogeneous group of those who spoke Spanish in their childhood. In terms of age structure, the Plains region has by far the youngest rural population of the country.
- The Araucania contains almost one third of the rural elderly population of Chile. Although this region concentrates most of the Mapuche people living in rural areas, this ethnic group represents only one fourth of the total rural elderly population of that region.
- The “Zona Huasa” –where one fourth of the Chilean rural elderly population live—is almost entirely composed by non-indigenous people, most of them descendants from the Spaniard colonial settlers.
- Finally, in the five regions under analysis sex ratio is systematically higher in rural areas than in urban areas. This rural-urban gap is very big in the Chilean regions and in the Bolivian Plains, apparently due to sustained over female out-migration in the former and, in the latter, to sustained over male in-migration.

D. Support received by the elderly from their households and their families

The information collected by the population censuses makes possible to explore how much support are likely to receive the old men and women of the rural areas from the households where they reside and from their families.

1. Household size

It is assumed here that the larger is the number of persons composing the household, the greater is likely to be the support received by the elderly from the other members. This is certainly only a first approach to this issue, since the support provided by the household to its old member(s) will certainly depend not only from its size, but also from its composition. In other words, a rather small household, composed by an elderly widow, her only son and her daughter in law, both of them working and hiring income, could be more supportive than a larger household constituted by a couple of elderly, their daughter and five grand-children of school age. Nevertheless, a deeper analysis on this matter—which can be easily made with the same census data bases—will remain as a pending task.

a. Gender and rural-urban gaps

Table III-3-A shows that while in Chile the average household size is almost the same (around 3.5 members) for men and women both in rural and urban contexts, in the case of Bolivia, the urban households where the old people live have one member more in average (4.4) than the corresponding households in the rural areas (3.4). This seems to be the expected consequence of the erosion produced by the higher propensity of the youth and young adults to migrate from the country side to the cities. Thus, when eventually the grandparents decide to migrate, they are likely to find a well consolidated household of one of their children to receive them.

Furthermore, the percentage of old people living alone (one person households) or with only another person—who may be also an elder—is in the case of Bolivia significantly higher in the rural areas than in the urban ones. Thus, one out of five old persons in the rural areas of Bolivia lives alone. In the other extreme of the distribution, only 26 percent of the old men and women residing in rural areas of

Bolivia live in a relatively large household of five or more members, compared to 42 percent of the elders residing in urban areas.

As far as gender gap is concerned, it is worth noting that in the rural areas of Chile the proportion of old men living alone (15%) is significantly higher than the proportion of women in that condition (9%). The opposite happens in the urban areas, where there are more women than men living alone.

b. Comparing rural contexts

Going deeper in the analysis through table III-3-B, it can be stated that, while there are no significant differences between the two Chilean regions under consideration, there are important and meaningful differences among the three Bolivian regions. In effect, while the average size of the households containing old people is as large as 4.7 in the Plains, it is 3.6 in the Valleys and only 3 in the Altiplano.

The gap between the Altiplano and the Plains become apparent when the two extremes of the distribution are examined. Thus, while almost one fourth of the elderly lives alone in the Altiplano, there are only 12 percent of old men and 7 percent of old women in that precarious condition in the rural Plains. On the other side, while only one out of every five old persons in the rural Altiplano can live in a rather large household of 5 or more members, that is the condition for 45 percent of the elderly population in the rural Plains.

Thus, while the situation in the Bolivian Valleys is similar to the one found in the Chilean regions, the most supportive household environment is found in the Plains and the weaker, in the Altiplano.

2. Relationship with the head of the household

This variable gives lights about how much the elderly are in control of the household and its resources and also about the support and care that they might receive from the other members. As in the previous variable, the implications of a given relationship with the head of the household will depend on a wide array of conditions, such as the size and age composition of the household, the property of land and the number of economically active members. Nevertheless, we will assume for the following analysis that a household headed by a relative is likely to be a more supportive setting for an old person than a household headed by himself or herself. This hypothesis seems to be particularly appropriate in the case of the old women who use to play the role of head of the household only when they never had a husband or they have lost him.

a. Gender and rural-urban gaps

Table III-4-A shows important differences between sexes, but similar patterns in rural and urban areas and in both countries. Around four out of every five old men remain in control of their household and few of them, especially in Bolivia, allow their wife to play the role of head of the household. Instead, an important proportion of old women –larger in rural than in urban areas— are the wives of the heads of the household. Nevertheless, the most frequent status for old women –exception made of rural Chile—is that of head of the household (between 39 and 45 percent), position which might mean power together with low supporting household environment.

More old women than men live in households headed by a son, a daughter, a son-in-law or a daughter –in-law or a relative. This situation is more frequent among old women living in the urban areas of

both countries and, therefore, might be associated with rural-to-urban migration of widows moving with their relatives who migrated earlier.

b. Comparing rural contexts

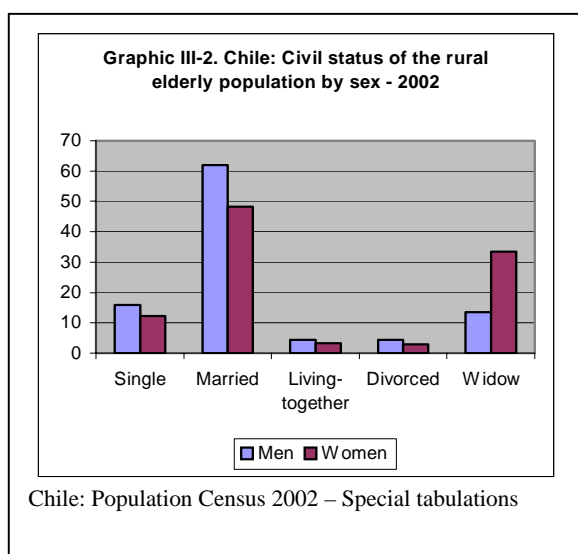
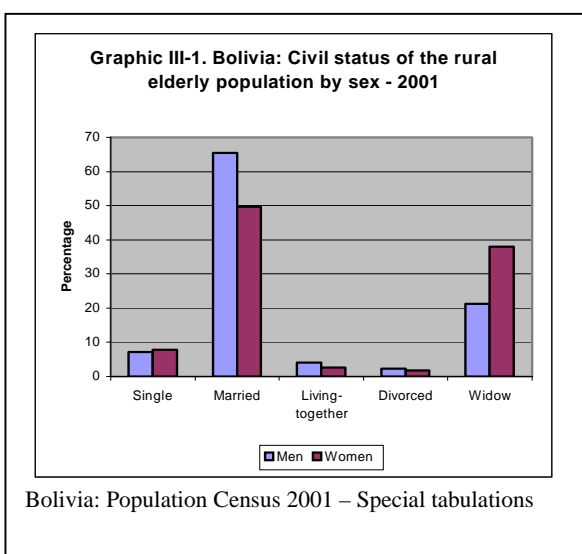
Again the Araucanía and the “Zona Huasa” are very similar, while meaningful differences appear among the three Bolivian regions. The Altiplano has the highest proportion of old men and old women in the position of head of the household and the Plains, the lower (see table III-4-B). The opposite happens with the proportion of old women who are the wife of the head of the household as well as with those who live in the house of a son, a daughter or other relative. This last situation is more frequent –both for women and men—in the Plains than in the Valleys and in the Valleys than in the Altiplano.

Thus, while in the Plains only 29 percent of the old rural women have the burden of being head of a household and 69 percent of them live in a more protected setting with their husbands and/or with a son or daughter or in the house of other relative, in the case of the Altiplano these figures are 47 percent and 52 percent respectively. The Valleys region is in between the other two regions.

3. The civil status of the elderly

The common wisdom says that being a widow or an old single woman without children to protect her in her elder years is a vulnerable condition. The same is thought about divorced woman. Perhaps it is the same for men, but there is the social expectation that men can survive by themselves, thesis that has not been proved to be valid. On the other hand, having a stable partner, both for women and men, is expected to mean protection.

Other common wisdom, in this case supported by empirical observation, is that it is easier for men than for women to re-marry and find a stable partner after losing their partners because of death or separation. This seems to be the case for the populations under study.



a. *Gender and rural urban gaps*

As shown in table III-5-A, the most evident finding, valid for the urban and rural populations of Chile and Bolivia, is that the condition of married or “living together” is much more frequent among old men than among old women. On the other side, widowhood and divorce are much more frequent among old women than among old men in both countries and in both contexts. Singlehood doesn’t show a clear trend.

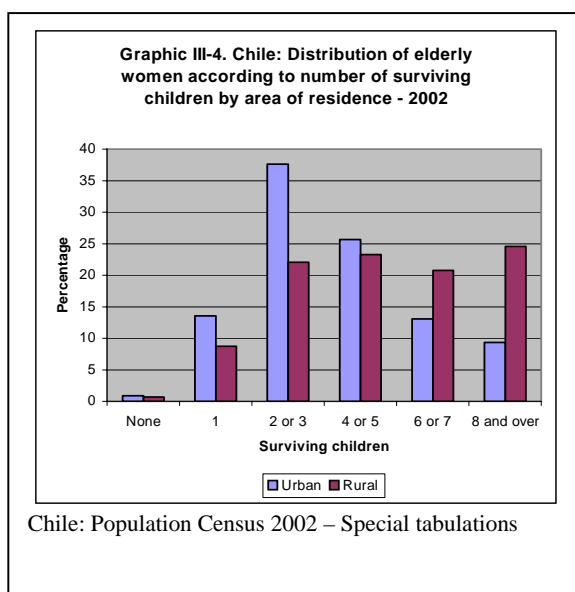
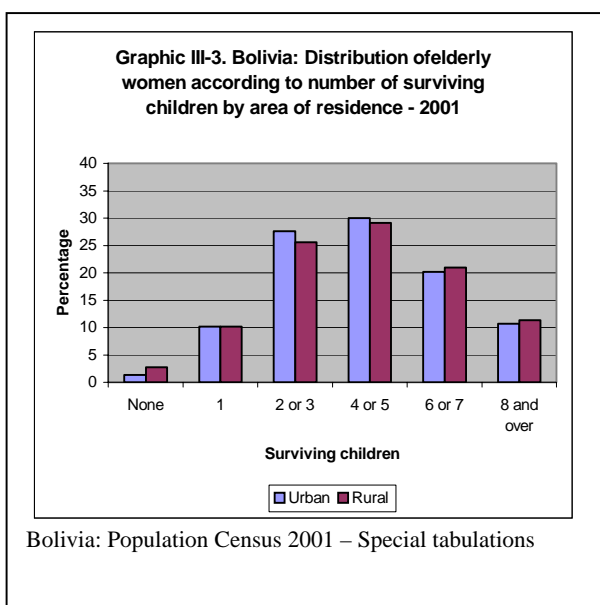
As shown in the graphics III-1 and III-2, the elderly rural populations of Bolivia and Chile have a similar pattern of distribution by civil status. There are, nevertheless, some meaningful differences. In fact, there are more singles --particularly among men-- and fewer widows in Chile than in Bolivia.

As far as rural-urban gaps are concerned, it is worth noting that there are larger proportions of married women and smaller proportions of widows in the rural areas than in the urban ones. Instead, the condition of divorced is more frequent in the urban populations, particularly among women.

b. *Comparing rural contexts*

Once again, the Araucania and the “Zona Huasa” are very similar, while some differences appear among the three Bolivian regions (see table III-5-B). The most outstanding are a relatively smaller proportion of widows and a larger proportion of single males in the Plains. There are also in the Plains, if compared with the other two regions, a lower percentage of old people married and a higher percentage of “living together”, but if both categories are combined, the differences among regions become very small.

In summary, gender differences seem to be much more significant than those found between countries and between rural and urban contexts, as far as the civil status of the elderly is concerned. If the assumptions made at the beginning of this section are valid, the combined effect of lower life expectancy among men and their propensity to marry women younger than them or to re-marry after divorce or widowhood, result in a larger proportion of men counting with the support of a spouse in their elderhood. From this point of view, men seem to be better protected than women.



5. The number of surviving children

Censuses inquire about the number of surviving children only for women. Nevertheless, it seems reasonable to assume that the information about the surviving children of old women that will be presented in this section is valid also for the old men.

The surviving children of women 60 years old and over are expected to be adults in working ages, able to transfer income to their parents and to take care of them. Therefore, it can be assumed that the larger is the number of surviving children the old men and women have, the larger is also the support and care that they are likely to receive from them.

Certainly, the actual support and care that the old parents receive from their adult children depend on several factors, such as their economic activity and income level as well as the cultural norms and patterns that shape the relationship between parents and children in a given community. These are subjects that should be addressed in future studies on this matter.

a. Rural-urban gap

The distribution of old women according to the number of surviving children is almost the same in the rural and urban contexts of Bolivia, with over 60 percent of them counting on at least four sons and daughters (see table III-6-A). This is not the case in Chile, as it can be seen in the graphics III-3 and III-4 above. In fact, the Chilean rural old women have more surviving children than the Bolivian old women and much more than the Chilean urban old women.

Thus, in Chile, while 52 percent of urban old women have three or less surviving children, for the rural old women that figure is only 32 percent. On the other side, an amazing 25 percent of the latter have 8 or more children able to support them, while only 9 percent of the urban women count with such a large family support.

These differences between countries and between urban and rural areas within the same country seem to be explained in a large extent by different degrees of advancement in the demographic transition. Most of the children of the women 60 and over years old around 2001 in Bolivia and 2002 in Chile were born between the 1940s and the 1970s. The distribution observed for the urban Chile would be the result of a declining infant mortality followed by a sustained decline also in fertility. The distribution in rural Chile, with a large percentage of women with 8 or more surviving children, would be the result of high levels of fertility accompanied by a significant and sustained decline in child mortality during that period. Finally, in the case of Bolivia, at least in its rural population, the combination of high fertility with still high levels of child mortality might be the explanation for a much lower percentage of old women with 8 or more surviving children than in rural Chile. These are only tentative hypotheses which ask for further research on this matter.

b. Comparing rural contexts

Although there are significant differences among the five regions under analysis, the most outstanding finding is the large family support that the elderly population have everywhere (see table III-6-B). Thus, even in the Altiplano and Valleys of Bolivia, where this support is the lowest, there are at least 61 percent of old women (and likely also men) who can count with the support of four or more sons and daughters, probably all of them adults able to generate income or provide care and protection. The

situation is even better in the Araucanía, where that percentage is 70 percent, as well as in the “Zona Huasa” (73%) and in the Bolivian Plains (75%).

It is worth noting that the three regions with the relatively lowest family support for the elderly are those with the highest proportion of indigenous people and –as it will be shown in the following chapter—with the highest incidence of poverty.

E. Capacity of the old men and women to support themselves

In the previous section attention was paid to the role that the household and the family seem to play in the safety net providing protection and care to the elderly. Here, the analysis will be focussed on some characteristics of the old women and men that habilitate them to generate income or to get social protection.

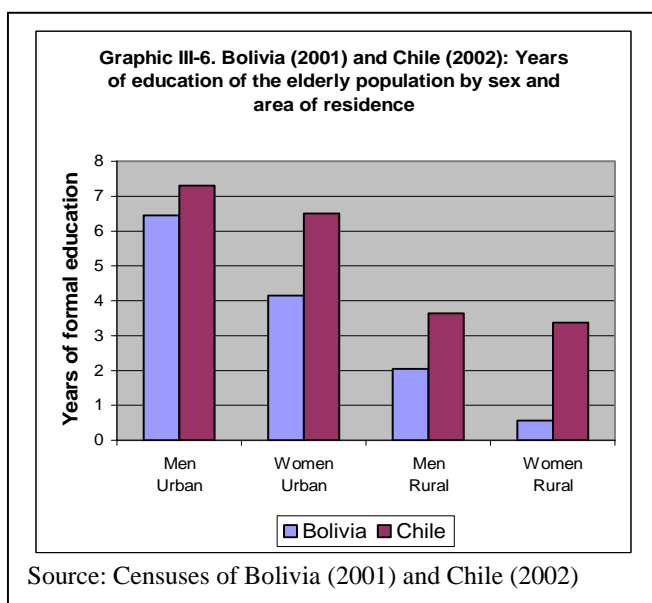
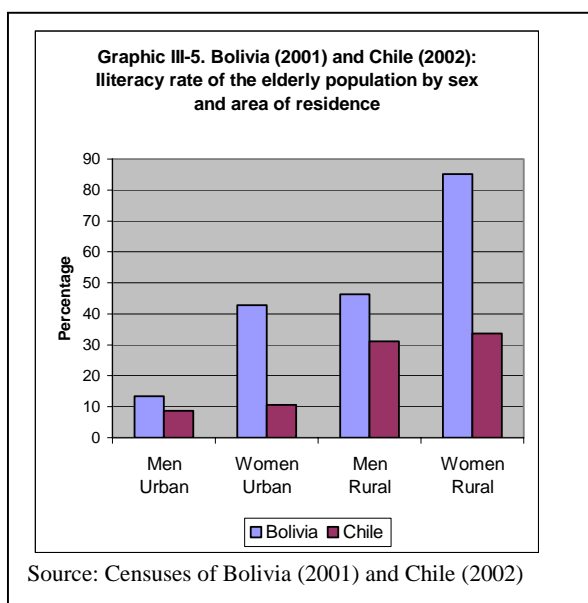
1. Education

The ability to read and write as well as the level of formal education attained are considered here as “human capital”. Therefore, there is the assumption that the higher is the education level of the old men and women under analysis, the larger will be their capacity to participate along their lives in activities with higher levels of productivity, income and social prestige, and to be associated to social security schemes. If so, they can be also expected to be out of poverty and hunger.

1.1. Literacy

a. Gender and rural-urban gaps

As shown in the graphic III-5 and III-6, as well as in table III-7-A, there are big urban-rural gaps in both countries, although in both contexts the proportion of literate people is systematically higher in Chile than in Bolivia. The gender gap is also different in the two countries. Although the percentage of literate people is higher among men than among women, this gender gap is small in Chile and very large in Bolivia. The situation of the old women in the Bolivian rural areas is the worst, with 85 percent of them unable to read and write. Only one third of the rural Chilean old women have this limitation.



b. Comparing rural contexts

Table III-7-B allows us to compare regions. In Bolivia, the gender gap is very large in the rural Valleys and Plains (29 percentual points) and even larger in the rural Altiplano (44 percentual points). Nevertheless, there are important differences among the three regions as far as the proportion of literate elderly is concerned, particularly among women: only around 13 percent of old women are literate in the Valleys and the Altiplano, while that figure raise to 36 percent in the Plains.

The situation in Chile is quite different. While in the Araucania the male literacy rate among old people is a little bit higher than the female one, in the Zona Huasa that rate is higher among women than among men.

1.2. Formal education level

a. Gender and rural-urban gaps

Table III-8-A allows us to go deeper in the analysis of education. The rich information provided in that table can be summarized by the estimated average number of years of formal education completed by the elderly several decades ago. The historical development gap between Bolivia and Chile becomes apparent. The difference between urban old men in the two countries is rather small, since there are in both close to one third who attended the educational system for eleven or more years. The gap becomes larger if the urban women are compared: 6.5 versus 4.1 years of schooling.

In the rural contexts of Chile the gender gap is small: 3.6 and 3.4 years of formal education for men and women respectively (see the graphic above). The lowest levels and grater gender gap is in the rural Bolivia, with only two year of schooling as average for men and only 0.6 for women. Actually, 91 percent of the latter never attended the school (83%) or attended it for less than two years. (8%). Sixty seven percent of the rural old men are in the same condition.

c. Comparing rural contexts

When the five regions are compared (see table III-8-B), the same picture found with literacy appears. In Chile, very small differences between the two regions, with women being less educated than men in the Araucania and a little bit more educated than men in the Zona Huasa. In Bolivia, once again the condition of old women in the Plains is relatively better than the one found in the Valleys and the Altiplano; nevertheless, the large majority of the rural women of the Plains never attended the school (59%) or completed less than five years of schooling (additional 28%).

2. Sources of income

Working contributes always, in one way or another, to the satisfaction of the worker's needs and those of his/her family, with feeding as perhaps the most important one. In modern societies there is the expectation that after sixty or sixty five year of age, the time for retirement comes. It happens, nevertheless, that in developing countries --particularly in their rural areas--, where social security schemes are not well developed, working is unavoidable, even only for surviving.

In this section information on the economic activity of the elderly will be examined from a gender perspective, comparing rural and urban areas as well as rural populations residing in different rural contexts.

2.1. Work/income Status

In this subsection the elderly population will be classified according to four categories: (a) those who work for income, (b) those who obtain their income from a rent or a pension, (c) those who work at home or as unpaid family workers, and (d) those that neither work nor receive a pension or a rent.

a. *Gender and rural-urban gaps*

As shown in table III-9-A, there are different patterns of distribution among these four categories for men and women. Working for income, receiving a rent or pension or simply doing nothing is more frequent among men than among women. In contrast, working at home or as unpaid family worker is the most frequent status among women.

Within each country, having a rent or a pension as the main source of income is more frequent in urban areas than in rural areas. This source of income is also more important as economic support for the elderly in Chile than in Bolivia, particularly in the rural areas. Actually, while in Chile 45 percent of the rural old men and 25 percent of women enjoy this benefit, in Bolivia this figures are only 4 percent and 2 percent respectively. The other face of the coin is, naturally, working for income, status which is much more frequent in rural Bolivia than in Chile. Thus, while in the former 67 percent of old men and 29 percent of old women have to work for income, in the latter these figures are only 28 percent and 4 percent respectively.

c. *Comparing rural contexts*

The main differences between the two Chilean regions –as seen in table III-9-B—deal with getting a pension or a rent and working at home or as unpaid family worker. In the more modernised Zona Huasa there are larger proportions of both men and women benefited by a pension or rent than in the Araucania. On the contrary, working at home or as unpaid family worker is more frequent among rural old men in the Araucania (19%) than in the Zona Huasa (9%).

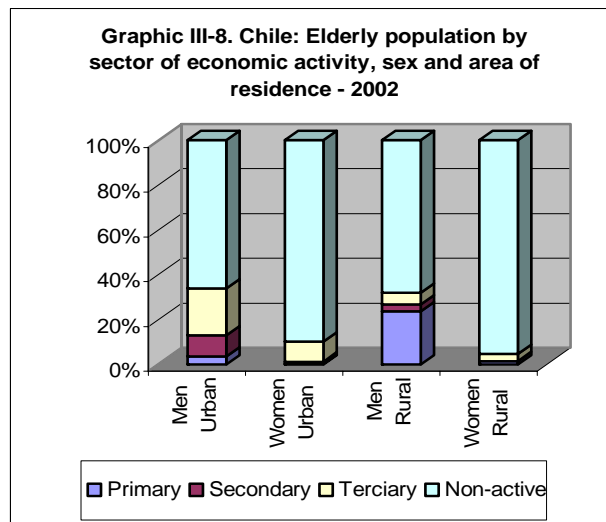
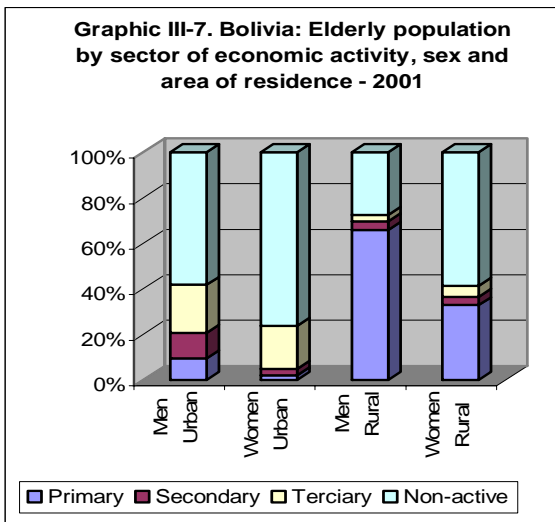
In Bolivia, benefiting of a pension or rent is uncommon in the three regions. The main difference is among women in the status of “working for income”, since this condition is more frequent in the Altiplano (42%) than in the Valleys (29%) and in the Plains (25%). There are also significant differences among regions as far as the status of “working at home or as unpaid family worker” is concerned. In the case of old men, this condition is more frequent in the Altiplano (15%) than in the Valleys (12%) and in the Plains (6%). In contrast, for the old women this condition is more frequent in the Plains (62%) or in the Valleys (60%) than in the Altiplano (47%).

2.2. Sector of activity

In the previous sub-section “working at home” –an important and frequent women’s activity—was included among the various forms of contributing to family income. Although this is a productive activity –normally unpaid and unrecognized as such–, those who perform it are not included within the economically active population, which will be analysed here.

a. *Gender and rural-urban gaps*

As it can be appreciated in table III-10-A and in the graphics III-7 and III-8 below, the large majority of Chilean elderly are not economically active. The same happens in a lesser extent in urban Bolivia. Nevertheless, in rural Bolivia as many as 72 percent of old men and a significant 41 percent of old women work in productive activities.



In urban areas, as expected, those who are economically active work mainly in the tertiary sector – services—and in a lesser degree in the secondary sector --industry.

In rural areas the two countries differ not only in terms of activity rates, but also in terms of the distribution of the economically active population by sectors. In Bolivia the large majority work in the primary sector, likely most of them in agriculture, both old men (91%) and old women (79%). In Chile, instead, there is at least one quarter of active men that work in the secondary and tertiary sectors. The difference is even greater in the case of Chilean rural active elderly women who are mainly occupied in services. Thus, while almost one third of all Bolivian elderly women living in rural areas work in primary – presumed agricultural—activities, only one percent of those women in Chile work in that sector.

c. *Comparing rural contexts*

The distribution by sector of activity of the relatively few elderly Chilean people who are economically active is almost the same in the two regions under analysis in this study (see table III-10-B). In Bolivia, instead, there are some meaningful differences at least among old women, since for men the three regions reproduce the same pattern as well as similar rates of activity. Thus, among the active women, there is a larger proportion engaged in the primary sector in the Altiplano (86%) than in the Valleys (67%) and the Plains (51%). The opposite happens with their participation in the tertiary sector, which is higher in the Plains (34%) than in the Valleys (19%) and the Altiplano (8%). All this happens framed by significant differences in the women’s rate of economic activity, with the Altiplano having the highest rate (48%), followed by the Valleys (33%) and the Plains (26%).

2.3. *Occupational category*

In this context of relatively low level of economic activity of the elderly, with the exception of rural Bolivia, it might be useful for the objectives of this study to look at how the old people relate to work. Four main conventional categories are used here: The position of “employer” means by itself some degree of economic power. “Self employed” means often property of means of production, which in rural areas can be property or access to land. “Salaried worker” includes a wide spectrum of positions in terms of income and stability; in rural areas often implies low salary and unstable occupation because of seasonal variations in the agricultural labour market. “Unpaid family worker” seems to be the weaker position in terms of returns. The category “other” has different meanings in these two countries. In Bolivia it contains unspecified answers, while in Chile means “employee for domestic work”.

a. *Gender and rural-urban gaps*

The category of “salaried worker” is in both countries and in both contexts more frequent among old men than among old women, while the category of “unpaid family worker” is more frequent among women. Nevertheless, there are more differences than similarities between contexts and countries from a gender perspective (see table III-11-A).

Let us focus on the rural populations. There are very few employers (less than 1 percent) among the economically active elders in Bolivia. Instead, in rural Chile they represent 6 percent of active men and 8 percent of active women. But this is a statistical fiction, since that 8 percent of the economically active women, who represent only 4.5 percent of the Chilean elderly rural women, means an insignificant 0.4 percent of that group.

The condition of “salaried worker” is very important among both men and women in rural Chile, representing 50 percent and 33 percent of the economically active people respectively. Instead, in rural Bolivia this condition is rare, particularly among women.

The condition of “self employed”, although frequent in Chile, is by far the most common condition in rural Bolivia, where it can be considered almost a synonymous of “peasant” working his or her own land, often with the help of unpaid family workers. This is certainly a position of control of resources. Nevertheless, the population censuses do not give information on how large those resources could be. This finding, combined with a low proportion of elders in the condition of “unpaid family workers” in both countries, confirm that they are in command of productive activities when there is access to land.

b. *Comparing rural contexts*

Table III-11-B shows important differences between rural contexts in both countries. In the case of Chile, the participation of old women in economic activity is so low that it is better to focus on old men only. In the Araucania the condition of “self-employed” is the most frequent (48%) followed by “salaried workers” (38%), while in the Zona Huasa most of the active elders are salaried workers (61%) and the condition of “self employed”, is in a distant second place (28%). The Araucania has also fewer employers (4%) and more “unpaid family workers” (9%) than the Zona Huasa, where those figures are 6 percent and 4 percent respectively. This picture is consistent with the socio-economic characteristics of these two regions: the Zona Huasa with a dominant modern export-oriented

agriculture and the Araucania, with an important minority of Mapuche people and a relatively large number of small land owners.

Although the general picture in terms of employment categories of rural Bolivia remains valid for the three regions, there are important differences among them. Perhaps the main one deals –as already mentioned-- with the women’s rate of economic activity, with the Altiplano’s rate almost doubling the one of the Plains. On the other side, the Plains are the only region with a significant presence of “employers and entrepreneurs” (3%) and of salaried workers (19%) among the rural old men. Nevertheless, in all three regions the dominant category is by far the “self-employed”, probably a peasant.

F Main findings

- Both in Bolivia and in Chile, the proportion of elders is larger in the rural population than in the urban one and, within the former, it is the largest in the less developed rural contexts with the higher concentration of indigenous population (Bolivian Altiplano).
- A “masculinisation” of the elderly population has been taking place in the rural areas of both countries.
- Older population structures in rural areas and the “masculinisation” of their populations of elders seem to be the result of selective migration by age and sex: larger specific rural-to-urban migration rates among youth and young adults and among women, as well as –at least in the case of Bolivia-- a larger proportion of men than of women in the labour migration flows from less developed to more dynamic regions.
- In Bolivia, the support received by the rural elderly from their households and families seem to be larger in the Plains than in other ecological regions since there the elderly have the larger household’s average size, the larger average number of surviving children and the larger proportion of elders living in households headed by adult sons, daughters or other relatives who can provide them care and protection.
- The weakest situation in terms of support from the households and families seems to be in the Bolivian Altiplano, where a relatively large proportion of the elders live alone or in small households and have relatively less number of surviving children to support them. Furthermore, a larger proportion of them, among both men and women, remain as heads of their households, despite their advanced age.
- The situation of the rural elderly in the Valleys’ region of Bolivia and in the two Chilean regions under consideration is in-between those described for the Bolivian Plains and the Altiplano.
- When the civil status of the elders is considered, significant differences appear between genders, but not among rural contexts. Men seem to count with more family support than women, since a large proportion of the former has a wife or a partner to help and accompany them, while among women there is a significant proportion of widows.
- When the educational capital of the elders is considered, big gaps appear between old men and women, rural and urban areas, as well as between countries and among regions within them. As expected, the educational level of the rural elders is significantly lower than the one of their pairs in urban areas. Ceteris paribus, the Chilean elders are much more educated than the Bolivian ones. Furthermore, while among the Chilean rural elders there is not a gender gap, in Bolivia there is an important gender gap both in urban and in rural areas.
- There is a close association among the rural elders between the gender education gap and the importance of indigenous groups in the population. Thus, looking at the extreme situations, the larger gender education gap, with women in the worst condition, is found in the Bolivian rural

Altiplano, where 95 percent of elderly population are indigenous. In contrast, the smaller gap –and with old women showing a slightly higher level of education than men—is found in the Zona Huasa of Chile, where the indigenous presence is less than one percent.

- The same happens when the working/income status of the elders is examined. While in Chile a large proportion of old men and a significant proportion of old women in the rural areas benefit from a pension or a rent, in rural Bolivia, this source of income is almost unknown and a large proportion of men and a significant proportion of women are forced to work in order to survive.
- Again, significant differences appear among rural contexts, particularly when the working status of elderly women is examined. Thus, while in rural Chile there is an insignificant proportion of old women who are economically active, in the case of Bolivia it vary from one fourth of them in the Plains to one half of them in the Altiplano.
- In rural Bolivia, most of the elders who are economically active work in the primary sector –likely in agriculture—as self-employed, probably with the help of some unpaid family workers. This status is also frequent among active old men in the Araucania and, in a lesser degree, in the Zona Huasa. The contrary is found with the status of “salaried worker”, which is the most frequent condition among the active old men in the Zona Huasa, second in importance in the Araucanía and the Bolivian Plains, and insignificant in the Valleys and the Altiplano.

Although there is a diversity of social profiles within each one of the five elderly populations under analysis, the following would be the typical profiles of an old man and an old woman in the two most contrasting rural contexts: The Bolivian Altiplano and the Zona Huasa in Chile.

The typical old man of the rural Altiplano is Aymara, head of a relatively small household of three people, married to a woman of his age or younger than him, with four surviving children. Although some of them migrated to urban areas, they keep in touch with him and help him with work and money. In his childhood he had the opportunity to attend a rural school for only two years. He works a small piece of land inherited from his father, only a fraction of the parcel that he received during the Agrarian Reform in the early 1950s. That is his main source of food and income.

There are two profiles for a typical old woman of the rural Altiplano: (a) She is the wife of the head of a relatively small household of three people, with four surviving children who help them as in the case of the typical old man. She was born in an Aymara family. In her childhood her parents didn’t send her to the school, giving preference to her brothers; consequently she is illiterate. She works at home and helps her husband cultivating their land, when needed. (b) She is a widow head of small household of three members, with four surviving children. Although her children help her, she has to work the land she inherited from her husband to survive. As the other type, she is illiterate.

The typical rural old man of the Zona Huasa speaks only Spanish and carries a Spanish family name. He is the head of a household of five people, where he lives with her wife and other three members of his large family of six surviving children. As his wife, he attended the school for three years and can read and write. He doesn’t need to work since he receives monthly his pension from the social security and also counts, when needed, with the support of his sons and daughters, all of them more educated than him and most of them living in cities and having a regular job.

The typical rural old woman of the Zona Huasa could be the spouse of this typical old man. She doesn’t work for money and is used to spend most of her time at home doing daily domestic work for her family.

Tables of Chapter III

Table III-1 Bolivia (2001) and Chile (2002): Distribution of the elderly population by sex and area of residence at national level and in selected regions								
	Men		Women		Both sexes		% of elderly in total P.	Sex ratio
BOLIVIA	N*	%	N*	%	N*	%		
Total Population	4124	100	4150	100	8274	100		99
<i>Urban</i>	2518	61	2648	64	5166	62		95
<i>Rural</i>	1606	39	1502	36	3108	38		107
Elderly population								
National	264	100	308	100	572	100	6.9	86
<i>Urban</i>	126	48	160	52	286	50	5.5	79
<i>Rural</i>	138	52	148	48	286	50	9.2	93
Highlands	131	50	154	50	285	50	8.3	85
<i>Urban</i>	52	20	68	22	120	21	5.9	77
<i>Rural</i>	79	30	87	28	166	29	11.6	91
Valleys	77	29	97	32	174	30	7.3	79
<i>Urban</i>	36	14	49	16	86	15	6.5	73
<i>Rural</i>	41	16	48	15	89	15	8.4	86
Oriental Plains	56	21	56	18	112	20	4.6	98
<i>Urban</i>	38	14	43	14	80	14	4.4	88
<i>Rural</i>	18	7	14	4	32	6	5.0	133
CHILE								
Total Population	7448	100	7669	100	15117	100		97
<i>Urban</i>	6366	85	6724	88	13090	87		95
<i>Rural</i>	1081	15	945	12	2026	13		114
Elderly population								
Country level	743	100	941	100	1684	100	11,1	79
<i>Urban</i>	600	81	814	87	1414	84	10,8	74
<i>Rural</i>	143	19	127	13	269	16	13,3	113
Araucania	143	19	171	18	315	19	N.A.	84
<i>Urban</i>	96	13	129	14	225	13	N.A.	74
<i>Rural</i>	48	6	42	4	90	5	N.A.	112
Zona Huasa	90	12	100	11	190	11	N.A.	91
<i>Urban</i>	54	7	68	7	122	7	N.A.	79
<i>Rural</i>	37	5	32	3	68	4	N.A.	115

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

* Thousands.

Table III-2 - Bolivia (2001) and Chile (2002): Ethnic composition of rural elderly population (60 and over years old) by sex, at national, urban/rural and regional levels

	NATIONAL		URBAN		RURAL							
	Men	Women	Men	Women	Country		Highlands		Valleys		Oriental plains	
BOLIVIA												
Language	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Quechua	31,2	35,1	19,8	24,0	41,7	47,1	32,4	36,6	72,3	75,6	12,9	13,7
Aymara	27,2	25,8	17,6	17,0	35,9	35,3	61,4	59,2	2,2	1,7	1,1	0,8
Spanish	39,3	37,0	60,8	57,4	19,6	14,9	5,9	3,9	23,8	21,1	69,6	63,4
Guarani	0,7	0,8	0,4	0,4	1,1	1,2	0,0	0,0	1,0	1,1	5,9	8,9
Other native	0,7	0,6	0,4	0,5	0,9	0,8	0,2	0,1	0,3	0,2	5,4	6,9
Foreign	0,8	0,6	0,9	0,6	0,7	0,6	0	0	0	0	5	6
Total	100	100	100	100	100	100	100	100	100	100	100	100
CHILE							Araucania				Zona Huas	
Ethnia							Men	Women			Men	Women
Mapuche	3,8	3,2	2,0	1,8	11,5	12,4	24,8	27,6			0,5	0,4
Other indigenous	0,6	0,4	0,5	0,4	0,9	0,8	0,1	0,1			0,1	0,0
Non indigenous	95,6	96,3	97,5	97,8	87,6	86,8	75,1	72,3			99,4	99,5
Total	100	100	100	100	100	100	100	100			100	100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

Table III-3A - Bolivia (2001) and Chile (2002): Elderly population (60 and over years old) by size of the household sex and area of residence				
BOLIVIA	Urban population		Rural population	
Household size	Men	Women	Men	Women
1 person	12,0	11,5	19,3	19,9
2	17,2	19,5	26,5	28,6
3	14,9	15,4	16,1	16,2
4	13,4	13,0	11,1	10,6
5	11,9	11,7	8,2	7,4
6	9,7	9,7	6,3	5,6
7	7,3	7,1	4,5	4,3
8	5,0	4,7	3,2	3,1
9 and over	8,6	7,5	4,8	4,3
Total	100	100	100	100
Average size	4,4	4,3	3,5	3,4
CHILE				
1 person	9,3	13,1	15,0	9,0
2	27,1	28,0	24,6	28,6
3	21,2	19,8	19,4	21,2
4	15,4	14,0	14,4	14,8
5	11,0	10,8	10,7	11,0
6	7,7	7,4	7,7	7,6
7	3,8	3,4	3,7	3,6
8	2,0	1,7	2,0	2,0
9 and over	2,4	1,9	2,4	2,2
Total	100,0	100,0	100,0	100,0
Average size	3,6	3,4	3,5	3,5

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

Table III-3B - Bolivia (2001) and Chile (2002): Rural elderly population (60 and over years old) by size of the household and sex in different regions						
BOLIVIA	Highlands		Valleys		Oriental plains	
	Men	Women	Men	Women	Men	Women
1 person	22,9	23,5	15,5	16,9	12,7	7,0
2	29,6	31,2	24,4	26,0	17,3	21,1
3	16,6	16,3	16,3	16,1	13,2	15,6
4	10,4	9,9	12,4	11,8	11,0	11,2
5	7,1	6,3	9,7	8,7	9,8	10,0
6	5,0	4,5	7,7	6,9	8,5	8,2
7	3,3	3,4	5,4	5,2	7,3	7,1
8	2,3	2,2	3,8	3,7	6,0	6,1
9 and over	2,6	2,6	4,9	4,6	14,1	13,7
TOTAL	100	100	100	100	100	100
Average size	3,1	3,0	3,7	3,6	4,7	4,7
CHILE						
	Araucania				Zona Huasa	
	Men	Women			Men	Women
1 person	13,3	8,2			14,7	8,6
2	23,8	27,9			23,6	28,1
3	20,4	21,8			18,5	20,6
4	15,1	15,4			14,5	14,9
5	11,1	11,2			11,3	11,2
6	8,1	7,9			8,1	7,8
7	3,8	3,6			4,2	4,1
8	2,1	2,0			2,3	2,2
9 and over	2,4	2,0			2,8	2,6
TOTAL	100	100			100	100
Average size	3,5	3,6			3,6	3,6

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

Table III-4-A - Bolivia (2001) and Chile (2002): Relationship of the elderly population (60 and over years old) with the head of the household by sex and area of residence				
BOLIVIA	Urban population		Rural population	
	Men	Women	Men	Women
Head of household	80,1	40,9	83,8	43,2
Husband or wife	2,9	26,9	2,6	35,5
Father/mother (or) in law	9,8	21,7	5,8	12,1
Other relative	5,7	8,9	6,0	8,2
Other	1,6	1,2	1,7	1
Total	100	100	100	100
CHILE				
Head of household	78,4	45,2	81,6	38,6
Husband or wife	8,5	33,1	5,3	43,5
Father/mother (or) in law	4,7	12,9	3,5	9,4
Other relative	6,8	6,9	7,0	7,4
Other	1,5	1,9	2,7	1,1
Total	100	100	100	100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

Table III-4B - Bolivia (2001) and Chile (2002): Relationship with the head of the household of the rural elderly population (60 and over years old) by sex in different regions						
BOLIVIA	Highlands		Valleys		Oriental plains	
	Men	Women	Men	Women	Men	Women
Head of household	86,2	46,5	82,7	41,2	75,5	29,4
Husband or wife	2,6	34,0	2,9	36,5	2,2	41,7
Father/mother (or) in law	4,7	10,4	6,5	13,3	9,1	18,4
Other relative	5,7	8,3	6,1	8,0	7,4	8,6
Other	0,8	0,7	1,8	1,1	5,9	1,9
Total	100	100	100	100	100	100
CHILE						
	Araucania				Zona Huasa	
	Men	Women			Men	Women
Head of household	81,0	38,3			81,1	38,5
Husband or wife	5,0	43,8			5,7	44,4
Father/mother (or) in law	3,5	9,0			3,7	9,5
Other relative	7,5	7,8			6,8	6,4
Other	3,0	1,0			2,7	1,1
TOTAL	100	100			100	100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

**Table III-5A - Bolivia (2001) and Chile (2002):
Civil status
of the elderly population (60 and over years old)
by sex and area of residence**

BOLIVIA	Urban population		Rural population	
	Men	Women	Men	Women
Civil Status				
Single	7,6	11,0	7,1	7,8
Married	65,5	38,1	65,5	49,7
Living-together	3,9	1,9	4,0	2,6
Divorced	5,1	7,4	2,2	1,8
Widow	17,9	41,6	21,2	38,0
TOTAL	100	100	100	100
CHILE				
Single	8,4	13,2	16,0	12,2
Married	68,5	39,5	61,9	48,2
Living-together	5,1	2,5	4,3	3,3
Divorced	5,8	7,0	4,4	2,9
Widow	12,1	37,9	13,5	33,5
TOTAL	100	100	100	100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

**Table III-5B - Bolivia (2001) and Chile (2002): Civil status
of the rural elderly population (60 and over years old)
by sex in different regions**

BOLIVIA	Highlands		Valleys		Oriental plains	
Civil Status	Men	Women	Men	Women	Men	Women
Single	5,2	7,0	8,0	9,1	13,5	8,2
Married	68,9	51,9	64,8	47,4	52,2	43,7
Living-together	2,0	1,2	3,8	2,6	13,3	11,9
Divorced	1,6	1,6	2,0	2,0	4,4	3,2
Widow	22,3	38,3	21,3	39,0	16,5	33,0
TOTAL	100	100	100	100	100	100
CHILE	Araucania				Zona Huasa	
Civil Status	Men	Women			Men	Women
Single	15,6	12,0			15,6	9,6
Married	62,4	48,4			62,2	49,5
Living-together	4,1	3,2			3,5	2,7
Divorced	3,8	2,3			4,6	2,9
Widow	14,1	34,1			14,1	35,3
TOTAL	100	100			100	100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

**Table III-6-A - Bolivia (2001) and Chile (2002):
elderly women by number of surviving
children in urban and rural areas**

<i>No. of children</i>	<i>Urban</i>	<i>Rural</i>
BOLIVIA		
None	1,3	2,8
1	10,2	10,2
2 or 3	27,6	25,6
4 or 5	30,0	29,2
6 or 7	20,2	21,0
8 and over	10,7	11,3
Total	100	100
CHILE		
None	0,9	0,7
1	13,5	8,7
2 or 3	37,6	22,1
4 or 5	25,6	23,3
6 or 7	13,0	20,7
8 and over	9,3	24,6
Total	100	100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

**Table III-6B - Bolivia (2001) and Chile (2002):
Rural elderly women (60 and over years old)
according to number of
surviving children in different regions**

<i>BOLIVIA</i>	<i>Altiplano</i>	<i>Valleys</i>	<i>Plains</i>
Children			
None	2,3	2,8	1,9
1	9,8	10,2	6,1
2 or 3	27,2	25,6	17,1
4 or 5	32,3	29,2	25,3
6 or 7	20,1	21,0	24,3
8 and over	8,3	11,3	25,4
Total	100	100	100
CHILE			
Children	Araucani a		Zona Huasa
None	0,6		0,6
1	8,4		7,3
2 or 3	21,2		19,1
4 or 5	24,1		21,8
6 or 7	22,0		20,9
8 and over	23,7		30,2
Total	100		100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

Table III-7-A - Bolivia (2001) and Chile (2002): The elderly population (60 and over years old) by literacy, sex and area of residence				
BOLIVIA	Urban population		Rural population	
	Men	Women	Men	Women
literate	86,6	57,3	53,6	14,9
illiterate	13,4	42,7	46,4	85,1
Total	100	100	100	100
CHILE				
literate	91,3	89,4	68,9	66,3
illiterate	8,7	10,6	31,1	33,7
Total	100	100	100	100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

Table III-7B - Bolivia (2001) and Chile (2002): Distribution of the rural elderly population(60 and over years old) by literacy and sex in different regions						
BOLIVIA	Altiplano		Valleys		Oriental plains	
	Men	Women	Men	Women	Men	Women
literate	57,5	13,2	41,1	11,8	65,2	36,4
illiterate	42,5	86,8	58,9	88,2	34,8	63,6
TOTAL	100	100	100	100	100	100
CHILE						
	Araucania				Zona Huasa	
	Men	Women			Men	Women
literate	66,7	59,6			61,8	67,0
illiterate	33,3	40,4			38,2	33,0
TOTAL	100	100			100	100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

**Table III-8A - Bolivia (2001) and Chile (2002):
Distribution of elderly population (60 and over years
old) in % by number of years of formal education,
sex and area of residence**

BOLIVIA	Urban population		Rural population	
	Men	Women	Men	Women
None	14,4	40,2	46,1	83,4
1 or 2	12,2	11,0	20,5	7,8
3 or 4	15,9	11,2	19,0	5,2
5 or 6	16,0	11,7	8,7	2,3
7 or 8	4,7	3,4	1,9	0,5
9 or 10	6,0	4,1	1,1	0,3
11 or 12	16,2	11,4	1,7	0,4
13 and over	14,6	7,1	1,1	0,2
Total	100	100	100	100
Average	6,4	4,1	2,0	0,6
CHILE				
None	9,1	11,1	27,7	30,8
1 or 2	7,3	8,3	16,1	14,7
3 or 4	13,9	15,9	26,2	26,1
5 or 6	17,0	18,5	13,4	13,9
7 or 8	11,7	12,4	5,0	4,8
9 or 10	9,5	10,4	3,2	3,4
11 or 12	17,0	15,5	4,7	4,5
13 and over	14,5	7,9	3,7	2,0
Total	7,0	7,3	4,9	4,9
Average	7,3	6,5	3,6	3,4

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

**Table III-8B - Bolivia (2001) and Chile (2002):
Distribution of rural elderly population (60 and over
years old) in % by number of years of formal
education and sex in different regions**

BOLIVIA	Altiplano		Valleys		Oriental plains	
	Men	Women	Men	Women	Men	Women
None	43,7	85,6	56,6	86,3	32,6	59,0
1 or 2	22,0	7,7	17,6	6,1	20,3	13,8
3 or 4	19,9	4,3	15,0	4,4	24,2	13,7
5 or 6	8,4	1,4	6,9	2,0	14,2	9,2
7 or 8	1,8	0,4	1,2	0,3	3,5	1,9
9 or 10	1,1	0,2	0,7	0,2	1,7	0,7
11 or 12	1,8	0,3	1,1	0,3	2,6	1,4
13 and over	1,2	0,2	0,9	0,3	1,0	0,3
TOTAL	100	100	100	100	100	100
Average	2,1	0,4	1,6	0,5	2,8	1,6
CHILE	Araucania				Zona Huasa	
	Men	Women			Men	Women
None	29,0	36,6			32,5	29,6
1 or 2	17,2	14,7			16,3	14,5
3 or 4	26,0	24,1			24,8	27,0
5 or 6	13,7	12,8			11,9	14,7
7 or 8	4,6	4,0			4,4	4,9
9 or 10	3,0	2,9			2,7	3,2
11 or 12	4,2	3,5			4,4	4,6
13 and over	2,5	1,5			3,1	1,6
TOTAL	100	100			100	100
Average	3,4	2,9			3,3	3,4

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

Table III-9A - Bolivia (2001) and Chile (2002): Work/income status of elderly population (60 and over years old) by sex and area of residence				
BOLIVIA	Urban population		Rural population	
	Men	Women	Men	Women
works for income	39,3	22,7	66,9	29,2
rentist or beneficiary of a pension	33,0	14,6	3,9	2,0
works at home or as unpaid family worker	8,0	49,2	11,8	59,6
Neither works nor receives pension or rent	19,7	13,6	17,4	9,2
Total	100	100	100	100
CHILE				
works for income	29,3	9,1	27,6	4,0
rentist or beneficiary of a pension	55,6	32,9	44,5	25,2
works at home or as unpaid family worker	3,1	49,6	14,3	64,6
Neither works nor receives pension or rent	11,9	8,4	13,5	6,1
Total	100	100	100	100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

Table III-9B - Bolivia (2001) and Chile (2002): Work/income status of the rural elderly population (60 and over years old) by sex in different regions						
BOLIVIA	Altiplano		Valleys		Oriental plains	
	Men	Women	Men	Women	Men	Women
works for income	68,0	42,2	66,9	29,2	77,2	25,2
rentist or beneficiary of a pension	4,4	2,0	3,9	2,0	3,4	3,4
works at home or as unpaid family worker	14,5	46,5	11,8	59,6	6,3	62,3
Neither works nor receives pension or rent	13,0	9,3	17,4	9,2	13,1	9,0
Total	100	100	100	100	100	100
CHILE						
	Araucania				Zona Huasa	
	Men	Women			Men	Women
works for income	23,5	2,9			25,9	3,2
rentist or beneficiary of a pension	42,5	24,4			53,2	29,8
works at home or as unpaid family worker	19,1	66,4			8,8	62,2
Neither works nor receives pension or rent	14,9	6,3			12,1	4,7
Total	100	100			100	100

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

**Table III-10A - Bolivia (2001) and Chile (2002):
Economically active elderly population
(60 and over years old) by sector
of activity, sex and area of residence**

BOLIVIA	Urban population		Rural population	
	Men	Women	Men	Women
Sector of economic activity				
Primary	22,8	8,7	90,9	79,2
Secondary	26,9	11,7	5,3	9,1
Tertiary	50,3	79,6	3,7	11,7
Total EAP	100	100	100	100
as % of total elderly population	42	24	72	41
CHILE				
Primary	10,6	2,0	74,1	25,8
Secondary	27,5	9,1	9,8	5,8
Tertiary	61,9	88,9	16,1	68,4
Total EAP	100	100	100	100
as % of total elderly population	34	10	32	5

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

**Table III-10B - Bolivia (2001) and Chile (2002):
Economically active rural elderly population
(60 and over years old) by sector of activity
and sex in different regions**

BOLIVIA	Altiplano		Valleys		Oriental plains	
	Men	Women	Men	Women	Men	Women
Sector of economic activity						
Primary	91,0	85,7	91,0	67,1	90,3	50,8
Secondary	5,1	6,8	5,9	14,3	4,9	15,5
Tertiary	3,8	7,5	3,1	18,5	4,8	33,7
Total EAP	100	100	100	100	100	100
as % of total elderly population	73	48	69	33	76	26
CHILE						
	Araucania				Zona Huasa	
	Men	Women			Men	Women
Primary	77,4	25,2			78,7	22,5
Secondary	9,0	3,9			8,7	5,5
Tertiary	13,6	70,9			12,5	72,0
Total EAP	100	100			100	100
as % of total elderly population	28	3			30	4

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

**Table III-11A - Bolivia (2001) and Chile (2002):
Occupational category of the working
elderly population (60 and over years old)
by sex and area of residence**

BOLIVIA	Urban population		Rural population	
	Men	Women	Men	Women
Salaried worker	30,6	14,9	6,8	1,9
self-employed	55,2	69,2	77,1	74,0
employer or entrepreneur	6,7	3,9	0,9	0,4
unpaid family worker	1,3	2,7	3,7	6,4
Other	6,2	9,3	11,5	17,3
Total working	100	100	100	100
as % of total elderly pop.	42	24	72	41
CHILE				
Salaried worker	58,9	42,9	49,8	32,5
self-employed	30,6	25,2	37,5	32,9
employer or entrepreneur	7,6	5,7	6,1	8,3
unpaid family worker	1,7	3,9	5,5	7,7
Other	1,1	22,3	1,1	18,6
Total working	100	100	100	100
as % of total elderly pop.	33.8	10.1	31.9	4.5

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

**Table III-11B - Bolivia (2001) and Chile (2002):
Occupational category of the economically active
rural elderly population (60 and over years old)
by sex in different regions**

BOLIVIA	Altiplano		Valleys		Oriental plains	
	Men	Women	Men	Women	Men	Women
Salaried worker	4,0	1,2	6,4	2,9	19,3	7,3
self-employed	79,8	76,0	76,8	70,7	66,7	65,6
employer or entrepreneur	0,4	0,2	0,9	0,4	2,9	1,5
unpaid family worker	3,9	6,3	4,3	7,0	1,5	4,7
Other	11,9	16,4	11,7	19,0	9,6	20,9
Total working	100	100	100	100	100	100
as % of total elderly pop.	73	48	69	33	76	26
CHILE	Araucania				Zona Huasa	
	Men	Women			Men	Women
Salaried worker	38,0	27,7			61,0	40,4
self-employed	47,8	34,0			27,8	28,8
employer or entrepreneur	4,4	6,9			6,1	5,6
unpaid family worker	8,6	10,8			4,3	5,8
Other	1,2	20,7			0,8	19,4
Total working	100	100			100	100
as % of total elderly pop.	28	3			30	4

Source: Special tabulations from censuses of Bolivia (2001) and Chile (2002)

IV. Rural ageing and food security

“Fundamentally, the roots of the problem of hunger and malnutrition are not lack of food but lack of access to available food, inter alia because of poverty, by large segments of the world's population” (UN ECOSOC)¹

Talking about “food security” or insecurity is dealing with the very real phantom of hunger and malnutrition.

According to FAO, “**food security** exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”. This is certainly an absolute definition, conceptually rich, but impossible to achieve in the practice in this very uneven world.

Since direct indicators of food insecurity affecting the elders in rural areas are practically unavailable, an indirect approach will be taken here, focussing on factors which food security and insecurity depend on.

Food security is a different challenge in urban areas than in the rural ones. While in the former monetary income is needed to purchase food in the market, in the latter there is the possibility for many families –varying from context to context—to consume food produced by them. Therefore, in rural areas dependency on the market is variable.

All rural elders are consumers and also many of them –as seen in the previous chapter— can be food producers. The satisfaction of food needs will depend, in the case of the old men and women in rural areas, on the capacity of their households and families to produce food for self-consumption and to generate monetary income. For this reason, in this chapter, after presenting a general overview of each country in terms of food security, the analysis will focus on two critical issues: access to land and poverty, in both cases treated as contextual variables. Nevertheless, the proper satisfaction of elder’s feeding needs will also depend on an array of cultural factors which model the family and community patterns of consumption as well as the distribution of food within the household members, according to their age, sex and relationship with the head of the household. This important dimension will not be addressed in this exploratory study.

This chapter will be opened with some considerations on food security as a human right, which explain the large international support –at least at the level of declarations—given to the goals of reducing poverty and ending with hunger and malnutrition in the world.

A. *Food security and the Human Rights*

In the past, hunger and periodical famines in different parts of the world were largely due to insufficient production of food by the affected nations or communities. At present, in this globalised world, there is the global capacity to produce, conserve and distribute food sufficient to meet the needs

¹ United Nations, Economic and Social Council. *The right to adequate food (Art.11)*. 12/05/99. E/C.12/1999/5 (General Comments)

of the world's population. Thus, the hunger and malnutrition suffered now by millions of people find their main cause not in the lack of food, but in the lack of access to available food, largely because of poverty –as stated by the UN Economic and Social Council in the above quotation. Hunger and malnutrition are now, more than in previous centuries, ethical challenges, because the nations of the world can overcome them and there is the knowledge about how to do it.

Because access to food is a basic universal need, which has to be satisfied daily, *the human right to adequate food* has been recognised in several instruments under international law. The International Covenant on Economic, Social and Cultural Rights deals more comprehensively than any other instrument with this right. Pursuant to article 11.1 of the Covenant, States parties recognize "the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions", while pursuant to article 11.2 they recognize that more immediate and urgent steps may be needed to ensure "the fundamental right to freedom from hunger and malnutrition".²

We will come back to these issues in the final chapter, when some policy implications of this analysis will be presented and discussed.

B. Status of food security in Bolivia and Chile

From a country level perspective, Bolivia and Chile have followed different paths as far as food needs and supplies are concerned.

Table IV-1 presents the observed changes from mid 1960s to late 1990s in population size, level of urbanisation, estimated needs of dietary energy per person and the observed effective dietary energy supply, also per person.

Table IV-1 Bolivia and Chile: Trends in needs and supplies of energy 1965-1997		
	BOLIVIA	
	1965	1997
Total population (thousands)	3,748	7,593
Level of urbanisation (%)	40	61
Needs of dietary energy per person (kcal/caput/day)	2,079	2,080
Dietary Energy Supply (DES) (kcal/caput/day)	1,831	2,204
Deficit or surplus (DES/needs-100)	- 12 %	6 %
	CHILE	
	1965	1997
Total population (thousands)	8,572	14,421
Level of urbanisation (%)	72	84
Needs of dietary energy per person (kcal/caput/day)	2,120	2,183
Dietary Energy Supply (DES) (kcal/caput/day)	2,630	2,819
Deficit or surplus (DES/needs-100)	24 %	29 %
Source: FAO Nutrition Country profiles		

The estimated average needs of dietary energy per person shift over time affected by changes in factors such as the age structure of the population, its distribution by area of residence and cultural norms and patterns dealing with the composition of the diet. Raises in education and income affect that

² Ibidem

composition. Furthermore, food consumption is more diversified in urban than in rural areas. These are the reasons why the needs per capita differ between countries and years, increasing over time.

The situation in Bolivia considerably improved between 1965 and 1997, moving from a critical deficit of 12 percent to a surplus of 6 percent of supplies over needs. In Chile there was a clear surplus (24% and 29%) in the relationship supplies/needs in those two years and likely also during the in between period and the years after 1997.

The slight surplus observed in Bolivia in recent years would require a very even distribution of supplies to provide food security for all; but that is not the situation. In fact, according to FAO estimates, Bolivia moved from 25 percent of undernourished people in 1990-92 to 22 percent in 1997-1999.³ These figures are in the case of Chile only 8 percent and 4 percent respectively. In other words, around one fourth of the Bolivian people have been chronically getting less food than needed, a serious situation of food insecurity. In Chile instead, that proportion was rapidly declining during the 1990s to a level below 5 percent. In this general picture there is no direct way to know whether the elderly population has been more or less affected by food insecurity than the rest of the population.

As expected from the information already provided, food insecurity varies greatly among regions in Bolivia (see the map in the following page). The level of vulnerability to food insecurity is estimated high in most of the Altiplano; middle level in most of the Valleys' region and in the northern part of the Altiplano, around the city of La Paz, and relatively low in most of the Plains' region. The information provided in the following sections of this chapter about access to land as well as incidence and deepness of poverty are fully consistent with this picture.

There is not available information about how this chronic deficit in food intake has been affecting the elderly population in general and the rural elders in particular. Nevertheless, WHO's estimates of under-nourishment for children 0-4 years old give an idea about the inter-country and rural-urban gaps. Thus, in 1998 the percentage of children 0-4 who were two SD below median in the height/age indicator, was in rural Bolivia (38%) the double of the percentage observed in its urban areas (19%). At national level, that indicator was 27 percent in Bolivia vis-à-vis 1.5 percent in Chile (2002).⁴

In the following sections two crucial factors for food security in rural areas will be examined. They are access to land by the rural households and the incidence and deepness of poverty.

C. Availability and access to land

1. Availability of land

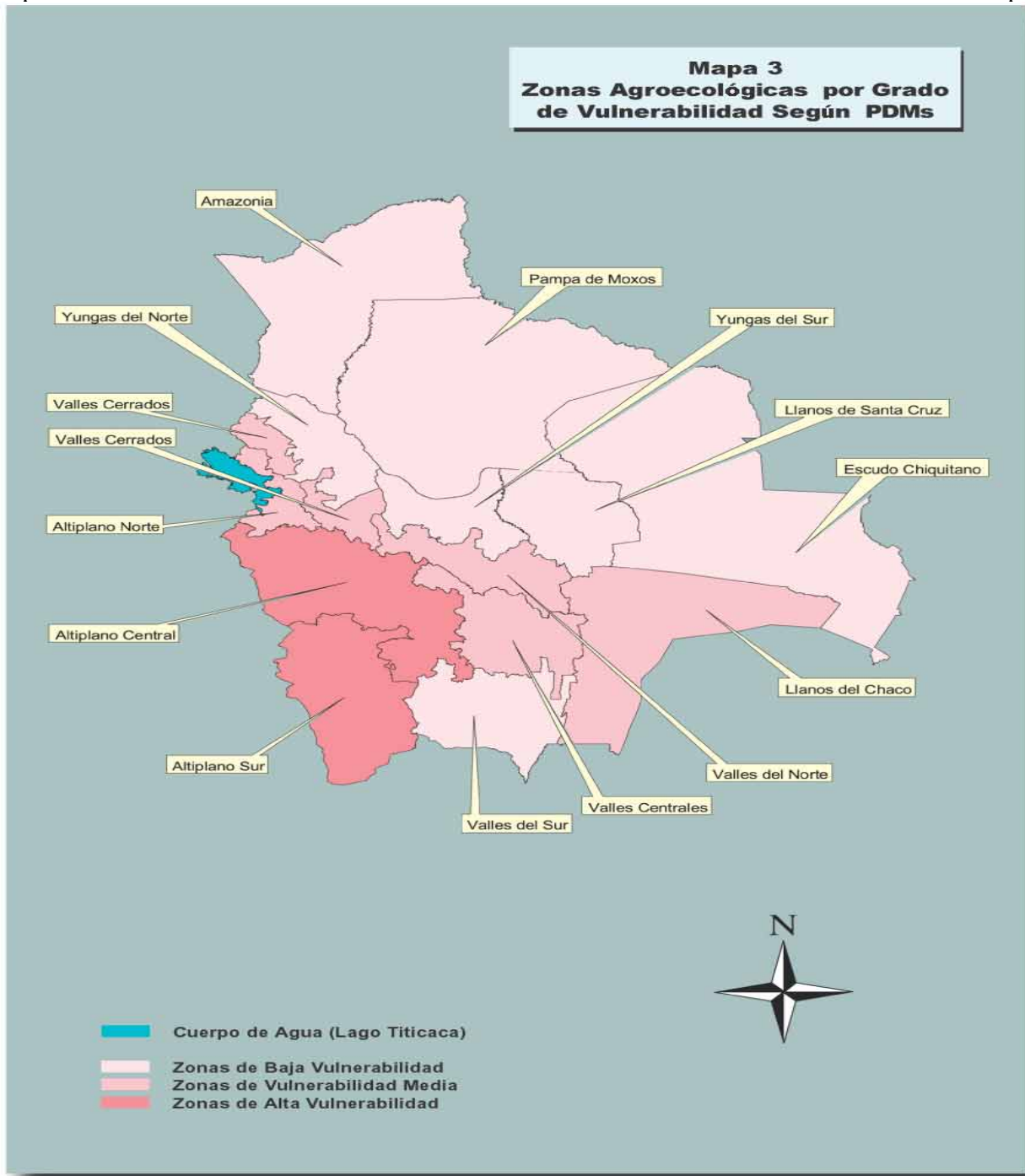
Only one hundred years ago Chile and Bolivia were predominantly rural countries with most of their population and their economic activity based on agriculture. That historical experience gave origin to the cultural belief that both of them were rich in fertile lands. But that is not fully the case.

In Bolivia, only three percent of its total surface is land useful for agriculture and in the case of Chile, around five percent. Table IV-2 shows important changes over time. Thus, while in Bolivia the arable and permanent crops area more than doubled its surface along the last four decades, due to the

³ FAO, The State of Food Insecurity in the World – 2001, Table 1.

⁴ WHO Data Bank on Internet.

expansion of the agricultural frontier in the Plains, in Chile that surface experienced a reduction of 43 percent in only two decades, due mainly to the use of cultivable land for export-oriented forestry, expansion of urban areas and use of fertile land for recreational parcels.



(“Análisis y cartografía de la vulnerabilidad a la inseguridad alimentaria en Bolivia”, study supported by WFP, FAO, MDSP and SINSAT after 2000. Source: Internet www.wfp.org)

In the case of Bolivia, the increase in the cultivated land has almost compensated the rapid population growth experienced during the last four decades. In Chile instead, the number of hectares per capita has decreased along this period from 0.50 to 0.15. Something different has happened with the amount of land per capita in rural areas, since the size of the rural populations of both countries has experienced only minor changes during the last thirty years. Thus, as shown in table IV-2, in Bolivia that amount increased during the period 1970-2000 by 67 percent and in Chile decreased by 34 percent, resulting in similar surface of “arable and permanent crops” land per capita in both countries in the year 2000 (1.06 ha.).

This is the general picture as far as availability of land is concerned. But the main issue here is how that land is distributed among landholders and how many rural households have effective access to land as a source of food and income.

Table IV-2 Bolivia and Chile: Land and population 1960-2000					
	<i>1960</i>	<i>1970</i>	<i>1980</i>	<i>1990</i>	<i>2000</i>
<i>Arable & Permanent Crops (1000Ha)</i>					
Bolivia	1,442	1,697	2,062	2,255	3,131
Chile	3,836	4,100	4,050	3,049	2,297
<i>Total Population (,000)</i>					
Bolivia	3,351	4,212	5,355	6,669	8,428
Chile	7,608	9,496	11,147	13,100	15,211
<i>Rural population</i>					
Bolivia		2,689		2,958	2,983
Chile		2,566		2,251	2,177
<i>Arable & Permanent Crops (Ha) per capita</i>					
<i>For total population</i>					
Bolivia	0.43	0.40	0.39	0.34	0.37
Chile	0.50	0.43	0.36	0.23	0.15
<i>For rural population</i>					
Bolivia		0.63		0.76	1.05
Chile		1.60		1.35	1.06

Sources: FAOSTAT-Agriculture and CELADE/ECLAC, Demographic Bulletin 72, July 2003

2. Access to land

Although both countries went through rather deep processes of agrarian reform, their situation in terms of access to land for the rural people differ in several respects.

a. *BOLIVIA*

Before the 1952 Revolution, Bolivia's land distribution was the worst in Latin America: some 4 percent of all landowners possessed more than 82 percent of the land. A major success of the land reform program was the redistribution of nearly 50 percent of lands to the peasants within its first two years.

Although greatly improved from the pre-revolutionary period, broad disparities in land tenure remained in the 1980s, when the last agrarian census took place (1986). Analysts have estimated that over 90 percent of the farms in the Altiplano and Valleys remained under twenty hectares in the 1980s. These farms typically were one to three hectares in size and were worked by nearly 80 percent of Bolivia's more than 700,000 farmers. The majority of farmers in the Altiplano were also members of agricultural co-operatives. Only 40 percent of the farms in the Plains were less than twenty hectares; the most common size in that region was fifty to seventy-five hectares, but subsistence farming existed as well.

Nearly 60 percent of all farmers lived in the Altiplano highlands in the late 1980s. Highland parcels were the smallest in the country, had the least fertile soils, and had been worked for the longest period of time. Highland farmers received less than 40 percent of all rural income, although they represented about 60 percent of the rural population. Twenty percent of the country's farmers were located in the relatively fertile Valleys region. These farmers fared much better than their Altiplano counterparts. Plots averaged between five and ten hectares, and because of the more fertile and less exhausted soils, a larger share of that land was in use compared with the Altiplano. Farmers in the Valleys were frequently able to harvest two crops annually, as opposed to the one crop a year on the Altiplano.

The largest farms were found on the sprawling and often isolated eastern lowlands of the Plains region, where about 20 percent of the country's farmers worked 65 percent of the country's land. The lowlands produced the bulk of all agricultural output and virtually all of the sector's exports. Although about 16 percent of the lowland farms were of subsistence size (five hectares or fewer), the great majority of the region's land was owned by medium-to-large landowners actively engaged in commercial agriculture. The power centre of the agricultural sector was located in the south-eastern department of Santa Cruz, where landholdings often exceed 5,000 hectares.⁵

b. CHILE

The agrarian reform started in Chile at a large scale during the first Christian Democrat Party government, with President Eduardo Frei Montalva (1964-1970) and it was deepened during the Popular Unit government, under the socialist President Salvador Allende (1970-1973).

Although the Agrarian Reform Law, approved in January 1967, had as final purpose giving land in individual property to the peasants, it was implemented through the creation of medium and large size farms ("asentamientos") exploited by groups of peasants and former agricultural workers, organised in large production units. A system was put in place to provide technical assistance and credit. During the Popular Unit government the agrarian reform was expanded and a new form of State owned collective farm was introduced.

By August 1973 (one month before the military coup that abruptly ended the Popular Unit government) the number of small properties (0-5 ha)⁶, which in 1965 represented 81.4 percent of the agricultural properties and only 9.7 percent of the agricultural land, had experienced a slightly reduction in the share of properties (79.3), while keeping the proportion of land. Nevertheless, the big change took place with the large farms⁷, which used to occupy 55 percent of the agricultural land and, after been

⁵ Based on U.S. Library of Congress, Bolivia, Land Tenure (website)

⁶ Small farm or "minifundio" is defined as an agricultural property with a productive capacity equivalent to less than five irrigated hectares of the Maipo Valley, a very fertile land near Santiago.

⁷ Large farms were those with a productive capacity equivalent to 80 or more hectares of irrigated land of the Maipo Valley.

expropriated by the agrarian reform, gave place to a limited number of “asentamientos”, representing in August 1973 2.3 percent of the exploitations, covering 40.6 percent of the agricultural land.⁸

The military government (1973-1990) stopped and reversed the process of agrarian reform and, even more important, adopted a neo-liberal approach in its economic policy, promoting the modernisation of agriculture and its orientation towards exports. This general approach has continued after the restoration of democracy.

A recent study⁹, based on the 1997 agricultural census, divides the relatively small exploitations in two categories, taking into account not only their size, access to water and quality of land, but also the capital invested and the access to technology. The first category is of “subsistence farming”, based on family work, with low capital and limited access to technology. The second one is called “small entrepreneurs”, which means availability of capital, technology and permanent salaried workers. In 1997 the farms in the first category had in average 5.2 hectares of land, representing 31 percent of the exploitations, but only 3 percent of the productive land. Nevertheless, more than half of the exploitations (53.4%) were in the second category, with 20 hectares as average size and occupying 20 percent of the productive land¹⁰. Thus, although almost one third of the farmers are in a situation of “subsistence farming”, there is a very important core of small agricultural entrepreneurs (176 thousand in 1997), which constitutes now by far the most frequent condition in rural areas.

C. *The incidence of poverty in rural areas*

Poverty can take many different forms. It can affect not only individuals and families, but also communities, regions and countries. It is quite different being poor in a rather rich city than in a depressed rural area. Poverty will be treated here mainly as a contextual variable that tell us about the social environment in which the rural elders --and the families and communities which they belong to-- live.

The figures we are going to present about poverty in Bolivia and Chile will show us, beyond the numbers, important qualitative differences between both countries.

1. Bolivia

The information below has been taken from the 1999 national survey on living conditions (MECOVI – 1999), conducted by the Bolivian National Institute of Statistics. That instrument distinguishes two levels of poverty below the poverty line: the condition of *indigence* or extreme poverty and the condition of *poor* but not indigent, which will be labelled as *moderately poor*. In 1999 almost two thirds of the Bolivian population was living under the poverty line (63%) and more than one third were indigents. Men and women were evenly affected by this condition (see table IV-3).

⁸ Original source of data: Corporación de la Reforma Agraria, 1977, presentad by María Elena Cruz in “Reforma Agraria y Migraciones”, in Bengolea (1979) *Clases Sociales Agrarias en Chile*.

⁹ ODEPA (Agrarian Research and Policy Office – Government of Chile), “Social and Geographical Diversity in Chile’s Agriculture” at www.fao.org/DOCREP/005/Y2519T

¹⁰ Productive land means here areas used for agriculture, cattle raising and forestry.

a. Poverty and age structure

There is information on poverty for age groups only at the national level. Table IV-3 shows clearly that in Bolivia the poorer is a population the younger is its age structure. Thus, the indigent population, which represents 37 percent of the total population, has the larger proportion of children and the smaller proportion of elders if compared to the moderately poor and the non-poor. On the other side, the incidence of poverty among the people 60 and over years old is below the average of the total population. In summary, although the elders as a group are not poorer than the rest of the population, almost 6 out of ten of them live in poverty.

Why a higher proportion of children in the indigent population? The explanation seems to be a vicious circle between poverty and fertility. The analysis of findings from demographic and health surveys conducted during the 1990s in several countries of Latin America shows that there was a strong negative association between the educational level attained by women (a proxy for poverty) and their fertility. But there was also a strong negative association between educational level and the number and proportion of unwanted births, as well as with un-met need for family planning services.¹¹

The probably in the past having a large number of children was part of a cultural survival strategy, but that was not any longer the situation already ten years ago in Bolivia. The demographic and health survey conducted in that country on 1994 showed for the women in fertile age of Andean rural areas (Altiplano and Valleys) an observed fertility of 6.4 children, against a “wanted fertility” of only 2.7 children.¹² The same survey replicated four years later showed almost the same values for all the Bolivian rural population: 6.4 observed TFR versus an estimated “wanted fertility” of only 3.2 children.¹³ Why if those women – most of them in extreme poverty – wanted to have in average around 3 children, are they giving birth to the equivalent of more than 6 children in average along their fertile lives? The answer to this question is probably a combination of cultural factors and insufficient access to family planning information and services. Actually, the same 1994 survey showed that about one third of the married women in that Andean rural population were using some kind of contraceptive method to prevent an unwanted pregnancy, but only one fifth of the family planners were using a modern effective method. These facts seem to indicate that by that time the access to family planning services was very limited in Andean rural Bolivia, where the large majority of poor rural families reside.

Thus, we can conclude that in recent years high fertility among rural poor in Bolivia was in a significant extent the result of an important aspect of their living conditions: limited access to reproductive health information and services. On the other side, we can expect that the larger is the number of children in a household, the higher is the economic intra-household dependency ratio and the lower is their income per capita. This statement may be particularly valid for the rural Altiplano, where –as shown earlier in this chapter—the amount of land available per family is very small and, consequently, there is only limited room for benefiting from child labour. This is a subject that could and should be explored in further studies using the census data.

¹¹ Consolidated data of nine countries around the mid 1990s show that 39% of the observed fertility (TFR 5.7) of the women with no formal education corresponded to unwanted births, while in the case of women with secondary level of education that figure was only 21% of their already quite low observed fertility (TFR 2.16). See Gonzalez, Gerardo. “Cinco años después de El Cairo”, ECLAC/CELADE, Santiago, CHILE, May 1999. Doc. LC/DEM/R.297 pp.63-68

¹² DHS and INE, Encuesta Nacional de Demografía y Salud – BOLIVIA 1994. La Paz, Bolivia.

¹³ DHS and INE, Encuesta Nacional de Demografía y Salud – BOLIVIA 1998.

Now, coming back to the main subject of this section, a possible explanation for a younger age structure among the household in extreme poverty is that they are younger families with several small children and, many of them, with a single parent to support them, while the households where most of the elders live correspond to mature families with elder parents, still economically active, and their daughters and sons living still with them are also economically active. This is certainly another interesting subject for future analyses.

<i>Sex</i>	<i>Condition of poverty</i>				<i>Poverty indicators</i>	
	Non-poor	Moderately poor	Indigent	Total Population	Incidence of	
					Poverty	Indigence
Men	50.5	49.6	48.4	49.5	61.9	36.0
Women	49.5	50.4	51.6	50.5	63.4	37.5
All	100	100	100	100		
<i>Age groups</i>						
0-9	17.8	27.3	33.3	26.0	74.4	47.2
10-19	21.5	25.6	24.4	23.6	66.1	38.0
20-29	19.4	14.8	10.3	14.9	51.3	25.5
30-39	13.4	10.5	11.6	12.0	58.2	35.4
40-49	12.1	9.9	9.2	10.5	56.9	32.3
50-59	8.6	5.8	5.4	6.7	52.1	29.8
60-69	4.5	3.6	3.2	3.8	55.6	31.1
70-79	2.1	2.0	1.8	2.0	60.5	34.4
80 and over	0.8	0.5	0.8	0.7	58.8	41.5
Total	100	100	100	100		
Population	2,988,781	2,071,192	2,940,825	8,000,798	62.6	36.8

Source: Instituto Nacional de Estadística de Bolivia, MECOVI - 1999

<i>Language</i>	<i>Condition of poverty</i>				<i>Poverty indicators</i>	
	Non-poor	Moderately poor	Indigent	Total Population	Incidence of	
					Poverty	Indigence
Quechua	27,8	34,3	47,6	40,9	87,5	68,7
Aymara	12,2	17,0	24,5	20,5	89,1	70,4
Spanish	51,2	37,6	16,5	27,6	65,8	35,2
other native	2,4	2,8	1,8	2,1	78,9	49,1
Foreign	0,1	0,1	0,0	0,0	50,0	0,0
Doesn't speak	6,4	8,4	9,7	8,8	86,6	65,2
Total	100	100	100	100		
Population	546.337	667.760	1.751.166	2.965.263	81,58	59,06
<i>Percentage</i>	18	23	59	100		

Source: Instituto Nacional de Estadística de Bolivia, MECOVI - 1999

b. Ethnicity and poverty in rural Bolivia

The incidence of poverty is much higher in the rural areas of Bolivia (81.6%) than in its urban areas (51.5%). Furthermore, six out of every ten rural people live in extreme poverty. Although poverty is the predominant condition of living, it affects in different degrees the indigenous and non-indigenous populations.

While the heterogeneous group of Spanish speaking people (language learn and used in their childhood) is the dominant (51%) in the non-poor rural population, indigenous groups are the majority (54%) among the moderately poor and the large majority (74%) of those living in extreme poverty (see table IV-4).

This situation is reflected in the rates of incidence of poverty and indigence in rural areas, which are the highest among the Aymara people –dominant ethnic group in the Altiplano--, followed closely by the Quechua people, the dominant ethnic group in the Valleys. The incidence of poverty and indigence are slightly lower among the other indigenous ethnic groups –residing mainly in the Plains--, although still very high.

c. Poverty and social security

Poverty is not only a matter of income, as measured in this survey, but also a matter of access to social security. From this point of view it can be stated that in Bolivia the coverage of social security is low in general, even for the urban non-poor, with only 36 percent of them protected by either a public or a private scheme. As shown in table IV-5, there were in 1999 a big urban-rural gap as far as social security is concerned, with 92 percent of unprotected people in the rural areas.

Table IV-5 Bolivia: Affiliation to social security			
by poverty condition and area of residence			
<i>Kind of social Security</i>	<i>Poverty condition</i>		
	<i>Non-poor</i>	<i>Poor</i>	<i>Total</i>
Urban area			
Public	27.43	15.28	21.17
Private	8.55	3.39	5.89
Other	0.24	0.26	0.25
None	63.78	81.07	72.69
Total	100.00	100.00	100.00
Population	2,442,444	2,593,091	5,035,535
Rural area			
Public	11.86	4.22	5.63
Private	1.41	1.39	1.39
Other	0.50	0.68	0.65
None	86.23	93.70	92.32
Total	100.00	100.00	100.00
Population	546,337	2,418,926	2,965,263

Source: Instituto Nacional de Estadística de Bolivia, MECOVI - 1999

d. *The household living conditions of the rural poor*

Only one out of every five poor households has electricity at home and practically none of them has telephone. Firewood is used as fuel for cooking in 79 percent of the poor households, which means time and work to collect it as well as pressure on the ecological system (see table IV-6)

<i>Energy and basic services</i>	<i>Non poor</i>	<i>Poor</i>
Electricity	45,1	19,1
Source of energy used for cooking		
<i>Firewood</i>	57,8	79,2
<i>manure</i>	3,0	8,0
<i>Kerosene</i>	0,4	0,8
<i>gas</i>	36,6	11,9
<i>electricity</i>	0,2	0,0
<i>does not cook</i>	2,0	0,2
Telephone	3,1	0,0

Source: Instituto Nacional de Estadística de Bolivia, MECOVI - 1999

<i>Urban area</i>	<i>Incidence</i>		<i>Poverty</i>	<i>Gini</i>
	<i>Poverty</i>	<i>Indigence</i>	<i>gap</i>	<i>index</i>
Country	51.5	23.6	22.5	0.36
Altiplano	57.2	34.5	27.7	0.37
Valleys	50.2	14.2	19.0	0.34
Plains	45.3	17.2	18.5	0.35
<i>Rural Area</i>				
Country	81.6	59.1	45.8	0.42
Altiplano	88.8	70.2	52.7	0.39
Valleys	83.5	61.8	48.9	0.45
Plains	59.9	25.9	22.7	0.33
Total	62.6	36.8	31.1	0.44

Source: Instituto Nacional de Estadística de Bolivia, MECOVI - 1999

e. *The incidence and deepness of poverty in different rural contexts*

How poor are those people living in poverty is a key issue. Data in table IV-7 confirm at the level of ecological region the urban-rural gap in poverty incidence found for the country as a whole. Both for

urban and rural populations, the incidence of poverty and indigence are the highest in the Altiplano and the lowest in the Plains.

The same happens when the deepness of poverty is explored through the “poverty gap” and the Gini index. Poverty is deeper in rural areas than in urban areas, being the deepest in the rural Altiplano, followed closely by the rural Valleys.

2. Chile

The recent history of poverty in Chile is quite different from the Bolivia’s one. During the 1990s, under the progressive governments of the centre-leftist alliance denominated “Concertación” (Concerted Alliance of Political Parties for Democracy), a combination of rapid economic growth and high priority to social development has resulted in a drastic reduction of poverty (see table IV-8).

a. *General trends in poverty*

At the beginning of the 1990s the incidence of poverty was close to forty per cent both in urban and rural areas. Ten years later it had been reduced to 20 percent in urban areas and to 24 percent in rural areas. Indigence or extreme poverty was also reduced to less than half the level that used to be in 1990. Thus, in rural areas –our focus of analysis—there were only 8.3 percent of the population living in conditions of extreme poverty and other 15.5 percent also below the poverty line at the beginning of the current century.

	<i>Total population</i>		<i>Elderly population</i>	
	<i>1990</i>	<i>2000</i>	<i>1990</i>	<i>2000</i>
National				
<i>Poor</i>	38.6	20.6	20.4	8.0
<i>Indigent</i>	12.9	5.7	4.7	1.6
<i>Poor non-indigent</i>	25.7	14.9	15.7	6.4
<i>Non-poor</i>	61.4	79.4	79.6	92.0
<i>Total population</i>	100	100	100	100
Urban area				
<i>Poor</i>	38.4	20.1		7.9
<i>Indigent</i>	12.4	5.3		1.5
<i>Poor non-indigent</i>	26.0	14.8		6.4
<i>Non-poor</i>	61.6	79.9		92.1
<i>Total population</i>	100	100		100
Rural area				
<i>Poor</i>	39.5	23.8		8.4
<i>Indigent</i>	15.2	8.3		2.1
<i>Poor non-indigent</i>	24.3	15.5		6.3
<i>Non-poor</i>	60.5	76.2		91.6
<i>Total population</i>	100	100		100

Source: MIDEPLAN, surveys CASEN 1990 and 2000

There is the general belief that the elderly are *per se* a vulnerable group and that a significant proportion of them live in poverty. Data in table IV-8 show the opposite. Already in 1990 the incidence of poverty among the elders was almost half the one observed for the total population and its decline along that decade was even faster than that of the total population. Thus, in the year 2000 only 8 percent of the people 60 and over years old was living below the poverty line and a slight 1.6 percent was under extreme poverty conditions. The rural-urban gap was also minimum with only 0.5 percent of difference between the incidence of poverty in urban areas and in the rural ones.

In summary, the large majority of rural elders (92%) were living in the year 2000 above the poverty line and the incidence of poverty among them was only one third of the one observed for the rural population in general. Therefore, as observed in Bolivia, the poorer is the population, the younger is likely to be its age structure.

b. A gender gap?

The so called “feminisation of poverty” has been a central theme of study and discussion for the last twenty years. At least in the case of the Chilean elderly population, data seems to indicate that poverty is slightly more frequent among old men than among old women (see table IV-9). Nevertheless, the

	<i>Urban area</i>		<i>Rural area</i>	
	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>
Indigent	1.7	1.2	2.3	1.9
Poor non-indigent	6.6	6.2	7.0	5.6
Non-poor	91.7	92.5	90.7	92.5
Total	100	100	100	100

Source: MIDEPLAN, Situación de los adultos mayores en Chile, 2000 (Source of data: CASEN 2000)

main findings are that only small proportions of old men and old women live in households below the poverty line, both in urban and in rural areas, and that in the latter only around two percent of them live in conditions of extreme poverty. Thus, in Chile, over ninety percent of the rural elders live –according to recent data-- in households where the chances of food insecurity seem to be very low.

c. The social security of the poor elders

Do these small proportions of old men and women living in poverty have access to free health services? The answer is yes. According to the 1998 CASEN survey, 93 percent of the rural poor non-indigent elders were protected by some scheme of health security, provided in the large majority of the cases by the public health system. The very small proportion of indigent elders had the same level of protection (92%). Once again, there are not meaningful differences between the rural and the urban elders living below the poverty line.

d. Housing conditions

The material conditions of the houses where the rural elders live seem to be relatively good. According to the 2002 Population and Housing Census, 86 percent of the rural households have electricity at

home, 81 percent have save drinking water and 96 percent W.C. or latrine. Furthermore, the CASEN survey shows that in 1998 as many as 42 percent of the rural poor households had “good” houses and an additional 21 percent used to live in houses classified as “acceptable”.

3. Main findings

Chile and Bolivia stood on different grounds in the near past and have been following diverging paths as far as food security is concerned. Chile has benefited from a sustained surplus of food supply over needs and declining incidence of poverty, both in urban and rural areas, particularly among the elders. In contrast, Bolivia’s improving trends in terms of food supplies have not been sufficient to overcome a precarious surplus, which --in a context of wide spread poverty, particularly in its rural areas-- have resulted in a rather high incidence of hunger and malnutrition. In summary, while Chile seems to be in a rather good situation in terms of food security for the country as a whole, including its rural elders, Bolivia shows a chronic situation of food insecurity, which seems to be particularly acute in the traditional rural settlements of the Altiplano and the Valleys, where the large majority of its rural population resides. Thus, the food insecurity of the elders seems to be in rural Bolivia the result of a general problem affecting large segments of its population more than the specific problem of an age group.

The followings are some specific findings of the previous analysis, which focussed on access to land and poverty as contextual factors conditioning food security of the elders in rural areas:

- During the last decades the expansion of the agricultural frontier in the Plains region of Bolivia led that country to have by the year 2000 a similar situation than Chile in terms of arable and permanent crops area per capita in the rural areas. Nevertheless, the effective access to land seems to be quite different in these two countries. In the case of Bolivia, most of its rural households possess land, but of a very small size and a rather low productivity. In Chile instead, although only four out of every ten rural households possess agricultural land, the majority of them are small entrepreneurs with exploitations of around twenty hectares of irrigated land or equivalent and with access to capital and modern technology. Thus, while in Bolivia subsistence farming is the most frequent condition, modern market-oriented farming is the dominant form in Chile.
- In both countries the incidence of poverty is lower among the elders than in the total population. In other words, children are more affected by poverty and indigence than the elders because the age composition of indigent households is younger than the structure of those households which are out of poverty.
- There is not in both countries a significant gender gap as far as poverty is concerned. Nevertheless, there is a slightly higher proportion of women in indigence in Bolivia, while the contrary appears in Chile.
- While in Chile there is not an urban-rural poverty gap, in Bolivia the incidence and deepness of poverty are much higher in rural areas than in the urban ones, both at country level and within each ecological region.

- There is a big difference between these two countries in terms of social security for the rural population. While in Bolivia less than ten percent of the rural population is affiliated to social security, in Chile that condition is almost universal, even among those in extreme poverty.
- In Bolivia, the Aymaras and Quechuas, most of the rural population of the Altiplano and the Valleys, are the most affected by poverty, with around 70 percent of them living in conditions of indigence.
- The most challenging situation in terms of food security seems to be in the rural Altiplano, where 7 out of every ten households live in extreme poverty and the parcels of agricultural land owned by the peasants are very small and with low productivity.

It seems to be a kind of “vicious circle” in the relationship between poverty and access to land with regard to food security in the case of Bolivia, particularly for its Altiplano rural population. In a context of wide spread poverty and low access to institutional social security, the possession of land seems to be crucial for the provision of self-produced food under conditions of subsistence agriculture. But, on the other side, wide spread extreme poverty in a population that possess land means that the land they own and the supporting conditions for its exploitation (credit, technical assistance, access to technology and markets) are not sufficient even for self subsistence. In the case of Chile, there would be instead a kind of “virtuous circle”, since the consolidation of a large number of small modern market oriented farms, able to produce food and income well beyond the owners’ family subsistence needs, would be contributing to the generation of employment and the demand for services, helping in this way to reduce poverty in rural areas.

V. Policy implications

Access to adequate food is a human right. Therefore, as stated in the previous chapter, it is a duty of the states and a challenge for international solidarity to create economic and social conditions for the appropriate satisfaction of this very basic need in every human being. But hunger and malnutrition –the dark side of this human right—are inseparable of a widely spread social evil: poverty. Actually, “*Eradicate extreme poverty and hunger*” is the first objective adopted by the nations of the world in the *UN Millennium Development Goals*.

From this perspective, Chile can be considered as a successful story and Bolivia, as one of the most challenging countries, at least within Latin America. Some policy relevant lessons can be drawn from the Chilean experience, but it would be naive to think that they can be mechanically applied to Bolivia, since the differences between both countries have centenary roots.

Two main policy issues seem to be relevant for this analysis:

- The first issue is the wellbeing of the rural elderly population itself. Are the elders more or less affected than other age groups by poverty and food insecurity? Which are their weaknesses and strengths that should be taken into consideration when specific policy interventions having the elders as their target group are formulated?
- The second one deals with the rural society as a whole. How population ageing in rural areas affects rural poverty and food insecurity? And, consequently, could a policy aimed at changing demographic dynamics –including population ageing in rural areas-- contribute to alleviate poverty and reduce food insecurity?

In the following pages we firstly examine the weaknesses as well as the favourable factors in the social condition of the elders, which open windows of opportunity for policy interventions; secondly, we look at the policy implications of population ageing in rural areas from a macro-perspective, with special reference to Bolivia; thirdly, we try to draw some lessons from the Chilean experience; and finally, we will present a rather innovative approach being developed by ECLAC.

A. *The social profile of the elders: windows of opportunity for policy interventions*

In Chapter III we examined some socio-demographic characteristics of the rural elders looking at two interrelated issues: (1) how much support are the elders likely to receive from the households where they live and from their families? And (2) how capable are the elders to support themselves?

Let us start discussing these two issues and its policy implications.

1. Strengthening the support received by the elders from their offspring

Although most of the rural elders live in medium size households –between three and four members--, they are the heads of rather large families with many surviving sons and daughters. This situation is more frequent in Chile than in Bolivia. Actually, in the former around 46 percent of the elderly rural women –and probably also the men—had in 2002 six or more surviving children. In Bolivia, that percentage was 32; nevertheless, 62 percent of them had at least four children. Because of the rural-

urban migration patterns by age and sex, we can assume that most of these children, particularly daughters, are living in the cities.

Since migration and, consequently the ageing process, have been more intense in the most depressed and poor areas, there is also, particularly there, a significant proportion of elders who live alone (23% in the Altiplano) or with only one other person (additional 30% in the Altiplano). Nevertheless, even in those depressed areas, close to 90 percent of the elders have at least two surviving children who could contribute to support them.

In this context, conditions seem to be given for a policy aimed at strengthening intergenerational solidarity. The emotional and economic support of the elders, including their food security, could be significantly improved with a larger support from their children. Measures facilitating the migration of the elders to the cities to live with –or close to- one of their sons or daughters, specially in the case of elders who live alone or in the company of other elder, could be considered. This idea will be developed in the following section of this chapter.

It is worth noting that in these least developed rural areas – specifically the Bolivian Altiplano and in some degree also the Valleys—we have found the highest proportion of elders who are head of their households, one third of them women; the highest proportion of widows (close to 40 percent of the elderly women), and the higher proportion of elders who have to work in income generating activities to survive. Additionally, it is in the Altiplano that the incidence of extreme poverty is the highest and the size of the peasants' farms is the smallest. They are the most vulnerable and perhaps that situation could be improved if intergenerational solidarity is strengthened and conditions that facilitate the flow of resources in support of their parents are created.

2. Increasing human capital

Human capital is certainly more than literacy and years of formal education. In the case of the elders, there is normally an important accumulation of “know how” that result from their daily experience. Nevertheless, literacy seems to be essential for increasing that capacity of out-of-the-school learning. The findings of previous chapters show that there is an important proportion of illiterate elders in the rural areas of both countries, that that proportion is higher in the most poor and backward regions, and that the larger is the incidence of poverty and the proportion of indigenous people, the larger is the gender literacy gap. Thus, the biggest challenge is among the elderly women of the Bolivian Altiplano, where 85% of them are illiterate. Nevertheless, even in the best rural contexts, as it is the case of Chilean rural areas and the Bolivian Plains, at least one third of the elderly men are illiterate.

From this point of view, literacy programs could be considered to empower the rural elders in this domain, giving priority to those rural communities where literacy rates are relatively high and, consequently, there are environmental conditions that facilitate the learning process and the sustained effective use of this new capacity. Furthermore, in communities with a rather high proportion of literate elders, some of them could be trained to transfer their ability to read and write to illiterate fellow elders of their own communities.

3. Benefiting from social security

In rural Chile there are more elders benefiting from a pension than elders who need to work to generate their own income. In rural Bolivia is the opposite. Actually, only around 3 percent of the Bolivian rural elders benefited from a pension at the time of the last census. In Chile, the coverage and the

effectiveness of the social security system has been improving, as shown later in this chapter, and can be improved in the future. While, in Bolivia, universal social security for the rural elders is a goal that could take several decades to be reached. Thus, in this country the best system to provide economic security and social support seems to be –as already suggested—take advantage of the large number of surviving children that most of the elders have and strengthen their solidarity links with their progenitors.

B. *Population ageing and rural development in Bolivia: Is there room for a population policy?*

The Ministry of Sustainable Development of Bolivia has recently (March 2004) issued a “*Declaración de Principios sobre Población y Desarrollo Sostenible*” (Declaration of Principles on Population and Sustainable Development), with a prologue by the President of the Republic. Although this document doesn’t propose yet a well articulated population policy for that country, it has the great merit of positioning two major population issues in the framework of a comprehensive general strategy to move the country towards a sustainable style of development. They are (1) the “*Ordenamiento Territorial*” (Territorial planning) aimed at better organizing the use of the natural resources and the occupation of the national territory by its population and (2) the creation of favourable conditions for the full exercise of the people’s sexual and reproductive rights, in accordance with the commitments taken by Bolivia in the 1994 International Conference on Population and Development at Cairo, Egypt, and its ongoing Action Programme.

1. Population ageing and population distribution

a. *The challenge*

As shown in Chapter II, the demographic transition and the consequent ageing process in Bolivia as a whole are having and will continue to have, at least for the coming 20 years, positive effects for development at the country level, since the dependency ratio is rapidly declining. Nevertheless, this process is benefiting more the urban areas than the rural ones, because rural-to-urban migrants are predominantly youth and young adults.

There is also evidence that the more backward is a locality or region, the more intense is this migratory process and deeper its impact on the age population structure. This seems to be the case of the rural Altiplano, which –as shown in Chapter IV—has the highest incidence of poverty, as well as high proportion of very small farms and degraded soils.

Thinking only in demographic terms, lower out-migration rates from these least developed localities or regions among the youth and the young adults would reduce the dependency rate with benefit for the whole population. This statement would be true only if young people migrate less because a raise in economic activity is creating new employment opportunities. If this happens as the result of market forces it could be a sustainable phenomenon, but if it is only or mainly the result of public investments aimed primarily at reducing unemployment and underemployment, it could be like keeping a terminal sick person connected to a respiratory machine. In other words, it seems reasonable to think that the only sustainable way to promote a healthy economy in a given locality or region, able to reduce poverty and food insecurity, is making it more competitive. And, if overpopulation is one of the causes of the economic backwardness of an area, increasing out-migration –including also the children and the elderly—could contribute to improve the situation.

Actually, as shown in Chapter II, the rural population in Bolivia has grown slowly because most of its rapid natural population growth has been neutralized by migration. Migrations normally are the result of imbalances between countries, regions or localities in terms of availability of benefits and opportunities. People spontaneously move out from stagnant places and look for places that are progressing. Nevertheless, a leitmotif in the field of internal migration policies has been that rural-to-urban migrations should be reduced. It seems reasonable to think that when conditions are extremely adverse for local development, the opposite could be the most advisable. This statement is even more valid when those adverse conditions include overpopulation.

The concept of “overpopulation” has been since Malthus’ times a subject of controversy, which was particularly hard in Latin America during the 1970s and 1980s. Then, this concept was central for those who advocated population control as the key for overcoming underdevelopment, while their opponents sustained that the real roots of poverty and stagnation were factors of a non-demographic nature and that focusing on population growth was a way of keeping them hidden. Let us try to overcome that mainly ideological dispute and attempt to rescue the concept of “overpopulation” by firstly degrading it at the condition of an attribute: over-populated as the opposite of under-populated. Thinking from the Sustainable Development paradigm, we can say that a rural area is over-populated if, in the present socio-economic setting (land tenure, use of land, technologies used, access to credit and markets, etc) is affected by chronic underemployment of the available labour force and wide spread poverty, which force the people to maintain unsustainable practices in the use of natural resources with their consequent deterioration. If this chronic underemployment can be solved through feasible policy interventions such as changing land-tenure system (Bolivia had already in the 1950s a deep agrarian reform), public works of irrigation, introduction of more productive crops and agricultural technologies (green revolution) and so forth, we would be dealing with a relative overpopulation. Nevertheless, if those interventions are not feasible or can be done only at small scale or are expected to take long time to be implemented, we can say that we are dealing with an “absolute overpopulation”. In other words, the easier or only way to overcome the problem would be to significantly reduce the size of that population by fostering out migration and reducing in that way underemployment as well as demographic pressure on natural resources.

It is worth noting that –as shown in Chapter II—this phenomenon has been taking place in Chile spontaneously.

b. *The recent policy guidelines*

The Declaration of Principles on Population and Sustainable Development includes a section on “*ordenamiento territorial*” --translated here with low accuracy as Territorial Planning-- considered a fundamental part of Sustainable Development planning since it introduces the spatial dimension. Two main policy instruments are announced:

- *El Plan de Uso*: Plan for the rational use of the territory, with particular reference to the soil. It will give a set of norms and guidelines for the sustainable use of the resources, based on the principles of integrality, concurrence, equity, subsidiarity, social participation and respect for the cultural identity and the rights of the indigenous peoples.
- *El Plan de Ocupación (Settlement plan)*: This Plan will promote a system of urban and rural human settlements, which will correct the historical trends leading to an excessive concentration and dispersion of the land, the economic activities and the population. The main objectives of this plan are (1) to improve the hierarchy of population settlements in accordance with the plan for the use of the soil and (2) to prevent the excessive concentration

in metropolitan areas by fostering the development of medium-size cities and of cities in the border areas.

This is certainly not the first time that the Bolivian government states its will to intervene spatial patterns of population settlements. By the late 1970s the government had developed already a comprehensive population policy in which the need to move rural population from the Altiplano and the Valleys towards the Oriental Plains was stated. And even earlier resettlement programs were implemented with discussable success, as mentioned already in Chapter III. Actually, the expansion of the agriculture frontier and the economic dynamism of the city of Santa Cruz, the main urban centre in the Plains, were the main engines of sustained migration from the Highlands and Valleys towards the Plains. Nevertheless, the Government's will to reactivate that policy is a wonderful opportunity for including in that policy the issue of population ageing in rural areas.

c. Possible lines for action

Perhaps the first pending task is to develop demographic scenarios of population distribution, contrasting trends' scenarios (what is likely to happen if the historical trends continue) with policy scenarios (the most desirable as well as feasible situation in 10 or 20 years more). These scenarios are useful instrument to assess how realistic are some of the preliminary goals stated in the current Declaration of Principles. For example, these scenarios would show how rapidly should grow the medium-size cities to produce a significant reduction in the historical grows rate of the three metropolitan areas of the country –La Paz/El Alto, Cochabamba and Santa Cruz. They could also indicate the carrying capacity of the rural areas in terms of the size of the labour force that could be productively absorbed on sustainable bases by those areas, identifying in that way the areas that are over-populated and those which are under-populated and, consequently, could be considered as suitable destinies for rural-to-rural migrants.

Inducing the elders living at present in poor and stagnant rural communities to migrate to the cities to live closer to or with their children who already migrated could be a policy line to be considered. The results would be double. On one side, elders better protected by their family and living in settlements where they can find better health services and more opportunities for an active social life. On the other side, lands would be freed to be worked by those who remain in the country side. A possible instrument for implementing such a policy could be a Government program that buys the properties of those elders willing to move to the cities and sell them with soft long-term loans to young peasants who are equipped for working those lands with reasonable productivity levels. A program like this one would have two desired effects: (1) Moving the elders to a more appropriate environment and (2) increasing the assets of those who remain in the country side, allowing them, hopefully, to overcome poverty.

The payment for the elder's land could be done in cash or in the form of a pension for life. Certainly, the commercial value of a small and deteriorated piece of land probably would not be enough for generating a decent pension for life. Therefore, this kind of intervention assumes that there is an important subsidy from the state.

It must be taken into consideration that any policy aimed at moving poor rural people to the urban areas is likely to be strongly opposed by the urban dwellers. Probably they are right when they think that no benefits for them will result from that migration. Nevertheless, that migration can be beneficial for the migrants themselves and for the communities of origin, which are good reasons to promote such a kind of policy.

2. Creating conditions for the exercise of the sexual and reproductive rights of the population

a. *The challenge*

In Chapter IV, when the relationship between poverty and age structure was discussed, it was clearly shown that the rural population in extreme poverty has the youngest age structure, that that was in a large extent the result of high fertility among the very poor, and that that high fertility was in a high proportion due to unwanted pregnancies and births. Already in the 1990s, if the rural women of the Altiplano and the Valleys would have been in a favourable setting for exercising their reproductive rights and they would have got pregnant only when they wanted, their fertility would have been half the observed one. In other words, they would have had in average around three children instead of six. It was also shown that, although one third of the married women in that Andean rural population were using some kind of contraceptive method to prevent an unwanted pregnancy, only one fifth of the family planners were using a modern effective method. These facts seem to indicate that by mid 1990s the access to family planning services was very limited in Andean rural Bolivia, where the large majority of poor rural families reside. Nevertheless, socio-cultural factors could have been also preventing women from going to the health posts where family planning services could have been available.

Why the standard of living of the elderly could be affected by the number of children that their daughters and sons have? How a reduction in fertility among the poor rural women can benefit the elderly and reduce food insecurity? The answer to these questions deals with the economic capacity of the elders' children to support their parents when they reach an advanced age. *Ceteris paribus*, the larger is the number of children in a young family, the higher tends to be the intra-household economic dependency ratio¹ and, consequently, the lower the capacity of its head to support economically his or her elderly parents. As seen in table III-6-B, 61% of the rural elderly women in the Valleys and the Altiplano had at the time of the last population census 4 or more surviving children. In the case of the Plains that proportion was even higher: 75%. Thus, the most convenient situation for an elder, in terms of progeny, would be to have many surviving children and not too many grandchildren.

b. *The recent policy guidelines*

The text of the Declaration of Principles speaks by itself. The general principle is that *"The opening of opportunities for all men and women must be accompanied by their capacity to make free choices in any aspect of their personal and communal lives, based in complete information."*

This implies, according to the Declaration, *"Respecting the decisions made by young and adult women about their sexuality and fertility as well as the democratization of their roles in the family and the society"* through policy actions such as:

- *"Promotion of preventive and educative activities in connection with safe motherhood and the reduction of maternal mortality";*
- *"Wider access and better quality in prenatal and childbirth care";*
- *"Diffusion, promotion and support of the services for the voluntary regulation of fertility through the provision of the complete array of contraceptive methods, with full participation of young and adult men, according to their new reproductive roles in the family, and full respect of the different cultural visions on this matter".*

¹ The number of economically dependent members of a household per each economically active member.

It is worth noting the emphasis given in this declaration to: (1) free decision about when and how many children to have and how to prevent pregnancies while keeping a healthy sexual life; (2) effective access for all women and men to information, education and services in the field of family planning; (3) the importance of empowering women within their families and communities, allowing them to make free reproductive decisions and have effective access to information, education and services; (4) active involvement of men, since they are young, in reproductive decision making and the implementation of their decisions, and (5) the need to adapt any policy intervention to the cultural values and patterns prevailing in each community.

The Declaration refers to the “Program on Sexual and Reproductive Health 2004-2008” as one of the main instruments to implement these policy guidelines. This is certainly not the first program in this field. Since the 1970s the Bolivian government has been progressing in the implementation of a national program in the area of reproductive health. The inclusion of components of family planning has been slow, because of the strong resistance from the Catholic Church –still active-- and from leftist parties and groups which considered the introduction of family planning activities as collusion with the American Imperialism.

The National Health Policy, adopted when current President Mesa was the Vice-President of the Republic, begins with a dramatic recognition of the challenges ahead. *“Bolivia is a country with serious health problems, which result from its underdevelopment, its social and geographic disarticulation and, mainly, from the social inequity and secular exclusion that affect large segments of its population”*. . The Program of Sexual and Reproductive Health is an important instrument in this policy. One of the arguments in support of the delivery of education and services in this field is that reducing the number of unwanted pregnancies is the best way to combat abortion. At the same time, the policy document recognizes that the larger unmet health needs are in the rural areas.

Recent data on family planning service delivery show how the less developed rural regions are the most in need. Thus, in 2003 the Plains, the most developed rural region, with only 19% of the female rural population of the country, concentrated 33% of the counselling sessions on RH/FP, 56% of the new acceptors of IUD and 47% of the female sterilizations. In the other extreme, the Altiplano, the least developed and poorest rural region of Bolivia, with 47% of the female rural population, absorbed only 24% of the counselling on RH/FP, 12% of the new acceptors of IUD and 7% of the female sterilizations. These figures give an idea of how big is the challenge faced by the Government and the civil society of Bolivia of creating favourable conditions for the exercise of the sexual and reproductive rights by all women and men, including those who live in the less developed rural areas.

c. *Possible lines for action*

Is there room for the rural elders in the implementation of this policy? The answer is yes. Many traditional midwives are elders, respected in their communities, which can be trained on reproductive health. Furthermore, old men and women play an important role in the intergenerational transmission of cultural patterns and norms related to sexuality, reproduction and gender roles. Furthermore, particularly old women, can influence the views and decisions of their daughters and daughters-in-law, as well as of their grand children, with regard to the ideal number of children and the use of contraceptives to prevent unwanted pregnancies. If they are educated on this matters and eventually understand that having only wanted pregnancies and a small family can benefit their own children and grand-children and allow them to take better care of their parents when they become old, they could play a significant role in the implementation of a policy aimed at creating a favourable setting for the full exercise of the sexual and reproductive rights.

C. *Looking for lessons from the Chilean experience*

As shown in previous chapters, the incidence of poverty and of indigence have experienced a sustained reduction in Chile; there is not an important poverty gap between rural and urban areas, and these rates are particularly low among the elderly. We have assumed that food insecurity has followed the same pattern. A rather sustained economic growth --and consequent increase in income per capita-- is certainly a critical factor to explain the declining trend in poverty, but how important has been the role played by the public policies, particularly in connection with the elderly? In this regard it is worth remembering that Chile is much more advanced than Bolivia in its population ageing process and, consequently, the public discussion about the social and economic implications of a rapidly growing number of elders started earlier, as well as the public policies aimed at responding to this challenge.

1. Growing with equity: the government's strategy to defeat poverty

For the last thirteen years Chile has been under the rule of the "Concertacion", a centre-left alliance of political parties, including from the Socialists to the Christian Democrats. This government has maintained the neo-liberal approach to economic development, adopted by the military government of General Pinochet in the mid 1970s, giving at the same time high priority to social development.

Four main drives move the government's strategy forward: (a) positive discrimination in favour of the poor; (b) empowering individuals and social organizations; (c) decentralization and increasing participation of the civil society at the local level, and (d) the promotion of a culture of solidarity.

Instead of waiting for the expected "trickle down", the government's strategy to reduce poverty and eradicate indigence has used a set of policy instruments aimed at redistributing resources in a focalized manner. So, there has been the political will to implement a positive discrimination in favour of the poor and more vulnerable groups of the society. With that purpose, a national register of families in need (Ficha CAS) was improved, which covers close to forty percent of the households along the country. Based in that information, the local authorities can identify those families eligible for social programs and subsidies such as a special pension, a subsidy for drinking water or a subsidized house, effective in both urban and rural areas.² Additionally, poor and indigent people are benefited with free health services, free education -extended recently to secondary school-, and a growing system of fellowships and soft credits facilitating the access of their youth to the tertiary level of education.

Although most of these measures have as immediate effect alleviating poverty, their main purpose is to remove its roots and drastically reduce vulnerability. Empowering the poor and their organizations is the way to overcome social exclusion and poverty. The *FOSIS* (*Fondo de Solidaridad e Inversión Social* – Solidarity and Social Investment Fund) has been a key instrument. Created in 1991, this fund has helped individuals, families and social organizations to improve their abilities to use available social benefits, to channel their demands and to generate income. The projects supported by *FOSIS* and implemented by a wide variety of social organizations include: helping youth and adult workers to complete their basic studies, becoming in this way more competitive in the labour market; creation or strengthening of micro-enterprises; helping unemployed workers to become freelance workers; assisting groups of women, youth, neighbours to organize themselves; and supporting programs aimed

² 13 thousand subsidized houses were built during 2003 for poor families in rural areas. To apply to this program, the rural family needs to be poor, have land in property and savings equivalent to US\$270. The subsidy provided by the State is equivalent to US\$4,500, but in the case of an indigenous family this amount reaches US\$6,700.

at preventing or rescuing from social risks –drug-addiction, alcoholism, delinquency— which deepen poverty and social exclusion. The social investment in these areas foreseen for *FOSIS* for 2004 is around 25 million US dollars.

Since 2002 these efforts to help people to escape from poverty has been strengthened by focussing on households in condition of indigence, through the program “*Chile Solidario*”. Surveys had shown that there was a “hard core” of around 225,000 families in extreme poverty that, apparently, were not effectively reached by the ongoing set of programs and measures. Therefore, a proactive approach from the State side was adopted: The households in indigence will be find out, identified and regularly visited by a professional or technician belonging to *Chile Solidario*. Around 2,000 of them have been mobilized. Their function is to help the family to identify its weaknesses and potentialities, and assist its members to take full benefit of the existing social programs. The program provides monthly, for two years, a small amount of money. There are, additionally, monetary subsidies for the household members younger than 18 years old, for the invalids and for the elderly. The third component of the program is the preferential access of the family members to social programs, among them: a skill development bonus for the unemployed heads of household, helping them to upgrade their working skills or learn a new one; breakfast at the school for children and a bonus for the schools that are able to keep the children of these families in the educational system. The target is to cover 100 per cent of the families affected by extreme poverty before ending 2006. Until February 2004, one hundred and six thousand families had been contacted and solidarity support had been provided to 79 thousand of them.

The organizations of the civil society have a crucial function to play in this strategy to defeat poverty. A good example of close collaboration among the civil society and the public sector is given by the *Fundación para la Superación de la Pobreza* (Foundation for Overcoming Poverty). This foundation, born as a civil society advisory council to the government, has developed important initiatives aimed at building a new culture based on solidarity. The first one, started in 1995, is “*Servicio País*” (At the Service of the Nation), which support professionals who go to poor rural counties and stay there for a year or longer, assisting those communities in designing and implementing projects or initiatives able to improve the quality of their lives. In 2004 there are around 300 of them distributed in the poorest localities of the country. Other innovative program, lunched in 1996, is called “*Adopta a un hermano*” (Adopt a brother or sister). University students are engaged to perform as tutors of children 8-13 years old who study in a public school and are considered psychosocially vulnerable. Other programs launched later are the one called “*Redes Sociales*” (Social Networks), which promotes and facilitates the strengthening of networks among social organizations, including public institutions, and the program “*Emprender Juntos*” (Undertaking together), which provides voluntary technical advisers (entrepreneurs, professionals, university students) for 8 months to poor people wanting to start a micro-enterprise.

2. The impact of public social expenditures on income distribution

Chile has had one of the most uneven income distributions in Latin America. Between 1997 –ending period of the military regime—and 1998 – after eight years of democratic government by the “Concertacion”—the income per capita of the richest 20% of the population was always close to 16 times the one of the poorest 20%. Thus, although the income per capita increased and the incidence of poverty declined drastically during the 1990s –as shown in previous chapters-- the income distribution remained very uneven. Nevertheless, social expenditures were growing during that period. Did those expenditures benefit the very poor? How important are social investments and expenditures for the real income of the poor and the indigents?

Studies made by the Chilean Ministry of Planning and by the World Bank help to answer those questions. The former³ shows that, by the year 2000, close to 70% of the public expenditures in health, education and monetary subsidies went to the poorer 40% of the population. Those transfers resulted in an increase of 84.5% over the autonomous income in the poorer 20% of the households and of 28.2% in the case of the households of the second quintile of income per capita.

In the WB study, data collected in 1998 on transfers in money and in kind through public social programs (health, education, housing, transferences in money and fiscal credit) are added to the monetary income to estimate the total income. In the case of the first quintile – the poorer—these transfers coming from social programs were equivalent to 69% of their monetary income and represented 41% of their total income. In the case of the second quintile, these transfers were equivalent to 23% of their monetary income and represented 19% of their total income. Furthermore, when the first and the fifth quintiles are compared, a difference of 20 times between them when only monetary income is considered, come down to 11 times when the total income –including transfers from social programs-- is considered.

Thus, it can be concluded that the transfers in kind and in money from the social programs have been primarily benefiting the low income households and constitute an important part of the income of the poorest families in Chile.

3. Specific policies and programs addressed to the elderly

Growing awareness about the ageing process and its social implications led in 1996 to the adoption of a formal *Política Nacional para el Adulto Mayor* (National Policy for the Senior Adult). Its general objective is to induce a cultural change in the Chilean society leading to a higher social appreciation and a better treatment of the elders by their families and the community. Equity and intergenerational solidarity are the two fundamental values orienting this policy. Among its principles, it is worth noting:

- Promoting self-reliance and active ageing, with full recognition of the elders' right to participate in all the domains of social life;
- Prevention and education for a healthy physical, mental and psycho-social ageing;
- Decentralized implementation, with flexibility to adapt the programs and services to the local conditions;
- Priority given to the elderly living in poverty;
- Active involvement of the civil society, while keeping for the State the role of regulator.

Some of the policy objectives are:

- Facilitate increasing participation and social integration of the elderly
- Promote preventive health approaches and the adoption of healthy life styles
- Focalize State subsidies on the groups and sectors most in need
- Strengthening intergenerational responsibility within the families and in the society as a whole.
- Promote associations among the elders to support each other and jointly pursue their common goals
- Improve social security and the services provided to the pension holders.

³ Gobierno de Chile, Ministerio de Planificación y Cooperación. "Impacto distributivo del gasto social – 2000", in Internet: www.mideplan.cl

This policy has been implemented through a variety of programs, involving one or more social ministries. Among them are worth noting here, in addition to the regular pensions under the system of social security, the following:

- Free access to health services of the Public Health System for the people of 65+ registered under FONASA (National Fund for Health) *Programa para el Adulto Mayor* (Program for the Senior Adult), including prostheses, eyeglasses, hearing aids, wheel chairs and selective surgery.
- Special housing program for the third age (60+) benefiting low-income elderly needing a place to live. They have access to a small house (25 m²) specially built or adapted for the elderly. This house may be gotten free or paying a rent that cannot exceed 10% of the raw income of the beneficiary.
- Sports activities aimed at practicing a healthy style of life.
- Tourism at low cost organized for groups of elders during the low season.

The *Servicio Nacional del Adulto Mayor – SENAMA* (National Service for the Senior Adult) was created in 2002 to better promote and coordinate the implementation of this policy. Additionally, a *Fondo Nacional del Adulto Mayor* (National Fund for the Senior Adult) was created in 2004 to finance projects presented by *the Clubs of Senior Adults* and other social organizations working for the elderly. This fund is administered by SENAMA through its regional committees.

In summary, the small rural-urban gap and the low proportion of elders living in poverty or indigence, even in rural areas of Chile, found in chapter IV, which can be assumed as indirect indicator of low prevalence of food insecurity in this particular age group, seems to be the result of more than economic development and general increase in income levels per capita for the country as a whole. Aware that the economic model of open market economy, if let alone, leads to growing income gaps and social exclusion, the centre-left Government of the “Concertacion”, in power since 1990, has given high priority to social investment and expenditures, improving at the same time the institutional mechanisms allowing to concentrate those resources on the less developed localities and the poor families. Furthermore, special policies and programs in favour of the most vulnerable groups among the poor (children, women, youth and the elderly) have been adopted and implemented.

D. Empowering young adults with the control of land: a rural development strategy proposed by ECLAC to cope with population ageing and gerontocracy

Population ageing in rural areas of Latin America is being a source of concern for the countries and the organizations interested in promoting rural development. In this section we will summarize the analysis and proposals recently produced in the Unit of Agricultural Development of the UN Economic Commission for Latin America and the Caribbean (ECLAC),⁴ by Martine Dirven, it’s Director, which seems useful for discussing the findings of this study.

1. The problem

Elders are becoming an increasing proportion of the rural population and their life expectancy is rising. Many of them are owners of the land and in control of their farms. Because of laws and customs about

⁴ See: Dirven, Martine, “Las prácticas de herencia de tierras agrícolas: ¿una razón más para el éxodo de la juventud?” CEPAL/ECLAC, Unidad de Desarrollo Agrícola, División de Desarrollo Productivo y Empresarial, Santiago, CHILE, Dic. 2002.

inheritance, the transfer of property and control of the land to their children usually takes place only after the death of the elders. Consequently, this intergenerational transfer occurs late in their life and frequently when the children have already migrated or moved out of the agricultural environment long time ago. This is one of the main barriers for the productive and social insertion of the rural youth in their agricultural environment of origin as well as a motive for them to migrate towards urban areas. This is also a barrier for rural development, since the elders can be expected to be less open to innovations than their offspring and less equipped than them for a competitive integration into a market economy.

Actually, the level of formal education of the rural youth in Latin America easily duplicates the one reached by their parents. This higher education, together with the day to day experience gained by the youth in the agricultural environment, is a valuable human capital which is being lost for rural development because that youth don't find opportunities for their productive integration in the country side.

Opening opportunities for the young and middle age adults to replace earlier their parents in the control of their family properties would be a positive factor for increasing productivity of land and labour and, consequently, for rural development.

2. Possible policy responses

Based on these considerations and on the experience gained in rural development strategies already adopted in Europe, the author is proposing for discussion the following approach.

The strategic goal would be to reduce the mean age of those who manage the agricultural properties or, in other words, to increase the proportion of young adults among them. An earlier intergenerational transfer of property or effective control on agricultural assets would be a key factor for inducing that change. The challenge is how to induce this intergenerational transfer without hampering the economic security and quality of life of the elders and, if possible, improving it. Some of the possible paths of action towards that end suggested by the author are:

- *Increasing access for the rural elderly to pension systems.* To have transferred the control of the farm to a younger manager would be a condition for the elder to benefit from a pension. The pension systems are already rather well developed in the case of Chile. While in the case of Bolivia, as shown in Chapter III, it would probably take long time and a large amount of resources to extend the coverage of the public social security system to the elderly population living in rural areas.
- *Provide training opportunities* for young and middle-age adults who are managing the farms.
- *Facilitating the construction of houses* for the young managers who take control of elders' properties, allowing in that way the elders to remain in their houses.
- *Establish an age limit* for having access to credit, technical assistance, etc.
- *Promote and institutionalize the concept of "intergenerational contract"*. This contract should state how the young adult will compensate the elderly for transferring the property of the assets -or at least their control-. Arrangements such as paying a rent for life; committing support and care in case of illness; providing a house and a vegetable garden, could be considered in such a kind of contract.

This last course of action seems to be, in principle, suitable for Chile and for Bolivia. Nevertheless, there are at least two characteristics in the setting of the rural elderly population that should be taken in consideration. The first one is the large number of surviving children, as seen in Chapter III. Sharing the rural properties among several inheritors has been perhaps the main cause of the dramatic segmentation of land, particularly in the Bolivian Altiplano. Transferring the property or control of land to only one of them would avoid its further segmentation. But in this case the intergenerational contract should include also the other potential inheritors. The second issue is the already very small size of properties in the case of the poor families –a major cause of food insecurity—and again particularly acute in the Bolivian Altiplano. It is difficult to think that a piece of land which –because of its size and deteriorated condition of its soil-- was unable to sustain its elder owner and those living with him or her, will be able now to support additionally the young adult and his/her family, even if important technological and managerial innovations result from this transfer. Thus, it would be advisable to consider policy measures aimed at grouping properties in larger productive units, which can be expected to be economically sustainable.

This approach seems to be valid for rural areas where the incidence of “mini-fundia” is low and the large majority of the land owners have enough agricultural land to sustain themselves and their households above subsistence level. But in areas, such as the Bolivian Altiplano and probably some parts of the Valleys region, where peasants’ properties, because of their size and deteriorated condition of the soil, are unable to sustain a household, the alternative approach already presented in section B of this chapter, could be more appropriate. It was proposed there, for overpopulated rural areas, to promote and facilitate the migration of the elders to the cities where they can live or be closed in touch with one of their sons or daughters. In this approach the transfer of property and control of land from an elder to a younger adult is not necessarily between a father or a mother and one of his/her sons or daughters, but to any young adult already in control of agricultural land, who can in this way increase his assets to a sustainable size. If the property is transferred to a son or daughter who already has his or her own farm, the idea of the *intergenerational contract* would be suitable. But if the transfer is done to a young adult outside the family, the intervention of a government program buying from the elder and selling to a young adult peasant or farmer would be required. Thus, both approaches can complement each other or even being combined, depending on the economic, social and agricultural conditions prevailing in each specific rural area.

B. Pending tasks

The analysis of the ageing processes, the social profile of the rural elders and their relations with food security, poverty and land tenure in Bolivia and Chile, as well as the presentation and discussion of their policy implications have resulted both in findings and new questions that should be addressed in further studies.

There are at least three areas of “pending tasks”:

1. Further utilization of census data

The analyses and discussions of Chapter III were based in a set of special tabulations of the most recent population censuses of Bolivia (2001) and Chile (2002). It was found there –to give an example—that one third or even more of the rural elder women are widows –which could be a condition of social vulnerability—and that while an important proportion of elder rural women are heads of their households (around 40 percent), other significant proportion of them live in households headed by a son, a daughter or other relative. A pertinent question comes up from these findings: How many

widows are also the head of their households –which may be considered a difficult condition—and how many of them live in households of relatives –which could be a more secure setting?

It was found that a significant proportion of elders -especially in the poorest rural areas- live alone or with somebody else. Another finding is that the number of surviving children of the elders can vary from zero to more than seven. Is there any correlation between these two variables? How large is the family support network of the elders living alone or with only one other person?

These are only two examples of questions which can be easily answered by running additional cross tabulations based on the available census data.

2. The need for deepening the analyses through a larger segmentation of the populations under study

Dividing the Bolivian population in three ecological big regions brought a lot of light to the analysis of the internal heterogeneity of this country. In the case of Chile, the comparison of two regions gave also some interesting findings. But we know that each one of these large regions is also internally heterogeneous.

Some of the policy oriented suggestions made in the previous section ask for a careful study of the “carrying capacity” of different rural areas, understanding this capacity in terms of employment generation, as already explained. For “over populated” areas – those with insufficient capacity to absorb with reasonable levels of productivity the labour force available—policy interventions would be aimed at fostering migration, including the elders. On the contrary, “under-populated” rural areas, where the natural resources –combined with other factors—would be able to employ more labour force than the one available, could be considered as areas for attracting migrants.

Again, this is only an example showing that discriminating analysis should be done to find out more homogeneous social segments and/or territorial areas, to better define priorities and modalities of intervention in the suggested policies.

3. The need for further socio-cultural analysis

Both in Chile and, particularly, in Bolivia socio-cultural diversity is an important national characteristic. This study is based mainly on statistical data and there were neither time nor resources available for a careful assessment of the large number of sociological and anthropological studies on relevant matters for a better understanding of aging and related policies.

Actually, a better understanding of the socio-cultural dimension of ageing and related topics is required at least for the following three reasons: (1) to have a more comprehensive diagnostic; (2) to respect the culture of the people, particularly in the case of indigenous peoples; and (3) increase the probability of success of the policy measures suggested and, consequently, the social impact of the policy.

Again, an example: One of the most significant findings in this study is the large number of surviving children that most of the elders have and -from a policy oriented perspective- the importance that the children could and should have as emotional and economic supporters of their elderly parents. We have spoken of “intergenerational solidarity” and “intergenerational contract”. To give real meaning to those concepts we need to know more about the cultural norms and patterns that inform the relations between parents and children along their life in different socio-cultural settings. We need also to know

more about the real meaning of “solidarity” and “making a contract” for different cultural groups. There are practices, rituals, social mediations that need to be taken into consideration to be both respectful of cultural identities and effective in terms of social impact.

This is only one example. Several others have been pointed out along this study. Thus, making a research agenda of socio-cultural issues which ask for further bibliographical and field research seems to be a priority pending task.

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