

Rural Poor in Rich Rural Areas: Poverty in Rural Argentina

By

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Abstract

Rural poverty remains a crucial part of the poverty picture in Argentina. This paper used a rural dataset collected by the World Bank in 2003. Findings show that extreme income poverty in rural areas reached 39 percent of the people or 200,000–250,000 indigent families. These families tend to: be large, and young, and to escape from poverty as they mature and children leave the household (life cycle); live largely in dispersed areas where basic service provision is often weak and delivery is difficult (in particular school attendance beyond 11 years of age falls off very rapidly compared to grouped rural or urban areas); and be more likely to be small landholders than landless laborers. The structure of poverty in rural Argentina shows that: larger households are poorer than smaller households, female headed households are poorer than male headed households, young households/household heads are poorer than older households/household heads, the poor tend to work more in the informal sector, and a greater share of those engaged in agriculture are poor. However, poverty is by no means strictly an agricultural problem. Furthermore, the deepest poverty is among the poorly educated and young household heads with children. Without interventions to improve their opportunities and assets, their plight is likely to worsen.

1. Introduction

Rural poverty is largely neglected by policymakers in Argentina. The general urban policy bias common to many countries is accentuated by Argentina's lack of data on rural poverty. Argentina is one of a small number of countries in the region that does not conduct regular household surveys in rural areas. As a consequence, rural areas are not included in the official income poverty figures. The limited information that is available suggests that poverty is much higher in rural areas than in urban areas. In 2001, according to a Basic Needs Index that the government calculates based on census data, 33 percent of rural residents had unmet basic needs, compared to 14 percent in urban areas.

In part, the rural-urban wedge in Argentina is the consequence of the highly skewed public investment distribution that disfavors rural people and provinces, combined with underinvestment in agriculture and policies which suppressed the rural terms of trade for many years. Moreover, the provision of rural public services is scarce in such areas as education and health care, infrastructure, and transfer programs. Moreover, the lack of public investments and services in rural areas has hit the rural poor the hardest: they cannot afford to buy privately provided services such as health and education because they lack the necessary assets and income.

Argentina's rural population has at least three different types of livelihood strategies: (i) on-farm—agricultural-based livelihood; (ii) off-farm—agricultural and nonagricultural employment and subsidies; and (iii) a combination of (i) and (ii). Poor households' assets and social capital, and their access to markets, services, and existing institutions, are important when addressing the livelihood of the poor.

The rural sector is important for the macro and micro economies in Argentina. Agriculture and agro-based industry account for 57 percent of all exports, 36 percent of employment, and 18 percent of gross domestic product (GDP). The rural poor and nonpoor receive the largest share of their total income—54 and 68 percent, respectively—from agricultural activities such as farming and agricultural labor. The rural nonfarm sector is also important for income and employment. The poor and nonpoor in dispersed rural areas receive less than 20 percent of their total income from the nonfarm sector. Remittances and transfers account for 27 and 19 percent of the poor and nonpoor's total income, respectively. This information motivates this paper, which tries to shed some empirical light on poverty in rural Argentina, an area that has been neglected, for example, in terms of data collection compared to urban areas.

The analyses of rural poverty in a broad sense undertaken in this paper are based on existing literature and available data, including a rural survey from 2003 undertaken by the World Bank. This paper is the first on rural poverty based on this dataset and the rural poverty analysis includes an overview of demographic changes, poverty and inequality, and social programs and services. This paper follows official Argentine statistical classification methods: rural areas are disaggregated into two categories: (i) grouped rural

areas with under 2,000 inhabitants and (ii) dispersed rural areas or open countryside. Key findings from this paper are reported below.

Rural income poverty is widespread and deep. It is especially extensive in Northeast and Northwest Argentina. By the income measure of extreme poverty nearly 40 percent of rural households in these areas are in extreme poverty, compared to just over 30 percent in urban areas.² The rural extreme poor account for around 1.2 million people or around 200,000 households.

At the beginning of the twenty-first century, the structure of poverty is clear in rural Argentina: larger households are poorer than smaller households, female headed households are poorer than male headed households, young households/household heads are poorer than older households/household heads, the poor tend to work more in the informal sector, and a greater share of those engaged in agriculture are poor. However, poverty is by no means strictly an agricultural problem, as Wiens (1998) also noted in his analysis of the early and mid-1990s. Furthermore, the deepest poverty is among the poorly educated and young household heads with children. Without interventions to improve their opportunities and assets, their plight is likely to worsen. Moreover, labor market analyses reveal that education is key to increase productivity, wages, and incomes for rural Argentines (see Verner 2006).

Poverty seems feasible and sensible to tackle via government programs. For comparison, the direct cost of eliminating the income gap between the rural poor population's current income and the extreme poverty line is roughly 0.1 percent of GDP.³ However, the challenge is not to transfer these resources but to help poor families to build the assets to permanently escape from poverty. This will require a rural poverty reduction strategy tailored to the specific characteristics of the rural poor, taking into account their lack of skills; social capital (networks), and opportunities in addition to cultural and ethnic differences. The strategy needs to include education and cash transfer programs, but it needs to go much further. The case of the rural poor in Chile is a good example: despite aggressive development of the agricultural sector, investment in education, targeted social protection programs, and incentives for exiting rural areas, a significant segment of the rural poor has been unable to benefit from the growth in the sector and public programs for facilitating their transition out of agriculture and rural areas.

This paper suggests that government programs to alleviate rural poverty need a comprehensive strategy that includes different types of components such as employment generation and safety nets related to secondary and tertiary education and elements to

² These poverty rate comparisons refer to income poverty because consumption poverty estimates are not available for urban areas (see Section 3 for definition). Consumption poverty measures give a better picture of the true status of household poverty in rural areas and therefore consumption poverty rates are used in the rest of the paper unless otherwise stated.

³ The numbers are based on consumption poverty calculated in Section 4 and expanded to Argentina as a whole. The main idea is to calculate the cost of lifting all rural dwellers above the indigence poverty line. The cost of administration and other related costs would have to be added to achieve the total cost.

increase the indigents' broader asset base. Moreover, improving the rural dwellers' connections with towns is key for speeding up rural and semi-rural area relations.

The paper is organized as follows. Section 2 addresses demographic changes. Section 3 presents data and methodologies applied in the following sections. Section 4 addresses poverty, income inequality, and UBN. Section 5 presents a poverty profile. Section 6 addresses access to selected services and assets. Finally, section 7 concludes and gives policy recommendations.

2. Population

Demographic factors have direct and indirect impacts on prices and poverty. As the size and age composition of the population change, the relative size of the labor force and the number of dependents also change. This modifies the dependency ratio of families and therefore their level of poverty. This is the direct effect of demographic changes. It captures the effect that demographic changes have on quantities: number of children, size of the labor force, and the number of elderly people. However, these changes in quantities will generally influence prices in the economy. In particular, changes in the population's growth rate and in the age structure may have important impacts on labor supplies, savings, household production decisions, and migration. As a consequence, demographic changes may have considerable impact on the level of wages and on interest rates. Since these prices are important determinants of family income, they are bound to have a profound influence on the level of poverty. These are the indirect impacts of demographic changes on poverty, which occur through the effects of demographic changes on savings, wages, production decisions, and interest rates.

Changing demographics can also have important impacts on the demand for public sector investments and public services, incentives for private sector investments, political power, and labor markets. As a result, it is important to look at recent changes in demographic patterns in rural Argentina. The following overview describes demographic changes between rural and urban areas that have taken place from 1960 to 2001 (rural labor markets are not addressed in this paper, but in Verner [2005]).

Overview of demographic changes

Argentina is in the midst of a baby bust. After expanding at 16.4 percent between 1980 and 1991, Argentina's population increased by only 11.2 percent or 3.6 million people during 1991–2001 and reached 35.9 million in 2001 (Table 2.1).⁴ The main explanation is the sharp drop in the birth rate and some emigration.

⁴ The most recent population census was undertaken in 2001.

The poorest regions experienced a higher population growth rate than the average of Argentina as a whole during 1991–2001. The Northwest and Northeast regions reached a population growth rate of 21 and 19 percent, respectively. This compares to the Cuyo region where the population only expanded by 15 percent and the city of Buenos Aires which lost 6 percent of its population during 1991–2001.

The rural population, defined for census purposes as people living in communities with populations under 2,000 or in the open countryside, represented 11 percent of total population in 2001, down from 13 percent in 1991 and 28 percent in 1960. Hence, currently rural Argentina is home to around 3.9 million rural dwellers, although the population was reduced by 8.4 percent during 1991–2001 (Figure 2.1 and Table 2.1). Moreover, demographic developments in rural areas have not been homogeneous in the last decade. The rural Northeast region experienced a net out-migration (12.1 percent) while the rural Northwest experienced population growth and some in-migration (1.4 percent). Some provinces, such as Mendoza, Catamarca, and Tierra del Fuego, experienced positive rural population growth rates of 4.5, 8.9, and 43.7 percent, respectively. This compares to Chaco and Santa Cruz which experienced negative rural population growth rates of 24.3 and 44.8 percent, respectively.

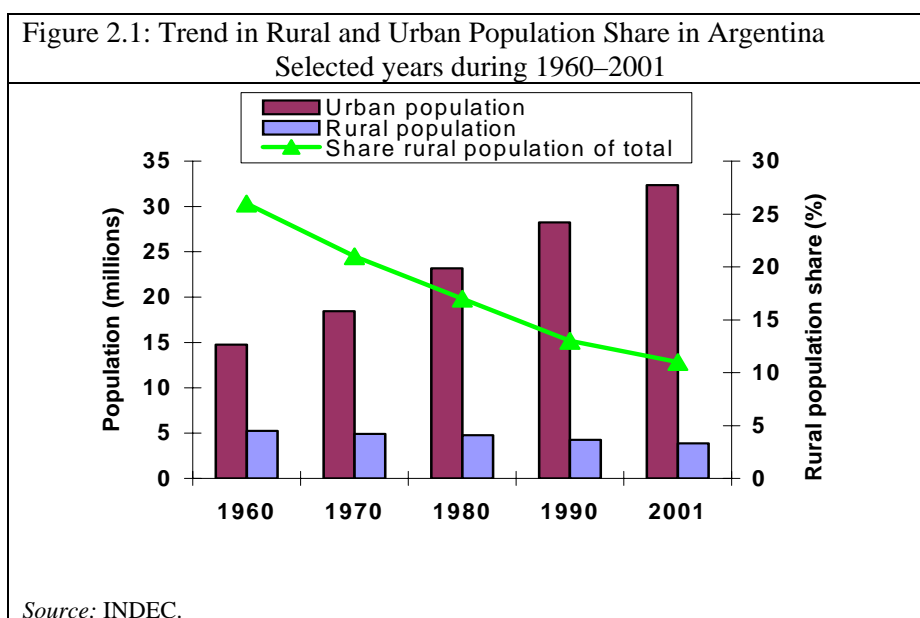


Table 2.1: Population in Argentina and its Regions, 1991 and 2001

1991						2001				
	Total	Urban as a share of total	Rural as a share of total	Grouped rural as a share of total rural	Dispersed rural as a share of total rural	Total	Urban as a share of total	Rural as a share of total	Grouped rural as a share of total rural	Dispersed rural as a share of total rural
Pampeana region										
Buenos Aires	12,594,974	95.2	5.1	29.8	70.2	13,827,203	96.4	3.8	40.3	59.7
Entre Ríos	1,020,257	77.6	28.9	21.7	78.3	1,158,147	82.5	21.2	28.8	71.2
La Pampa	259,996	74.2	34.8	55.3	44.7	299,294	81.3	23.0	61.8	38.2
Córdoba	2,766,683	86.0	16.2	38.2	61.8	3,066,801	88.7	12.7	45.9	54.1
Cdad Bs. Aires	2,965,403	100.0	0.0	0.0	0.0	2,776,138	100.0	0.0	0.0	0.0
Santa Fe	2,798,422	86.8	15.2	40.7	59.3	3,000,701	89.2	12.2	47.1	52.9
Total Pampeana	19,440,332	91.5	9.3	34.1	65.9	24,128,284	94.1	6.3	42.4	57.6
Cuyo region										
Mendoza	1,412,481	77.8	28.5	13.1	86.9	1,579,651	79.3	26.1	16.6	83.4
San Juan	528,715	80.3	24.6	35.0	65.0	620,023	86.0	16.3	35.2	64.8
San Luis	286,458	81.1	23.3	42.3	57.7	367,933	87.1	14.8	51.9	48.1
Total Cuyo	2,227,654	78.8	26.8	21.3	78.7	2,567,607	82.0	21.9	23.7	76.3
Northwest region										
Catamarca	264,234	69.8	43.2	66.0	34.0	334,568	74.0	35.0	68.9	31.1
Jujuy	512,329	81.6	22.5	32.7	67.3	611,888	85.0	17.7	40.3	59.7
La Rioja	220,729	75.7	32.1	63.9	36.1	289,983	83.1	20.3	62.0	38.0
Salta	866,153	79.0	26.6	25.6	74.4	1,079,051	83.4	19.9	34.3	65.7
Santiago del Estero	671,988	60.7	64.8	22.7	77.3	804,457	66.1	51.3	24.0	76.0
Tucumán	1,142,105	76.6	30.5	13.9	86.1	1,338,523	79.5	25.8	15.9	84.1
Total North West	3,677,538	74.4	34.4	27.8	72.2	4,458,470	78.6	27.2	31.2	68.8
Northeast region										
Corrientes	795,594	74.1	34.9	15.3	84.7	930,991	79.4	26.0	16.3	83.7
Chaco	839,677	68.6	45.8	11.9	88.1	984,446	79.7	25.5	17.8	82.2
Formosa	398,413	67.8	47.5	14.4	85.6	486,559	77.7	28.7	15.4	84.6
Misiones	788,915	62.5	59.9	15.0	85.0	965,522	70.4	42.0	15.0	85.0
Total North East	2,822,599	68.3	46.3	14.1	85.9	3,367,518	76.7	30.4	16.1	83.9
Patagonia region										
Chubut	357,189	87.8	13.9	48.8	51.2	413,237	89.5	11.7	54.9	45.1
Neuquén	388,833	86.3	15.9	30.0	70.0	474,155	88.6	12.9	33.4	66.6
Río Negro	506,772	79.9	25.1	35.4	64.6	552,822	84.4	18.5	42.0	58.0
Santa Cruz	159,839	91.4	9.4	49.9	50.1	196,958	96.1	4.0	38.7	61.3
Tierra del Fuego	69,369	97.0	3.1	23.8	76.2	101,079	97.1	3.0	42.9	57.1
Total Patagonia	1,482,002	85.5	16.9	37.6	62.4	1,738,251	88.8	12.6	42.4	57.6
Total Argentina	32,615,528	87.2	14.7	27.1	72.9	36,260,130	89.4	11.8	32.0	68.0

Source: INDEC, National Population Census 1991 and 2001.

Major demographic changes are taking place in and across regions. Data presented in Table 2.1 show that dispersed rural areas lost 14.5 percent of their population over the last decade, reaching 2.6 million in 2001, compared to grouped rural areas that experienced an 8 percent increase and reached 1.2 million.

In 2001, dispersed rural areas had 68 percent of rural population. Some 400,000 people left dispersed rural areas during 1991–2001. Roughly speaking, some 25 percent may have moved to grouped rural areas and the rest may have moved to urban areas.⁵ The Pampeana region experienced a fall of 24.6 percent and the Cuyo region of 5.1 percent in the dispersed rural population. In the latter region, the province of Mendoza is an outlier as it experienced a population increase of 0.3 percent in dispersed rural areas and 32.2 percent in grouped rural areas.

What is driving the heterogeneous population growth pattern that rural Argentina is experiencing? There are various reasons for the changing demographic pattern in rural Argentina, many of which relate to economic opportunities, lack of access to services, and change in crop structures. For example, it is clear that living conditions in rural Chaco are inferior to those of rural Mendoza. In Mendoza, in the Cuyo region, a large part of the agricultural and nonfarm sector is highly labor intensive and expanding, while in Chaco, in the Northeast region, capital intensive agriculture is moving into the south of the province; northern parts of the province experience recurrent droughts and floods that push the population out of rural areas. In the Pampeana region, jobs are becoming scarce in the agricultural sector. The change in production technology toward more capital-intensive methods, for example in the soybean sector, may explain a significant part of the large reduction in the Pampeana region's rural population (see Box 1).

The share of children in the total population is falling. In 1991, in urban and rural areas, children aged 14 and under accounted for 30 and 36 percent and people aged 65 and over accounted for 9 and 7 percent, respectively. In 2001, the share of children aged 14 and under was down to 28 percent, lower than other middle-income countries in Latin America. At the same time, the number of retirees will remain relatively small (Table 2.2). These trends are likely to continue and will have a significant effect on the country's efforts to reduce poverty. For the next few decades, the ratio of children to the working age population will decline. The amount the state must spend on expanding the quantity of social services will also decline. This will free up resources to spend on improving the quality of these services and on other poverty reduction efforts.

The overall dependency ratio is larger in rural than in urban areas. Table 2.2 shows regional and rural-urban differences in the aging pattern. In the Northwest and Northeast regions over 34 and 36 percent, respectively, of the population are under age 15, compared to 28 percent of total population. This compares to 26 percent in the Pampeana region. Moreover, this region has a higher share of the working age population and therefore is able to better feed the region's children compared to northern regions. This demographic

⁵ This analysis does not take into account demographic changes that may account for part of these changes.

pattern is even more widespread when regional rural to urban areas are compared. In the Northeast, 58 percent of the rural population is below 25 years of age and 35 percent is of working age, roughly speaking.⁶ This compares to 44 and 44 percent, respectively, in the Pampeana region. Moreover, findings indicate that 60 percent of Argentina's rural population consists of children, youth and old people in rural Argentina.

Table 2.2: Age Cohorts as a Share of Total, Urban, and Rural Population, 2001

	Age Cohorts			
	0-14	15-24	25-64	65+
Total Argentina				
Total Argentina	28.3	17.6	44.2	9.9
Total Pampeana	25.6	17.1	45.9	11.4
Total Cuyo	29.8	17.9	43.4	8.8
Total Northwest	34.1	19.3	39.9	6.7
Total Northeast	36.4	18.8	38.8	6.1
Total Patagonia	31.5	17.9	44.5	6.0
Urban Argentina				
Total Urban Argentina	27.6	17.6	44.7	10.1
Urban Pampeana	25.4	17.2	45.9	11.5
Urban Cuyo	28.9	17.9	44.1	9.1
Urban Northwest	33.0	19.5	40.9	6.6
Urban Northeast	35.3	19.1	39.7	6.0
Urban Patagonia	31.6	18.1	44.5	5.8
Total Rural Argentina				
Total Rural Argentina	34.2	17.3	40.1	8.3
Total Pampeana	28.9	16.0	44.7	10.5
Total Cuyo	34.1	18.2	40.4	7.3
Total Northwest	38.2	18.4	36.1	7.3
Total Northeast	40.0	18.1	35.6	6.2
Total Patagonia	31.4	17.0	43.9	7.7
Grouped Rural Argentina				
Total Grouped Rural Argentina	33.0	17.1	40.5	9.4
Total Pampeana	28.2	15.8	43.6	12.4
Total Cuyo	33.6	18.3	40.7	7.4
Total Northwest	38.5	18.6	36.3	6.5
Total Northeast	40.9	18.1	35.2	5.8
Total Patagonia	36.5	17.5	40.3	5.7
Dispersed Rural Argentina				
Total Dispersed Rural Argentina	34.8	17.4	40.0	7.8
Total Pampeana	29.4	16.1	45.5	9.1
Total Cuyo	34.3	18.2	40.3	7.2
Total Northwest	38.0	18.3	36.0	7.7
Total Northeast	39.9	18.1	35.7	6.3
Total Patagonia	27.7	16.6	46.6	9.1

Source: Own calculations based on INDEC National Population Census, 2001.

⁶ In Jujuy, Misiones, Salta, and Santiago del Estero less than 35 percent of the population is in the prime working age (see Appendix A).

Table 2.3: Poor and Nonpoor Household Size and Average Members below Age 15 Selected Provinces in Dispersed Rural Areas of Argentina, 2003									
Average Household Size					Average # of Household Members <15				
POOR									
Mendoza	Santiago del Estero	Chaco	Santa Fe	Total	Mendoza	Santiago del Estero	Chaco	Santa Fe	Total
5.8 (2.1)	6.5 (2.4)	5.7 (2.2)	5.5 (2.0)	5.8 (2.3)	1.8 (1.7)	2.3 (1.8)	2.0 (1.7)	2.0 (1.6)	2.1 (1.7)
NONPOOR									
3.6 (1.4)	3.1 (2.1)	3.4 (1.9)	3.9 (1.7)	3.6 (1.8)	1.1 (1.2)	.84 (1.3)	1.0 (1.6)	1.1 (1.3)	1.1 (1.4)
TOTAL SAMPLE									
4.6 (2.0)	5.4 (2.8)	4.4 (2.3)	4.2 (1.9)	4.6 (2.3)	1.6 (1.5)	1.9 (1.7)	1.4 (1.7)	1.3 (1.4)	1.5 (1.6)

Note: Standard deviations in parenthesis.

Source: Own calculation based on RHS 2003.

Table 2.4: Dependency Ratio in Dispersed Rural Areas in Argentina, 2003						
	Total Sample		Poor Households		Nonpoor Households	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Dependency	2.4	2.1	2.9	2.4	1.9	1.7
Household size	4.7	2.3	5.8	2.3	3.6	1.8
# of household members with a job	1.7	1.1	2.0	1.3	1.5	0.8
# of household members without a job	3.1	2.2	3.9	2.2	2.3	1.7

Note: Dependency rate is defined as the total number of household members without a job relative to the total number of household members with a job.
Source: Own calculation based on RHS 2003.

Demographic trends have lowered the dependency ratio and may lead to a reduction in the poverty headcount. This trend is likely to deepen further in the future as Argentina's poorer regions, such as the Northeast and Northwest, experience lower fertility rates. Unfortunately, disaggregated urban-rural fertility data are not available in Argentina.

The typical poor person lives in a larger household with more children than the nonpoor. In Argentina, poor households in dispersed rural areas had an average of 5.8 individuals in 2003 (Table 2.3). Poor households had 2.2 more individuals than nonpoor households. Moreover, the average number of household members below age 15 is also higher in poor households than in nonpoor. Poor households have an average of 2.1 children below age 15, nearly the double the average of the nonpoor. The dependency ratio is also much higher in poor households (Table 2.4). Each worker in a poor household supports 2.9 family members, compared to the nonpoor worker who supports 1.9 family members.

Fecundity—measured as the number of children per mother—dropped from 2.8 in 1991 to 2.4 in 2001 (University of La Plata 2004). Women's increased participation in the

labor market is an important factor contributing to the reduction in the fertility rate, which also produced a sharp drop in the dependency rate. However, fecundity is not homogeneous across Argentina's provinces. The poorer provinces have a higher fertility rate than richer provinces; for example, Santiago del Estero, Misiones, and Formosa have a fertility rate above 3.2. Total desired fertility rates in poor provinces are lower than the actual fertility rate according to the author's field visits in Chaco and Santiago del Estero. Similar findings are presented in Gacitua et al. (2001) for Salta and Misiones. This would indicate a substantial unmet demand for high quality and reliable family planning services, information, and resources.

Table 2.5: Average Number of Children of Household Heads By Level of Education in Dispersed Rural Areas in Argentina, 2003				
	Total	Nonpoor	Poor	Indigent
No education	1.8 (1.9)	0.89 (1.5)	2.5 (1.9)	3.6 (1.8)
Primary completed	1.9 (1.8)	1.4 (1.5)	2.6 (2.0)	3.2 (2.2)
Secondary completed	1.7 (1.4)	1.3 (1.2)	3.8 (.98)	3.0 (0.0)
University completed	1.1 (0.8)	1.3 (0.8)	NA	NA
Note: Standard deviations in parenthesis. Children are defined as persons below age 18. Source: Own calculation based on RHS 2003.				

Another important development is the decline in the fertility differential between more educated and less educated household heads. Survey data from four provinces (Chaco, Santa Fe, Santiago del Estero, and Mendoza; see Section 3 for more information on the survey) show that parents with no or incomplete primary education have 1.8 children while those with complete tertiary education have 1.1 children (Table 2.5). Hence, education plays a key role both directly through increased income and wages (see Sections 5 and 6) and indirectly through the reduced fertility rate in poverty reduction.

Box 1: The Growth of Soybean Production—a Blessing and for Some a Curse

Steady growth in soybean production to service expanding export markets is placing greater pressure on fragile ecosystems and their inhabitants in Argentina and elsewhere in South America (specifically Brazil). Argentina is the world's third largest soybean producer, accounting for 17 percent of global output (after the U.S. and Brazil with 35 and 27 percent, respectively) and also the third largest exporter with 28 percent of the market. At least 98 percent of Argentina's soybean production is genetically modified (GM) and exports are directed primarily to the growing Asian market.

While soybean cultivation delivers economic benefits, there is increasing evidence that the expansion of this crop is having negative social impacts. Social impacts include loss of livelihood security (especially for local populations dependent on natural forest and aquatic resources) and limited employment opportunities.⁷

Soybeans were introduced in the 1980s and now occupy over 14 million hectares, more than all other crops combined. Soybeans were concentrated until recently in the provinces of Buenos Aires, Córdoba, and Santa Fe, employing mechanized GM technology and replacing other crops. Initial impacts of the conversion of the Pampas to arable farmland took the form of soil erosion and degradation, causing river flooding. Since the late 1990s, some 10 percent of production has spread to the provinces of Entre Ríos, Chaco, Santiago del Estero, Salta, and Tucumán, at the expense of Chaco's bush savannahs and the Yungas subtropical forests. In Chaco, 2.4 million hectares have been cleared to make way for soybeans. Soil erosion, sedimentation, and increased risk of flooding have accompanied soybean expansion. Deforestation caused by soybean expansion will compromise this stock of natural capital including a forest loss rate of 10,000 hectares per year. Moreover, soybeans have overtaken sugar and tobacco, two key crops of small farmers, and plantation forests as the main driver of deforestation.

The loss of land and livelihood experienced by small farmers squeezed out through land speculation and concentration is not easily quantified. A further consideration is that large-scale mechanized soybean farming predominates in Argentina, generating only one job per 200 hectares, compared with one job per eight hectares for typical smallholder operations. This induces a process of rural out-migration and a destabilization of livelihoods, which have much wider impacts including loss of food security and urban overpopulation (see also Section 6).

Source: Oxford Analytica; <http://www.oxweb.com>

⁷ In addition to the social consequences of soybean production, ecological consequences include deforestation, soil erosion, river sedimentation, agrochemical pollution, and loss of natural habitats and biodiversity.

3. Data and Methodology

This section presents the data sources and methodologies used in this paper to analyze poverty and labor markets in rural Argentina.

Data

Argentina has no comprehensive household survey that covers both rural and urban areas. Therefore, analyses in this paper are based on available data: urban households survey (EPH) from 1990 to 2003; Censuses (1991 and 2001); educational data from the Ministry of Education; and health data from the Ministry of Health. The Agricultural Census was used sparsely in this paper because we did not have access to the micro dataset but only to highly inconsistent tabulations.

Additionally, this paper applies information from a special rural household survey (RHS) undertaken by the World Bank in 2003 in dispersed rural areas. The survey was undertaken in four provinces: Chaco, Santa Fe, Santiago del Estero, and Mendoza. It covers a third of Argentina's rural population. The RHS includes 441 households.⁸ Data provided by the RHS is critical for making informed decisions on rural poverty alleviation in Argentina. It is the first time in Argentina's history that a survey of this magnitude has been conducted.⁹

Consumption data in the RHS is measured in a broad sense, i.e., it includes self-consumption and any kind of consumption including clothing, food, rent, gas, etc. The consumption series are developed using the "Guidelines for constructing consumption aggregates for welfare analysis" or LSM135.¹⁰ The reason for analyzing consumption in this way is that people tend to more easily recall what they consume than what they earn. The income measure includes all income sources such as transfers, remittances, self-consumption, labor income, and production income. The way in which the consumption and income data are constructed may explain why consumption poverty is higher than income poverty in some provinces (see Section 4), because it is well known that income often tends to be underreported.

The RHS also includes information on demographics, employment, education, and health for all household members. Furthermore, a special module with agricultural production questions was applied to farming households. The survey was conducted with

⁸ To design the sample, a database with the fractions and radius of each department in each province was considered. In each fraction, a random weighted sample of 8 to 10 points, depending on the number of rural people in the province, was conducted. Once the fraction and points sampled were identified the final sample points were defined considering the number of rural inhabitants in each radius.

⁹ Previous studies on livelihoods in rural areas used small samples of data. Therefore, these take the form of case studies: for example, the study of citrus workers or of a geographic area.

¹⁰ Another recent study using this approach is the "Panama Poverty Assessment: Priorities and Strategies for Poverty Reduction" (SKU 14716).

the aim of assessing the impact of Argentina's 2001 crisis. Fieldwork for the RHS was conducted at the end of 2002 and the beginning of 2003.¹¹ The survey was collected in the midst of a crisis and data therefore reflect the specific and peculiar situation in the rural population at that time. Hence, we do not make predictions or extrapolate the future or the past from the series. Due to the small size of provincial samples, disaggregated information from the sample should be analyzed cautiously.

Methodology

Income-poverty measures are designed to count the poor and to diagnose the extent and distribution of poverty. Income-poverty measures proposed by Foster, Geer, and Thorbecke (1984) are used throughout the paper. These are the headcount rate (P0), poverty gap (P1), and squared poverty gap (P2) measures. The former measures the magnitude of poverty and the latter two poverty measures assess both poverty magnitude and intensity.

The headcount rate is defined as the proportion of people below the poverty line. One concern about applying the P0 measure is that each individual below the poverty line is weighted equally and therefore the principle of transfers is violated. A limitation of the measure is illustrated by the fact that it would be possible to reduce the P0 measure of poverty by transferring money from the very poor to lift some richer poor out of poverty, thereby increasing social welfare according to the measure. P0 takes no account of the degree of poverty and is unaltered by policies that lead to the poor becoming even poorer.

One measure of poverty that takes this latter point into account (at least in weak form) is the poverty gap measure (P1). P1 is the product of incidence and average distance between the incomes of the poor and the poverty line. It may be interpreted as a per capita measure of the total economic shortfall relative to population. P1 distinguishes the poor from the not so poor and corresponds to the average distance to the poverty line of the poor. One problem with the poverty gap, as an indicator of welfare, is that poverty will increase by transfers of money from the extreme poor to the less poor (who become nonpoor), and from the poor to the nonpoor. Furthermore, transfers among the poor have no effect on the poverty gap measure.

The P2 measure of poverty is sensitive to the distribution among the poor because more weight is given to the poorest below the poverty line. P2 corresponds to the squared distance of income of the poor to the poverty line. Thus, moving from P0 toward P2 gives more weight to the poorest in the population.

¹¹ In Mendoza information was gathered between December 5 and 30, in Santiago del Estero between December 7 and 19, in Chaco between December 27 and January 15, and in Santa Fe between December 7 and 30.

This paper sets its poverty bar very low. To define “extreme poverty” it uses the indigence or “food only” poverty line; those with sufficient income to buy a basic food basket are above the line. The poverty line is based on the monetary value of food items only. This measure is based on the cost of a “minimum food-basket” equal to a minimum caloric intake of 2,700 kcal daily per household member.

The poverty lines used for the rural household survey were constructed based on the consumption patterns of households located in the three lowest deciles of the consumption distribution. The observed consumption patterns were translated to a basic food basket (BFB) that fulfills the caloric requirement for an adult equivalent. Moreover, the basic food basket was expanded with nonfood services, considering the service consumption patterns of the total population. In this way, a total basic basket (TBB) was constructed. To place a value on the TBB, the weight of the food component in the TBB for the total population (Engel coefficient) was calculated. Finally, the BFB was multiplied by the inverse of the Engel coefficient. Thus, the poverty line was set at AR\$118.61 (approximately US\$40) per month and the indigence line or the extreme poverty line at AR\$69.65 (approximately US\$21) per month per adult equivalent (Gerardi 2003).

4. Poverty, Income Inequality, and Unmet Basic Needs

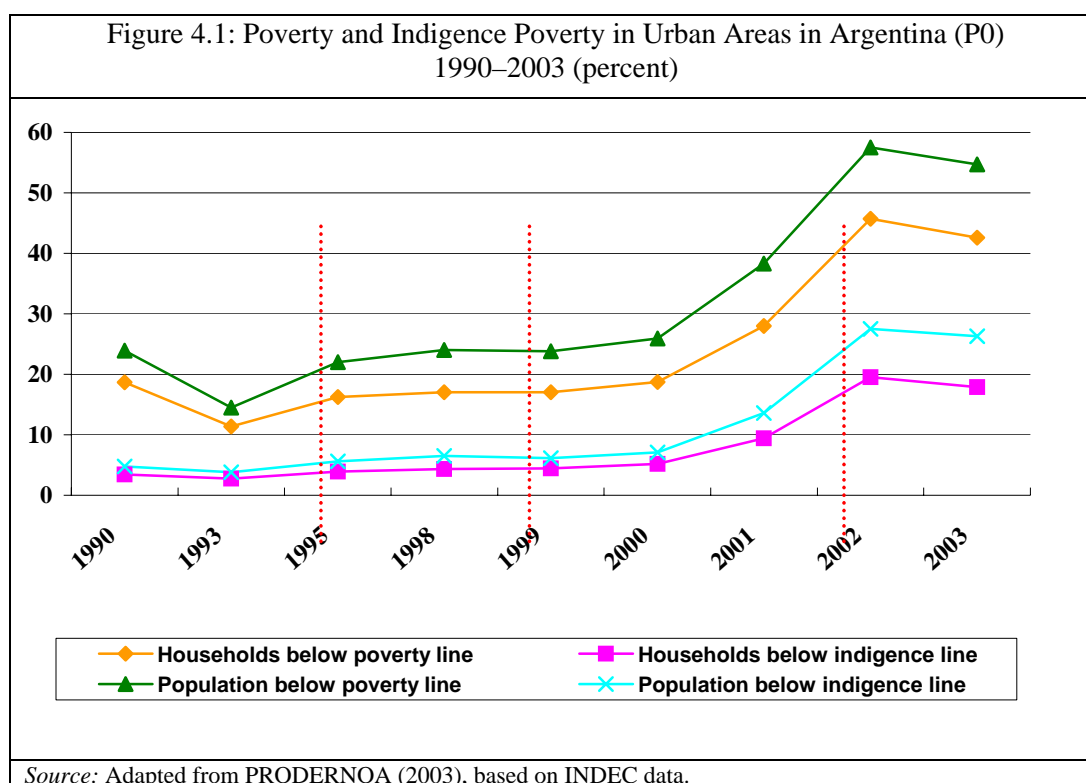
Using the above methodology, this section addresses headcount income poverty and its depth, other poverty indicators, income inequality, and UBN. It does not attempt a more comprehensive quantitative and qualitative analysis of other forms of deprivation or social exclusion. The broader issues of inequalities of assets and opportunities are addressed in Section 6.

In rural and urban Argentina, extreme monetary poverty has increased rapidly in the last decade and currently affects around 10.8 million Argentines. This means that around 28.7 percent of the Argentine population did not have sufficient income to buy a minimum basket of food in 2003. Around 15 percent of the extremely poor in Argentina live in rural dispersed areas. The following paragraphs present general information and analyses of rural and urban poverty that are behind the findings presented in this paragraph.

Argentina’s income poverty trend was fairly volatile during 1990–2003. During 1990–94, GDP expanded rapidly (25 percent during the period) and poverty declined in Argentina. When the Mexican crisis hit in 1994 and unemployment reached more than 18 percent of the active population, the declining trend experienced in the previous years reversed. The headcount poverty rate started climbing in tandem with the increase in the number of informal sector jobs and unemployment. The economic crisis was further aggravated during 1999–2001 and ended in a devaluation of the currency. Thus, poverty continued climbing at the end of the 1990s and in early 2000. The sharp rise in poverty after the 2001 crisis has in great part been due to the rise in food prices (prices rose with the devaluation), which represent a major portion of the poor’s expenditures (World Bank

2003). Moreover, inflation reduced real wages substantially because the break with the Convertibility Plan meant that labor market adjustment occurred more through wages than through increased unemployment. Unemployment arose largely from the formal sector, with an increase in employment in the informal sector and particularly in low paying temporary jobs. In late 2001, the government introduced the safety net program *Plan Jefas y Jefes de Hogar Desocupado* (Jefas) leading to a slight reduction in extreme urban income poverty in Argentina (Galasso and Ravallion 2004). Finally, in 2003 the economy started picking up, new employment began to be created, and prices stabilized.

In terms of location, poverty is distributed roughly along two dimensions in Argentina; (1) within provinces along a population density gradient running from dispersed rural to urban, and (2) across regions. Argentina has fairly steep declining gradients in living conditions from more developed urban areas, through the urban periphery and smaller towns (grouped rural areas), to the more remote rural areas. This poverty location pattern is similar to other Latin American countries such as Mexico. In rural localities in Mexico with fewer than 2,500 people, over 40 percent were extremely poor compared with those localities with 2,500-15,000 people where 21 percent were poor in 2002 (Verner 2006).



In the last decade, urban poverty in Argentina has increased dramatically. During 1992–2003, indigence poverty, measured by P0, increased by 23.8 percentage points in urban areas.¹² The largest increase occurred after the 2001 crises. Indigence poverty in urban areas is still very high at 28.0 percent. This translates to over 9.1 million people in urban areas who live in extreme poverty, which means that they do not have sufficient income to buy a minimum basket of food. This is almost seven times higher than the poverty rate of 4.2 percent in 1992 (see also Figure 4.1).

In Argentina, the rural population is more affected by poverty than the urban population. Since the 1980s, the rural poverty incidence is higher than the urban poverty incidence (Murmis 1996). In 2003, extreme poverty, measured by consumption, affected 30.9 percent of the rural dwellers in dispersed rural areas in Chaco, Santa Fe, Santiago del Estero, and Mendoza (Table 4.1). Applying the extreme poverty rates for these provinces to their respective regional populations yields a total of some 800,000 extreme poor living in dispersed rural areas.¹³ Assuming as an upper bound (in the absence of reliable information on poverty in grouped areas) that extreme poverty is the same in grouped areas yields 1.2 million people living in extreme poverty in rural Argentina. It is clear that assuming poverty rates are similar in dispersed and grouped rural areas overestimates poverty in grouped rural areas as we expect P0 in grouped areas to be lower than in dispersed rural areas. Furthermore, in line with other social indicators in Argentina this shows that people in grouped areas are better off or less poor than people in dispersed rural areas. Additionally, studies from other countries such as Mexico show that poverty rates are higher in dispersed areas as compared to grouped rural or urban areas. Therefore, in reality the share of the extreme poor rural dwellers accounts for less than 1.2 million or 15 percent of Argentina's extreme poor population. Thus, with good policies rural extreme poverty should be fairly easy to alleviate in the short-run by introducing good safety nets and making high quality service available for these people so they can build assets and skills and therefore escape poverty altogether in the medium to long run.

Geographic factors are important when analyzing poverty in Argentina. Living in a poor area can make a profound difference to well-being and life prospects. There are great differences in consumption poverty between different regions, with a not so straight gradient from south to north. In 2003, the headcount indigence rate in rural areas in Santa Fe in the Pampeana region reached 7.6 percent, nearly one-fourth of that in Santiago del Estero in the Northeast region where 29.1 percent were extremely poor. Chaco in the Northwest region experienced an extreme poverty headcount of 20.7 percent and Mendoza in the Cuyo region 26.6 percent. The latter finding may surprise the reader, but considering the fact that many agricultural workers face seasonal employment constraints the finding is less surprising. Some agricultural workers (such as those involved in the production of garlic, wine, and herbs) work four to six months per year and not continuously.

¹²The numbers used are based on calculations from the University of La Plata, CEDLA 2004 (http://www.depeco.econo.unlp.edu.ar/cedlas/monitoreo/excels/argentina/poverty/extreme_official.xls).

¹³ In the absence of household survey data for Patagonia, the weighted average of the poverty rate of the other regions was applied to Patagonia.

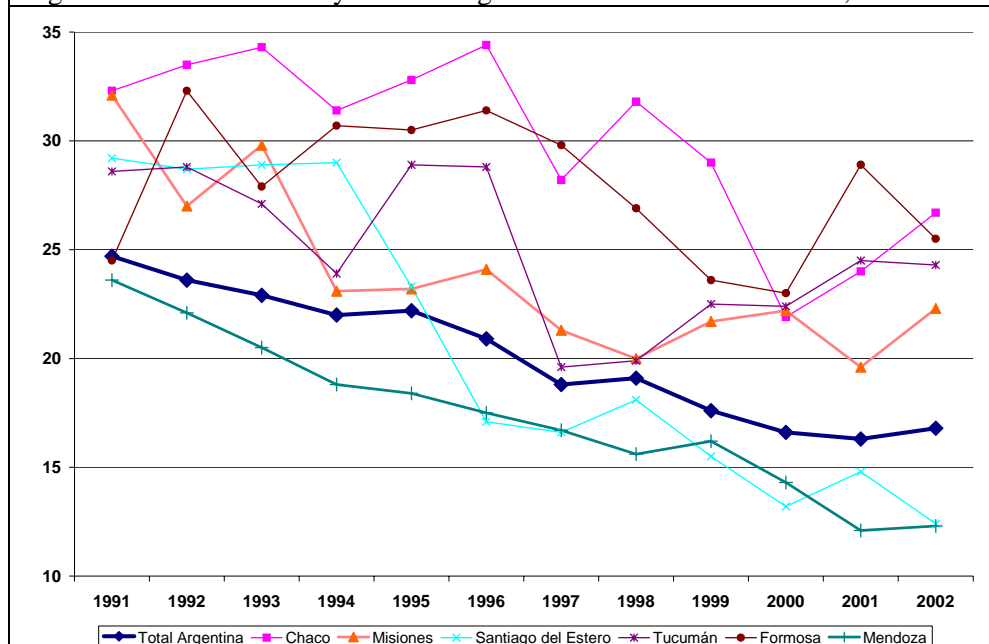
Table 4.1: Poverty and Indigence Rates in Dispersed Rural Areas of Argentina, 2003 (percent)

	Mendoza	Santiago del Estero	Chaco	Santa Fe	Total
Poor and indigent HOUSEHOLDS measured by CONSUMPTION:					
Indigent	26.6	29.1	20.7	7.6	21.6
Poor	60.8	67.7	42.3	18.6	48.7
Poor and indigent PEOPLE measured by CONSUMPTION:					
Indigent	38.5	36.6	31.4	11.2	30.9
Poor	70.1	80.6	54.9	25.1	60.6
Poor and indigent HOUSEHOLDS measured by INCOME:					
Indigent	38.3	31.2	46.7	15.4	33.2
Poor	57.5	60.4	65.3	34.1	54.3
Poor and indigent PEOPLE measured by INCOME:					
Indigent (%)	43.8	34.9	56.2	18.8	38.8
Poor (%)	67.3	69.6	75.2	42.7	64.3

Note: Poverty line AR\$118.61 per adult equivalent. Indigence line AR\$69.65 per adult equivalent. See Section 3 for information on poverty measurement.

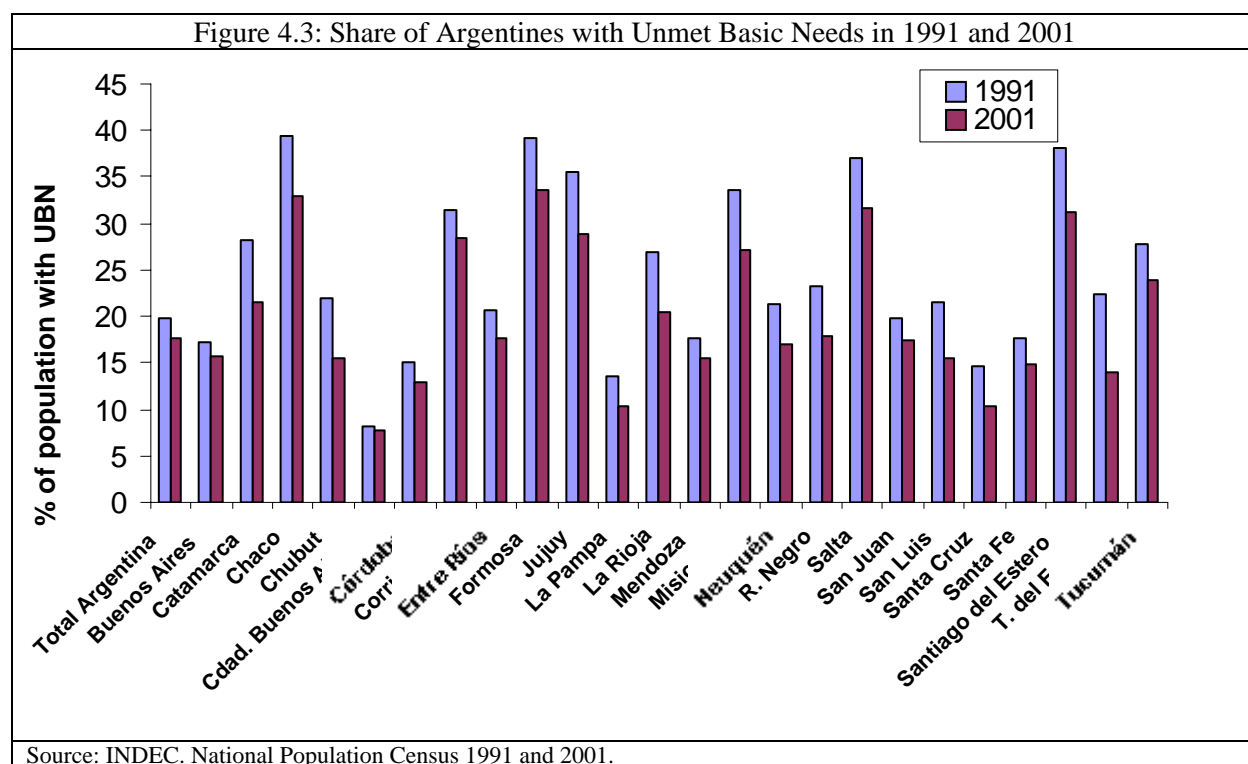
Source: Own calculation based on RHS 2003.

Figure 4.2: Infant Mortality Rate in Argentina and Selected Provinces, 1991–2002



Source: Ministry of Health, Argentina.

Not all poverty-related indicators follow the income poverty pattern. The fall in Argentina's social indicators such as infant mortality during 1991–2002 contradicts the deterioration in measured income poverty. The infant mortality rate dropped dramatically from 24.7 per 1,000 live births in 1991 to 16.7 per 1,000 live births in 2002 (Figure 4.2). Today the infant mortality rate in Argentina is one of the lowest among middle-income countries and mainly a rural phenomenon. The positive trend in the falling infant mortality rate from 1991–2002 occurred in all provinces. However, the poorer provinces, such as Chaco and Formosa, experienced a short-run trend that may be characterized as a slippery slope. These provinces experienced an increase in infant mortality after each economic crisis occurred in Argentina and in some provinces children died of hunger (see Box 2). Major, steady advances have taken place in richer provinces such as Mendoza. Advances may be attributed to an improved health care system, increased access to water, urbanization, past investments in education (see Section 6), and other social programs. Thus, to further reduce the infant mortality rate in order to reach levels of Uruguay (13.5), Chile (8.9), or high-income OECD countries (5.0), especially in rural areas, further actions are called for.



The share of the Argentine population with UBN took the same declining path as infant mortality. During 1991–2001 the share with UBN fell 2 percentage points (Figure 4.3), reaching 17.7 percent of the population (6.3 million Argentines or 1.4 million households) in 2001 before the greatest and deepest crisis in Argentine history. The number of people and households with UBN fell in all provinces including the poorest

provinces. However, the cross-province inequality in UBN is high—in Formosa, Salta, and Santiago del Estero 31 percent of the population had UBN compared to the City of Buenos Aires where only 8 percent had UBN.

A larger share of the rural than urban population faces UBN. Disaggregate data from the 2001 Population Census on the situation in rural and urban areas is now available. In rural areas 30 percent of the population had UBN in 2001.

The variation in UBN across provinces is large. Data from 2001 reveal that Northeast and Northwest regions have the largest share of the rural population with UBN. For example, in Salta and Formosa more than 50 percent of the rural population has UBN while only around 15 percent of the rural population in the provinces of Buenos Aires and Pampa face this situation.

Box 2: Children Die of Hunger Although Argentina Is One of the World's Largest Food Producers

Since October 2001, poverty has increased by 40 percent and the number of unemployed has risen by 450,000. The 2001 crisis magnified long-standing inequalities and has shocked society into recognizing problems of malnutrition, which has often been given little attention. Not all state subsidies to unemployed heads of household and other aid programs have managed to alleviate poverty either before or after the 2001 crisis. It is estimated that up to 25 percent of those under five are suffering from malnutrition. According to estimates, three children per day now die of malnutrition or related diseases, most of them in the northern parts of Argentina. In Misiones, around 50 children died of malnutrition in 2002. In Tucumán, the revelation that eight children died of malnutrition in one week focused attention on the provincial government's failure to provide adequate poverty relief. Tucumán, which has one of the country's highest poverty rates, is an example of the pauperization that has occurred in Argentina in recent years.

Poverty in Tucumán has remained at extremely high levels since at least 1930, when the sugar industry on which its economy is based entered into severe decline. Since then, much of the provincial economy has survived on state subsidies to maintain the sugar industry, which is unprofitable but labor intensive, in a densely populated province characterized by high unemployment, and on other federal subsidies that serve to buy votes for both the provincial and national governments. Cases of malnutrition in Tucumán are occurring among the "structural poor." Doctors in the province note that malnutrition has affected two earlier generations, and the current rise in deaths is attributable to an exacerbation of the poverty situation, rather than being a previously unknown problem.

Source: Oxford Analytica; <http://www.oxweb.com>

Poverty Depth

The share of the rural population living in extreme monetary or consumption poverty is not only broad but deep. P0 measures the proportion of people below a certain poverty line, but takes no account of how far they are below that line, i.e., the degree of poverty. To address the situation of the poorest, the squared poverty gap measure (or P2) is used. This takes into account the degree of poverty, because it gives more weight to the poorest and most vulnerable. The P2 poverty measure reveals that the extreme consumption poverty depth reached 10.2 percent in 2003 (Table 4.2).¹⁴ The squared consumption poverty gap measure reveals that poverty was deeper in Santiago del Estero (14.2 percent) than in Mendoza (12.2), Chaco (9.8), and Santa Fe (3.1). Therefore, Santa Fe has a lower poverty rate than that of the other provinces, and poverty is less deep.

Table 4.2: P1 and P2 for Households in Dispersed Rural Areas of Argentina, 2003					
	Mendoza	Santiago del Estero	Chaco	Santa Fe	Total Sample
Income Poverty Gap (P1)	31.7	26.7	36.9	14.8	27.8
Consumption Poverty Gap (P1)	23.6	27.3	18.1	6.7	19.4
Squared Income Poverty Gap (P2)	22.1	16.4	24.9	9.2	18.4
Squared Consumption Poverty Gap (P2)	12.2	14.7	9.8	3.1	10.2

Source: Own calculation based on RHS 2003.

Data reveal that in 2003, the median income of extremely poor households in dispersed rural areas was AR\$228.4 per month, slightly more than half of the median income of the nonpoor (AR\$392.3). In addition, the income of indigent households in Chaco, in the Northwest region, was lower than Mendoza in the Cuyo region and Santa Fe in the Pampeana region.

In 2003, the median monthly income of the nonpoor was highest in Santa Fe in the Pampeana region (AR\$593.6) and more than double that in Santiago del Estero in the Northeast region. This pattern also holds for the extreme poor households and it is clear that monetary income is severely lacking in poor households in Santiago del Estero where the average monthly income is only AR\$191.9. A comparison of Tables 4.2 and 4.3 clearly shows that one factor driving poverty in dispersed rural areas is the large number of members in poor and indigent households because the monthly median household income is often more unstable for poor households. In Santiago del Estero the medium income of poor households is AR\$382, more than AR\$100 higher than the median income of the nonpoor. Therefore, the large average number of household members (3.5 in Santiago del Estero) is the main factor explaining the difference between poor and nonpoor households.

¹⁴ The fact that the P2 is systematically lower than P1 is simply a mathematical property of the way the indices are constructed. Moreover, P1 and P2 are not a percentage of anything. A common interpretation is that it is the product of the headcount and the average distance between the incomes of the poor and the poverty line.

Moreover, if poor and extreme poor households in Santiago del Estero and the other three provinces had the same number of members as the nonpoor households in those provinces, only 30.2 and 17.1 percent of households would be below the poverty line as compared to the current 48.7 and 21.6 percent, respectively.

Table 4.3: Median Monthly Household Income in Dispersed Rural Areas of Argentina, 2003 (AR\$)

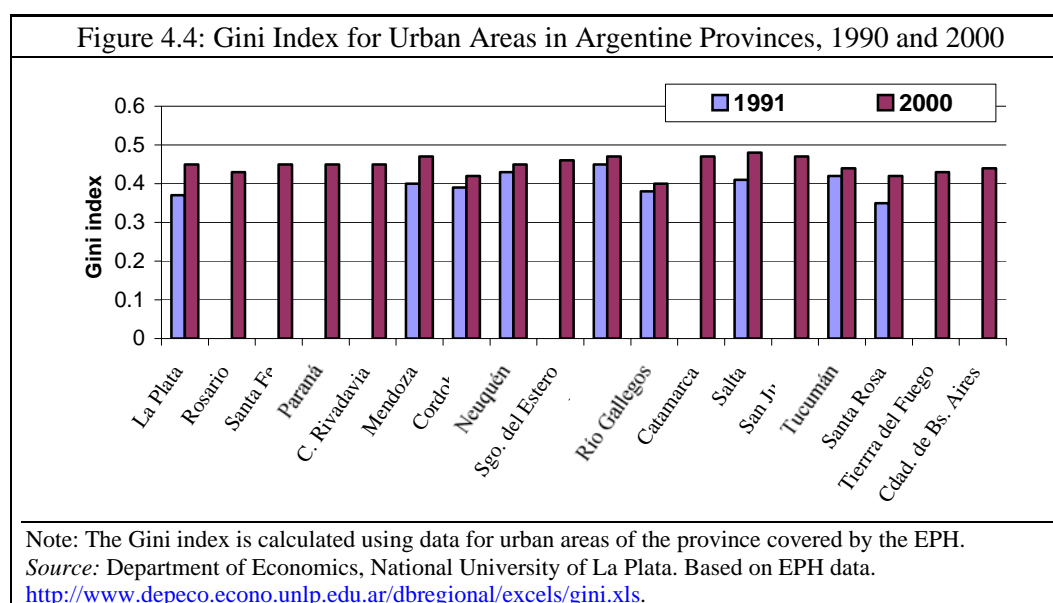
	Mendoza	Santiago del Estero	Chaco	Santa Fe	Total
Nonpoor households	318.1	270.7	258.2	593.6	392.3
Poor households	330.7	381.5	213.2	373.4	300.0
Indigent households	291.5	191.9	222.6	373.4	228.4

Note: Poverty measured by consumption.

Source: Own calculation based on RHS 2003.

Income inequality

Income inequality is part of the reason why the poverty indicators of rural Argentina and those of the nation as a whole are worse than in other countries with similar per capita incomes. Moreover, the country's income inequality worsened over the past decade. In 2000, the average Gini index for Argentina's urban areas was 0.45 (Figure 4.4).



Income inequality is significantly higher in dispersed rural areas than in urban areas. Data for the four provinces show a Gini index of 0.74 (Table 4.4). This high income inequality probably reflects the dispersed population's wide range of livelihood strategies,

ranging from heavy reliance on subsistence agriculture with little earned income, to complete reliance on wage labor. This hypothesis is supported by the significantly lower consumption inequality of 0.43, which is roughly equal to that in urban areas. International research shows that the more unequally income is distributed the less effective economic growth is in reducing poverty (Lustig et al. 2001).

High return rural nonfarm occupations in Argentina were mostly taken up by the comparatively better off, although the poor have also participated to some extent (see Verner 2006). Therefore, it is likely that the impact has not been equalizing, and the rural nonfarm sector has contributed in some measure to the worsening of rural income distribution. Private transfers (and to a much lesser extent public transfers) have definitely helped the poor more than other groups, and have therefore had an equalizing impact (see Verner 2006).

The problem of poverty and inequality in rural Argentina largely reflects disparities in opportunities. The distribution of key productive assets—jobs, human capital, physical assets, financial assets, and social capital—is highly unequal both among and between provinces. These disparities are greatest between the poor and nonpoor, but also manifest themselves differently by geographic area. In addition, access to services is unequal.

Table 4.4: Gini Index in Dispersed Rural Areas of Argentina, 2003					
	Mendoza	Santiago del Estero	Chaco	Santa Fe	Total
Income	0.50	0.48	0.79	0.76	0.74
Consumption	0.37	0.37	0.48	0.35	0.43
Source: Own calculation based on RHS 2003.					

5. Poverty Profile

After counting the rural poor, we need to know who they are, where they live, and what they do. Comparing average levels of poverty for different categories is useful for learning which population groups are falling behind or catching up in terms of poverty. This is useful for the design of policies: for example, we would like to know whether more or less educated people are more likely to be poor in rural Argentina. Unfortunately, data do not allow for analyzing how the relative odds of being poor have evolved for these groups since data are only available for 2003. The poverty profile constructed is based on data from the RHS (Table 5.1). In the following the indigent poverty line and consumption poverty are referred to in the text. The main questions addressed are: (1) who are the poor? (2) what are the characteristics of poor households? (3) where do they live? and (4) where do they work?

The structure of poverty in rural Argentina is clear: (a) female-headed households are poorer than male-headed households, (b) young households/household heads are poorer than older households/household heads, (c) the poor tend to work more in the informal sector, (d) a greater share of those engaged in agriculture are poor, (e) larger households are poorer than smaller households, and (f) small landholders tend to be poorer than large landholders and the landless. Furthermore, the deepest poverty is among the poorly educated, and young household heads with children. Without interventions to improve their opportunities and assets, their plight is likely to worsen.

From the standpoint of policy development the following are the three most salient features of rural poverty in Argentina to emerge from this study: (1) poverty is concentrated in young families and is transitory, (2) poverty is concentrated where provision of services is most difficult, and (3) small landholdings are a poverty anchor.

Poverty is concentrated in younger households. Data reveal that all households headed by a person younger than age 25 are extremely poor and poverty drops off as the family ages in dispersed rural areas in Argentina. As presented in Table 5.2, probit regression analysis of the correlation of indigent poverty in dispersed areas shows that the probability of being indigent falls by 0.7 percent for each year older the household head is. The fact that poverty declines with increasing age of the household head is strongly related to the average number of children in the household (see Table 5.2 and Figure 5.1). Table 5.2 shows that indigent poverty falls by 39 percent when the dependency ratio falls by one percent and Figure 5.1 shows that from age 45 the average number of children of the household head and the average number of children under age 15 decreases drastically with increasing age of the household head. As children leave the household they continue to contribute significantly to their parents' households (see Verner 2006). For poor households 27 percent of household income comes in the form of transfers and remittances. These transfers are almost completely private. The survey found that government transfers basically did not reach the poor in dispersed rural areas. The pattern of large young families, the high rate of departure of the children from the household, and significant remittances is key in explaining the observed reduction in poverty with household age.

Young parents with low income, low level of education, and few assets may also suffer poor health because access to quality health care is very limited in remote rural areas (2.6 million of the rural population lacks health insurance, more so in the Northeast and Northwest). Their children receive low quality education, and parents have no access to kindergartens for the youngest offspring. Such young parents face a high probability of being unemployed or active only in the household, and have no access to employment benefits or other social benefits, except in a few cases to Jefas. Data from RHS show that in dispersed rural areas only 3.9 percent of household heads receive Jefas (see also Section 6). There is considerable evidence from other settings that benefits associated with early childhood interventions are very high, especially for children from disadvantaged backgrounds, because this is a critical stage in child development and because returns to any productive investment in children accrue over a much longer period of time than

returns to productive investments in adults (see Heckman 1999; Currie 2001). This suggests that interventions that benefit children should receive high priority. In addition, targeted social protection measures that relate to youth employment, family planning, and preschool programs could help improve the employment prospects of young people.

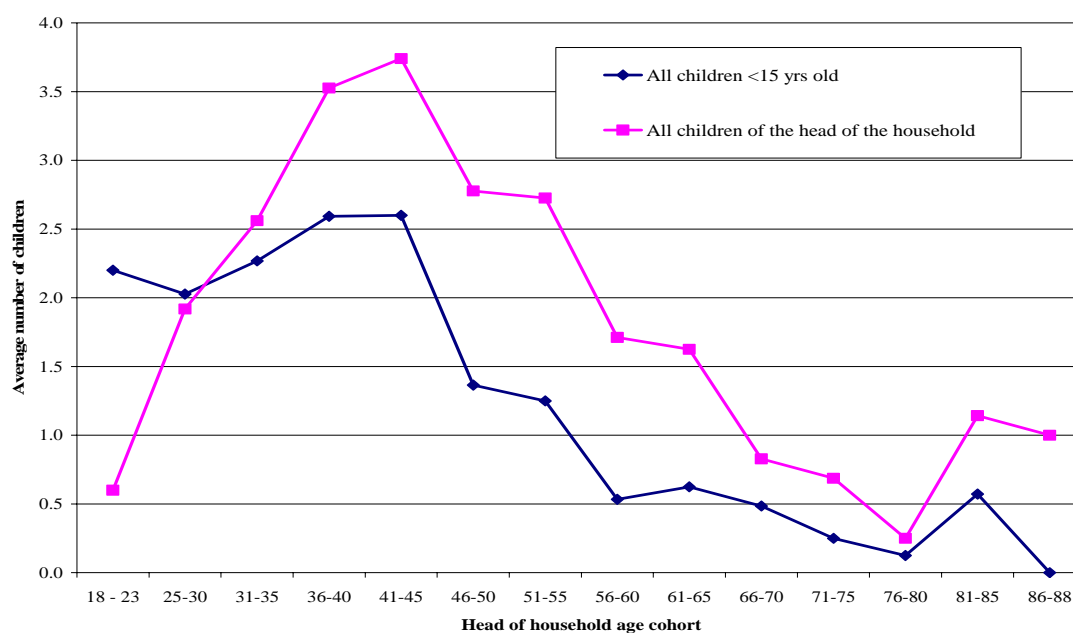
Table 5.1: Poverty Profile by Four Measures of Poverty (P0)
Dispersed Rural Areas of Argentina, 2003

		Consumption Poor	Consumption Indigent	Income Poor	Income Indigent
Gender:	Male	45.4	20.4	54.4	32.7
	Female	64.4	27.0	54.2	35.5
Age:	<25	100.0	100.0	82.3	61.4
	25–44	46.5	24.3	62.2	39.5
	45–65	54.4	22.9	56.6	34.1
	>65	37.1	8.9	29.6	15.4
Literacy:	Literate	47.2	20.3	53.1	31.2
	Illiterate	60.8	33.8	65.6	50.5
Years of schooling:					
	None or less than 1	66.0	31.5	64.3	43.9
	1–4	56.6	25.2	54.4	33.4
	5–8	45.8	20.5	56	34.6
	9–12	30.3	10.7	38.2	14.9
	More than 12 years	0.0	0.0	40.7	29.2
Labor status:	Economically Inactive	52.2	43.6	43.5	23.4
	Economically Active	61.4	17.9	95.5	77.7
	Employed	46.8	20.7	53.4	31.7
Work position:	Wage-worker	53.3	23.2	59.4	33.6
	Self-employed	43.1	18.7	45.9	25.9
	Pieceworker	50.9	26.0	69.8	46.2
	Employer	14.8	4.4	38.3	24.1
Work sector:					
	Agriculture & Livestock	43.3	24.5	51.2	31.9
	Industry	51.6	5.2	57.7	20.0
	Commerce & Services	54.9	25.7	54.9	24.8
	Other Sectors	57.6	0.0	69.4	33.4
	Public Administration	62.6	23.4	69.2	25.2
Work condition:					
	Formal	38.6	21.2	44.8	18.8
	Informal	50.1	14.6	56.7	38.8
Family size:	1–3 members	23.2	4.1	31.7	20.9
	4–5 members	44.2	14.8	56.1	34.5
	More than 5 members	80.5	47.4	76.6	44.8
Land tenure:	No land	45.0	12.9	56.9	33.0
	0–1 ha	74.9	23.8	70.5	40.6
	1.1–10 ha	62.8	18.4	55.1	30.5
	10.1–35 ha	26.4	30.8	40.1	29.3
	35.1–100 ha	8.9	30.5	35.9	20.1
	100.1–250 ha	16.4	13.3	33.4	16.8
	More than 250 ha	11.4	2.6	24.8	9.3

Source: Own calculation based on RHS 2003.

Table 5.2: Probability of being Indigent in Argentina Household Heads in Dispersed Rural Areas, 2003			
	dF/dx	P> z	x-bar
<i>Skill characteristics</i>			
Age	-0.002	0.000	48.87
Education	-0.022	0.000	5.84
<i>Gender</i>			
Male	-0.058	0.000	0.87
<i>Family characteristics</i>			
Nonworking children <15 years of age/total number of members in the household	0.386	0.000	0.25
<i>Landholdings*</i>			
0.1–100 ha.	0.057	0.000	0.633
100.1–250 ha.	-0.014	0.003	0.089
>250 ha.	-0.025	0.000	0.059
Pseudo R2: 0.1173 Observed P: 0.189 Predicted P: 0.160			
Note: Excluded categories No land			
Source: Own calculation based on World Bank survey 2003.			

Figure 5.1: Average number of children (all ages) and children under 15 years of age in rural households by age group of household head in Argentina, 2003



Source: Own calculation based on RHS 2003.

Elder household heads are far less likely to experience poverty than younger household heads. Only 8.9 percent of those households headed by a member older than age 65 were below the indigent poverty line in 2003. Additionally, this group has the highest average income of any age group, which may be explained in part by pension reforms. The P0 of the population groups aged 25 to 44 and 45 to 64 reached 24.3 and 22.9 percent, respectively. Thus, the younger the head of household is, the more likely he or she is to be poor. This life cycle profile of poverty illustrates that many households are born poor (mainly due to inadequate assets), with some escaping poverty as they accumulate more assets or as their household size shrinks. There are no perfect credit markets that can ensure a permanent income over the life cycle. In other words, poor household heads cannot borrow against future household income which, according to data, on average is higher later rather than earlier on in the life cycle. Moreover, households with children and an older head may be better off as the other adults in the household can work outside the home while the older head minds the young children or takes care of the household. Finally, findings in Table 5.2 indicate that a large family size for households with few assets (controlled for by education because this is the most poverty reducing asset in rural Argentina—see Verner 2006) is not a successful strategy in itself to guarantee the well-being of the household.

The size of household is positively correlated with poverty. Household size in dispersed rural areas in Argentina is positively correlated with the incidence of poverty. Therefore, the larger the household is, the more poverty prone it is. Households with 1-3 members have a poverty rate of 4.1 percent, with 4–5 members 14.8 percent are poor, and for households with more than 5 members as many as 47.4 percent are poor. This does not simply reflect the age of the household head because smaller households have fewer children left in the household and has more grown children who potentially contribute. When taking into account age, gender, and educational level of the household head by performing a multivariate conditional probit regression, findings suggesting that households with a large number of nonworking children under 15 years of age to overall household size are more poverty prone, still stands (see Table 5.2).

Female-headed households are more likely to be poor than male-headed households, with 27.0 percent and 20.4 percent of female- and male-headed households, respectively, likely to be poor. When controlling for age, education, etc., findings reveal that the result still holds, as male-headed households are less likely to be poorer than female-headed households (Table 5.2). Other authors studying Argentina find similar results. Forni and Neiman (1994) find that female-headed households are poorer than male-headed households. Forni and Neiman also mentioned that women's roles vary with farm type (crops produced, family circumstances, etc.) and women's participation in the productive cycle is linked to the household's poverty condition. Women have lower educational attainment than men do and, of children who do not attend school, girls are the majority. Finally, migration has left women in charge of farming activities.

However, the abovementioned poverty figures are only part of the myriad factors that affect a poor woman's well-being. Data do not reveal anything about domestic

violence and other types of discrimination that women often face. Social policies favoring women, such as conditional cash transfer programs like *Bolsa Família* in Brazil in which the mother receives the benefit, should be considered (see Section 6). Furthermore, introducing more kindergarten and childcare facilities for poor mothers could facilitate their participation in the labor market.

Educational levels are strongly related to poverty: the ability to read and write is important in determining the likelihood of being poor. In dispersed rural areas, the P0 is 20.3 percent for household heads who are literate and 33.8 percent for those who are illiterate. There already appears to be a relatively large difference in P0 between household heads with no education (31.5 percent) and household heads with 1–4 years of primary education. Nevertheless, household heads who have completed secondary education are much better off (10.7 percent are indigent) than those with only primary education (20.5 percent). Of the very few household heads with more than 12 years of schooling, no rural dweller was extremely poor in 2003. These findings indicate that education is a very important key to poverty reduction in rural Argentina (see also Verner 2006).¹⁵ Policy interventions that facilitate poor rural people's access to basic services and expand high quality rural education are central to poverty reduction in rural Argentina.

Argentina, together with Chile, is well known for its relatively well educated population compared to other Latin American nations. Tremendous strides have been made in improving the poor's access to basic education. However, there are large disparities between rural and urban areas and across regions. Children in dispersed areas often face a long travel time to go to school. This is especially the case for the poor who often have to travel by foot or horse (see Section 6 for more on education).

Labor market connection is important for the probability of falling into poverty. Economically active household heads face more poverty than do employed household heads. The difference between the two has to do with unemployment: unemployed heads searching for work are included in the former category. This also explains why active household heads face less consumption poverty than income poverty because the unemployed heads may grow crops for personal consumption and therefore are less consumption poor than income poor.

Informal workers suffer more poverty than formal workers (79.7 and 20.3 percent are employed in the respective sectors). The P0 for informal workers is high: 21.2 percent compared to 14.6 percent for formal workers. In dispersed rural areas, only 20.3 percent of household heads are engaged in the formal labor market, while 79.7 percent are engaged in the informal labor market.

¹⁵ Clearly, it is valid to question causality. Moreover, the education poverty literature has still not uncovered this. It is surely the case that many children received a good education because their parents had a good education and income. Thus, one direction of causation flows from well-off or better educated parents to better educated children. How strong is the education effect when the previous generation was poor and uneducated? Access to education has also been shown as important. Unfortunately, our data set cannot shed further light on this question.

The informal poor face risks in the form of unemployment and overall economic downturns, earn a low and irregular income, own very few assets, and have no insurance against poverty, such as unemployment benefits. At the same time, it should be recognized that since very few people work in the formal labor market, social policies tied to formal employment or unemployment will have only a very limited reach among the poor. Moreover, informal mechanisms of risk sharing in dispersed rural areas are limited because covariate risk (such as climate) is high and thus there is limited potential for informal risk sharing. This places a premium on migration diversification strategies, such as sending a few children to informal urban markets.

The labor category contributing the largest share to overall poverty is that of employees with salary as a percent of sales or production (26 percent are indigent). This contrasts with the self-employed and wage worker categories where 18.7 and 23.2 percent are extremely poor, respectively.

Those who work in agriculture and services are more likely to be poor than workers in industry. This suggests that productivity in agriculture and services is lower than in industry. It also suggests a more competitive wage environment among more highly educated workers in the industrial sector. The P0 is 24.5 percent in agriculture, 25.7 percent among service workers, and 5.2 percent among industrial workers.

In 2003, more than 75 percent of the extreme poor household heads in dispersed rural areas cited agriculture as their primary form of employment. One explanation for the indigent poverty rate in agriculture can be traced to migration out of the sector as the most educated rural dwellers leave, in part due to the structure of land ownership, the quality of land, and lack of credit and other productive inputs. Rural land ownership is characterized by a high degree of concentration of land in a few large establishments and a large number of small farms with an insufficient area to sustain a family by agricultural employment alone.

Land concentration increased over the last 10 years. During 1988–2001, the planted area increased by 8 percent, while the number of farm enterprises decreased by 21 percent (Agricultural Census, 2001). Table 5.3 indicates the land distribution as of 2003 in dispersed rural areas in Argentina. The table shows that nearly half of the landholdings (49 percent) are smaller than 10 hectares and 19 percent are larger than 100 hectares.

Table 5.3: Land Distribution For Producer Households Dispersed Rural Areas in Argentina, 2003 (percent)		
Hectares	Total	Cumulative
0–1	27.6	27.6
1.12–10	21.7	49.3
10.1–35	17.9	67.2
35.1–100	14.2	81.4
100.1–250	10.8	92.2
More than 250	7.8	100.0

Source: Own calculation based on RHS 2003.

Extreme poverty among landless rural dwellers is not necessarily higher than among households with land. P0 for landless households is 12.9 percent compared to 23.8 and 30.8 percent for landholders with less than one hectare and 10–35 hectares, respectively. Only households with more than 250 hectares experience less consumption poverty than landless households. Extreme poverty is decreasing from households with more than 10 hectares onward. However, income poverty is higher for households with 1–250 hectares than it is for households with no land holdings (Table 5.1).

In dispersed rural areas the majority of the population has limited access to basic infrastructure and services. The rural poor are primarily smallholders, sharecroppers, and informal wage workers who depend on a diverse strategy of income-generating activities in which subsistence production predominates. The varying soil quality and climatic conditions (76 percent of Argentina is arid or semi-arid) explain why crops and livestock of the poor vary across the country. In the *precordillera* (mountainous areas) goat rearing is the main occupation of farmers. Poor farmers cultivate corn, cotton, wool, tobacco, or sugar cane. In the north, pepper and peas are produced. In addition, a few vegetables and fruits are grown mainly for subsistence.

In semi-arid/desert and transition zones, rainfall is scarce and highly irregular, yielding crops of low quality and low income generating capacity. These small farmers lack modern production technology, basic infrastructure to store harvests to take advantage of cyclical price fluctuations, technical assistance to improve productivity, and organized marketing facilities. Therefore, family income is highly variable and there is little opportunity for saving. Families have very few assets, including education, and are very vulnerable. What is the best way to address poverty in rural Argentina? There are three dimensions to any rural poverty reduction strategy: (1) improve the mobility of the poor, in order to help them to move to areas with better employment opportunities, (2) create jobs accessible to the poor, and (3) strengthen safety nets to help them wherever they may be found. The best option for Argentina is a strategy that (1) emphasizes rural employment growth, (2) combines safety net transfers with incentives for improved secondary and tertiary school attendance, and (3) strives to strengthen links between families living in dispersed areas with the closest grouped areas.

6. Access and Use of Services and Assets

The well being and value of goods produced by the rural population is closely linked to availability of assets and infrastructure, as discussed in this section. Production capacity and the quality of products increase, production value improves, and so do household incomes of the rural population with increased access to better irrigation systems, flood control, energy, regular land tenure, and good roads. Lack of education and good health for the rural population is another factor that causes poverty.

The problem of poverty and inequality in rural Argentina largely reflects disparities in opportunities and assets. The distribution of key productive assets—labor, human

capital, physical assets, financial assets, and social capital—is highly unequal. These disparities are greatest between the poor and nonpoor, but also manifest themselves differently by geographic area. In addition, access to services is unequal. This section addresses a few of these areas, namely education, basic infrastructure services, and social assistance. The following sections address employment and wages as well as the importance of education and other assets in employment, wage, and income determination.

Education

Education is key to poverty reduction. Increased educational attainment can improve the livelihoods of the poor and reduce the likelihood of becoming poor, as shown in Section 5. More education is also a key factor in obtaining a higher income (see Verner 2006). Furthermore, education is associated with fertility, i.e. the more education a woman attains, the lower her fertility rate is, and therefore the lower the dependency ratio and the lower the likelihood of falling into poverty because each year of schooling yields an increase in hourly earnings (as shown in Verner 2006). Therefore, a clear message is that the rural dwellers in Argentina need to be brought up the educational ladder to escape poverty.

There are large disparities in access to education between rural and urban areas and across regions in Argentina. However, tremendous strides have been made in improving the poor's access to basic education. Inequalities remain between rural and urban dwellers. In urban areas, 98.5 percent of the 6–11-year-olds attend school. In grouped rural areas, 98.5 percent of the 6–11-year-olds also attend school, but the number falls to 95.5 in dispersed rural areas (Table 6.1). The 12–14- and 15–17-year-olds in dispersed rural areas fall further behind their peers in urban areas: 12 and 20 percentage points respectively. Moreover, children and youth in the poorest provinces fall even further behind. For example, 91 percent of the 6–11-year-olds in dispersed rural areas attend school in Chaco and Misiones compared to 98 percent in Buenos Aires, Córdoba and Santa Fe. Of the 15–17-year-olds, only 28 percent attend school in Santiago del Estero compared to 72 percent in the province of Buenos Aires. Moreover, educational quality is often lower in dispersed rural areas. Children in dispersed areas often face a long travel time to go to school. This is especially the case for the poor who often have to travel by foot or horse.

What causes the fall-off in school enrollment after age 11 in dispersed rural areas? Is it a supply constraint or lack of demand? Is the reason cost of schooling in dispersed areas or lack of economic value for education above primary level for children in dispersed areas? More research is needed to answer these questions.

Rural dwellers of working age (15 years and above) have accumulated far less human capital than their peers in urban areas (Table 6.2). As many as 43 percent of rural dwellers have not completed primary school, compared to only 16 percent of working age urbanites.

Table 6.1: School Attendance, Rural and Urban Argentina, 2001 (percent)						
	Age (years)					
	3–4	5	6–11	12–14	15–17	18–24
Total	39.1	78.8	98.2	95.1	79.4	36.9
Total Urban Argentina	42.0	80.8	98.5	96.2	82.4	39.1
Total Rural Argentina	20.4	65.9	96.4	87.2	56.1	16.5
Total Grouped Rural Argentina	29.3	78.2	98.5	93.2	70.9	23.2
Total Dispersed Rural Argentina	16.6	60.6	95.5	84.4	49.1	13.5

Source: Own calculations based on INDEC National Population Census 2001.

Disparities are even larger for secondary school education, which 9 percent of rural dwellers of working age have completed, compared to 26 percent in urban areas. Moreover, data reveal that rural dwellers in dispersed areas have attained much less education than their peers in grouped rural areas; for completed secondary education, the numbers are 7 and 13 percent, respectively.

Table 6.2: Maximum Level of Education Attained in Argentina, 2001 (percent)				
	No education or primary incomplete	Primary complete or secondary incomplete	Secondary complete or tertiary incomplete	Tertiary complete
Total Argentina	17.9	48.9	24.5	8.7
Total Urban Argentina	15.6	49.0	26.1	9.4
Total Rural Argentina	38.6	49.2	9.2	3.1
Total Grouped Rural Argentina	29.9	52.9	12.8	4.4
Total Dispersed Rural Argentina	42.8	47.5	7.3	2.4

Source: Own calculations based on INDEC National Population Census 2001.

School attendance by poor students still lags in rural Argentina. In dispersed rural areas, children from richer households have on average a higher school attendance, are less likely to repeat a school year, and have more completed years of schooling than children from poor households. Furthermore, data reveal a negative correlation between poverty and educational attainment in rural Argentina. The level of education of the extremely poor is the lowest, and it is also increasing more slowly than average.

Table 6.3: School Attendance of 10–14-year-olds and Income Quintile
Dispersed Rural Areas of Argentina, 2003 (percent)

5 (richest)	91.1
4	91.6
3	90.4
2	92.5
1 (poorest)	86.3

Source: Own calculation based on RHS 2003.

The incidence of education is fairly equal across income quintiles. As Table 6.3 shows, the trend is only slightly increasing for successively higher income quintiles, indicating a slightly regressive nature of benefit incidence in primary education. The first quintile receives 86 percent of primary school services while the fourth and fifth quintiles receive more than 91 percent each. Compared to other countries in the region this seems surprisingly equal. The big policy question is whether the lower participation of the lowest quintile is supply or demand driven. If the problem is related to lack of demand a program such as *Bolsa Escola* in Brazil may increase school attendance of the poor. Most regions do have schools, but the students' travel time to reach the schools may be significant, particularly in Northwest and Northeast Argentina.

Education appears to reduce the risk of falling into poverty in Argentina (World Bank 2003). Large gaps between the poor and nonpoor exist in school attendance. Since the number of those under age 14 is not increasing (see Section 2), Argentina has been presented with an excellent opportunity to increase access of the poor to primary school and above (there are lower rates of participation by the first quintile than by other quintiles) and to improve the quality of education. Policies to improve access of the poor to secondary and higher education linked with improved quality of education and increased focus on technical skills should be one of the key pillars of the government's rural poverty reduction strategy.

Basic Infrastructure Services

Basic infrastructure services contribute to higher well-being and productivity. Some services such as potable water and sanitation contribute directly to overall well-being and health status. Others such as electricity and telephones help households use their homes productively for income generation. Research reveals that access to basic services is highly correlated with a lower probability of being poor. Inequities in access to such services abound in rural Argentina, both between the poor and nonpoor and by geographical area. Key gaps for the rural poor exist in energy and potable water.

Access to public infrastructure services is poor for many services in rural Argentina and the rural and urban services gap is large. Argentina's rural population has little access to safe water; only 30 percent have access compared to 85 percent in urban areas. Rural

dwellers in Argentina have less access to safe water than do some of their peers in rural Africa such as Kenya (31 percent), Nigeria (39 percent), and Uganda (46 percent).¹⁶ A fact having to do with the highly dispersed nature of Argentina's rural poor population, especially compared to Africa's village-based rural population. Moreover, the supply of services is seriously lacking in dispersed rural areas compared to national averages. In dispersed rural areas, only 21 percent of households have access to safe water, 7 percent to trash collection, 16 percent to paved roads, and 7 percent to a fixed telephone (Table 6.4).¹⁷

Table 6.4: Household Access to Basic Infrastructure in Dispersed Rural Areas of Argentina in 2003 (percent)

	Mendoza	Santiago del Estero	Chaco	Santa Fe	Total
Electricity	94.2	18.8	78.2	79.6	70.8
Water	43.4	10.4	18.2	0.8	21.0
Trash collection	15.0	0.0	6.6	0.8	6.6
Paved road	43.4	4.2	0.0	3.3	16.0
Public lighting	40.0	0.0	21.2	5.6	19.2
Fixed telephone	7.5	0.0	2.0	17.8	7.1
Mobile phone	18.3	3.1	6.7	31.6	15.6

Source: Own calculation based on RHS 2003.

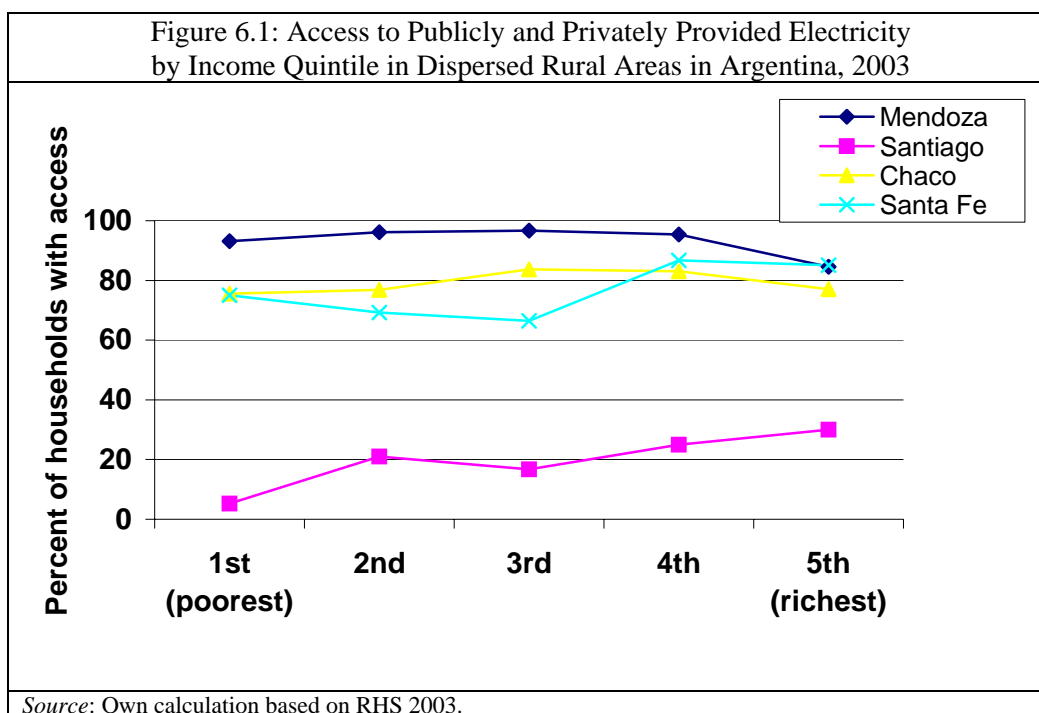
Large differences exist in access to energy and electricity in rural Argentina. Energy and rural electrification contribute to the improvement of living conditions in rural areas. They facilitate social integration, contribute to increasing production value, and promote diversification. Some houses, most of them in dispersed areas and small localities far from main roads, use diesel generators. Large differences exist among provinces with regard to access to the electrical network and the type of energy used. Rural residents commonly use firewood or charcoal for cooking. In dispersed rural areas, public electricity connections range from 5.1 percent for the poorest quintile in Santiago del Estero to 85.1 percent for the wealthiest quintile in Santa Fe in 2003 (Figure 6.1 and Table 6.5). Therefore, there are extreme differences across income distribution and provinces in access to electricity. The growing trend toward successively higher income quintiles indicates the regressive nature of electrification in Chaco, Mendoza, Santiago del Estero, and Santa Fe. The clearest regressive pattern in incidence benefits is seen in Santiago del Estero. In Chaco, Santiago del Estero, and other provinces, it would not take a great deal of effort to increase access to electricity because in many places the power line runs directly over the lot, but the dwelling is not connected to the grid. During field visits rural dwellers mentioned that there is a one-time fee of AR\$750-1,100 to connect the household to the electrical grid.

¹⁶ Source: UNICEF database (2000).

¹⁷ There may be representative problems at provincial level in the data set.

Table 6.5: Access to Basic Infrastructure by Income Quintile in Dispersed Rural Areas in Argentina, 2003 (percent)					
Quintile	Electricity	Water	Trash Collection	Paved Road	Public lighting
5 (richest)	67.6	20.0	6.3	15.9	22.5
4	70.8	19.3	8.2	15.9	27.9
3	67.7	28.3	10.5	17.4	17.4
2	71.8	23.2	6.1	20.5	16.1
1 (poorest)	76.6	12.9	1.5	10.9	11.4

Source: Own calculation based on RHS 2003.

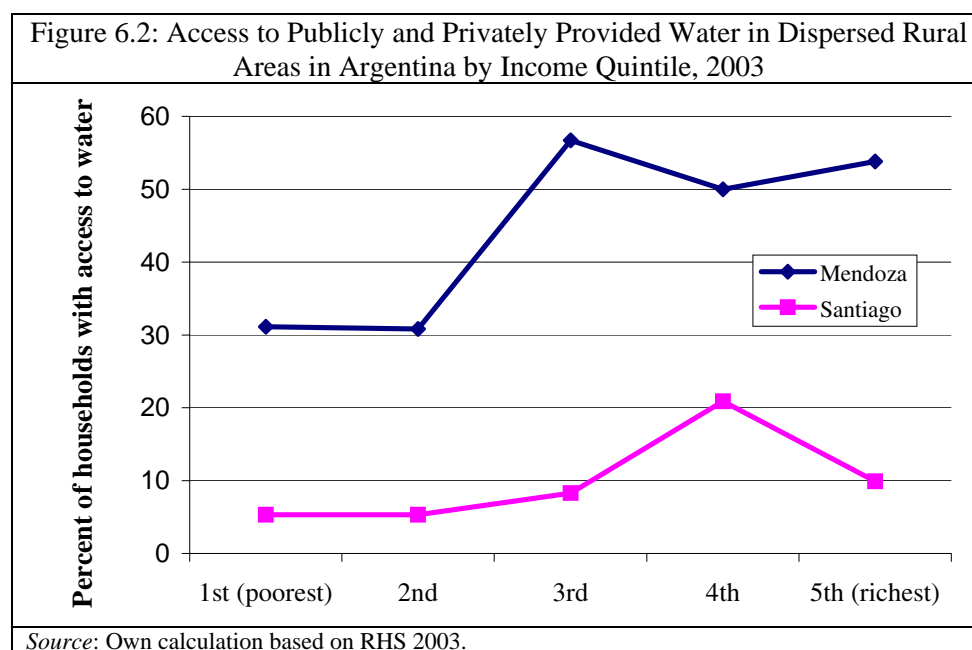


The incidence of water access varies among rich and poor and provinces. Overall, two-thirds of rural drinking water service is provided by neighborhood groups and cooperatives and one-third by official provincial and municipal agencies (World Bank 2004). As Figure 6.2 shows, access to water varies across income groups. The trend is increasing for successively higher income quintiles in Mendoza. The first and second quintiles receive around 31 percent of the water services while the fourth and fifth receive more than 50 percent each.¹⁸ The benefit incidence of water in Santiago del Estero is concentrated in the fourth quintile. In Chaco, the first quintile receives 20.3 percent of the service while the fourth only 15.3 percent; thus, the trend appears more progressive.

¹⁸ Although households in Mendoza have access to water, in some places it is contaminated and unsuitable for drinking.

However, the RHS may not be representative for all provinces; more research is needed in order to check the robustness of this finding.

If one considers that the provision of drinking water, sewerage networks, and electricity to a dispersed rural population would be particularly costly, efforts should first be aimed at the agglomerated population in localities and in regions and provinces with the most acute level and highest density of poverty. At the same time, special programs should be defined, using appropriate technologies that improve the dispersed rural population's access to water.



Social and Productive Assistance

Recognizing that economic growth and social investment in education (and health) will still leave many in extreme poverty, the provincial and federal governments have a variety of programs aimed at reducing economic insecurity and targeted poverty. Programs fall into three categories: (i) those dealing with life cycle considerations such as social security and pensions; (ii) those dealing with income volatility such as unemployment insurance; and (iii) those dealing with social protection, aimed at improving the well-being of specific vulnerable groups.

No social protection programs specifically targeted to rural dwellers exist in Argentina. Social protection programs in rural areas are extensions of nationwide programs. These include cash transfer schemes as well as employment and income generation programs.

This section describes some of the social protection issues and addresses government policies to deal with them. In so doing, it focuses on one major social protection program: Jefas. This section also briefly addresses rural development programs and programs targeted to indigenous peoples.

Many existing social programs find it difficult to reach the very poorest. A recent study for Brazil found that of the total spent on social programs, 14 percent accrued to the first quintile of income distribution (World Bank 2001). Many programs lack broad reach among the poor, good targeting, or both.

Social programs are plentiful in Argentina. Different ministries administer a large number of programs, such as the Ministries of Labor (5 employment programs), Social Assistance (22 programs), Education (2 compensatory education programs), Health (29 programs), and Agriculture (9 rural development programs). It is clear that fewer, stronger, and more consolidated programs are needed to assist the poor in building key assets and to provide social protection. The current government has recently initiated this process, but so far no particular attention has been given to the rural population and its needs.

The federally financed workfare program, Jefas, is the largest social program in Argentina. Jefas was the main public safety net response to the severe economic and political crises at the end of 2001. It is designed to provide direct income support (a monthly subsidy of AR\$150 or US\$55) for unemployed heads of households who abide by certain rules. The target group is unemployed heads of households with children under age 18 or disabled children of any age and single mothers.¹⁹

The Jefas program represents recognition of the fact that the 2001 recession increased official unemployment and a large share of the population fell below the poverty and indigence lines. The Jefas program imposes a number of conditions aimed at ensuring its effectiveness and reducing corruption: (1) applicants must present a sworn statement demonstrating that they are unemployed, as well as certificates to prove that their children are attending school and have received their vaccinations; (2) applicants must register for the subsidy in person, rather than through intermediaries; (3) beneficiaries will be required to carry out community work for four hours per day and/or participate in training courses designed to increase their employment prospects; (4) small companies that offer jobs to unemployed heads of households will be required to sign a six-month contract with the employee, in exchange for which the company will receive the AR\$150 subsidy in partial payment of the individual's salary; and (5) representatives of local government, the UN, church bodies, trade unions, neighborhood groups, and nongovernmental organizations

¹⁹ There are plans to extend Jefas to unemployed youths and to those over age 60 who do not receive pensions.

(NGOs) will participate in local consultative councils to review applications and ensure that subsidies are not granted to individuals who are employed or who already receive pensions or other unemployment benefits. A conservative estimate of the annual cost of the subsidy is AR\$1.3 billion.

In order to finance the program, export taxes on grains and oilseeds were increased from 10 to 20 percent, and those applied to vegetable oils and meals increased from 5 to 20 percent in 2002. The government expected these increases to generate at least US\$1 billion per year in additional revenues, nearly sufficient to finance the subsidy.

The Jefas program represents recognition of the state's obligation to provide a minimum safety net to alleviate poverty. If it is successful in avoiding past practices of corruption and political patronage, it may help to stimulate a modest rise in consumer demand and lessen the impact of the present crisis. The Jefas program is widely seen as successful because it reduced aggregate unemployment, although it moved as many people into the workforce from inactivity as it did people who would otherwise have been unemployed (Galasso and Ravallion 2003).²⁰ The authors also find that the Jefas program partially compensated losers from the crisis and reduced extreme poverty (the research was undertaken with the household survey dataset that only covers urban areas).

With World Bank support, the program expanded rapidly to cover about two million households by late 2002. Although the Jefas program had the best monitoring system, the information gathered by the program does not allow disaggregation of coverage into rural and urban areas.

Provinces in Argentina are divided in departments. Departmental information indicates that Jefas's coverage is highest in departments with 2,000-6,000 inhabitants where 7 percent of residents are covered, and is lowest in departments with fewer than 2,000 inhabitants where 4 percent of residents are covered (Table 6.6). In dispersed rural areas, only 3.9 percent of household heads received Jefas in 2003: 4.2 percent of male heads and 3.5 percent of female heads (see Table 6.7). Data also reveal that major variations exist across provinces. Provinces with the least rural poverty received less Jefas than other provinces. In the provinces of Santa Fe and Mendoza, 1.0 and 2.5 percent of the household heads received Jefas while in Santiago del Estero and Chaco 5.6 and 7.3 percent, respectively, received Jefas. Moreover, 1.3 percent of nonpoor household heads (measured by income) received Jefas and 5.4 percent of income poor heads received Jefas. These findings, together with findings from Section 4 (P0 for rural households are much larger than for urban), indicate that rural areas are undercovered compared to urban areas in Argentina. Field visits to rural areas in Chaco, Mendoza, and Santiago del Estero confirm this observation.

²⁰ Galasso and Ravallion (2003) assess the Jefas program in urban areas only, due to lack of data on rural households.

Table 6.6: Coverage of Jefas by Departmental Population, Argentina, 2003		
Inhabitants in departments	Beneficiaries	Coverage
Fewer than 2,000	0.03	0.04
2,001–6,000	0.10	0.07
6,001–10,000	0.12	0.05
10,001–20,000	0.22	0.06
20,001–40,000	0.18	0.05
40,001–80,000	0.16	0.05
80,001–120,000	0.06	0.04
More than 120,000	0.14	0.05
Source: Own calculations based on data from Ministry of Employment. Coverage= # beneficiaries/total		

Table 6.7: Share of Household Heads Receiving Jefas in 2003 Dispersed Rural Areas in Argentina (Percent)					
	Mendoza	Santiago del Estero	Chaco	Santa Fe	Total
Share of Household Heads Receiving Jefas	2.5	5.6	7.3	1.0	3.9
Source: Own calculation based on RHS 2003.					

In Argentina, rural development programs are managed by the Secretariat of Agriculture (SAGPyA), the Ministry of Production, and the National Institute of Agricultural Technology (INTA). The majority of rural development programs that emerged in the 1990s were aimed at assisting small farmers in order to increase production. Rural development programs provide subsidies, credits, technical assistance, training, and organizational capacity. The national rural development programs PSA, PROINDER (see Box 3), PRODERNOA, and PRODERNEA use a holistic approach to improve the livelihood of small farmers by simultaneously providing several tools to improve their production and living conditions. PROINDER, PRODERNEA, and PRODERNOA specifically target the rural poor, identified by households with UBN. The program's technical staff is extremely committed to reduce rural poverty, but programs lack resources to reach all needy households. Programs may benefit from evaluation and improved coordination. Apart from national level programs, provinces also have their own rural development programs. For example, programs in Chaco are primarily devoted to livestock and agricultural development.^{21 22}

²¹ For example, the *Programa Hortícola para el Este Provincial* (Horticulture program for the East of the Province) was aimed at developing 5,000 ha of crops through investments in irrigation systems and machinery, the *Programa Frutícola para el Este Provincial* (Fruit Program for the East of the Province) was aimed at planting 1,000 ha of citrus and other species, the *Programa Frutícola para El Impenetrable* (Fruit Program for the Impenetrable Region) was aimed at investing in 200 fruit farms, and the *Programa Provincial de Siembra Directa* (Provincial Zero Tillage Program) was aimed at modernizing farm technology. Moreover, Chaco has forestry, desertification, protection, and fishery programs. Chaco is also implementing a program to formalize and regularize the use and tenure of fiscal lands.

Social or rural development programs are lacking for rural workers. Rural work is regulated by specific resolutions passed by the National Commission for Agricultural Work (*Comisión Nacional de Trabajo Agrario*, CNTA) and approved by the National Congress. CNTA is an autonomous agency composed of representatives of the national government, employers, and employees. In 1999, the National Congress passed the “rural workers’ license” law (Law 25,191), aimed at regulating different aspects of the hiring process of permanent, temporary, and harvest workers. Law 25,191 filled a vacuum in the agricultural labor legislation, because the previous law (22,248) only regulated labor conditions for permanent workers. Law 25,191 also established unemployment insurance for rural workers funded by employers’ contributions. Before the act/law, rural workers lacked unemployment benefits because they were not included in the labor law that regulated other sectors of the economy. In 2001, the National Congress established the National Records Office for Rural Employers and Workers (RENATRE), which in charge of issuing rural workers’ licenses. The objective has been to combat informal employment and increase the protection of workers. Brondo and Luparia (2001) estimate that 1.5 million agricultural workers are engaged in the informal sector, but they recognize the difficulties of obtaining accurate data. Neiman (2003) finds that for a sample of five provinces, more than half of the rural workers have salaries 30 percent below the minimum salary established by law, about 25 percent receive salaries according to the maximum and minimum legal levels, while 20 percent earn salaries above the maximum legal threshold.²³ The RHS reveals that only 17.5 percent of workers in the agricultural and livestock sector were engaged in formal employment in dispersed rural areas.

Argentina has 17 indigenous peoples’ groups distributed throughout the country. The most important indigenous peoples are the Kolla, Mapuche, Toba, and Tupi-Guarani. The National Population Census of 2001 included a specific question on self-identification of ethnicity. Preliminary figures indicate that 3.5 percent of households recognize the presence of an indigenous member. Thus, nearly 100,000 households have at least one indigenous member.

There is little information available about indigenous people in Argentina. There have been done very few surveys to address this in Argentina. The population census of 2001 included, for the first time, a question on ethnicity by self-identification. Findings based on the survey show that 2.8 percent of households have least one person considering him/herself indigenous. The estimated number of indigenous people is 402,921 based on a

²² For example: *Programa Ganadero del Noroeste* (Livestock Program for the Northeast) aimed at improving the socioeconomic status of 700 small goat farmers, *Proyecto Apícola* (Beekeeping Project), and *Programa de Desarrollo de la Producción Láctea* (Dairy Development Program) focused on medium-scale producers. The latter contemplates the construction of one model dairy farm and investments in 80 dairy farms and two milk factories. It is also aimed at building six farmyards to hold livestock during emergencies. *Programa de Manejo de Aguas Superficiales en Campos de Pastoreo* (Program for Surface Water Management in Pastures), and *Programa de Pastoreo Racional Intensivo* (Intensive Grazing Program).

²³ This does not mean that approximately half of rural workers are formal (i.e., paying contributions to social security).

complementary survey on indigenous households (Encuesta Complementaria de Pueblos Indígenas—ECPI) carried out by INDEC between 2004 and 2005. The findings based on the ECPI estimation suggests that 36 percent of indigenous people are between 0-14 years old, a 58.6 percent between 15-64 years old and 5.5 percent of 65 and older. Moreover, 66.8 percent of indigenous people live in indigenous communities.²⁴

Several barriers, both physical and mental, prevent indigenous communities from accessing conventional health care services. An important number of indigenous families lack means of transportation to reach the far off facilities, some due to inability to pay for the journey. Furthermore, indigenous individuals are often more comfortable with their communities own traditional medical care and many have experiences of disrespectful or discriminating treatment in public health care centers. Health seeking behavior of indigenous women is additionally influenced by strong gender norms, which define reproductive issues as taboo and limit women decision-making power. The fact that many women experience the triple burden of reproductive, domestic and productive labor explains why they often have a higher morbidity rate than men.²⁵

Other non-income poverty measures show that it is very difficult to obtain precise information about indigenous peoples and communities from the 2001 Census. Access to paved roads, water electricity, etc. cannot be separated out for different ethnic groups using publicly available data. The indicators presented below are from the departments where the indigenous communities involved in the Indigenous Community Development Project are located. In cases the community spans over more than one department, the indicators are calculated as an average of them.

Poverty is broad and deep among indigenous people. Almost a quarter (23.5 percent compared to 14.3 percent for non-indigenous) of households counted as indigenous is deprived in terms of basic needs. In three Provinces (Chaco, Formosa and Salta) a significant majority (57-75 percent) of indigenous households live in poverty. Comparison of indigenous and the non-indigenous households show clearly that the indigenous households are worse off than the average.

The health status and other areas of indigenous peoples' well-being are not well known.²⁶ In the absence of health statistics broken down by ethnicity, only rough estimations based on regional patterns and poverty figures can be given on the health conditions of indigenous peoples in Argentina. The census results highlight two significant

24 People who share a territory or a common habitat in rural or urban areas.

25 To address any of these problems, the Ministry of Health (MOH) has been implementing another Bank financing Project, the Maternal Child Health Insurance Program (Plan Nacer) in nine of the poorest Provinces, at the Northern region. The first phase of the insurance health program had a particular subcomponent that addressed the health condition of Indigenous communities through the developing of tailor-made culturally-sensitive health plans. The extension of the Plan Nacer to all the country Provinces will allow it to address these problems in all of those that meet the screening criteria, This Project will contributes to improve the access of Indigenous people to ten selected public health interventions.

26 Argentina: Essential Public Function Project.

health hazards common in indigenous households: i) the use of combustible fuels for cooking and ii) lack of adequate plumbing and sewage systems. In the absence of a ventilation system the first contributes to the high level of respiratory infections and the second to diarrhea and other intestinal problems.

The majority of indigenous peoples live in rural areas and their living conditions are worse than those of other rural dwellers. Health agents argue that infant mortality is about 30 percent among indigenous people. Despite important improvements at the national and provincial levels in recognizing indigenous peoples' rights and land regularization, there are few other effective policy actions aimed at improving their livelihood. At the national level, four programs specifically target indigenous people, the largest of which is *Desarrollo de Comunidades Indígenas* (Development of Indigenous Communities), which is aimed at community development and natural resource management in indigenous communities. The pilot project is implemented in Misiones, Neuquén, Jujuy, Río Negro, Salta, and Tucumán. Finally, indigenous people are also reached by social protection and rural development programs such as PSA (Box 4), Pro-Huerta, Jefas, and pensions. However, coverage information for indigenous peoples is not available. Since rural dwellers are undercovered, it seems likely that indigenous people also are. Field visits to Chaco and Mendoza confirmed this hypothesis.

Unfortunately the census micro data is not publicly available, therefore no disaggregate analysis or comparison between indigenous and nonindigenous peoples are feasible to undertaken for this study.

Two issues, targeting and institutional arrangements, arise in the implementation of the poverty alleviation strategy. Targeting seeks to reduce costs by limiting benefits only to the desired beneficiary group. Clearly, for targeting to be efficient the administrative mechanism must not be so costly that it offsets savings from excluding the nonneedy. In Argentina, targeting can be effective if it is based on individual or family characteristics.

The seriousness of poverty in rural Argentina calls for the active participation of all resources, including NGOs. According to *Organizaciones de la Comunidad* (CENOC) 2,615 civil society organizations are operating in rural areas in Argentina: 38 percent are located in the Pampeana region, 25 percent in the Northwest, 14 percent in the Northeast, 12 percent in the Cuyo region, and 11 percent in Patagonia. NGOs in rural Argentina cover different fields, such as *Fundación Solidaridad* which assists groups of rural dwellers in improving their production and livelihood, and *Fundapaz* that provides technical assistance and economic support to small farmers.

Box 3: PROINDER's principal achievements in terms of improving living and productive conditions for beneficiaries of the PROINDER programs

Direct financing to beneficiaries through the *Programa Social Agropecuario's* Rural Initiatives Support Fund (FAIR) took place from 2000 to May 2005, in 5,861 subprojects involving 40,843 families of small farmers and agricultural migrant workers in 21 provinces. An evaluation carried out in 2002 based on a sampling of these subprojects, a year and a half after their start-up, showed the following results:

- ***Evolution of the social and organizational level of groups:*** the organizational level of 39% of the groups has increased. They have progressed from being groups with no prior organization, to stages with an early level of organization, and to a lesser extent a consolidated organization, which provides them with greater management capacity to advance their interests in political and commercial arenas.
- ***Joint purchase of goods or joint sale of products:*** the number of groups that purchased and/or sold jointly increased by 36%. Joint purchases of goods, even among different groups of producers, resulted in a lowering of the costs foreseen in the original design of the subprojects, which also permitted an increase in goods purchased and/or in improvements made.
- ***Investments in productive infrastructure:*** stemming from investments financed through different types of subprojects, the productive infrastructure owned by groups increased by 22%, reaching as high as 39% in some provinces. Taking into account the limited on-farm investments at the start-up of each subproject, the investments in productive infrastructure are considered to have enabled significant increases in productivity such as those listed below:
 - ***Number of products for on-farm consumption:*** the number of products increased by 46%. This indicator relates directly to the existence of improvements in the quality of life at the family level, since it allows the diet to be diversified and increases on-farm "non-monetary income" (valuing of on-farm consumption).
 - ***Equivalent amount of production for on-farm consumption:*** the increase in the value of production for on-farm consumption totaled 34%.
 - ***Number of products for sale:*** the number of products and/or by-products for sale increased by 32%, which clearly indicates an increase in productive diversification.
 - ***Income from sales:*** with regard to the amount of income obtained from marketed products, a positive trend is observed throughout the entire country, totaling 11%. However, this result stems from a high level of interprovincial variability, linked to various reasons: (i) provinces where products slated for market were few and are increasing; consequently the increased amount obtained from sales expands; (ii) provinces in which commercial products predominate but face a crisis in prices and where it has been difficult to sustain income from sales even though additional products have been incorporated into the livelihood strategy. Despite these results, producers state that, without the subproject, their situation would be one of a serious deterioration of their income level.

Another significant contribution to the improvement in productivity was PROINDER's subcomponent of Research in Appropriate Technologies for Small Farmers, which carried out 33 adaptive research studies between 2001 and 2004. An analysis of the research results, using four basic indicators (increase in income, productivity and/or quality of production, savings in labor and/or inputs, and improvement in the sustainable use of natural resources) shows the following results:

- 70% of projects produced some improvement in a given indicator.
- 45% of projects showed simultaneous improvements in more than one indicator.
- 44% of projects showed increases in income.
- In 60% of projects, productivity and/or quality of production increased.
- 28% produced some type of savings (labor and/or inputs).
- 35% increased the sustainability of natural resource use.

Source: Aparicio and Tapella (2002)

**Box 4: Experiences with indigenous peoples, women's and youth groups
since the start of PSA-PROINDER**

Indigenous Peoples

PROINDER continues and expands upon the work that, since the establishment of the Social Program for Agriculture (PSA) in 1993, had been started with indigenous communities. PSA-PROINDER offers aboriginal beneficiaries the opportunity to participate in decision making. Nationwide, 5,500 indigenous people participate in on-farm consumption and infrastructure investment subprojects, especially for irrigation water, handicrafts centers, and land improvements. Over half of these beneficiaries are from the Province of Salta, with aboriginal communities representing 70% of this province's total beneficiaries.

Formosa's Provincial Coordination Unit, which evaluates and approves subprojects, has 20 indigenous delegates. From 1998 to 2001 the Project for Experimentation and Provision of Water to Aboriginal Communities was carried out, benefiting 768 families (around 3,840 people) with hydraulic works in 34 communities. This signified the resolution of water problems in the communities, and the training of 30 indigenous technicians from different ethnic groups in drilling and in the design and generation of appropriate technology. The project was executed by means of coordinated efforts among the region's NGOs (APCD, the Zonal Training Center-CECAZO, the Parochial Team for Aboriginal Pastoral Issues-EPPA, the Institute of Popular Culture-INCUPU, the National Institute of Indigenous Affairs-INAI), and the National University of Formosa.

Rural Women

As of the year 2000, women beneficiaries of PSA totaled 10,000 throughout the country, representing 28% of all recipients of financing both for subprojects supporting production for on-farm consumption and for sale. From 2001 to 2005, PROINDER was able to benefit 20,000 rural women, representing 40% of the country's total beneficiaries. In parallel, it helped them increase their participation and their managerial and organizational capacity, resulting in concrete achievements with regard to productive issues (greater participation by women with their products being presented at regional and provincial fairs) and other aspects of quality of life (housing, schools, health centers, scholarships, etc.).

Systematic work has also contributed to a marked increase in women's self-esteem and sense of self-worth, together with a recognition of the rights of women in general and of rural women in particular. Over the years, this process has become institutionalized. Currently, a peasant woman and a technician are participating in the Coordination Unit of the Latin American Network of Rural Women. This unit also coordinates the National Network of Female Technicians and Institutions working with Rural Women—TRAMA—which brings together 100 female agricultural technicians from 27 governmental and nongovernmental institutions. In 2004, the PSA introduced an exclusive line of financing for groups of women, stemming from the recognition of their dual role as producer and housewife, with the objective of alleviating their housework. Over 50 subprojects are currently being formulated throughout the country, out of the 150 planned for 2005.

Youth

With regard to youth, systematic work began in 2004, and rural youth were incorporated as specific actors, to be financed by PSA-PROINDER, since PROINDER's original formulation did not include financing for this group. The PSA-PROINDER work process showed a clear need to incorporate an exclusive line of subprojects for youth. Since that time and to date human resources have been trained (technicians as well as youth) on productive issues (agricultural and non-agricultural) and on youth-specific issues. This process is accompanied by the development and dissemination of specific materials (specific teaching materials, dissemination of existing studies and bibliographic material). Sixty subprojects, out of the 150 planned for 2005, are in the process of being formulated and appraised.

Source: PROINDER (2005)



Responde is another important NGO that works on recuperating villages at risk of disappearing, for example by assisting in improving the livelihood of rural dwellers. Communities at risk of disappearing exist in all provinces, but they are highly concentrated in the Pampeana region and surrounding provinces (Box 5). Reasons for their disappearance are multifold, but the main reasons are: (i) termination of key economic activities, (ii) closing of railway stations, (iii) isolation from paved roads, and (iv) lack of employment opportunities.

Nussbaumer (2004) studies reasons for outmigration and changing settlement patterns in rural locations in the province of Chaco. The majority of the recorded migrant population left their communities of origin due to lack of employment opportunities and the low household consumption level and poverty that followed. Owners of large farms (more than 1,000 ha) used to have many families working and living on the farm. Other

factors were the disappearance of typical peasant agrarian products such as cattle, goats, poultry, charcoal, and timber as local stores closed, lack of road maintenance, lack of access to water, reduced health assistance (it used to be common to find at least a health agency in most *parajes*), and distance from secondary schools and communication services. Finally, loneliness and changing cultural patterns among generations have also been mentioned as key factors for depopulation in rural Argentina. In summary, people leave rural areas due to the deterioration of living conditions that is said to be mirroring the lack of development strategies.

7. Conclusion

The analyses of demographic trends and the poverty and asset profile provide guidance on a social inclusion and poverty alleviation strategy for rural Argentina. Rural poverty remains a crucial part of the poverty story in Argentina. Although Argentina is a largely urbanized country, extreme income poverty in rural areas reached 39 percent of the people or 200–250,000 indigent families. These families tend to: (1) be large, and young, and to escape from poverty as they mature and children leave the household (life cycle); (2) live largely in dispersed areas where basic service provision is often weak and delivery is difficult (in particular school attendance beyond 11 years of age falls off very rapidly compared to grouped rural or urban areas); and (3) be more likely to be small landholders than landless laborers.

These findings suggest that a rural poverty strategy should be well focused on the truly poor families, and on helping young families to make the transition to life in grouped or urban areas. This will require a more targeted focus on education for poor families and on the acquisition of skills required to compete in an increasingly urban world.

This strategy would be in concert with the underlying demographic and economic forces affecting the distribution of population among rural dispersed, rural grouped, and urban areas. Dispersed areas lost 14.5 percent of their population over the past decade, reaching 2.6 million in 2001, compared to grouped rural areas which experienced an 8 percent increase and reached 1.2 million in 2001. Around 400,000 people left the dispersed rural areas during 1991–2001. Roughly speaking, some 25 percent may have moved to grouped rural areas and the rest may have moved to urban areas. The Pampeana region experienced a fall of 24.6 percent and the Cuyo region 5.1 percent in the dispersed rural population. In the latter region, Mendoza is an outlier as it experienced a population increase of 0.3 percent in dispersed rural areas and 32.2 percent in grouped rural areas.

The described distribution profile reveals that poor Argentines tend to earn a large share of their incomes from wage labor activities. For the poor, low return/productivity wage labor activities are important. The rural nonfarm sector is heterogeneous and includes a great variety of activities and productivity levels across nonfarm jobs. Moreover, the nonfarm sector can reduce poverty in several distinct but qualitatively important ways. First, high productivity activities seem to provide rural dwellers with sufficient income to

escape poverty. Second, vulnerable segments of the population, such as women and many of the poorest, tend to be concentrated in low or less productive rural non-agricultural activities, mainly due to lack of skills, educational deficiencies, and location disadvantages. Nevertheless, these low productivity/return occupations provide a critical contribution to their livelihoods and prevent further destitution.

Five-pronged approach to poverty reduction in dispersed rural areas in Argentina

Poverty in dispersed rural areas is may not be a big problem, but lack of human capital is. The abovementioned findings indicate that poverty is a transitory phase, as mobility does exist in rural areas. After the childrearing phase, families “grow” out of poverty as people in the active age move out and away from dispersed rural areas. Moreover, households with a small landholding are tired down because they are less productive than non-smallholders. i.e., landless or large landholders (with more than 250 hectares). Furthermore, there is little access to services, especially education and health, in dispersed rural areas. It is important that the government assist rural dwellers in moving up the education and health ladders in order to increase their asset base. This will make the rural dwellers more productive if they decide to stay in rural areas or move to urban areas and will also reduce or eliminate the opportunity cost of farming own land. Moreover, enhancing the human capital stock of rural dwellers will make them more likely to escape extreme poverty.

With good policies, rural extreme poverty should be fairly easy to alleviate by investing in children and families and making grouped rural areas more attractive by increasing the quality of services.

It is recommended that the government improve the access and quality of rural education and reproductive health care and expand the rural development programs so that the indigent can eventually leave the social programs. Moreover, improving the rural dwellers’ connections with towns (even in the same rural space, grouped rural areas) is key for speeding up migration from dispersed rural areas where public services are scarce and expensive to supply to all dwellers.

The strategic principles for reducing rural poverty involve seeking to strengthen the key assets of the poor, taking into account geographic differences in the poverty situation and priorities. The Government of Argentina could apply a five-pronged poverty reduction approach:

First, improve the asset base of poor households. This requires improvements in social policies and access to public services. Extreme poor and poor households are at great risk of poor or low human capital accumulation. This includes poor health and undesired pregnancies because of their lack of access to family planning (and clean water and sanitation facilities) and their low quality education and education attainment. Indigent and poor families can be targeted with transfers linked to education through the secondary

level—along the lines of the Brazilian *Bolsa Escola* for primary education. Improved quality of and access to education can reduce the likelihood of becoming poor, as more education is a key factor in obtaining a higher income in both the farm and nonfarm sectors. Furthermore, education is associated with fertility: the more education a woman attains, the lower her fertility rate and, therefore, the lower the dependency ratio, and the lower the likelihood of falling into poverty. Special efforts should be made to increase the level of human capital, including: (i) ensuring access to high quality health care including reproductive health; and (ii) ensuring access to high quality education and primary and secondary education adapted to the realities in rural areas; including technical or vocational training components at the end of primary school.

Second, create jobs. Many households are poor because they are trapped on low-productivity land or are in low-paying, low-productivity jobs in the informal sector or are unemployed. Workers need more productive jobs and tighter labor markets to raise their income above the poverty level. It should be recognized that since very few people work in the formal labor market, social policies tied to formal employment or unemployment will have only a very limited reach among the poor. Special efforts should be made to assist in generating rural employment. Many high productivity, labor intensive jobs can be created in the regional economies by improving the provision of public goods and the environment for collective action in irrigated agriculture, among other things.

Third, facilitate migration to higher opportunity areas, i.e., grouped or urban areas. In addition to education, other mechanisms should be explored to facilitate the ongoing migration out of dispersed areas. These could range from efforts to improve social linkages or capital between households in dispersed areas to a program to ensure titling of land for indigent farmers on dispersed lands. In the absence of titles a farmer on dispersed land has little chance to benefit from the land improvements undertaken were he to choose to move to higher opportunity areas.

Fourth, target carefully. Poverty interventions need to target the poor population as effectively as possible. In view of the trend of population movement out of dispersed areas, the much lower prospects for the development of human capital in these areas, and the very high cost of providing public goods, the government should, to the extent possible, invest in the people, not in the area. The government needs to develop a poverty monitoring system to track living conditions and provide data for (1) evaluating the impact of interventions, and (2) improving the targeting of interventions. The government should also seek to develop a key set of indicators for monitoring actions to reduce poverty. This may require including rural areas in the annual household survey or introducing an annual rural household survey.

Fifth, increase sectoral integration. For the poverty reduction strategy to be effective, a high level of sectoral integration is needed at all levels of government. It is of utmost importance that the Secretariat of Economy work closely with the country's other secretariats so that all changes in poverty indicators, etc. are reflected in social programs. Finally, rural development is a small part of the Ministry of Agriculture. In order to serve

sectors other than agriculture a new model is called for with a clear rural strategy or a national policy to address rural issues including rural poverty. One option is to create an Undersecretariat or Secretariat of Rural Development, as has been implemented in other countries in the region, such as Brazil. This, together with increased coordination of programs, would increase the impacts individual programs can achieve. Moreover, the government should establish clear and efficient mechanisms for NGO collaboration. Emerging NGO consortia provide one mechanism, which should be explored for fostering greater coordination, dialogue, and joint planning with the government.

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