WPS3576

Poverty in Rural and Semi-Urban Mexico during 1992-2002
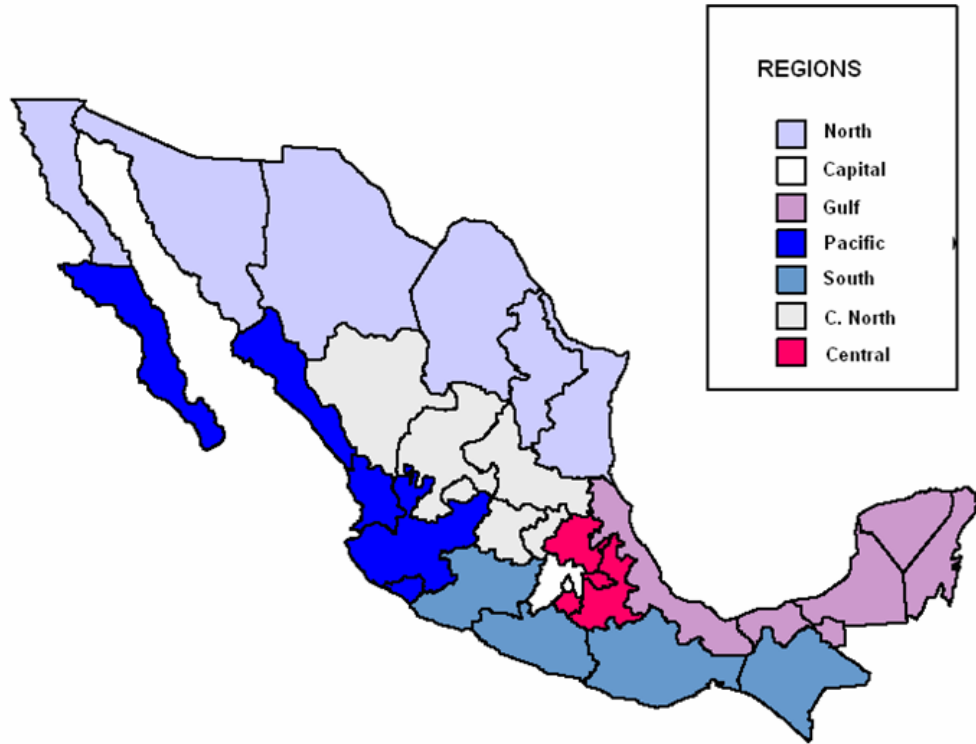
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Map 1. Regions of Mexico

Abstract

This paper analyzes poverty in rural and semi-urban areas of Mexico (localities with less than 2,500 and 15,000 inhabitants, respectively) and it provides guidance on a social agenda and poverty alleviation strategy for rural Mexico. The analyses are based on INIGH and ENE datasets for 1992-2002. Monetary extreme poverty affected 42 percent of the rural population in dispersed rural areas and 21 percent in semi-urban areas in 2002, slightly less than one decade earlier. Most of the rural poor live in dispersed rural areas and 13.2 million people live in poverty in rural Mexico with less than 15,000 inhabitants. It is disproportionately a feature of households whose heads main job is in the agricultural sector, as self-employed farmers or rural laborers, and that have at most a primary education. However, the incidence of extreme rural poverty has declined since 1996 but at a slower pace than the decline in urban poverty. Hence, the rural-urban poverty gap increased in recent years and in some places extreme poverty is at least four times higher in rural than urban areas. Moreover, not only is the income gap in urban areas increasing, but also the gap between richer and poorer segments of the population in the rural areas is growing. Finally, the gap between rich and poor regions is still large.

1. Introduction

Rural poverty in Mexico is a subject of widespread interest. This is true within Mexico itself, but also in the broad American context as the rural population, for example, migrate and export their produce. There are some 25 million people in rural areas in Mexico, most of which are poor. The countryside has the greatest degree of poverty in Mexico, as is the case in most Latin American countries. Poverty in rural Mexico is not homogeneous, neither across time, regions nor across sectors, such as agricultural and off-farm sectors. Poverty is endemic in rural Mexico and affects particularly vulnerable groups, such as the indigenous populations.

Monetary extreme poverty affected 42 percent of the people in dispersed rural areas (localities with less than 2,500 inhabitants) and 21 percent in semi-urban rural areas (localities with less than 15,000 inhabitants) in 2002, slightly less than one decade earlier. Most of the rural poor (10.4 million) live in dispersed rural areas and some of the poor live in semi-urban areas (2.8 million). This translates into 13.2 million rural people living in poverty in rural Mexico with less than 15,000 inhabitants. It is disproportionately a feature of households with a head whose main job is in the agricultural sector, whether as a self-employed farmer or rural laborer, and has at most primary education. However, the incidence of extreme rural poverty has declined since 1996 but at a slower pace than the decline in urban poverty.[2] Hence, the rural-urban poverty-gap increased in recent years and in some places extreme rural poverty is at least four times higher than in urban areas. Moreover, not only is the income gap to urban areas increasing but the gap between richer and poorer segments of the population in the rural areas is also growing. Finally, the gap between rich and poor regions is still large, such as between the North and South regions.

This paper attempts to analyze rural monetary poverty. Two definitions of rural areas are used: *first,* localities with more than 2,500 and less than15,000 inhabitants refers to semi-urban areas; and, *second*, dispersed rural areas refers to localities with less than 2,500 in habitants (the official definition of rural in Mexico). The analyses are based on national household surveys (*Encuesta nacional de Ingresos y Gastos de los Hogares-*ENIGH) from 1992 to 2002.

The paper is organized in 6 sections. Section 2 presents demographics and their changes during 1970-2000 in terms of rural and urban population size. Furthermore, it shows the recent growth pattern for Mexico and its regions. Section 3 analyzes rural poverty and its depth during 1992-2002 and Section 4 shows the rural Mexican poverty profile. Section 5 presents analyses of determinants of poverty, important factors to

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[2] The *Secretaria de Desarrollo Social* (SEDESOL) uses three poverty lines: a "food-based" poverty line (income required to acquire enough food to cover nutritional needs); a "human needs" poverty line which includes also the income required to acquire basic education, health, housing, dress, footwear, and transportation; and an "assets-based" poverty line, which also includes other needs. The latter corresponds to the usual broad definition of "poverty", which we call "moderate poverty', while the former corresponds to the usual definition of "extreme poverty".

escaping poverty and changes during 1992-2002. This section also addresses the extent to which the rural South region is different from rural Mexico as a whole. Finally, Section 6 presents a three-pronged rural poverty reduction strategy guided by the findings from the poverty profile and determinants of poverty analysis. The strategic principles for reducing poverty involve seeking to strengthen the key assets of the poor, taking into account geographic differences in the poverty situation and priorities.

2. Populations and Land

The degree of poverty a society might experience depends on the volume and distribution of resources and on the size and distribution of the population among households. These two basic determinants of poverty, however, are not independently determined. On one hand, the size and age structure of a population are consequences of fertility decisions taken over past decades that were influenced by economic conditions. On the other hand, the volume of resources available today is influenced by the size and age composition of the labor force. This section analyzes recent changes in demographics in Mexico's rural areas. The following section very briefly addresses agriculture, land, and rural living in Mexico.

2.1 Population

The importance of demographic factors

Demographic factors have direct and indirect impacts on prices and poverty. As the size and age composition of the population changes, the relative size of the labor force and the number of dependents also change, modifying 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. These changes in quantities, however, will, in general, influence prices in the economy. In particular, changes in the rate of growth of the population and in the age structure may have important impacts on labor supplies, savings, and 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, on incentives for private sector investments, on political power, and on labor markets. As a result, it is important to look at recent changes in demographic patterns in rural Mexico. The following overview describes demographic changes between rural and urban areas that have taken place from 1990 to 2000 followed by Section 3 on rural labor markets.

Overview of demographic changes in Mexico

In 2000, 24.5 million of Mexican's total of 97.5 million people lived in dispersed rural areas, defined as localities with less than 2,500 inhabitants (Table 2.1 and Appendix A). Expanding the definition of rural to locations with less than 15,000 inhabitants, or semi-urban, increases the rural population to 38.1 million. In Mexico, the population is slowly moving to urban areas. In 2000, 25 percent of the Mexicans lived in rural areas, down from 29 percent one decade earlier. The rural population is not distributed equally across regions. For example, in the South region, nearly 50 percent of the population lives in rural areas, a total of more than 6.8 million people (Table 2.1).

Region[3]	Zone	1990	1995	2000	Growth 1990-2000 (%)
México	Total	81,249,645	91,158,290	97,483,412	1.8
	Urbana (%)	71.3	73.5	74.6	2.3
	Rural (%)	28.7	26.5	25.4	0.6
North	Total	13,246,991	15,242,430	16,642,676	2.3
	Urbana (%)	84.7	86.5	87.9	2.8
	Rural (%)	15.3	13.5	12.1	-0.1
Capital	Total	18,051,539	20,196,971	21,701,925	1.8
	Urbana (%)	91.4	91.5	91.6	1.9
	Rural (%)	8.6	8.5	8.4	1.5
Gulf	Total	10,121,385	11,388,767	12,024,666	1.7
	Urbana (%)	59.9	62.5	63.7	2.4
	Rural (%)	40.1	37.5	36.3	0.7
Pacific	Total	9,077,660	10,177,075	10,745,699	1.7
	Urbana (%)	75.7	77.4	78.7	2.1
	Rural (%)	24.3	22.6	21.3	0.3
South	Total	12,398,892	13,600,852	14,424,973	1.5
	Urbana (%)	48.7	52.0	52.9	2.4
	Rural (%)	51.3	48.0	47.1	0.6
Center-North	Total	10,382,375	11,488,771	12,113,254	1.5
	Urbana (%)	59.4	62.9	64.8	2.5
	Rural (%)	40.6	37.1	35.2	0.1
Center	Total	7,970,803	9,063,424	9,830,219	2.1
	Urbana (%)	64.0	66.5	67.7	2.8
	Rural (%)	36.0	33.5	32.3	1.0

Table 2.1: Rural - Urban Population and Growth rates in Mexico by Region, Selected Years 1990-2000

Source: INEGI.

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[3] The regions correspond to the following states: **North**: Baja California, Coahuila, Chihuahua, Nuevo Leon, Sonora, Tamaulipas; **Capital**: Distrito Federal, México; **Gulf**: Campeche, Quintana Roo, Tabasco, Veracruz, Yucatán; **Pacific**: BC South, Colima, Jalisco, Nayarit, Sinaloa; **South**: Chiapas, Guerrero, Michoacan, Oaxaca; Center-North: Aguascalentes, Durango, Guanajuato, Queretaro, San Luis Potosi, Zacatecas; **Centro**: Hidalgo, Morelos, Puebla, and Tlaxcala.

Mexico's population increased from 66.9 million to 97.5 million during 1980-2000 or 1.8 percent per year (Table 2.2). In this period, Mexico has become more urbanized, and the largest population growth has taken place in urban areas. During the last two decades, Mexico's rural population has also increased. In 1980, rural Mexico with less than 15,000 inhabitants was home to 34.6 million people. In 2000, the rural population had increased to 38.1 million (Table 2.2). However, in rural areas, the population is expanding at a slower pace than the country as a whole, namely by 0.6 percent per year (Table 2.1). Not all regions follow the rural population growth pattern of the total country. In the North region, the rural population actually diminished by 0.1 percent annually during 1990-2000. In this period, in the Capital region, the difference in the population growth rate between rural and urban areas was the smallest in Mexico and the rural population expanded at 1.5 percent annually. The population growth rate in the poor South region and Gulf region followed closely the national average during the last decade.

Table 2.2: Population by size of location in Mexico and its regions, 1980-2000						
	Less than 2,500	Share (%)	More than 2,500	Less than 15,000	Share (%)	More than 15,000	Total
1980						
Total Mexico	22,547,104	33.73	44,299,729	32,242,146	48.2	34,604,687	66,846,833
North	2,360,814	22.08	8,331,073	3,317,815	31.0	7,374,072	10,691,887
Capital	1,556,931	9.50	14,838,483	3,115,882	19.0	13,279,532	16,395,414
Gulf	3,804,118	46.61	4,356,794	5,228,230	64.1	2,932,682	8,160,912
Pacific	2,332,162	31.06	5,177,267	3,602,773	48.0	3,906,656	7,509,429
South	5,557,813	58.92	3,874,317	7,259,617	77.0	2,172,513	9,432,130
Center-North	3,962,426	47.98	4,295,771	5,076,888	61.5	3,181,309	8,258,197
Center	2,972,840	46.46	3,426,024	4,640,941	72.5	1,757,923	6,398,864
1990						
Total Mexico	23,289,924	28.66	57,959,721	34,574,235	42.6	46,675,410	81,249,645
North	2,032,682	15.34	11,214,309	3,035,755	22.9	10,211,236	13,246,991
Capital	1,552,489	8.60	16,499,050	2,961,367	16.4	15,090,172	18,051,539
Gulf	4,063,169	40.14	6,058,216	5,878,621	58.1	4,242,764	10,121,385
Pacific	2,207,351	24.32	6,870,309	3,657,722	40.3	5,419,938	9,077,660
South	6,354,957	51.25	6,043,935	8,670,353	69.9	3,728,539	12,398,892
Center-North	4,212,549	40.57	6,169,826	5,478,828	52.8	4,903,547	10,382,375
Center	2,866,727	35.97	5,104,076	4,891,589	61.4	3,079,214	7,970,803
2000						
Total Mexico	24,723,590	25.36	72,759,822	38,064,204	39.0	59,419,208	97,483,412
North	2,015,059	12.11	14,627,617	3,153,993	19.0	13,488,683	16,642,676
Capital	1,812,596	8.35	19,889,329	3,645,216	16.8	18,056,709	21,701,925
Gulf	4,367,521	36.32	7,657,145	6,514,575	54.2	5,510,091	12,024,666
Pacific	2,290,394	21.31	8,455,305	3,865,830	36.0	6,879,869	10,745,699
South	6,791,721	47.08	7,633,252	9,579,248	66.4	4,845,725	14,424,973
Center-North	4,269,270	35.24	7,843,984	5,710,063	47.1	6,403,191	12,113,254
Center	3,177,029	32.32	6,653,190	5,595,279	56.9	4,234,940	9,830,219
Source: Census 1980, 1990 and 2000.						

The share of children in the total population is falling in rural Mexico. In 1980, children age 14 and under accounted for 43 percent of the total population in rural Mexico (Table 2.3). In 2000, the share of children age 14 and under was down to 34 percent. So far, the number of elderly dependents has not caught up with the reduction in children's share in the population. In 2000, only 5 percent of the population was 65 years of age or older (Table 2.3). This will have a significant effect on the country's efforts to reduce poverty. For the next few decades, the ratio of children to working age population will decline, while the number of retirees will remain small. As a result, not only will the dependency ratio fall, but also the amount the state must spend on expanding the quantity of social services will decline. This will free up resources to spend on improving quality of services and other rural poverty reduction efforts.

Table 2.3 also shows that there are regional differences in the aging pattern. In the rural South region more than 38 percent of the total population is 14 year of age or younger. This compares 30 percent in the rural North region. Moreover, there is a higher population share of working age and therefore able to better feed the region's children in the North compared to the South region.

Table 2.3: Share of the population per age group and by locality, rural Mexico, (percent)				
	0-14 Years of age	15-44 Years of age	45-64 Years of age	65 + Years of age
1980				
Total Mexico	43.1	42.9	10.1	3.8
North	41.9	43.9	10.5	3.7
Capital	40.6	46.2	9.9	3.4
Gulf	42.9	43.0	10.3	3.8
Pacific	44.3	41.6	10.0	4.1
Southr	44.7	41.2	10.2	3.9
Center North	46.1	39.9	9.8	4.2
Center	44.3	40.9	10.5	4.2
1990				
Total Mexico	38.6	46.3	11.0	4.2
North	35.4	49.0	11.5	4.0
Capital	34.5	50.4	11.2	3.9
Gulf	39.8	46.2	10.2	3.8
Pacific	38.5	46.3	10.8	4.4
South	43.0	42.2	10.6	4.2
Center-North	41.3	43.8	10.5	4.3
Center	44.2	11.0	4.5	4.5
2000				
Total Mexico	34.1	48.1	12.8	5.0
North	32.3	50.1	13.0	4.6
Capital	30.0	51.4	13.8	4.9
Gulf	34.6	48.8	12.1	4.5
Pacific	33.5	48.4	13.0	5.1
South	38.4	44.4	12.0	5.2
Center-North	36.5	46.4	12.0	5.1
Center	35.2	46.9	12.5	5.4
Source: Census 1980, 1990, and 2000.				

Fecundity, the number of children per mother, dropped from 2.8 in 1980 to 2.6 in 2000 in rural Mexico (Table 2.4). In the poor South region the fertility rate is still higher than in Mexico as a whole and the Capital region, namely by 0.3 percentage points and 0.7 percentage points, respectively. Women's increased participation in the labor market (by 3.3 percentage points see Table 2.5) may have been an important factor contributing to the reduction in the fertility rate and drop in the dependency rate. The female labor force participation rate is still lower in the South region (24.2 percent) than in the Capital region (35 percent) and therefore the high fertility rate in the former could be an important factor explaining this difference. Moreover, lack of access to childcare facilities etc. may also play a roll in the large difference in labor market structure among regions.

Table 2.4: Fertility rate by region in rural Mexico, 1980 and 2000		
	1980	**2000**
Total Mexico	2.8	2.6
North	2.8	2.5
Capital	2.6	2.2
Gulf	2.7	2.5
Pacific	3.0	2.7
South	2.8	2.9
Center North	3.2	2.8
Center	3.0	2.7
Source: Census 1980 and 2000.		

The demographic change that demands the most urgent policy response is the growth in the economically active population in rural areas. During 1990–2000 the number of those aged 12 to 64 rose by more than 300,000 (0.6 percent). The growth rate is low primarily due to out-migration and some due to reduced fecundity. Migration is important in rural Mexico. Mostly young people leave their village in search of employment and find work in a wide variety of economic sectors, either in Mexico or the U.S.

Table 2.5: Female and male labor market participation rate in Mexico, 1980 and 2000, Percent				
	Male	**Female**	**Male**	**Female**
	1980		**2000**	
Total Mexico	75.2	26.5	70.2	29.8
North	73.3	25.6	71.5	32.8
Capital	73.5	31.9	71.2	35.0
Gulf	77.7	25.3	73.3	28.2
Pacific	74.3	23.6	71.6	32.2
South	77.5	30.3	68.0	24.2
Center North	75.2	23.1	65.5	27.2
Center	75.2	26.1	70.5	28.8
Source: Census 1980 and 2000.				

Poverty analyses reveal that many rural Mexican workers, particularly those in the informal sector and agriculture, are poor. The challenge of creating employment is therefore not only to provide new jobs for the new entrants to the labor force, but also to increase the number of jobs that are able to provide sufficient income to lift the employee's household out of poverty or cushion against it. Creating jobs regardless of quality is not enough—people need good jobs. As the labor market, particularly the informal one, is relatively flexible, the concern is about generating sufficient income via employment rather than simply having a job. The trend in this regard since 1999, as

reflected by the recent increasing real wages of unskilled workers (with incomplete or no education)—is encouraging (Verner 2004).

2.2 Agriculture, Land and Rural Living

Although nearly half of Mexico's total land area is officially classified as agricultural, only 12 percent of the total area is cultivated. This is one of many factors driving migration and off-farm employment in rural Mexico. In the early 1990s, 80 percent of Mexico's cultivated land required regular irrigation. Because of the high cost of irrigation, the government has emphasized expanding production on existing farmland rather than expanding the area under irrigation. Although corn is grown on almost half of Mexico's cropland, the country became a net importer of grain during the 1970s.

Agricultural practices in Mexico range from traditional techniques, such as the slash-and-burn cultivation of indigenous plants for family subsistence, to the use of advanced technology and marketing expertise in large-scale, capital-intensive export agriculture. Government extension programs have fostered the wider use of machinery, fertilizers, and soil conservation techniques. These diverse agricultural practices call for a diverse rural labor market.
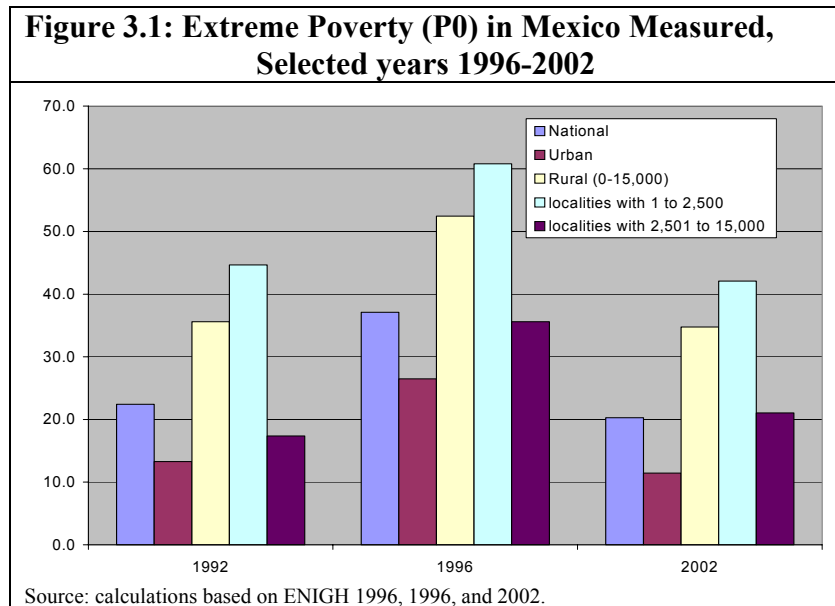
3. Poverty

Since 1996, Mexico has made creditable headway in reducing national poverty. During 1996-2002, the state's extreme poverty, measured by P0, fell 17 percentage points (Figure 3.1 and Table 3.1).[4] There is little room for complacency, however, because extreme poverty was still only slightly lower in 2002 when 20 percent of the Mexicans were poorer than it was in 1992 (22 percent). This translates to around 20 million Mexicans who still live in extreme poverty, which means that they do not have sufficient income to buy a minimum basket of food.

Rural population is more affected than urban population by poverty. Extreme poverty affected 42 percent of the rural population in areas with less than 2,500 inhabitants in 2002, approximately the same as one decade earlier (Figure 3.1 and Table 3.1). While only 25 percent of Mexico's population lives in rural areas, more than 65 percent of the Mexican poor are live in rural areas. The incidence of extreme rural poverty has declined since 1996, but at a slower pace than the decline in urban poverty.

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[4] Throughout this paper poverty refers to extreme poverty and poor to extremely poor. The secretariat of social development (*Secretaria de Desarrollo Social*-SEDESOL) uses three poverty lines: a "food-based" poverty line (income required to acquire enough food to cover nutritional needs); a "human needs" poverty line which includes also the income required to acquire basic education, health, housing, dress, footwear, and transportation; and an "assets-based" poverty line, which also includes other needs. The latter corresponds to the usual broad definition of "poverty", which we call "moderate poverty', while the former corresponds to the usual definition of "extreme poverty" (World Bank 2004 for more information on poverty lines).

Hence, the rural-urban poverty-gap has increased in recent years. Moreover, not only is the income gap to urban areas increasing but the gap between richer and poorer segments of the population in the rural areas is also growing. In 2002, rural Mexico had poverty rates for higher than urban Mexico. Dispersed rural areas had a poverty incidence double that of semi-urban areas. Furthermore, dispersed rural areas had a poverty incidence four times higher than urban areas in Mexico.

Figure 3.1: Extreme Poverty (P0) in Mexico Measured, Selected years 1996-2002

Source: calculations based on ENIGH 1996, 1996, and 2002.

Mexico has steep gradients in conditions of living from more developed urban areas, through the urban periphery and smaller towns, through to the more remote rural areas. Figure 3.1 shows that this pattern has not changed much over the last decade and in rural localities with less than 2,500 people more than 40 percent were extremely poor compared with those localities with 2,500-15,000 people where 21 percent were poor in 2002. This translates into 13.2 million people in poverty. Most of the rural poor live in more dispersed rural areas, as 2.8 million were poor in semi-urban areas and 10.4 million poor in dispersed rural areas (information on population in rural areas in Appendix A).

Geographic factors are important when analyzing poverty in Mexico. Living in a poor area can make a profound difference to well-being and life prospects. There are large differences in income poverty between different regions, with a generalized gradient from North to South (Figure 3.2 and Table 3.1).[5] In 2002, the headcount poverty rate in rural areas in the North region with less than 15,000 inhabitants reached 14 percent, a third of that in the South region where 48 percent were poor.

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[5] ENIGH is not designed to be fully representative at regional level, but differences between regions are statistically significant (also Word Bank 2004).

Table 3.1: Extreme poverty in Mexico and its regions, 1992-2002	Headcount (P0)			Poverty Gap (P1)			Square Poverty Gap (P2)		
	1992	1996	2002	1992	1996	2002	1992	1996	2002
National	22.4	37.1	20.3	7.5	14.1	6.3	3.5	33.9	3.2
Urban	13.3	26.5	11.4	3.6	8.3	2.8	1.4	3.7	1.1
Rural (0-15,000)	35.6	52.4	34.8	13.1	22.5	12.2	6.5	77.5	6.6
Dispersed Rural (Localities with 1-2,500)	44.7	60.8	42.1	16.7	27.1	14.9	8.2	11.4	8.3
Semi-Urban (localities with 2,501-15,000)	17.4	35.6	21.1	6.0	13.1	7.0	3.0	11.0	3.4
Region									
North									
Total	9.4	22.0	6.4	2.5	8.0	1.6	1.1	159.5	2.2
Rural (0-15,000)	13.3	30.9	13.8	3.7	16.3	4.9	1.5	747.9	11.0
Urban	8.2	19.7	4.8	2.2	5.7	0.9	0.9	2.4	0.3
Capital									
Total	9.9	25.8	8.6	2.4	7.7	1.9	0.9	3.3	0.7
Rural (0-15,000)	26.7	49.9	15.9	7.5	17.2	3.2	3.0	7.8	1.2
Urban	6.9	20.1	7.1	1.5	5.5	1.6	0.5	2.3	0.6
Gulf									
Total	23.7	45.1	34.7	7.8	17.9	11.0	3.6	9.4	4.7
Rural (0-15,000)	30.5	52.6	43.7	10.2	21.8	15.2	4.6	11.8	6.8
Urban	14.3	34.7	24.2	4.5	12.6	6.2	2.1	6.0	2.3
Pacifico									
Total	12.6	26.7	13.7	4.4	8.4	3.6	2.2	4.0	1.7
Rural (0-15,000)	18.5	32.3	21.8	7.4	11.2	6.6	4.1	5.4	3.1
Urban	8.5	23.0	9.4	2.2	6.7	2.1	0.9	3.2	1.0
South									
Total	41.1	60.0	39.9	15.3	26.6	14.3	7.3	14.8	7.0
Rural (0-15,000)	45.6	66.7	47.9	17.8	31.2	18.4	8.9	17.9	9.3
Urban	30.9	45.7	24.4	9.5	16.9	6.4	3.7	8.2	2.6
Center-North									
Total	28.5	44.5	21.1	9.0	17.1	6.0	4.2	8.8	2.7
Rural (0-15,000)	40.4	52.6	27.2	14.0	21.7	8.3	6.8	12.0	4.0
Urban	18.2	36.7	16.4	4.6	12.6	4.3	1.9	5.7	1.8
Center									
Total	44.7	49.5	30.1	16.1	20.0	10.3	7.9	17.3	5.0
Rural (0-15,000)	53.0	57.9	41.6	21.8	25.7	15.1	11.4	25.7	7.5
Urban	34.5	37.0	15.4	9.1	11.4	4.1	3.6	4.9	1.8

Source: ENIGH 1992-2002. Note: The ENIGH survey is not representative at the regional level.

Figure 3.2: Extreme rural poverty (P0) in Mexico by region, selected years 1992-2002

Source: Calculations based on ENIGH 1992, 1996 and 2002. Rural: areas population with <15,000.
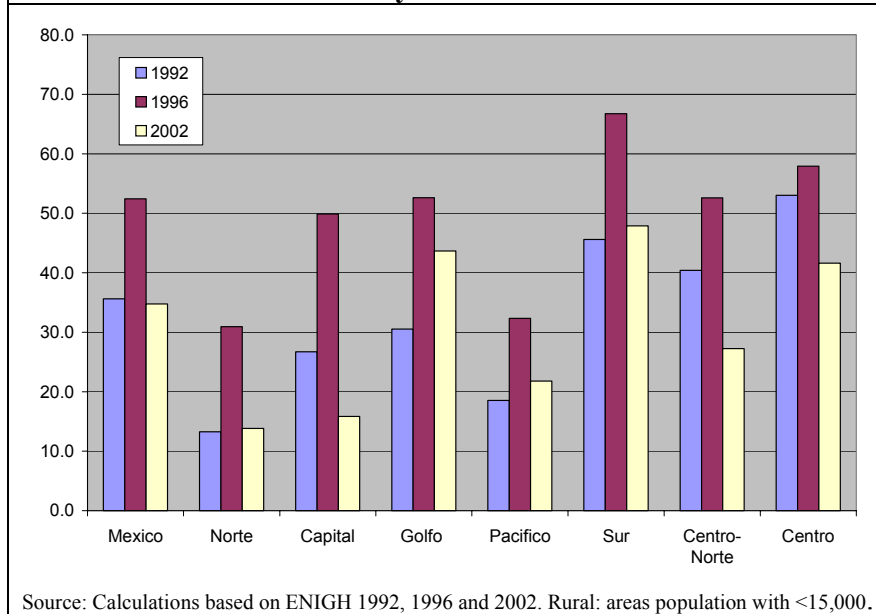
The distinction between regions seems to matter more for rural poverty than does that of rural and urban. As Figure 3.2 clearly shows, the Capital, Center, and Center-North regions experienced a considerable reduction in the headcount poverty rate over the past decade. The share of poor people in the total population fell by more than 10 percentage points in each region of these regions. This compares to the Gulf region where poverty increased by more than 10 percentage points during 1992-2002.

During 1992-2002, the pattern of overall poverty changes has closely followed the macroeconomic cycle and the associated rhythm of the labor market. The overall Mexican poverty was not stable, nor was rural poverty stable over the last decade. In rural areas P0 fell from 36 to 32 during 1992-94 and increased during the crises in 1995-96 where it hit an all-time high of 52 percent poverty rate. More populated rural areas (with between 2,500-15,000 inhabitants) have been more affected by the economic instability than dispersed rural areas (localities with less than 2,500 people). Poverty increased by 51 percent in the former and 27 percent in the latter areas during 1992-96. The crisis of 1994-95 constituted to a large setback for well-being in Mexico, and income poverty in 2002 is still close to levels prevailing a decade earlier, before the crisis. One result of the crises has been: (1) low labor returns in self-employment and wages independently of sector of engagement, and (2) increased under-employment for the poor.

Since 1996, the P0 embarked on a downward path and reaching in 2002 a level lower than at any point during the previous decade. While long run progress has been feeble, the measured trends in the 2000-02 period are encouraging, with a significant decline in extreme poverty, despite stagnation in average incomes driven by a

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combination of substantial income growth in rural areas, albeit with higher levels of rural inequality (World Bank 2004). During 1999-2002, the incomes of the poor population grew in Mexico, despite economy-wide stagnation (Appendix B). Two factors drove this, namely rapid growth in rural labor incomes of workers and self-employed, with some reduction in the wage premia to higher levels of education and large contribution from remittances and government transfers (Appendix B).

The income of the extreme poor households in rural areas is stagnant (Table 3.2). Average per-capita household income decreased from 1992-96 and increased during 1996-2002, but in 2002 it had still not return to the 1992 level. In 2002, the average income of the extreme poor rural households (P$315.5) was less than a third of the average income of the non-poor in rural Mexico.

Table 3.2: Average per-capita income by poverty level, Mexico, selected years 1992-2002						
	1992		1996		2002	
Region	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Dispersed Rural[1]	1,277.76	329.29	1,163.56	302.80	1,417.20	315.45
Semi-urban[2]	1,600.69	346.55	1,304.62	349.91	1,521.37	327.74
Urban	2,940.99	520.70	2,470.30	511.12	2,647.41	506.64
Source: ENIGH 1992-2002.						
[1] Rural: Localities with less than 2,500 inhabitants.						
[2] Semi-urban: localities with 2,500 to 15,000 inhabitants.						

Rural household heads with no income decreased during 1992-2002 (Table 3.3). In 2002, 4.2 percent of household heads had no income, down 1.3 percentage points since 1992 and 0.8 percentage point since 1996. Two factors may have played a role in reducing the share of rural households with no incomes: *first*, increased education attainment in rural areas, and *second*, a reduction in the share of inactive households heads in rural areas.

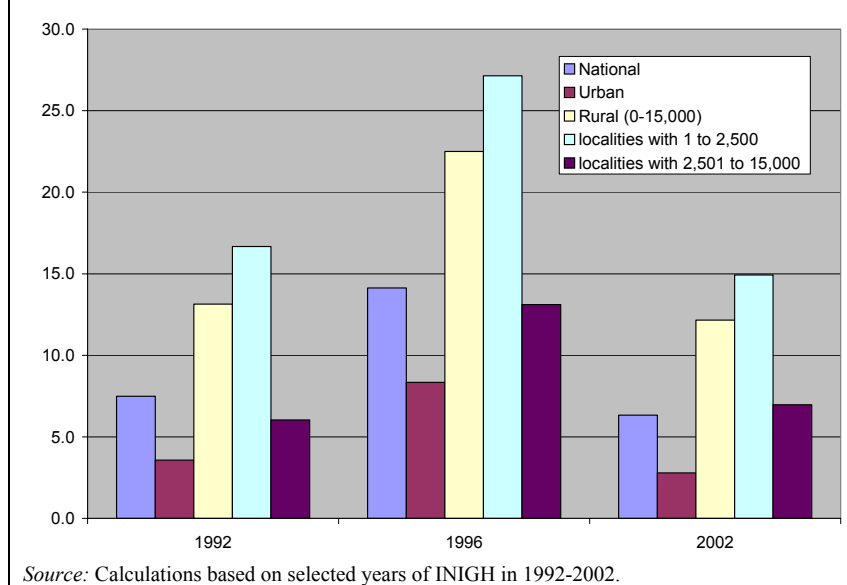| Table 3.3: Household heads with no monetary income in rural Mexico, Selected years 1992-2002						
	1992		1996		2002	
	Urban	Rural	Urban	Rural	Urban	Rural
Household heads with no income						
(a) Total Household Heads	13,152,597	4,183,553	15,252,501	4,667,367	18,588,744	5,595,519
(b) No income heads	694,848	229,130	866,784	232,449	1,059,990	234,401
(b)/(a)	5.28	5.48	5.68	4.98	5.70	4.19
Average Age	61.39	61.91	60.09	61.77	61.61	64.05
Male	51.87	68.72	58.09	64.12	46.07	71.69
Female	48.13	31.28	41.91	35.88	53.93	28.31
Education						
No education	30.05	67.29	29.35	55.37	25.01	50.00
Primary Incomplete	36.18	28.91	32.59	32.02	34.18	34.07
Primary Complete	21.22	2.93	23.52	11.28	23.52	13.52
Secondary Complete	6.15	0.65	6.35	1.13	8.52	2.35
Higher Education	6.40	0.21	8.18	0.21	8.77	0.06
Labor status						
Employed	7.56	22.91	5.13	30.92	9.31	25.93
Unemployed	7.88	1.30	15.24	4.63	5.83	3.64
Inactive	84.56	75.79	79.63	64.45	84.86	70.42

Source: Calculations based on ENIGH 1992-2002. Note rural is areas with less than 2,500 inhabitants.
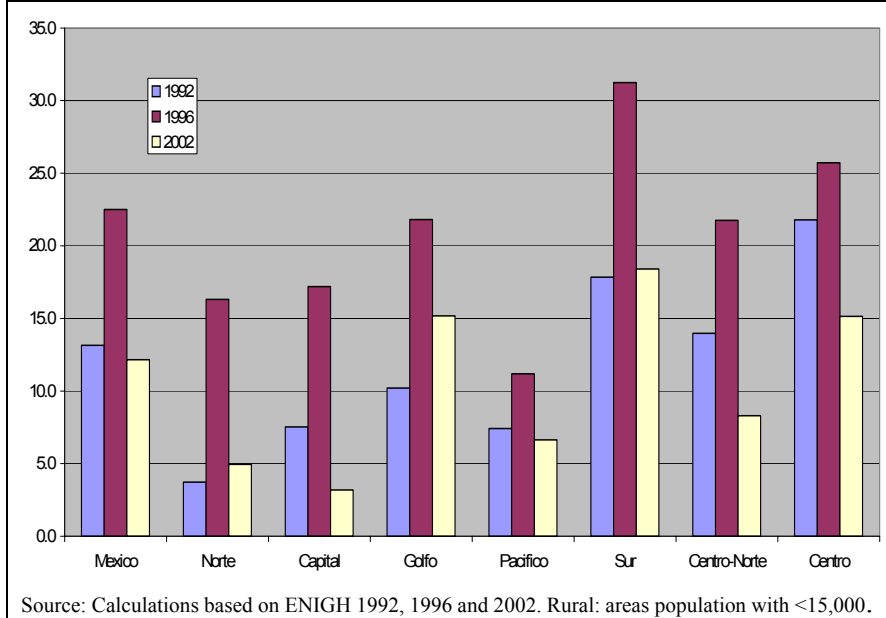
3.1   Poverty Depth

Although Mexico has made substantial progress since 1996 in reducing the share of the rural population living in extreme poverty, the problem remains broad and deep. The P0 measures the proportion of people below a certain poverty line but takes no account of how far they are below that line—the degree of poverty—or whether they are becoming even poorer. To address the situation of the poorest and to evaluate whether their economic situation has improved, the poverty gap (or P1) measure is used. In rural areas with less than 15,000 inhabitants the P1 poverty measure reveals that the extreme poverty depth fell 10 percentage points to 12 percent during 1996-2002 (Figure 3.3 and Table 3.1). However, the poverty gap measure reveals that poverty depth remained virtually unchanged in the 1992-2002 period.

The regional poverty gap figures reveal that there are also large regional differences in the depth of poverty in rural localities (Figure 3.4 and Table 3.1). In the North and Capital regions P1 was below 5 percent while in the Center, Gulf, and South P1 reached more than 15 percent in areas with less than 15,000 inhabitants in 2002. During 1992-1996 the poverty gap increased the most in the regions where poverty was less deep in 1992, such as the Capital and North regions where P1 reached 17 and 16 percent, respectively. The depth of poverty was at its highest for all the regions in the middle of the 1990s.

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Figure 3.3: Poverty Gap (P1) in Mexico Selected years 1992-2002

Legend:
- National
- Urban
- Rural (0-15,000)
- localities with 1 to 2,500
- localities with 2,501 to 15,000

Source: Calculations based on selected years of INIGH in 1992-2002.

Figure 3.4: Extreme Rural Poverty Depth (P1) in Mexico By Region, Selected years 1992-2002

Legend:
- 1992
- 1996
- 2002

Regions: Mexico, Norte, Capital, Golfo, Pacifico, Sur, Centro-Norte, Centro

Source: Calculations based on ENIGH 1992, 1996 and 2002. Rural: areas population with <15,000.
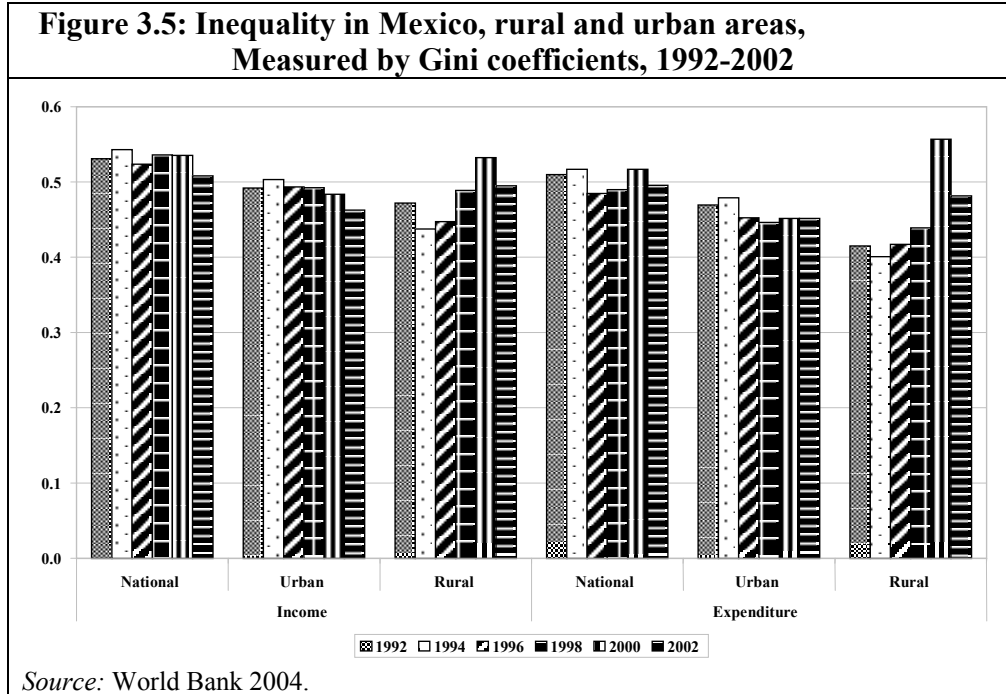
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3.2   Income Inequality

Part of the reason why the poverty indicators of Mexico are worse than in other countries with similar per-capita incomes is because of income inequality. Mexico has an extremely unequal income distribution. Moreover, Mexico's income inequality has not changed much during the last decade and is stubbornly high. In 2002, the Gini coefficient for Mexico was above 0.51, slightly higher than the coefficient for Mexico's rural areas of 0.48 (Figure 3.5). Moreover, the Gini coefficient reveals that rural income inequality has increased by 7 percentage points during 1992-2002. It is worth noting that international research shows that the more unequal income is distributed the less effective is economic growth in reducing poverty (Lustig et al 2001). Income poverty changes are driven by the interactions between growth and income inequality. In Mexico, even with steady growth, poverty reduction tends to be slow, as a consequence of the country's high-income inequality (World Bank 2004).

Changes in inequality are typically very slow, except during periods of radical social and institutional change. Where inequality has fallen it has usually happened in association with major expansion and equalization in educational attainment, as in Korea and Malaysia in the 1970s and 1980s. Mexico's expansion in education (reduction in education inequalities) may have been too recent to have a significant effect on the composition of skills, and occurred during a period in which the overall returns to high levels of skills were rising and returns to basic skills were falling.

In Mexico, inequality has tended to be counter cyclical with the 1994-95 crisis slightly equalizing, the 1996-2000 recovery disequalizing, and the 2000-02 period of stagnation equalizing for both income and expenditures, see Figure 4.5 from World Bank 2004.

Figure 3.5: Inequality in Mexico, rural and urban areas, Measured by Gini coefficients, 1992-2002

Source: World Bank 2004.

This contrasts the development of income inequality in urban areas that experienced an inequality reduction. The higher-productivity agriculture experienced rapid growth and so did high productivity non-farm income, which both contributed to increased rural inequality. Moreover, Mexico as a whole experienced a decrease in returns to tertiary education of workers in the labor market since around the middle of the 1990s and rural areas experience relatively little of this fall as very few of the rural population hold a university degree.

The poor have increased their access to government supplied services and infrastructure such as electricity, water and sanitation in the past decade. Ownership of household durables has also increased, but large inequalities remain in for example the ownership of housing and financial savings (World Bank 2004). Moreover, despite progress, there is evidence of Mexico lagging behind comparators in East Asian in infrastructure provision (World Bank 2004).

4. Poverty Profile

After counting the 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 about which population groups are falling behind or catching up in terms of poverty. This is useful for the design of policies: we would like to know not only whether, for example, more- or less-educated people are more likely to be poor in rural Mexico, but how the relative odds of being poor have evolved for these groups. This section traces the evolution of the P0 for various population groups during 1992-2002.
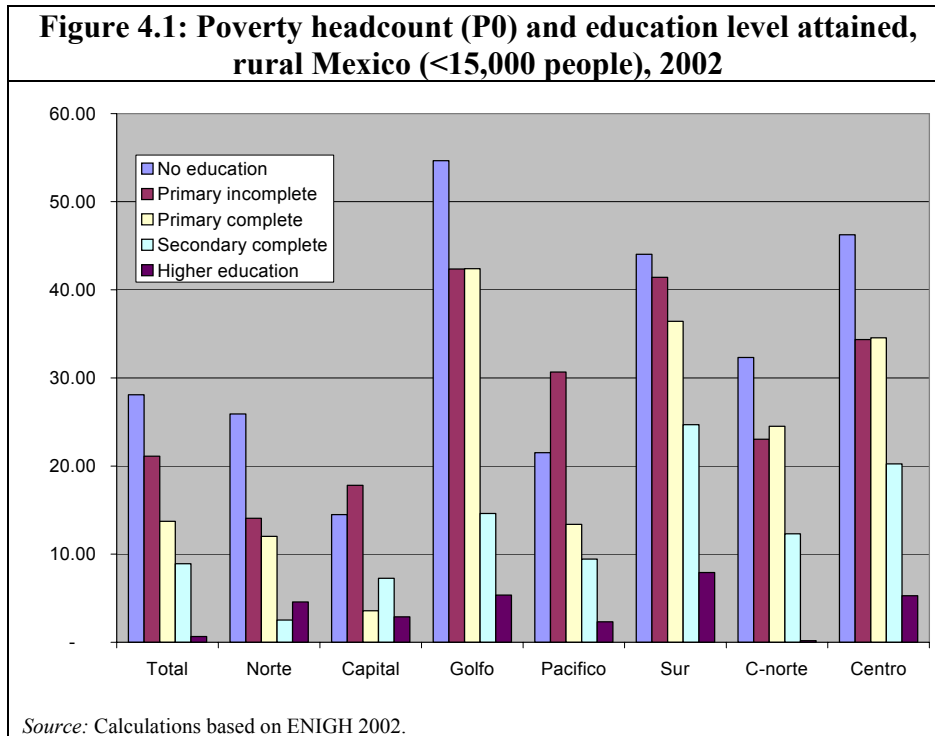
The poverty profile constructed is based on data from ENIGH. The main questions addressed are: (1) who are the poor, (2) what are the characteristics of poor households, (3) where do they live, and (4) where do they work. Table 4.1 presents the poverty profiles.

	1992									2002								
	Localities		Region[3]							Localities		Region[3]						
	Rural[1]	Semi-urban[2]	Localities with less than 15,000							Rural[1]	Semi-urban[2]	Localities with less than 15,000						
			Norte	Capital	Golfo	Pacifico	Sur	C-norte	Centro			Norte	Capital	Golfo	Pacifico	Sur	C-norte	Centro
Male	38.2	14.9	10.8	20.0	28.38	16.0	40.49	33.41	46.9	36.84	16.95	0.76	10.03	40.75	19.50	41.56	23.32	35.81
Female	36.6	4.0	9.0	25.64	25.9	10.7	25.05	28.83	32.3	32.11	11.65	0.24	11.31	30.19	8.40	23.19	22.08	31.79
Age Cohort (%)																		
15 to 25	27.4	16.3	6.4	20.00	28.28	21.89	26.83	22.73	34.0	30.49	6.25	1.59	2.37	43.05	17.51	33.22	13.81	40.42
26 to 40	44.5	18.1	12.2	22.24	28.61	16.61	46.68	41.68	59.2	42.70	16.92	15.81	10.16	34.96	22.77	49.50	28.37	41.74
41 to 60	37.7	10.3	10.4	22.54	28.71	13.95	38.13	36.78	35.7	36.00	15.43	10.45	12.30	39.63	17.83	38.12	18.06	33.41
>61	31.4	8.2	9.7	12.50	25.47	11.53	28.98	19.56	41.9	30.05	15.43	16.61	8.97	44.33	10.28	26.36	25.56	28.05
Education (%)																		
No education	46.2	25.2	14.8	39.78	29.01	17.84	52.76	36.98	65.4	44.98	28.09	25.91	14.48	54.66	21.52	44.03	32.32	46.25
Primary incomplete	38.0	11.4	10.6	21.55	25.22	13.71	38.32	37.84	43.6	36.18	21.10	14.07	17.81	42.35	30.66	41.43	23.04	34.37
Primary complete	31.0	15.0	7.4	23.86	43.08	23.92	22.54	23.55	25.2	36.09	13.73	12.02	3.58	42.39	13.38	36.43	24.51	34.56
Secondary complete	22.0	7.0	11.5	3.08	6.78	11.33	22.66	19.90	19.8	17.93	8.91	2.52	7.25	14.61	9.43	24.71	12.31	20.23
Higher education	0.7	0.4	-	-	-	0.58	-	-	4.8	12.46	0.65	4.57	2.89	5.35	2.31	7.90	0.17	5.26
Labor Status (%)																		
Employed	38.5	14.2	10.4	19.37	29.06	15.60	39.96	33.02	45.2	37.11	16.53	12.71	10.95	40.47	18.49	39.30	22.65	36.02
Unemployed	56.6	39.5	23.6	-	56.29	55.78	100.00	37.80	83.1	20.38	18.78	4.41	16.98	18.94	31.44	97.17	10.97	-
Inactive	32.7	6.4	11.0	37.30	14.84	11.55	21.06	33.67	45.4	29.43	11.96	13.96	4.57	26.56	12.72	25.87	25.23	28.37
Work Position (%)																		
Salaried worker	39.3	13.7	10.5	22.27	29.92	15.00	33.32	39.70	50.98	35.27	14.27	11.50	6.98	37.21	16.05	39.58	24.79	36.56
Self-employed	42.6	14.5	13.5	14.41	32.07	18.74	46.73	29.10	38.86	42.21	20.59	16.86	19.59	49.87	23.90	40.96	23.88	37.40
Employer	21.3	16.6	0.6	-	19.29	7.36	30.13	12.01	35.53	17.02	12.32	2.31	9.53	19.18	7.63	23.99	7.73	19.63
Family worker	36.3	-	30.2	-	-	88.34	-	100.00	63.57	39.28	-	0.93	39.98	-	32.75	34.38	23.53	75.89
Work Sector (%)																		
Agropecuarian	43.7	21.3	14.5	29.68	40.26	29.77	46.03	35.89	51.12	45.28	36.00	13.89	23.19	58.11	29.40	50.29	28.44	49.87
Extraction	26.2	9.8	-	-	39.66	56.17	-	26.92	-	7.67	1.11	-	-	9.48	-	100.00	1.68	-
Manufacturing	24.3	6.4	-	4.17	9.74	1.78	41.76	33.31	34.65	22.09	7.51	2.34	14.63	21.12	16.88	12.81	7.47	14.98
Construction	40.3	16.5	3.2	26.3	39.35	3.36	18.07	42.20	60.73	35.80	21.58	12.68	10.42	40.70	34.74	45.59	27.17	42.39
Utilities	7.7	-	-	-	23.86	19.21	-	-	-	-	24.32	-	4.11	-	-	-	-	100.00
Sales	25.5	12.0	7.7	26.5	25.50	8.53	22.81	15.98	27.44	23.18	6.97	4.26	2.28	26.44	6.61	17.11	21.53	23.67
Hotel-restaurant	1.9	0.2	-	-	4.85	-	0.45	-	-	15.38	6.64	14.22	-	15.59	9.57	0.57	-	18.46
Services	23.6	14.6	8.2	18.6	13.37	3.65	28.30	24.26	22.75	23.06	14.08	24.29	3.52	22.77	5.40	33.04	16.72	19.75
Education	1.4	0.9	-	-	-	-	-	2.61	6.19	1.83	1.13	7.60	-	4.06	-	-	-	-
Government	23.6	0.1	-	12.2	16.34	0.93	24.56	19.21	2.10	25.11	2.28	14.15	0.40	22.90	-	15.55	24.79	18.62

Table 4.1: Poverty Profile, Characteristcs of the Extreme Poor in Rural Mexico, 1992 and 2002

Source: ENIGH 1992-2002. [1] Rural area defined as localities with less than 2,500 inhabitants. [2] Semi-Urban area defined as localities with more the 2,500 and less than 15,000 inhabitants.

Education levels are strongly related to poverty. That is, having incomplete or some complete education is important in determining the likelihood of being poor. In Mexico, the P0 is 45 percent for household heads that have received no education in dispersed rural areas and 28 percent in semi-urban areas in 2002.

Figure 4.1: Poverty headcount (P0) and education level attained, rural Mexico (<15,000 people), 2002

Source: Calculations based on ENIGH 2002.

There appears to be a relatively large difference in extreme poverty between household heads with no education (45 percent) and household heads with incomplete primary education (36 percent) in dispersed rural areas. Surprisingly, there seems to be very little difference in extreme poverty between household heads with incomplete primary education and household heads with complete primary education (36 percent), the latter up from 31 percent in 1992. Nevertheless, household heads that have completed secondary education are much better off (18 percent are poor) than those with only primary education. Extreme poverty for high-school graduates decreased rapidly during 1992-2002, down from 22 percent in 1992. Of the household heads with some or complete tertiary education 13 percent were extremely poor in 2002, up from 1 percent in 1992. These findings indicate that education is a very important key to poverty reduction in rural Mexico. It is not a silver bullet, however, as the more educated are increasingly experiencing poverty, something that was rare a decade ago.It is useful to compare the characteristics of the extreme poor across rural areas to gain information about the spatial dimension of poverty. Geographic factors are important when analyzing poverty in rural Mexico. Table 4.1 and Figure 4.1 show the variation in P0 across the rural areas with less than 15,000 inhabitants by region and education level attained. The Center, Gulf, and South regions have the highest headcount poverty rates for all levels of education in rural Mexico and, in some cases, it is more than 10 times higher than in the North or Capital regions such as the case of completed primary

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education. Also, the headcount poverty rates for household heads with no- or little education are all higher in rural and semi-urban areas than in urban areas. For high school graduates, rural heads of household have a lower P0 than urban heads of household (18 percent).

In rural areas with less than 15,000 inhabitants, the gap in P0 between the educated and less educated is widening: the more educated are experiencing a slightly higher headcount poverty rate, while the less educated (with no or incomplete primary education) are getting left behind. Figure 4.1 shows that there are very large differences in poverty levels by education, and that they have increased over time: since 1992, the P0 for people with none or/and incomplete primary education appears to have increased a lot--the later by 10 percentage points reaching 21 percent in 2002--while the P0 for people with complete secondary and some university education stabilized or increased only marginally from its already very low level. In Mexico, as elsewhere, there is a great deal of debate about the causes of these changes: skill-biased technological change, changes in the relative supply of and demand for workers with different characteristics, and trade liberalization have all been mentioned as possible explanations (Blom and Velez 2001; Blom, Pavcnik, and Schady 2001).

Young household heads in semi-urban areas are far less likely to be poor than in dispersed rural areas. Data reveal that 6 percent of the households headed by a person younger than age 25 are extremely poor in semi-urban areas. Moreover, the poverty rate for these households fell 10 percentage points during 1992–2002, down to nearly a third in the last decade. In rural areas with less than 2,500 people 31 percent of the households headed by a person younger than age 25 are extremely poor. Furthermore, poverty is rising, P0 increased by 4 percentage points since 1992 in dispersed rural areas. Targeted social protection measures that relate to youth employment, family planning, and pre-school programs could help improve employment prospects of young people in dispersed rural areas.

Elder household heads used to be less likely to experience poverty than younger household heads in rural Mexico. Fifteen percent of those households headed by a member older than age 60 were below the indigent poverty line in 2002—a 7-percentage- points increase since 1992. In the more dispersed rural areas poverty for this group has stabilized at around 30 percent during 1992-2002. The P0 of population groups aged 25 to 40 and 41 to 60 were stable at around 43 and 37 percent over the decade in dispersed rural areas, but in semi-urban rural areas experienced an increase in poverty for the latter group. This life-cycle profile of poverty illustrates that many households are born poor (mainly due to inadequate assets), with few households escaping poverty as they accumulate more assets or as their household size shrinks but faces increased risk of returning to poverty at an old age.

Female-headed households are less likely to be poor than male-headed households in semi-urban rural areas, with 12 and 17 percent of female- and male-headed households, respectively, likely to be poor (Table 4.1). Since 1992, female-headed households have experienced poverty rates triple and male-headed households have experienced only a marginal increase (2 percentage points). This compares to more dispersed rural areas where male poverty stabilized around 37 percent during 1992-2002 and female poverty rates fell 4 percentage points reaching 32 percent in 2002. These income poverty figures are, however,

only part of the myriad of 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.

Those who work in agriculture are far more likely to be poor than others. This may suggest that productivity in agriculture is lower than in services or industry. The P0 is 36 and 45 percent in agriculture in semi-urban and dispersed rural areas. This compares to P0 in manufacturing of 8 and 22 percent and 14 and 23 percent among service workers (excluding sales and hotel/restaurants that is much lower) in semi-urban and more dispersed rural areas, respectively in 2002. Moreover, the agricultural workers' poverty rate increased by an astounding 15 percentage points in the last decade in semi-urban areas as compared to 1 percentage point increase in industry and 0 percentage points in services. This development pattern is different to the one in dispersed rural areas in the same period. In dispersed rural areas heads of household working in agriculture experienced poverty increase by only 1 percentage point, in industry the poverty rate fell by 2 percentage points, and in services it remained unchanged.

Sectoral poverty by region and the changes that occurred over the past decade were far from homogeneous across semi-urban and rural Mexico. In the Golf and South regions 58 and 50 percent of the households headed by a person working in agriculture were extremely poor in 2002, up 12 and 4 percentage points, respectively since 1992 (Table 4.1). This compares to the North region where 15 percent of the households headed by a person working in agriculture were extremely poor. Poverty in households where the head works in construction experienced a high likelihood of poverty in the South region and much less so in the Capital region, 46 and 18 percent, respectively were poor in 2002, up from 18 percent and down from 18 percent, respectively.

Historically, poverty in Mexico has been closely associated with agriculture. In 2002, 72 percent of the extreme poor household heads in dispersed rural areas cited agriculture as their primary form of employment. The main explanation for the increased poverty rate in agriculture can be traced to migration out of the sector and into services by some of the most skilled and, in part, to the structure of land ownership and the quality of land and climate. Rural land ownership is characterized by a high degree of concentration of land in few large establishments and a large number of small farms with an insufficient area to sustain a family by agricultural employment alone.

In dispersed rural areas the most skilled agricultural workers shifted employment out of agriculture toward higher wage service jobs. In 2002, 7 percent of the poor worked in services and 10 percent in construction.

Rural poverty fell in recent years but it is still much larger than urban poverty. One-quarter of Mexico's population lives in rural areas, with limited access to basic infrastructure and services. The rural poor are primarily smallholders, sharecroppers, and informal wageworkers that depend on a diverse strategy of income-generating activities in which the subsistence production of corn, beans, sorghum, and small livestock predominates. Often 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. Family income is therefore highly variable and there is little opportunity for saving. They have very few assets, including education, and are very vulnerable.

The differing characteristics of the smallholders, sharecroppers, and wageworkers suggest that a poverty reduction strategy needs to provide multiple paths out of poverty tailored to the heterogeneous cross-section of poor rural households. This will involve at least a five-pronged approach aimed at: (i) small farm sector intensification, (ii) improved employment opportunities in dynamic commercial agriculture, (iii) growth of the rural non-farm sector, (iv) migration of the young, and (v) provision of safety nets for those "trapped" in poverty. The recommended measures include improving human capital endowments, reforming the land, labor, and financial markets, enhancing research and extension, improving the supply of public goods and services, pricing and trade policies, and transfer programs.

In order to increase land productivity and labor-intensive farming, it is necessary to facilitate the movement toward farming medium-sized land holdings, in part via facilitating land rentals and sharecropping arrangements. This can be done by providing more secure titles to land and by the revision of the land legislation so as to secure longer-term tenancy arrangements, resolution of disputes regarding interpretation, and enforcement of land rental arrangements. The impact of such a program would be greatly enhanced by simultaneous adjustments of the labor code and of the land tax system. Labor laws have had an anti-sharecropping bias. In this context, the experience with the Rural Leasing Exchange in the Triângulo Mineiro in Brazil contains useful lessons that could be worth considering for Mexico.

Extreme rural poverty is not distributed equally across population groups. The incidence of poverty is much larger among indigenous peoples that are at the bottom of the income distribution.[6] According to 2000 Census, 44 percent of indigenous groups are in the bottom 20 percent of the overall distribution of income, and 80 percent in the bottom 50 percent (Hall et al 2004). Hence, indigenous peoples account for about a fifth of the extreme poor that is, over twice their population share. Moreover, indigenous groups typically suffer higher levels of deprivation in terms of access to public services.

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[6] The ENIGH does not include a question on ethnicity.

5. Poverty Correlates

After analyzing the poverty profile, this section turns to the factors associated with poverty in rural Mexico (areas with less than 15,000 inhabitants). Many individual characteristics such as labor market association and human capital are important correlates of poverty and the dynamics thereof. This section investigates the marginal impact of each individual attribute on the likelihood that a household falls below the poverty line. The analysis is undertaken applying probit regression techniques.

Other researchers have addressed the determinates of poverty, for example, Ferreira, Lanjouw and Neri (1999) for Brazil, and these authors perform the study for one year, which gives a good but static picture of the situation in a country. Here the analysis is more dynamic in nature as it is based on three ENIGH data from the years 1992, 1996, and 2002. This allows for an evaluation of the evolution of poverty over time and the most important variables determining poverty. Hence, three poverty analyses are performed for rural Mexico as a whole using data from localities with less than 15,000 inhabitants. This analysis reveals: (i) conditional correlation between poverty and characteristics of household heads; (ii) information about the volatility of the impact of the attributes on the likelihood that a household experiences poverty during the beginning and mid-1990s and beginning of the 2000s; and (iii) information about groups that are particularly vulnerable and changes thereof over the past decade.

The status of the household—poor or nonpoor—is regressed on relevant individual and household characteristics. The dependent variable takes the value of 1 if the average per-capita income is below the SEDESOL capacity poverty line and 0 otherwise. The dependent binary variable takes the value of one when income is below the indigence line and zero otherwise. The vector of five sets of independent variables includes: (1) attributes of household head: gender, education, experience and labor market connection, whether the household head works, the type of relation with the labor market, sector of employment; (2) family variables: size and age of its members; (3) spouse characteristics: education and labor market connection; (4) geographical characteristics; and (5) dispersed rural areas.

Probit coefficients are not easy to interpret, since they do not represent the standard marginal effects represented by linear regression coefficients. Therefore, rather than probit coefficients we chose to present marginal effects that have a straightforward interpretation.[7]

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[7] The marginal effects for a household head i in the Probit model are simply given by:

$$m_i = \frac{d\Pr(y_i = 1)}{dx_i} = \phi(x_i\beta)\beta$$

This represents the marginal changes in probability that a household head i is poor due to changes in the underlying regressors. In order to summarize representative marginal effects, the changes are evaluated at the mean of the data. Since similar conditions apply for marginal effects as for probit coefficients, the same tests for the positivity, negativity or significance can be applied.

Table 5.1: Probability of being poor in Rural Mexico in 1992, 1996, and 2002[1,2]

	1992			1996			2002		
	DF/dx		SE	P>|z|	dF/dx		SE	P>|z|	dF/dx		SE	P>|z|
Household Characteristics [3]												
Dependent below 5 years old+	0.215	***	0.017	0.000	0.234	***	0.016	0.000	0.225	***	0.016	0.000
Dependent 6 – 11 years old+	0.174	***	0.017	0.000	0.250	***	0.015	0.000	0.218	***	0.015	0.000
Dependent 12 - 14 years old+	0.114	***	0.019	0.000	0.119	***	0.017	0.000	0.135	***	0.017	0.000
Dependent 15 - 18 years old+	0.026		0.019	0.177	0.053	***	0.018	0.003	0.057	***	0.017	0.001
Dependent 18 - 25 years old+	-0.069	***	0.019	0.000	-0.046	**	0.018	0.012	-0.059	***	0.017	0.001
Dependent 65 and over+	0.047	**	0.020	0.018	0.051	***	0.019	0.007	0.003		0.017	0.839
Head												
Age +	-0.008	***	0.003	0.009	-0.016	***	0.003	0.000	-0.021	***	0.003	0.000
Age Square +	0.000	**	0.000	0.031	0.000	***	0.000	0.000	0.000	***	0.000	0.000
Female Head+	-0.030		0.028	0.295	-0.089	***	0.024	0.000	-0.037	*	0.021	0.087
Education												
Head												
Primary Complete+	-0.102	***	0.020	0.000	-0.082	***	0.020	0.000	-0.097	***	0.016	0.000
Lower Secondary Complete+	-0.167	***	0.027	0.000	-0.232	***	0.027	0.000	-0.180	***	0.022	0.000
Upper Secondary Complete+	-0.210	***	0.042	0.000	-0.343	***	0.033	0.000	-0.239	***	0.029	0.000
Spouse												
Primary Complete+	-0.075	***	0.021	0.001	-0.069	***	0.021	0.001	-0.095	***	0.018	0.000
Lower Secondary Complete+	-0.116	***	0.034	0.002	-0.182	***	0.031	0.000	-0.171	***	0.024	0.000
Upper Secondary Complete+	-0.213	***	0.051	0.003	-0.364	***	0.046	0.000	-0.273	***	0.032	0.000
Sector of Activity and Labor Status												
Head												
Unemployed+	0.083		0.095	0.365	0.205	***	0.063	0.004	0.074		0.092	0.414
Not in the labor force+	0.060		0.038	0.103	0.050		0.032	0.128	0.105	***	0.030	0.000
Agriculture												
Self employed+	0.006		0.025	0.808	0.031		0.025	0.213	0.219	***	0.024	0.000
Salaried worker+	0.166	***	0.026	0.000	0.155	***	0.023	0.000	0.216	***	0.023	0.000
Employer+	-0.156	***	0.026	0.000	-0.185	***	0.033	0.000	-0.054		0.041	0.199
Off-farm Sector												
Self employed+	-0.040		0.030	0.195	-0.044		0.029	0.126	0.046	*	0.027	0.083
Salaried worker+												
Employer+	-0.255	***	0.034	0.000	-0.356	***	0.039	0.000	-0.141	**	0.051	0.015
Second Employment +	0.010		0.017	0.550	-0.031	*	0.017	0.070	-0.061	***	0.016	0.000
Social Security +	-0.206	***	0.020	0.000	-0.251	***	0.024	0.000	-0.235	***	0.019	0.000
Spouse												
Employed in agriculture +	-0.017		0.031	0.595	-0.019		0.027	0.487	0.065	***	0.026	0.010
Employed in off-farm activity+	-0.067	***	0.023	0.005	-0.123	***	0.021	0.000	-0.133	***	0.017	0.000
Region [4]												
Norte +	-0.166	***	0.022	0.000	-0.155	***	0.026	0.000	-0.051	**	0.024	0.041
Golfo Region+	0.061	**	0.026	0.017	0.117	***	0.023	0.000	0.222	***	0.024	0.000
Pacifico+	-0.145	***	0.022	0.000	-0.152	***	0.025	0.000	-0.010		0.025	0.696
Sur+	0.134	***	0.029	0.000	0.161	***	0.024	0.000	0.190	***	0.023	0.000
Centro+	0.037		0.024	0.113	0.096	***	0.025	0.000	0.155	***	0.025	0.000
Capital+	-0.113	***	0.038	0.008	0.014		0.050	0.778	-0.086	***	0.029	0.005
Locality < 2,500 inhabitants+	0.085	***	0.020	0.000	0.132	***	0.017	0.000	0.120	***	0.015	0.000
Number of observations =	4752				6165							6481
Log Likelihood=	-2442.4				-3176.2							-3145.7
LR chi2(24)=	1360.4				2180.1							2448.7
Prob>chi2=	0.000				0.000							0.000
Pseudo R2=	0.218				0.256							0.280

Source: Authors estimations based on ENIGH 1992, 1996, and 2002. Note: [1]Rural area defined as locality with less than 15,000 inhabitants
[2] SEDESOL's capacity poverty line, (+) dF/dxis for discrete change of dummy variable from 0 to 1,*** sign. at 1%, ** sign. at 5%, * sign. at 10%
Regions are defined in footnote 3.

The poverty profile probit regressions can be interpreted as descriptive and do not infer anything in terms of causation. In the following, mainly statistically significant differences are discussed. Table 5.1 presents three probit models for rural Mexico linking the probability of being poor to a range of explanatory variables for 1992, 1996 and 2002.

Findings presented in Table 5.1 show that the major changes during 1992-96 in the rural poverty correlates relate to human capital (secondary education and skills in particular). Household heads and spouses with a relatively high level of human capital, that is, completed lower or upper secondary school experienced a reduced probability of falling into poverty compared to 1992, controlling for other variables. Also, employers experienced a fall in likelihood of experiencing poverty during 1992-96. Households in which the head had employment and with children age 6-11 and 15-18 experienced an increase in the likelihood of being poor relative to their peers in households with an employed head and with no children. Finally, the dispersed rural population experienced an increase the probability of being poor.

Also during 1996-2002 major changes took place. One such change was that female household heads became less poverty prone than male heads, taking into account other poverty correlates. The self-employed and salaried workers in the agricultural sector experienced an increased probability of falling into poverty than their peers in the non-farm sector. The educated households mentioned above experienced an increased likelihood of being poor, returning roughly to the 1992 level.

Rural living

Households living in semi-urban areas were more likely to escape poverty than households living dispersed rural areas. In 2002, household heads living in dispersed rural areas were around 12 percentage points more likely to be poor than household heads living in semi-urban areas (Table 5.1). Moreover, the probability of falling below the poverty line for household heads in dispersed rural areas increased by 3.5 percentage points during 1992-2002. Furthermore, the rural population in dispersed areas in the South region was more likely to experience poverty than in dispersed rural areas in Mexico as a whole in 1992 (Table 5.2). Interestingly, dwellers in dispersed rural areas in the South region were also more likely to be poor than dwellers in more populated rural areas in 2002, but the impact is much lower than for rural population in dispersed areas in Mexico as a whole.

Labor Status and Sector of Work

The informal sector is a pervasive and persistent economic feature of most developing economies, contributing significantly to employment creation, production, and income generation. The analysis presented in Table 5.1 shows clearly that formal sector workers, i.e. workers contributing to the social security system, are much less likely to be poor than informal sector workers in rural Mexico. The likelihood of escaping poverty for the formal sector workers increased during 1992-96 and seems to have been fairly constant since. In 2002, formal sector workers were 24 percentage points less likely to fall into poverty than their peers working in the informal sector.

Table 5.2: Probability of Being Poor Comparing the Rural South Region to Rural Mexico as a Whole, 1992 and 2002[1,2,3]												
	1992						**2002**					
				Variables multiplied by Sur Region dummy						*Variables multiplied by Sur Region dummy*		
Household Characteristics [4]	DF/dx	SE	P>|z|	dF/dx	SE	P>|z|	dF/dx	SE	P>|z|	dF/dx	SE	P>|z|
Dependent below 5 years old+	0.210 ***	0.018	0.000	0.069	0.056	0.205	0.216 ***	0.017	0.000	0.025	0.039	0.521
Dependent 6 - 11 years old+	0.181 ***	0.018	0.000	0.028	0.056	0.604	0.2198 ***	0.02	0	-0.033	0.038	0.392
Dependent 12 - 14 years old+	0.118 ***	0.020	0.000	-0.006	0.055	0.911	0.1341 ***	0.02	0	0.023	0.042	0.582
Dependent 15 - 18 years old+	0.021	0.020	0.290	0.085	0.063	0.162	0.0542 ***	0.02	0.004	-0.011	0.041	0.785
Dependent 18 - 25 years old+	-0.075 ***	0.020	0.000	0.127 *	0.069	0.058	-0.0729 ***	0.02	0	0.093 **	0.046	0.037
Dependent 65 and over+	0.055 ***	0.021	0.010	0.013	0.064	0.835	-0.0081	0.02	0.671	0.045	0.040	0.265
Household Head												
Age +	-0.010 ***	0.003	0.002	-0.007	0.005	0.146	-0.022 ***	0.003	0.000	0.002	0.003	0.471
Age Square +	0.000 **	0.000	0.016	0.000	0.000	0.150	0.000 ***	0.000	0.000	0.000	0.000	0.441
Female Head+	-0.035	0.029	0.240	0.049	0.094	0.596	-0.025	0.024	0.295	0.047	0.055	0.384
Education												
Head												
Primary Complete+	-0.091 ***	0.021	0.000	-0.134 **	0.057	0.041	-0.128 ***	0.019	0.000	0.086 *	0.052	0.094
Lower Secondary Complete+	-0.167 ***	0.029	0.000	0.047	0.141	0.735	-0.196 ***	0.022	0.000	0.123	0.080	0.113
Upper Secondary Complete+	-0.205 ***	0.044	0.001				-0.250 ***	0.031	0.000	0.070	0.124	0.565
Spouse												
Primary Complete+	-0.086 ***	0.022	0.000	-0.022	0.081	0.785	-0.122 ***	0.020	0.000	0.049	0.060	0.403
Lower Secondary Complete+	-0.138 ***	0.033	0.000	-0.117	0.148	0.482	-0.186 ***	0.024	0.000	0.047	0.086	0.583
Upper Secondary Complete+	-0.229 ***	0.051	0.003	-0.035	0.284	0.905	-0.268 ***	0.035	0.000	-0.204	0.143	0.274
Sector of Activity and Labor Status												
Head												
Unemployed+	-0.010	0.087	0.908				-0.017	0.092	0.855			
Not in the labor force+	0.044	0.039	0.249	-0.158	0.09	0.16	0.078 **	0.032	0.014	0.044	0.083	0.589
Self employed+	-0.026	0.026	0.318	0.091	0.091	0.300	0.190 ***	0.026	0.000	0.1387 **	0.07	0.03
Salaried worker+	0.144 ***	0.027	0.000	-0.053	0.085	0.546	0.224 ***	0.025	0.000	0.0459	0.07	0.48
Employer+	-0.165 ***	0.027	0.000	-0.004	0.103	0.965	-0.054	0.048	0.274	0.0619	0.11	0.55
Self employed+	-0.065 **	0.031	0.046	0.105	0.113	0.335	0.070 **	0.029	0.014	-0.071	0.06	0.29
Salaried worker+												
Employer+	-0.277 ***	0.031	0.000	0.078	0.290	0.782	-0.165 ***	0.053	0.008	0.1408	0.19	0.45
Second Employment +	0.039 **	0.018	0.029	-0.076	0.045	0.115	-0.054 ***	0.018	0.003	-0.013	0.04	0.75
Social Security +	-0.235 ***	0.019	0.000	-0.027	0.111	0.810	-0.241 ***	0.019	0.000	0.0097	0.1	0.92
Spouse												
Employed in agriculture +	-0.023	0.033	0.498	0.068	0.107	0.511	0.038	0.031	0.218	0.1236 **	0.06	0.03
Employed in off-farm activity+	-0.085 ***	0.024	0.001	0.178 **	0.084	0.029	-0.135 ***	0.020	0.000	0.0607	0.05	0.21
Region [4]												
Locality < 2,500 inhabitants+	0.039 *	0.022	0.089	0.220 ***	0.075	0.003	0.111 ***	0.017	0.000	-0.078 **	0.04	0.05

Number of observations =	4743	6478
Log Likelihood=	-2483.4	-3223.9
LR chi2(53)=	1269.1	2286.8
Prob>chi2=	0	0.000
Pseudo R2=	0.2035	0.262

Source: Authors estimations based on ENIGH 1992 and 2002. Note: [1]Rural area defined as locality with less than 15,000 inhabitants; [2] SEDESOL's capacity poverty line, (+) dF/dxis for discrete change of dummy variable from 0 to 1,*** sign. at 1%, ** sign. at 5%, * sign. at 10% level

Household heads that are inactively participating in the labor force are more likely to experience poverty than their peers being active in the labor force in 2002. In the early and mid-1990s this was not the case, as there was no statistical difference in the likelihood of falling into poverty for the two groups. Surprisingly, unemployed household heads in rural Mexico have neither a smaller or larger likelihood of being poor than their working peers. Findings in Table 5.1 indicate that this holds for both 1992 and 2002, but not after the crises in 1996 where unemployed heads were more likely to experience poverty than their employed peers. Part of the explanation may be increased remittances (Appendix B).

Employers are the single group that has the lowest probability of being poor followed by self-employed and salaried workers. In 2002, employers in non-agricultural related activities were 14 percentage points less likely to be poor than salaried workers; down from 26 percent points in 1992 and 36 percentage points in 1996. In 1992, the self-employed household heads were 4 percentage points less likely to experience poverty than their salaried worker peers in the off-farm sector. By 2002, this finding had changed so self-employed household heads were not marginally more or less poverty prone than were salaried workers in the non-agricultural sector. In 1992 self-employed in agriculture was not worse of than wageworkers in the nonfarm sector, although they were 4-percentage point more likely to experience poverty than self-employed in the nonfarm sector. During 1992-2002, the self-employed in agriculture experienced a 22-percentage-points increase in the likelihood of experiencing poverty. In 2002 relative to salaried workers in agriculture, the self-employed were not significantly more likely to experience or escape poverty, controlling for other characteristics, although they were in 1992.

Salaried workers in the agricultural sector experienced an increase of 5-percentage points in the likelihood of being poor during 1992-2002 compared to their peers in the nonfarm sector. Moreover, household heads with spouse engaged in the off-farm sector experienced a lower probability of being poor than did household heads with spouse engaged in agriculture or not working at all. Moreover this finding became stronger throughout the 1992-2002 period and in 2002 household heads with spouse engaged in off-farm activities had a 13-percentage points lower likelihood of experiencing poverty. Also, Araujo (2003) addresses the impact of non-farm rural employment on poverty. Araujo uses municipality data and finds that in Mexican municipalities there is a negative effect of manufacturing and services employment on poverty in semi-urban municipalities and a negative effect of services employment on poverty in rural municipalities.

In the 1990s, heads of household that took a second job were neither more nor less likely to escape poverty than their peers that did not take on an extra job, but in 2002 the second job holders were 6 percentage points more likely to escape poverty than heads that did not take a second job. Hence, the effect of the second job became poverty reducing after 1996 and hence a way that some rural families managed to escape or reduce household poverty.

When comparing the likelihood of being poor for household heads with different labor status in the South region to Mexico as a whole, the findings show that only self-employed southerners in the agricultural sector are statistically significantly more likely to be poor (14 percentage points) than in the rest of the country in 2002. In 1992 there was no difference

between self-employed workers in agriculture in the South and the rest of Mexico. Also, when a southern spouse is employed in agriculture, the household is more likely to be poor (13 percentage points) than households where the spouse is employed in agriculture but living in another part of the country. This finding may relate to the fact that in the South region there is only one crop season due to lack of irrigation infrastructure. Other activities and occupations do not show results that are statistically different to the rest of Mexico for that particular category of labor or sector.

Education and Skills

In rural Mexico as in many other developing countries, one of the most important factors contributing to the probability of a household being poor is human capital. Findings in Table 5.1 reveal that completed level of education by the household head and spouse are both very important to escape poverty. That is, the more education a household head and spouse have completed, the lower the probability of earning an income that takes the household below the poverty line. All education variables in the three models are strongly, statistically significant, and negatively correlated with the probability of being poor. This is the case for all levels of education starting with completed primary education. Controlling for other variables, the impact of educational attainment is quantitatively among the largest of all included explanatory variables. Moreover, the negative effect of education on poverty (i.e. the positive effect for poverty reduction) is increasing with the level of completed education of the household head and for the spouse. Put differently, the more completed education the less likely it is that the household experience poverty in rural Mexico.[8]

Relatively to the uneducated, those with education are generally more likely to escape poverty. Findings reveal that the impact of having raised one's completed level of education to the primary level on the likelihood of escaping poverty has been rather constant, around 10 percentage points over the last decade. For completed lower secondary education, the magnitude of estimated impacts is larger than completed primary. During 1992-2002, household heads that had completed lower secondary education experienced 18 percentage points lower probability of falling into poverty than their peers with no level of completed education. The effect on poverty of completed upper secondary education is significantly higher than for the other levels of education. Table 5.1 shows that the impact on poverty of completed upper secondary education is significantly and numerically larger, hence more poverty reducing than that of lower secondary education. The impact on the likelihood of escaping poverty of having completed secondary education in 2002 reached 24 percentage points relative to not having completed any level of education, in line with the impact in 1992 but down from 34 percentage points in 1996.

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[8] Also Ferreira, Lanjouw and Neri (1999) in the analysis of Brazil finds that education is the central personal attribute determining the likelihood that a household experience poverty.

Table 5.3:	Determinants of Income in Mexico's Rural Areas, Selected Years 1992,1996, and 2002 [1,2]								
Number of observations =	4750			6160			6473		
Prob > F=	0.000			0.000			0.000		
R-squared=	0.384			0.432			0.453		
Adj R-squared=	0.380			0.429			0.450		
Log income	*1992*			*1996*			*2002*		
	Coeff.	SE	P>|t|	Coeff.	SE	P>|t|	Coeff.	SE	P>|t|
Household Characteristics [3]									
Dependent below 5 years old+	-0.390 ***	0.023	0.000	-0.356 ***	0.019	0.000	-0.394 ***	0.019	0.000
Dependent 6 - 11 years old+	-0.355 ***	0.022	0.000	-0.397 ***	0.018	0.000	-0.352 ***	0.018	0.000
Dependent 12 - 14 years old+	-0.180 ***	0.024	0.000	-0.213 ***	0.020	0.000	-0.205 ***	0.020	0.000
Dependent 15 - 18 years old+	-0.069 ***	0.025	0.005	-0.086 ***	0.020	0.000	-0.124 ***	0.020	0.000
Dependent 18 - 25 years old+	0.049 *	0.025	0.055	0.057 ***	0.021	0.006	0.035 *	0.021	0.094
Dependent 65 and over+	-0.094 ***	0.026	0.000	-0.051 **	0.022	0.020	-0.016	0.021	0.445
Household Head									
Age +	0.025 ***	0.004	0.000	0.033 ***	0.004	0.000	0.037 ***	0.004	0.000
Age Square +	0.000 ***	0.000	0.000	0.000 ***	0.000	0.000	0.000 ***	0.000	0.000
Female Head+	0.035	0.037	0.346	0.147 ***	0.029	0.000	0.078 ***	0.026	0.003
Education									
Head									
Primary Complete+	0.235 ***	0.028	0.000	0.187 ***	0.023	0.000	0.226 ***	0.023	0.000
Lower Secondary Complete+	0.416 ***	0.046	0.000	0.370 ***	0.034	0.000	0.344 ***	0.031	0.000
Upper Secondary Complete+	0.809 ***	0.065	0.000	0.706 ***	0.045	0.000	0.672 ***	0.043	0.000
Spouse									
Primary Complete+	0.105 ***	0.030	0.000	0.087 ***	0.024	0.000	0.127 ***	0.024	0.000
Lower Secondary Complete+	0.172 ***	0.047	0.000	0.206 ***	0.036	0.000	0.195 ***	0.033	0.000
Upper Secondary Complete+	0.517 ***	0.082	0.000	0.522 ***	0.058	0.000	0.529 ***	0.053	0.000
Sector of Activity and Labor Status									
Head									
Unemployed+	-0.218 *	0.119	0.068	-0.415 ***	0.091	0.000	-0.215 **	0.110	0.049
Not in the labor force+	-0.033	0.048	0.483	-0.093 **	0.039	0.017	-0.090 **	0.035	0.011
Agro pecuarian Sector									
Self employed+	0.032	0.033	0.332	-0.073 **	0.029	0.011	-0.264 ***	0.028	0.000
Salaried worker+	-0.240 ***	0.032	0.000	-0.192 ***	0.028	0.000	-0.260 ***	0.027	0.000
Employer+	0.398 ***	0.043	0.000	0.305 ***	0.040	0.000	0.313 ***	0.051	0.000
Off-farm Sector									
Self employed+	0.081 **	0.041	0.049	0.049	0.033	0.141	0.004	0.031	0.903
Salaried worker+									
Employer+	0.702 ***	0.081	0.000	0.672 ***	0.058	0.000	0.513 ***	0.061	0.000
Second Employment +	0.054 **	0.022	0.012	0.059 ***	0.019	0.002	0.112 ***	0.020	0.000
Social Security +	0.292 ***	0.033	0.000	0.350 ***	0.030	0.000	0.315 ***	0.028	0.000
Spouse									
Employed in agriculture +	-0.023	0.042	0.585	-0.008	0.030	0.783	-0.073 **	0.030	0.016
Employed in off-farm activity+	0.090 ***	0.031	0.004	0.154 ***	0.024	0.000	0.206 ***	0.022	0.000
Region									
Norte +	0.274 ***	0.035	0.000	0.288 ***	0.032	0.000	0.063 **	0.030	0.032
Capital+	0.086	0.056	0.122	0.028	0.057	0.622	0.028	0.034	0.407
Golfo +	-0.045	0.034	0.178	-0.130 ***	0.027	0.000	-0.288 ***	0.028	0.000
Pacifico+	0.253 ***	0.034	0.000	0.234 ***	0.030	0.000	-0.043	0.030	0.153
Sur+	-0.183 ***	0.036	0.000	-0.214 ***	0.028	0.000	-0.292 ***	0.027	0.000
Centro+	-0.086 ***	0.031	0.006	-0.131 ***	0.029	0.000	-0.238 ***	0.029	0.000
Locality < 2,500 inhabitants+	-0.116 ***	0.028	0.000	-0.140 ***	0.019	0.000	-0.127 ***	0.019	0.000
Constant	4.909 ***	0.108	0.000	5.306 ***	0.092	0.000	6.049 ***	0.093	0.000

Source: Authors estimations based on ENIGH 1992, 1996, and 2002. Note: [1]Rural area defined as locality with less than 15,000 inhabitants. *** sign. at 1%, ** sign. at 5%, * sign. at 10%, Regions are defined in footnote 3.

Table 5.4: Years of Completed Education for Age Groups, by Locality and Poverty Condition, Selected Years 1992-2002						
		1992		1996		2002	
		Poor	Non-poor	Poor	Non-poor	Poor	Non-poor
Region		**Age group 12-24**					
Rural[1]	No education	12.71	5.72	7.85	5.48	5.27	4.25
	Primary incomplete	40.27	27.48	34.46	16.47	21.57	14.19
	Primary complete	38.77	41.87	43.13	44.06	51.12	42.51
	Secondary complete	7.87	21.8	13.69	29.6	20.53	30.45
	Higher education	0.37	3.13	0.88	4.39	1.52	8.59
Urban	No education	6.63	2.85	3.64	2.94	5.66	1.75
	Primary incomplete	24.9	9.48	19.55	5.73	22.41	5.28
	Primary complete	46.55	33.73	43.77	30.77	41.56	30.56
	Secondary complete	20.7	39.14	28.28	41.39	25.29	39.22
	Higher education	1.22	14.8	4.76	19.16	5.08	23.19
		Age group 25-45					
Rural	No education	37.67	20.9	21.67	13.09	23.15	12.84
	Primary incomplete	43.66	40.75	44.57	30.41	39.14	27.49
	Primary complete	16.66	27.34	25.62	29.85	29.26	31.37
	Secondary complete	1.96	7.74	7.46	18.77	7.32	19.55
	Higher education	0.04	3.26	0.67	7.89	1.13	8.76
Urban	No education	19.27	6.37	12.13	4.25	11.79	3.18
	Primary incomplete	34.93	16.37	29.11	10.46	26.13	9.28
	Primary complete	35.85	29.28	36.7	22.6	31.96	21.04
	Secondary complete	8.68	24.06	17.3	30.45	25.07	34.05
	Higher education	1.27	23.9	4.77	32.23	5.05	32.44

Source: ENIGH 1992, 1996 and 2002. [1] Rural area defined as localities with less than 2,500 inhabitants.

The probability of falling below the poverty line fell for secondary school graduates during 1992-1996 and increased again from 1996-2002 reaching a level that is not statistically significantly different from 1992. As unemployment increased after the crises in 1996, the labor market returns adjusted a little, as can be noticed in Table 5.3. The income per capita regression analyses presented confirm that returns to secondary education decreased before the crises and decreased only slightly again during 1996-2002. Moreover, the head of household's returns to secondary education in rural areas were statistically and significantly lower in 2002 (67 percent) than in 1992 (81 percent), controlling for other individual and household characteristics.

Human capital is composed of many components and an important one, apart from formal education, is skills. In the labor market literature, skills and experience are often proxied by the age of a worker. We include the age and age squared in the regression, the latter to capture possible nonlinearities in data. In all models, age is positively associated with the probability of escaping poverty during 1992-2002. Moreover, during this period skills become more poverty reducing; one more year decreases the likelihood of experiencing

poverty by 2 percentage points in 2002 up from less than 1 percentage point in 1992. There does not seem to be a turning point at an older age where the probability of being poor increases since the age-squared variable is estimated to be not statistically significantly different from zero. Hence, there does not seem to be any nonlinearity present in skills and experience in rural Mexico. This indicates that the older the household head, the lower probability the household will be poor controlling for other variables.

Gender

The gender of the household head makes a statistically significant difference for poverty in the mid-1990s where female-headed households were less likely to be poor than male-headed households. The finding was also present in 2002, but not statistically different from zero. In 1992 and 2002, the probability of female-headed households experiencing poverty is not different to that of male-headed households at a five percent level when including other covariates in the analysis, such as labor market connection, education, etc. in rural Mexico. This finding is different from other countries, such as Brazil, where male heads have a lower probability of being poor than female heads do.

Household Structure

Findings reveal that the household structure is more important than the age of the household head, since other included family characteristics are strongly statistically significant in explaining the likelihood of experiencing poverty for all years and the impact is also large than for age of the household head in rural Mexico.

The presence of children or youth in the household makes it more poverty prone. The presence of young children below the age of 5 makes the household more likely to fall into poverty than households with no children and children or youth age 6-24. The Probit regression findings reveal that the probability of being poor falls monotonically with increased child age. Households with members under the age of 5 appear more likely to be poor than families with no children below age 5. This finding indicates that households with young children are more vulnerable than households with no children below the age of five. Furthermore, the probability of experiencing poverty for families with small children has been high and rather constant over the past decade. One direct policy intervention would be to facilitate access to childcare. In particular, the poor often find the shortage of affordable childcare a large obstacle to their daily chores.

Also, households with members between the age of 6 and 11 have a large probability of being poor, albeit the likelihood is slightly lower than for families with small children. The probability of being poor increased from 17-percentage points in 1992 to 25 percentage points in 1996 and fell again to 22-percentage points in 2002 for households with children age 6 to 11 compared to households with no children. Households with youth members aged 15-18 experienced the same pattern in the likelihood of experiencing poverty as households with 6-11 year olds, although the impact is significantly smaller reaching 6-percentage point in 2002. One explanation for these findings may be that the introduction of Progresa in rural Mexico had a poverty reducing effect for households with children age 6-18.

The picture changes dramatically when the age of the youth household members increases to 19-25 years. During 1992-2002, households with members aged 19-25 are significantly less likely to fall below the poverty line than households with no children or youth present, controlling for other variables. Therefore, household members aged 19-25 can be considered a protective factor against poverty as these households have a 6 percentage points lower probability of being poor than households with no children. The fact that many youth enter into the labor market and bring home an income contributes positively to the household's poverty situation. In 2002, households in the South region that have youth household members do not experience the same lower probability of experiencing poverty as does Mexico as a whole, but it did in 1992 (Table 5.2). This may indicate that the most capable migrate and only the less educated and skilled stay behind, however this needs more investigation.

The presence of an older household member (above 65 years of age) in the households led it to become less poverty prone during 1992-2002. The presence of a household member age 65 and above was significantly and positively correlated with poverty in the 1990s. That is, having an old-aged in the household implied a higher chance of falling below the poverty line. In 2002, households with members of old age did continue to experience a higher likelihood of poverty but the magnitude was lower; 0.4-percentage points in 2002 compared to 5 percentage points in 1992.

Regions

Regional differences in probabilities of experiencing poverty require policy makers to address these differences. In this section we do not go very deep in trying to assess regional differences in the likelihood of being poor between different regions in Mexico, but some regional differences are noteworthy. During 1992-2002, rural households in all regions experienced an increased probability of falling into poverty relative to those in the Center-North region. Relative to those living in the Center-North region, the population in the North, Pacific, Capital, and Center regions in general are less likely to experience poverty, controlling for other variables. The Probit regression findings in Table 5.1 also reveal that heads of households in the Gulf, Center, and South regions of Mexico were more likely to experience poverty than the Center-North throughout the 1992-2002 period. None of these regions improved their chances of escaping poverty during the decade, controlling for other variables. In 2002, household heads living in the South and Gulf regions had a roughly 20-percentage-points higher likelihood of falling below the poverty line than their peers in the Center-North region.

Other considerations

By no means is this analysis fully complete, as important information identified by the poor themselves in rural Mexico is not directly included in the analysis, for example, safety, peace of mind, good health, sustainable environment, belonging to a community, and freedom of choice and action. In particular, crime, violence and safety are flagged as important problems and obstacles to well-being in the poor communities.

The ENIGH data set does not contain any information on ethnic or racial background. Other studies on poverty such as Finan, Sadoulet, and de Janvry (2002) measure the poverty reduction potential of land in rural Mexico using household data gathered in 1997 by the Mexican program for Education, Health, and Nutrition. Their results show for small landholders, an additional hectare of land increases welfare on average by 1.3 times the earnings of an agricultural worker. In addition, the marginal welfare value of land depends importantly on a household's control over complementary assets and on the context where assets are used: For non-indigenous small farmers with at least primary education and access to a road, the welfare benefit of additional land is on average seven times higher than for those without these attributes. Social assets such as ethnicity lower the marginal value of land, whereas households with more education receive a higher return to land. Households that face lower transactions costs as measured by assess to roads, garner a return to land that is two to three times as high as those without access to a road. These findings suggest that land can indeed be an important element of a poverty reduction strategy, but that there are specific conditions that must hold for this to be the case, calling on complementary interventions in Mexico.

Moreover, the ENIGH datasets do not contain any information on ethnic or racial background. Other studies on poverty in Latin America have shown that ethnic or racial background is an important factor contributing to poverty, controlling for other household head characteristics. Mestizos and Indians are two broad ethnic groups based on cultural rather than racial differences cohabiting in Mexico. Each group has a distinct cultural viewpoint and perceives itself as different from the other. At the same time, however, group allegiances may change, making measurement of ethnic composition problematic at best. Originally racial designators the terms *Mestizo* and *Indian* have lost almost their entire previous racial connotation and are now used entirely to designate cultural groups.[9] Although matzos and indians may both reside in rural areas and have relatively comparable levels of income, they maintain different lives, e.g. Mestizos often argue that Indians are too unmotivated and constrained by tradition to deal appropriately with the demands of modern society. Indians, in turn, frequently argue that mestizos are aggressive, impatient, and disrespectful toward nature.

In 1990, 7.5 percent of the Mexican population, or approximately 5.3 million people above five years of age, spoke an Indian language. Of that total, approximately 79 percent knew Spanish as well and thus were at least potential cultural converts to the mestizo world. Familiarity with indigenous languages increases from north to south: almost no native speakers live in the northeast and north-central part of Mexico, the share climbed to between 10-20 percent in the grouping of states from San Luis Potosí to Guerrero, to 26 percent in Oaxaca, to 32 and 39 percent, respectively, in Quintana Roo and Chiapas, and to 44 percent in Yucatán. Only 63 percent of users of indigenous languages in Chiapas also knew Spanish.

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[9] Historically, the term *mestizo* described someone with mixed European and indigenous heritage. Mestizos occupied a middle social stratum between whites and pureblooded indigenous people.

According to the 1990 Census, Indians remain the most marginalized group of Mexican society. More than 40 percent of the Indian population above fifteen years of age was illiterate; roughly three times the national rate. Thirty percent of Indian children between 6-14 years of age did not attend school. Indians also had significantly higher morbidity and mortality rates associated with infectious and parasitic illnesses, higher levels of nutritional deficiencies, and less access to such basic services such as indoor plumbing, piped water, and electricity.

6. Poverty-Reduction Strategy for Rural Mexico

Over the medium to long run, what is needed to alleviate the high levels of poverty is broad-based growth. However, this is not enough to alleviate poverty, particularly in the short run. Measures are needed to protect vulnerable groups and to ensure that the rural poor are able to take advantage of the greater opportunities in the economy. In order to address these latter needs, this paper has examined the profile of the poor in rural Mexico and the rural poverty correlates.

The government of Mexico has taken important steps to reduce poverty, for example though the continuation of *Oportunidades*. However, it needs a rural poverty alleviation strategy that sets clear and appropriate priorities and goals for poverty reduction efforts within a framework of a continuation of economic policies that would promote growth. The challenge and test of the government's resolve will be to what extent current and future policies and programs are governed by that strategy. In order to ensure that the poor reap the benefits, poverty measurement and monitoring are called for, including tracking changes and making appropriate adjustments in existing programs to reflect these changes.

A THREE-PRONGED POVERTY-REDUCTION APPROACH FOR MEXICO

The differing characteristics of poor households call for multiple paths out of poverty aimed at: (i) small farm sector intensification, (ii) improved employment opportunities in dynamic commercial agriculture, (iii) growth of the rural non-farm sector, (iv) migration of the young, and (v) provision of safety nets for those "trapped" in poverty. The recommended measures include improving human capital endowments, reforming the land, labor and financial markets, enhancing research and extension, improving the supply of public goods and services, and transfer programs.

The rural poverty profile and determinants of poverty analysis provide guidance on a social agenda and poverty alleviation strategy for rural Mexico. The strategic principles for reducing 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 Mexico could apply a three-pronged poverty-reduction approach:

First, targeted programs should focus on the extreme poor and prioritize among groups in rural areas, especially in the dispersed rural areas. Given the distribution of poverty, first

priority should be given to: households with young children and people with or at risk for low education attainment.

Second, priority should be assigned to programs that target the poor informal-sector workers and the poor unemployed. Improvements in social policies and access to public services are needed to reduce extreme poverty for these groups.

- The young children finding indicates that households with small children are far more likely to experience poverty than, for example, households with no children or older children or youth. Social policies should be expanded, for example: (1) conditional-cash-transfer programs where the mother receives the benefit, and (2) more kindergarten and childcare facilities for poor mothers could facilitate poor, especially, women's labor market participation.

- Extremely poor households are at great risk for poor or low human capital accumulation that includes poor health and undesired pregnancies because they lack access to family planning and clean water and sanitation facilities. They are also at risk for low-quality education and education attainment. Increased quality education and educational attainment can reduce the likelihood of becoming poor, as more education is a key factor in obtaining a higher income. 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. It is clear that the rural population in Mexico needs to be brought up the educational ladder to escape poverty. One approach would be to increase: (1) access to early childhood development and daycare programs, (2) access of poor people to programs of financial transfers linked to early childhood development and secondary and higher education, and (3) the quality of education.

Third, other households are poor because they are either in low-paying, low-productivity jobs in the informal sector or unemployed. They need more productive jobs to raise their income above the poverty level and become well equipped to take advantage of employment opportunities. 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 very limited reach among the poor. Social protection policies need to allow informal workers to avail of them, while simultaneous efforts need to be made to encourage formal sector growth and that may include liberalization of the labor market. Hence, the government should support initiatives to reform the labor code in order to reduce costs of employment creation in the formal sector. Possible measures would entail: (1) realigning incentives for hiring, retaining, and firing workers, and (2) targeted social protection measures that relate to informal sector and youth employment.

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Appendix A: Population in Mexico by size of Locality, 1990, 1990, and 2002														
	1990					**1995**					**2000**			
State	**<2,500**	**>2,500**	**<15,000**	**>15,000**	**Total**	**<2,500**	**>2,500**	**<15,000**	**>15,000**	**Total**	**<2,500**	**>2,500**	**<15,000**	**>15,000**	**Total**
Estados Unidos Mexicanos	23,289,924	57,959,721	34,574,235	46,675,410	81,249,645	24,154,775	67,003,515	36,524,861	54,633,429	91,158,290	24,723,590	72,759,822	38,064,204	59,419,208	97,483,412
Aguascalientes	168,962	550,697	227,281	492,378	719,659	187,736	674,984	242,446	620,274	862,720	186,706	757,579	256,298	687,987	944,285
Baja California	151,061	1,509,794	290,993	1,369,862	1,660,855	182,652	1,929,488	348,512	1,763,628	2,112,140	209,367	2,278,000	398,687	2,088,680	2,487,367
Baja California Sur	69,099	248,665	129,372	188,392	317,764	79,159	296,335	135,513	239,981	375,494	79,306	344,735	156,412	267,629	424,041
Campeche	160,405	374,780	262,024	273,161	535,185	185,321	457,195	302,893	339,623	642,516	200,380	490,309	324,906	365,783	690,689
Coahuila de Zaragoza	275,019	1,697,321	400,539	1,571,801	1,972,340	256,426	1,917,349	372,278	1,801,497	2,173,775	243,317	2,054,753	361,254	1,936,816	2,298,070
Colima	71,476	357,034	141,927	286,583	428,510	72,044	415,984	148,360	339,668	488,028	78,189	464,438	161,926	380,701	542,627
Chiapas	1,913,754	1,296,742	2,457,206	753,290	3,210,496	2,002,394	1,582,392	2,609,416	975,370	3,584,786	2,129,034	1,791,858	2,799,203	1,121,689	3,920,892
Chihuahua	552,107	1,889,766	749,647	1,692,226	2,441,873	554,353	2,239,184	742,378	2,051,159	2,793,537	533,460	2,519,447	750,499	2,302,408	3,052,907
Distrito Federal	21,901	8,213,843	143,295	8,092,449	8,235,744	25,146	8,463,861	121,220	8,367,787	8,489,007	20,320	8,584,919	100,491	8,504,748	8,605,239
Durango	574,961	774,417	759,539	589,839	1,349,378	558,781	872,967	749,217	682,531	1,431,748	524,606	924,055	710,770	737,891	1,448,661
Guanajuato	1,457,060	2,525,533	1,845,787	2,136,806	3,982,593	1,470,634	2,935,934	1,901,685	2,504,883	4,406,568	1,529,249	3,133,783	1,941,141	2,721,891	4,663,032
Guerrero	1,251,101	1,369,536	1,686,609	934,028	2,620,637	1,321,742	1,594,825	1,802,262	1,114,305	2,916,567	1,376,446	1,703,203	1,878,627	1,201,022	3,079,649
Hidalgo	1,042,648	845,718	1,402,800	485,566	1,888,366	1,109,584	1,002,889	1,501,534	610,939	2,112,473	1,132,897	1,102,694	1,551,581	684,010	2,235,591
Jalisco	962,257	4,340,432	1,727,958	3,574,731	5,302,689	1,007,468	4,983,708	1,820,041	4,171,135	5,991,176	976,700	5,345,302	1,810,919	4,511,083	6,322,002
México	1,530,588	8,285,207	2,818,072	6,997,723	9,815,795	1,689,408	10,018,556	3,154,979	8,552,985	11,707,964	1,792,276	11,304,410	3,544,725	9,551,961	13,096,686
Michoacán de Ocampo	1,361,845	2,186,354	2,108,956	1,439,243	3,548,199	1,373,161	2,497,443	2,193,754	1,676,850	3,870,604	1,378,901	2,606,766	2,235,229	1,750,438	3,985,667
Morelos	171,831	1,023,228	532,762	662,297	1,195,059	203,334	1,239,328	588,521	854,141	1,442,662	226,574	1,328,722	631,584	923,712	1,555,296
Nayarit	312,912	511,731	507,386	317,257	824,643	331,772	564,930	509,379	387,323	896,702	329,757	590,428	535,355	384,830	920,185
Nuevo León	248,079	2,850,657	398,146	2,700,590	3,098,736	250,275	3,299,839	399,724	3,150,390	3,550,114	252,770	3,581,371	430,492	3,403,649	3,834,141
Oaxaca	1,828,257	1,191,303	2,417,582	601,978	3,019,560	1,824,408	1,404,487	2,537,368	691,527	3,228,895	1,907,340	1,531,425	2,666,189	772,576	3,438,765
Puebla	1,473,322	2,652,779	2,462,697	1,663,404	4,126,101	1,544,465	3,079,900	2,643,104	1,981,261	4,624,365	1,610,175	3,466,511	2,820,979	2,255,707	5,076,686
Querétaro de Arteaga	423,396	627,839	561,827	489,408	1,051,235	444,663	805,813	640,479	609,997	1,250,476	455,434	948,872	688,463	715,843	1,404,306
Quintana Roo	128,903	364,374	197,505	295,772	493,277	138,783	564,753	209,312	494,224	703,536	153,425	721,538	234,787	640,176	874,963
San Luis Potosí	898,164	1,105,023	1,137,373	865,814	2,003,187	928,911	1,271,852	1,191,764	1,008,999	2,200,763	941,729	1,357,631	1,214,062	1,085,298	2,299,360
Sinaloa	791,607	1,412,447	1,151,079	1,052,975	2,204,054	810,052	1,615,623	1,179,659	1,246,016	2,425,675	826,442	1,710,402	1,201,218	1,335,626	2,536,844
Sonora	380,539	1,443,067	597,571	1,226,035	1,823,606	387,143	1,698,393	617,049	1,468,487	2,085,536	374,852	1,842,117	624,389	1,592,580	2,216,969
Tabasco	756,026	745,718	1,025,991	475,753	1,501,744	837,515	911,254	1,148,394	600,375	1,748,769	875,252	1,016,577	1,244,360	647,469	1,891,829
Tamaulipas	425,877	1,823,704	598,859	1,650,722	2,249,581	424,004	2,103,324	605,668	1,921,660	2,527,328	401,293	2,351,929	588,672	2,164,550	2,753,222
Tlaxcala	178,926	582,351	493,330	267,947	761,277	177,398	706,526	555,220	328,704	883,924	207,383	755,263	591,135	371,511	962,646
Veracruz Llave	2,726,513	3,501,726	3,789,568	2,438,671	6,228,239	2,804,093	3,933,231	3,980,448	2,756,876	6,737,324	2,829,007	4,079,968	4,028,128	2,880,847	6,908,975
Yucatán	291,322	1,071,618	603,533	759,407	1,362,940	306,033	1,250,589	653,060	903,562	1,556,622	309,457	1,348,753	682,394	975,816	1,658,210
Zacatecas	690,006	586,317	947,021	329,302	1,276,323	665,917	670,579	919,224	417,272	1,336,496	631,546	722,064	899,329	454,281	1,353,610

Appendix B: **Income shares by source and (consumption) Quintile, rural Mexico (Localities with less than 2,500 inhabitants), 2002 [a]**

	Agriculture				Nonagricultural income sources									
	Agricultural Enterprise Income (%)	Self - Consumption (%)	Agricultural Labor Income (%)	**Total Agriculture Income (%)**	Low-return Nonfarm Labor income [e] (%)	High-return Nonfarm Labor income (%)	Nonfarm Enterprise Income (%)	Remittances Income (%)	Other private Transfer Income (%)	PROGRESA Income (%)	PROCAMPO Income (%)	Other public Transfer Income (%)	Other Income (%)	**Total Nonagricultural Income (%)**
TOTAL	9.5	3.1	11.3	**23.8**	12.3	23.8	5.7	5.9	4.4	3.2	2.8	0.2	17.8	**76.2**
Rural per capita consumption quintile														
Bottom	12.4	6.1	28.1	**46.6**	11.5	2.8	4.3	1.7	5.1	12.0	4.7	0.3	10.9	**53.4**
2nd	10.0	4.7	22.3	**37.1**	14.4	8.3	6.0	4.5	5.0	8.5	3.6	0.7	11.9	**62.9**
3rd	10.4	3.6	20.5	**34.6**	16.8	11.1	7.6	4.7	4.7	5.7	2.9	0.4	11.5	**65.4**
4th	9.9	2.8	15.3	**28.0**	19.0	14.1	6.7	8.0	4.7	3.1	2.5	0.2	13.5	**72.0**
5th	8.6	2.4	3.8	**14.8**	8.6	35.4	5.0	6.2	4.0	0.6	2.5	0.1	22.7	**85.2**
Poor/non poor (food poverty line)														
Non-poor	9.2	2.6	9.6	**21.4**	12.2	27.0	5.5	6.2	4.2	1.7	2.6	0.2	18.8	**78.6**
Poor	10.9	5.9	21.9	**38.7**	12.8	4.4	6.8	3.8	5.5	11.9	3.8	0.4	11.9	**61.3**
Poor/non poor (assets poverty line)														
Non-poor	9.5	2.3	6.2	**17.9**	10.1	32.1	5.2	6.0	4.0	0.7	2.5	0.1	21.5	**82.1**
Poor	9.4	4.5	19.9	**33.8**	16.0	9.9	6.6	5.8	5.2	7.4	3.3	0.4	11.7	**66.2**

	Agriculture				Nonagricultural income sources									
	Agricultural Enterprise Income (%)	Self - Consumption (%)	Agricultural Labor Income (%)	Total Agriculture Income (%)	Low-return Nonfarm Labor income [e] (%)	High-return Nonfarm Labor income (%)	Nonfarm Enterprise Income (%)	Remittances Income (%)	Other private Transfer Income (%)	PROGRESA Income (%)	PROCAMPO Income (%)	Other public Transfer Income (%)	Other Income (%)	Total Nonagricultural Income (%)
TOTAL	6.5	2.5	8.2	**17.1**	12.5	27.5	8.6	4.4	6.1	2.2	1.8	1.1	18.8	**82.9**
Rural per capita consumption quintile														
Bottom	12.2	5.5	26.3	**44.0**	10.9	5.7	5.6	2.1	5.6	11.0	3.9	0.3	10.9	**56.0**
2nd	9.0	3.5	19.8	**32.3**	18.9	11.5	6.5	4.5	5.3	6.4	2.6	0.6	11.4	**67.7**
3rd	6.4	2.5	13.4	**22.3**	19.0	15.4	15.5	4.5	4.5	3.6	2.0	0.3	12.8	**77.7**
4th	7.9	2.3	9.2	**19.4**	18.4	22.5	10.4	5.8	5.2	2.0	1.4	0.3	14.6	**80.6**
5th	4.9	2.0	2.2	**9.1**	7.6	37.8	6.8	4.2	7.0	0.2	1.4	1.7	24.1	**90.9**
Poor/non (poor food poverty line)														
Non-poor	6.0	2.1	6.7	**14.9**	12.3	30.0	8.6	4.6	6.1	1.2	1.6	1.2	19.5	**85.1**
Poor	10.2	5.4	20.5	**36.1**	13.5	5.8	8.2	3.4	5.7	10.9	3.3	0.4	12.7	**63.9**
Poor/non poor (assets poverty line)														
Non-poor	5.9	2.0	4.1	**11.9**	9.8	33.8	8.9	4.3	6.4	0.4	1.4	1.4	21.5	**88.1**
Poor	7.6	3.6	17.0	**28.2**	18.1	13.9	7.9	4.6	5.4	6.1	2.5	0.4	12.9	**71.8**

Appendix B continued.

	Agriculture				Nonagricultural income sources									
	Agricultural Enterprise	Self - Consumption	Agricultural Labor	**Total Agriculture**	Low-return Nonfarm Labor income[e]	High-return Nonfarm Labor income	Nonfarm Enterprise	Remittances Income	Other private Transfer	PROGRESA Income	PROCAMPO Income	Other public Transfer	Other Income	**Total Nonagricultural**
	Income (%)	(%)	Income (%)	**Income (%)**	(%)	(%)	Income (%)	(%)	Income (%)	(%)	(%)	Income (%)	(%)	**Income (%)**
TOTAL	9.5	3.1	11.3	**23.8**	12.3	23.8	5.7	5.9	4.4	3.2	2.8	0.2	17.8	**76.2**
Region[g]														
Norte	5.5	1.8	12.2	**19.5**	15.1	20.1	5.8	3.8	4.7	1.3	8.3	0.2	21.1	**80.5**
Capital	2.9	2.2	5.9	**11.0**	35.9	22.4	5.0	1.5	4.1	3.1	1.8	0.1	15.1	**89.0**
Golfo	4.7	1.8	15.7	**22.2**	12.5	21.1	6.6	1.2	5.3	5.4	1.2	0.1	24.5	**77.8**
Pacifico	6.1	1.3	5.0	**12.4**	3.1	51.0	2.2	1.6	3.1	0.8	0.9	0.3	24.6	**87.6**
Sur	18.3	6.5	16.4	**41.2**	8.0	8.1	8.5	10.6	5.0	5.2	3.0	0.2	10.2	**58.8**
Centro-Norte	12.1	2.5	10.7	**25.4**	13.4	18.0	6.9	13.4	4.1	2.6	3.8	0.3	12.2	**74.6**
Centro	9.1	4.8	13.4	**27.3**	22.4	11.9	5.0	3.8	5.4	5.0	1.2	0.4	17.7	**72.7**

[a] Source: ENIGH 2002

[b] Agricultural production

[c] Include animal, forestry and fishing production

[d] Include labor from animal rearing, forestry and fishing

[e] Low and high return nonfarm activities are identified on the basis of average monthly per capita earnings associated with primary employment in different sectors of employment. Those sectors
in wish average monthly earnings are below the assets poverty line of $ 946.49 per month are identified as employed in low return activities. High-return activities comprise: chemicals, electronics, sales, professional services, education and medical services.

[f] Include leasing and business societies