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# Republic of Paraguay

## PY Equity Assessment and Poverty Support

### Volatility and Inequality as Constraints to Shared Prosperity: Paraguay Equity Assessment

June 2014

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# Volatility and Inequality as Constraints to Shared Prosperity: Paraguay Equity Assessment<sup>1</sup>

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## Executive Summary

1. Isolated by nature, and recovering from a period of historically low growth during the eighties and nineties, Paraguay faced many economic and social challenges at the beginning of the twenty first century. By year 2000, Paraguay GDP per capita was only 50% of the Latin American average and 34 percent of its MERCOSUR partners. High poverty and inequality were an inherent characteristic of the country.
2. Yet, between 2003 and 2013, Paraguay has performed substantially well, seeing a reduction in moderate and extreme (monetary) poverty. This is essentially the result of a period of average significant growth combined with a reduction in inequality.
3. **This report explores the factors associated to the observed improvements in welfare and inequality, and investigates the challenges facing their sustainability, given the historical structural problems of Paraguay to maintain growth and improve social indicators.** The underlying question is indeed whether the growth model and reduction in inequality are consistent with a positive social dynamics, taking a comprehensive definition of equity, which includes sustainable elimination of absolute poverty, enhancing equality of opportunity and strengthening agency for all groups.
4. Given that a significant proportion of the improvements in welfare were only experienced after 2011, the analysis considers two periods: 2003 to 2011, when extreme poverty remained stable despite per capita GDP increasing by 22 percent, and 2011 to 2013, when extreme poverty almost halved. At the core of the explanation of the differential evolution is the role of inequality, access to markets, and food prices.

## Introduction

5. Paraguay's per capita gross domestic product (GDP) reached its highest value in history in 2013 – though still remaining at just over half of the regional average. While this growth has been pro-poor, with the bottom 40 percent experiencing a slightly higher growth than the top 60 percent, inequality remained stubbornly high – particularly in the rural parts of the country – until 2012. The Paraguayan economy depends increasingly and significantly on agriculture. Yet, two-thirds of the extreme poor live in rural area and rely heavily on this volatile sector.
6. As poverty almost halved, the size of the middle class has been growing and represents the largest socioeconomic group in the country. Yet, as in the beginning of the decade, one in four Paraguayans remains economically vulnerable to falling back into poverty.
7. However, there are signs of some structural and lasting changes to poverty as extent of deprivations in non-monetary dimensions (such as access to key goods and services) fell throughout the decade even in periods when monetary poverty did not decline as much such as between 2003 and 2011. It is important to note, however, that though access has increased, quality of these services may remain a challenge.

## First pillar: Mobility out of poverty

8. Between 2003 and 2011, while both growth and distribution were contributing to a significant increase of the income of the poor, food prices were rising at a higher rate than general prices in the economy, mitigating to a significant extent the reduction in extreme poverty that would have otherwise resulted. In contrast, all three forces –growth, inequality reduction and decreasing food prices-- have been working in the same direction since 2011. Disproportionately high income growth among the less well-off and especially in rural areas is a strong factor behind the recent improvement in poverty. In both periods, rising labor incomes have been the driving force both because of increased earnings and increased number of earners. Meanwhile non-labor incomes such as public transfers only started to play a significant role in the past two years –perhaps due to important increases in coverage of the main social programs.
9. **The role of labor income:** Economic growth in the past decade has been driven in large part by the two largest sectors in the economy: agriculture and manufacturing. However, these gains in output have not translated into significantly higher employment growth in these activities, particularly for the less skilled. Indeed, while agriculture remains the primary sector of employment, especially for the low-skilled, between 2003 and 2013 the proportion of the low-skilled employed in this sector fell. Similarly, manufacturing still represents the largest sectors in terms of output (around 25 percent of the total economy) and yet, continues to account for only 10 percent of total employment. In fact, output increases in agriculture and manufacturing have been accompanied by falls in low-skilled employment, suggesting a replacement of low-skill labor. Instead, other sectors, occupations such as construction and services have become more relevant and, with higher wages than agriculture, present improved labor opportunities for low-skilled labor, and thus helped families moved out of poverty in both rural and urban areas.
10. **The importance of the rural sector.** Agriculture is the main source of income of the extreme poor living in rural areas, but most are self-employed or unpaid (especially women), cultivating few crops for both home consumption and a few for market. With inadequate irrigation systems and agricultural practices and limited access to markets, small farm holders are excessively exposed to exogenous shocks, such as droughts, floods, price fluctuations and infestation and diseases. In the absence of good access to financial markets (both insurance and credit), and a limited role of government, agricultural families are excessively vulnerable to falling (further) into poverty, as reflected in the 2009-10 drought when incomes of the bottom quintile experienced a significant drop. In this context, income diversification becomes essential, both in terms of types of crops cultivated (or cattle raising), and of labor and non-labor income sources. Indeed, in recent years, there has been a movement towards wage employment, both agriculture (larger farms) and non-agriculture (mostly construction, transport and public and private services), generating alternative

sources of income which could be more profitable and stable. In addition, non-labor incomes have played an important role in alleviating extreme poverty as a diversification strategy (largely, family transfers and informal lending and to a lesser extent, public transfers such as *tekopora* and *adultos mayores*), as well as a strategy to cope with adverse shocks.

11. **The role of urban labor markets.** The halving of urban poverty corresponds to significant changes in the urban labor market between 2003 and 2013: a fall in the unemployment rate, increases in employment in the higher-paying large firm sector (particularly in construction and public and private services), and rising income for the self-employed and small firm workers. Nonetheless, like the rural poor, the urban poor remain exposed to household income volatility through high unemployment rates and high shares of self-employment. To a significant degree, low-skilled and unskilled labor –the workers most likely to be in poverty – remain unprotected by the minimum wage legislation.
12. Despite the trend observed throughout the decade of increased employment in higher paying large firms, year-to-year transitions show that mobility into this sector is limited for the self-employed and workers in microenterprises –less than 3 percent of those in either of these categories is able to transition into large firm wage employment by the following year. But once in the large firm sector, then only a small proportion change type of employment a year later. The self-employed, rather than becoming small business persons, they typically transition into employment in a micro firm or leave the labor force. Indeed, the proportion of low skilled workers that are employers is almost negligible. Finally, while unemployment rate has steadily declined, the persistence of unemployment for those that are unemployed is particularly alarming: one in five of the unemployed between 2010 and 2012 remained unemployed one year later, suggesting that part of the population experiences either chronic or frequent spells of unemployment.

## **Second Pillar: The pursuit of opportunities for all**

13. One of the greatest structural barriers to equity, a challenge that Paraguay faces today is the high and persistent level of inequality in terms of opportunities for different groups, as defined by their circumstances of birth, including family background. This poses challenges to the sustainability of the recent improvements for future generations. While access to services for children has increased throughout the decade, there remain significant differences across circumstance groups. Coverage rates for access to flush toilet or tap water are quite different for poor and non-poor people, but also discrepancies are higher taking into account urban or rural location. Similarly, educational attainment is highly correlated with location and socioeconomic status, which in turn, will impact intergenerational mobility. Indeed, inequality of opportunities in the labor market has been rising in recent years, where place of birth (combining both rural/urban area and department), language spoken at home

and gender play an important role. This suggests inadequate access to opportunities in childhood can have significant impacts on inequality in the labor market and thus influence the next generation's outcomes.

14. One factor that can be associated to the observed persistence of structural inequities is the fact that social policies are not effective enough to counterbalance these inherited inequalities. Paraguay's fiscal system –including the overall role of the system of taxes and transfers-- is among the weakest in the region, incorporating a regressive tax system and limited redistribution through spending. On top of this, institutional and operational inefficiencies e.g. weak civil service system, and/or the lack of an effective monitoring and evaluation, may enfeeble the deprived social service delivery.

### **The third pillar: strengthening Agency**

15. The third dimension where the country still has room to make progress towards an equitable society relates to the strengthening of agency, understood as the capacity of people to be actors in their own development, establishing and pursuing effectively life plans they have reasons to value. This pillar has manifestations in different realms and dimensions. There is, however, one aspect that is salient and can be analyzed with existing data: the economic and social role of women. Paraguay has made progress over the last decade in promoting women's empowerment and gender equality. Improvements have been particularly strong in women's endowments, in terms of sexual and health indicators, as well as educational attainment and achievement. In recent years, there have also been important improvements in the legal framework to provide for gender equality. Despite these improvements, challenges remain in the areas of labor markets (particularly in terms of youth unemployment, job quality and segmentation), domestic violence, and teenage pregnancy. These manifestations of agency reflect, to some extent, the country's social norms, as reflected in perception surveys.

### **Conclusions**

16. **Paraguay has made substantial progress in the last decade in improving its people's welfare and reducing inequality.** There are some reasons for optimism related to increased labor productivity in agriculture and improved employment opportunities, suggesting potentially long-lasting transformations.
17. **Still, the country faces challenges that can threaten the sustainability of the observed improvements.** A key obstacle Paraguay faces today is the fact that a large share of the population faces a volatile economic environment. A second space of concern relates to the still high and persistent lack of opportunities for all groups: Even though inequality in income has fallen, some aspects related to the structural determinants of inequity remain.

Finally, the relevance of strengthening agency and autonomy, particularly of women in their participation in markets, community and relationships, is at the core of an equitable society.

18. **To reduce structural inequities in monetary and non-monetary outcomes, it will be essential to address their structural determinants.** This requires promoting well-functioning and accessible markets that are able to provide all segments of the population with well paying, high productivity jobs; enhancing risk management at the macro and micro levels to protect households falling back into poverty in the presence of shocks; ensuring equitable, efficient and sustainable fiscal policy to guarantee a solid fiscal position that allows for redistributive fiscal policy; improve fairness and transparency of institutions in the provision of high quality public goods without excluding any segments of the population and; design policies to expand women's opportunities in the labor market and enhance their agency, self-esteem and aspirations.

## Introduction

Isolated by nature, and recovering from a period of historically low growth during the eighties and nineties, Paraguay faced many economic and social challenges at the beginning of the twenty first century. By year 2000, Paraguay GDP per capita was only 50% of the Latin American average and 34 percent of its MERCOSUR partners. High poverty and inequality were an inherent characteristic of the country.

**Yet, between 2003 and 2013, Paraguay has performed substantially well, seeing a reduction in moderate and extreme (monetary) poverty.** This is essentially the result of a period of average significant growth combined with a reduction in inequality. Given that a significant proportion of the improvements in welfare were only experienced after 2011, the analysis considers two periods: 2003 to 2011, when extreme poverty remained stable despite per capita GDP increasing by 22 percent, and 2011 to 2013, when extreme poverty almost halved. At the core of the explanation of the differential evolution is the role of inequality, access to markets, and food prices.

**Between 2003 and 2011, economic growth in Paraguay was both high and volatile, and while moderate poverty declined, extreme poverty was more persistent, and income inequality has improved modestly.** Per capita GDP grew by 33 percent over the time period, but experienced a major dip during the 2009 drought and global financial crisis when it fell by 5.2 percent from the previous year [

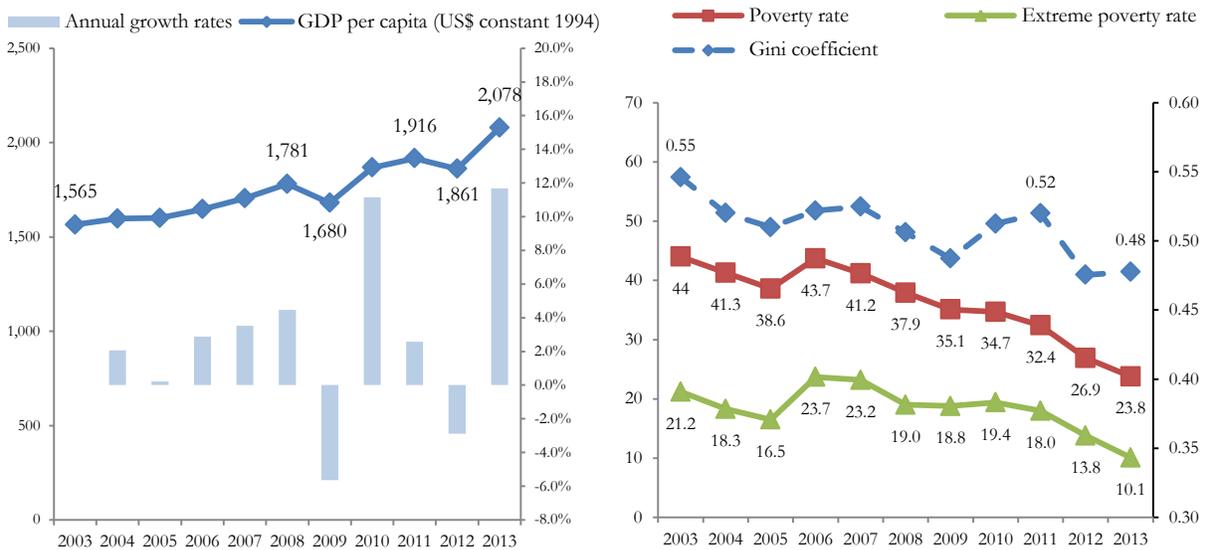
Figure 1]. While moderate poverty rate declined by 12 percentage points between 2003 and 2011, extreme poverty rate only fell by 3 percentage points. Using comparable numbers, Paraguay reduced moderate poverty and extreme poverty by less than LAC and lagged behind the Southern Cone by 6.5 percentage points in the reduction of moderate poverty and 3.5 percentage points in the reduction of extreme poverty. As of 2011, 32.4 percent of Paraguayans still lived in poverty and 18 percent lived in extreme poverty. Income inequality fell merely 0.03 points since 2003 and remains high at 0.53 as of 2011.

**In the last couple of years, however, there are significant signs of improvement.** Between 2011 and 2013 the economy grew 12 percent despite the dip in 2012, per capita income was 8.5 percent higher and extreme poverty as well as inequality finally showed to be responding to this growth. By 2013, 10 percent of the people fell below the extreme poverty line (24 percent below the moderate poverty line), and the Gini coefficient went down 0.04 points placing it at a historical minimum.<sup>2</sup>

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<sup>2</sup> 2012 estimates for poverty and inequality are considered preliminary and subject to change. Hence, these are excluded from the report.

Figure 1: GDP per capita, poverty rates and inequality



Source: BCP and DGEEC.

**This report explores the factors associated to the observed improvements in welfare and inequality, and investigates the challenges facing their sustainability, given the historical structural problems of Paraguay to maintain growth and improve social indicators.** The underlying question is indeed whether the growth model and reduction in inequality are consistent with a positive social dynamics, taking a comprehensive definition of equity, which includes sustainable elimination of absolute poverty, enhancing equality of opportunity and strengthening agency for all groups.

**The conceptual framework is based on a tripartite definition of “equity” - the equity triangle.** The first dimension of the equity triangle, the elimination of absolute poverty, entails that all members of a society are guaranteed a well-defined minimum standard to survive with dignity. All individuals must have sufficient access to goods and services such that they are able to achieve well-defined outcomes. The second dimension, fairness—or independence from original circumstances—lies in the notion that the initial background characteristics of individuals outside of their control (such as gender or area of childhood residence) should not limit the set of opportunities available to them and dictate their achievement. Finally, equity is also about agency (process-freedom), which is about strengthening of the individuals’ capacity to make choices and transform those choices into desired outcomes. Thus, an equitable society promotes mobility out of poverty, delinks background from socioeconomic achievement and empowers citizens by providing them with voice and autonomy. The present study will provide a diagnosis of these three elements as well as propose key policy changes to improve equity while enhancing the virtuous cycle of shared prosperity.

Based on this framework, and to answer the broader question on whether the recent improvements in equity are indeed signs of a more sustainable equitable society, this report explores the following specific questions:

1. **Why did growth have a limited effect on reducing extreme poverty until 2011, and what explains the recent reversal of this relationship? What is the role of labor**

markets, as well as public and private transfers in driving poverty reduction? To what extent have non-monetary dimensions of well-being improved throughout the decade? (Section 2)

2. To what extent do conditions at birth determine Paraguayans' access to basic services and opportunities throughout their lifetime? (Section 3)
3. What are the challenges that remain in terms of individual autonomy and voice, particularly with regards to women? (Section 4)
4. What are the key policy lessons that can be drawn from the above analysis to improve equity while fostering growth? (Section 5)

The next section provides a brief description of the main features of the growth, poverty and inequality processes in Paraguay since 2003. Importantly, persistent high income inequality is highlighted as a key obstacle to eradicating extreme poverty and achieving significant reductions in poverty.

## 1. Growth, poverty and inequality: Stylized facts

This section describes the main stylized facts of the Paraguay economy in the past decade in terms of growth, poverty and inequality, concluding with a description of the demographics of poverty. The analysis begins in 2003 to ensure comparability of the estimates that are drawn from the Permanent Household Survey (*Encuesta Permanente the Hogares - EPH*) and includes the recently released 2013 data but not the 2012 data released only as preliminary.

**Paraguay's per capita gross domestic product (GDP) reached its highest value in history in 2013 – though still remaining at just over half of the regional average.** According to the World Development Indicators (WDI), Paraguay's per capita gross domestic product (GDP) reached in 2011 its highest value in history:<sup>3</sup> \$5,448 in PPP (constant 2005 international prices), decreasing to \$5,290 in 2012. This placed the country well below the average in Latin American and the Caribbean — though higher than countries such as Nicaragua, Honduras, Guatemala, Guyana and Bolivia [

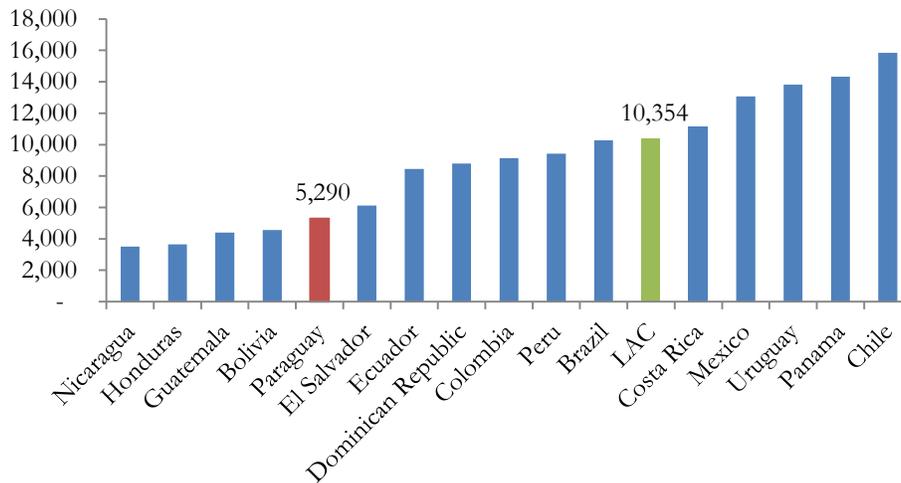
Figure 2]. Over the last decade economic growth in Paraguay has been high but volatile. Between 2003 and 2013, per capita GDP (constant 1994 US\$) grew by 33 percent; but it experienced a major dip during the 2009 drought and global financial crisis, when it fell by 5.2 percent from the previous year. Yet, record growth of 11.2 percent in 2010 more than compensated for the loss [

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<sup>3</sup> 2013 GDP estimates are not yet available in the WDI database.

Figure 1].

Figure 2: GDP per capita in Latin American Countries, 2012



Source: World Development Indicators.

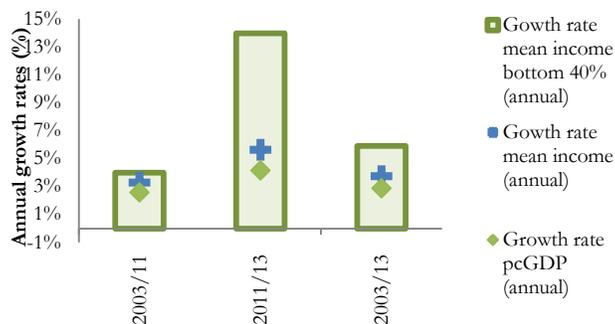
**The bottom 40 percent has benefited from economic growth<sup>4</sup>, with this group experiencing higher growth than the top 60 percent.** Between 2003 and 2011, above-average income growth raised the incomes of the poorest 40 percent of Paraguayans (at 4 percent per annum) above the mean income growth of the population (at 3.3 percent per annum) [Figure 3Error! Reference source not found.]. Using comparable figures, Paraguay’s performance for the bottom 40 percent is close to that of the LAC region as a whole, but still lags behind it and neighboring countries such as Uruguay, Argentina or Brazil.<sup>5</sup> But in the two subsequent years, the rate of growth of the bottom two quintiles was two and a half times higher than that of the mean –14 percent compared to 5.6 percent annually.

Figure 3: Growth of income of the poorest 40 percent compared to all and per capita GDP

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<sup>4</sup> Within the World Bank’s twin goals of ending extreme poverty and boosting shared prosperity, the latter has been defined as “expanding the size of the pie continuously and sharing it in such a way that the welfare of those at the lower end of the income distribution rises as quickly as possible” (World Bank 2013e). Promoting shared prosperity has thus been enunciated as fostering the income growth of the bottom 40 percent of the population.

<sup>5</sup> World Bank (2014).



Source: Authors' calculations from EPH official data (for mean income and mean income bottom 40%). Per capita GDP growth is based on per capita GDP (constant 1994 US\$) from Paraguay Central Bank.

**While this growth has been pro-poor, inequality remained stubbornly high – particularly in the rural parts of the country – until 2012.** During most of the past decade, the Gini coefficient fluctuated around 0.51 and 0.52 [Figure 4Error! Reference source not found.], placing Paraguay's inequality among the highest in LAC – itself the most unequal region in the world. Until 2011, jointly with Brazil, Paraguay was the most unequal country in Southern Latin America. In a period in which the region has shown significant improvements in inequality, Paraguay's performance paled in comparison with other countries such as Argentina, Brazil, Chile and Peru.<sup>6</sup> Nevertheless, since 2011 the country appears to have caught up with these countries by showing a significant decrease in the Gini index from 0.52 in 2011 to 0.48 in 2013. Inequality is also considerably higher in rural areas than in urban ones and the gap up until 2011 has been growing—by 0.06 percentage points since 2003. In 2011, inequality in urban areas was 0.10 lower than in rural areas (0.47 versus 0.57). By the year 2013, however, the rural Gini index had fallen 0.08 points, halving the gap between these two areas. Rural inequality continues to be higher than in urban areas, and one of the highest in the region, but still it sits below 0.50. In section 2.1 some factors behind this noteworthy improvement are explored.

Figure 4: Evolution of the Gini coefficient 2003-2013

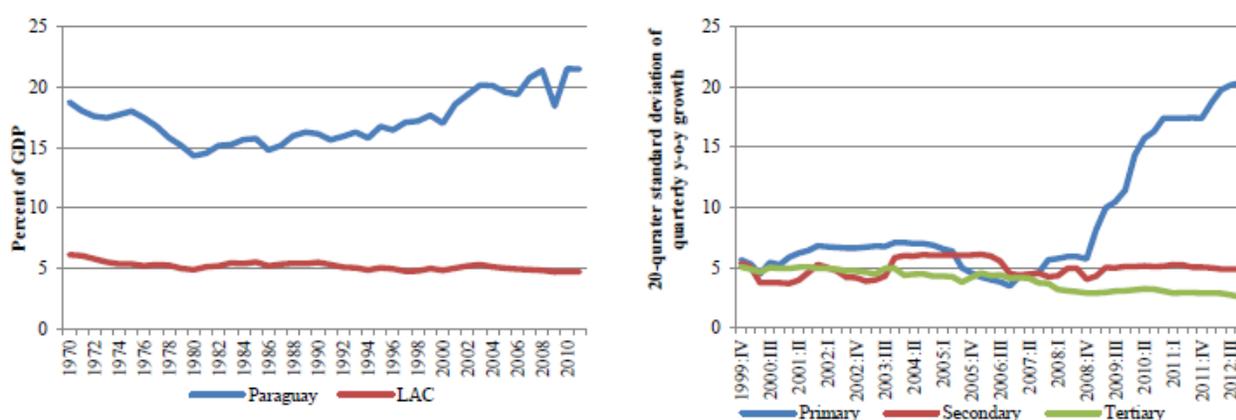


Source: Calculations based on EPH (2003 to 2013)

<sup>6</sup> World Bank (2013c).

**The Paraguayan economy depends increasingly and significantly on agriculture and, as a consequence, has become more volatile.** By the end of the decade, more than 20 percent of total GDP came from this sector [Figure 5]. In comparison, the importance of agriculture in the region is below 5 percent. The high levels of volatility of this sector due to weather shocks and fluctuations in commodity prices and external demand, combined with a significant reliance on few export products and export destination, have a dramatic impact on the total economy.<sup>7</sup> Macroeconomic volatility, in turn, has adverse effects in terms of welfare and equity in most developing countries.<sup>8</sup> Section 2.3 in this report explores the extent to which volatility in agriculture is reflected in variability in households' incomes and their strategies to cope with it.

Figure 5: Share of agriculture in GDP (left) and Growth volatility by economic sector in Paraguay



Source: World Bank (2013b). Based on data from the WDI and the Central Bank of Paraguay.

**Despite the increasing reliance on agriculture, and the substantive decline in poverty in recent years, two-thirds of the extreme poor live in rural areas and rely heavily on this volatile sector.** By 2013, approximately 138,226 thousand families were not able to meet the cost of a basic food basket; and 68 percent of those families lived in rural areas [Table 1]. The incidence of poverty in rural areas is nowadays three times as high as in urban areas [Figure 6].

Table 1. Distribution of extreme poor, 2013

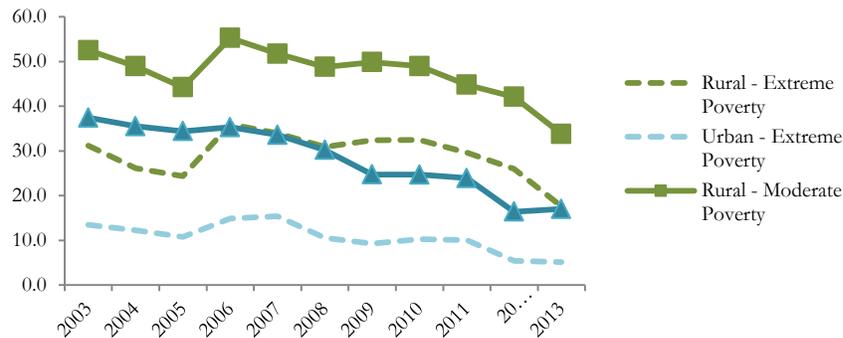
	Households	%	Population	%
<i>National</i>	138,226	100%	677,089	100%
<i>Urban</i>	43,651	32%	202,264	30%
<i>Rural</i>	94,575	68%	474,825	70%

Source: Authors' calculations using EPH 2013.

<sup>7</sup> World Bank (2013b)

<sup>8</sup> Loayza et al. (2007)

Figure 6: Evolution of poverty in rural and urban areas

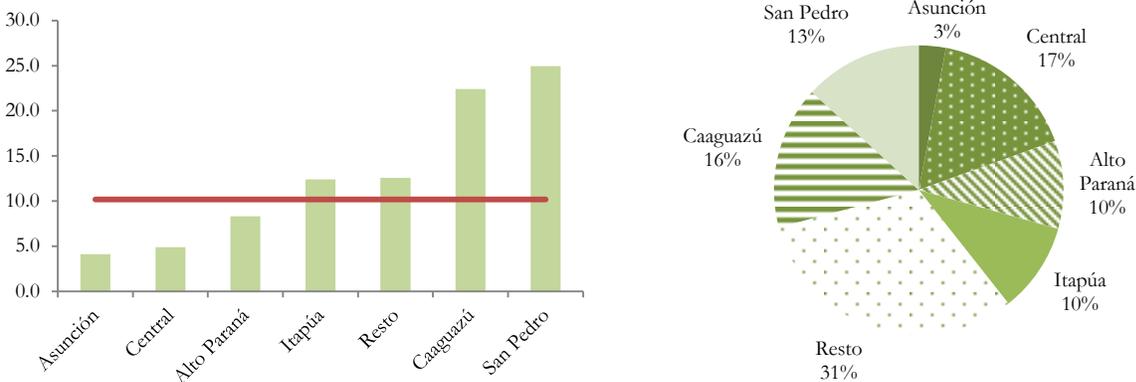


Source: Authors' calculations using EPH.

**Both urban and rural areas benefited from this decade's growth in terms of reducing moderate and extreme poverty, although the decline in rural areas was more recent than in urban ones.** 12 of the 14 percentage point reduction in rural extreme poverty between 2003 and 2013 happened in the last two years. In urban areas, instead, 40 percent of the reduction was observed in the first 8 years of analysis<sup>9</sup>.

**Discrepancies in poverty incidence are not only between urban and rural areas, but also across geographic areas.** More than a fifth of the population is not able to satisfy their basic food requirements in San Pedro and Caaguazú, whereas in Asunción and Central less than 5 percent of the population is in this situation [Figure 7]. At the same time, these latter two departments concentrate 20 percent of the extreme poor in the country. It is worth noting that the largest concentration of extreme poor is in the category "Resto" (excluding Boquerón and Alto Paraguay).

Figure 7: Extreme poverty incidence and composition by department in 2013



Source: Authors' calculations using EPH 2013 and the official Extreme Poverty line. The red line corresponds to the Extreme Poverty rate at the national level.

<sup>9</sup> 2006 poverty estimates are not strictly comparable with the rest of the series since important budget constraints forced the DGEEC to postpone data collection until March 2007 while in all other years data collection was performed in the months of August to December of each year (World Bank 2010).

**As poverty almost halved, the size of the middle class (and above) has been growing and represents today the largest socioeconomic group in the country.** Between 2003 and 2013, the proportion of the population earning more than 10 dollars a day per person grew by over 20 percentage points, representing in 2013 half of the total population of the country.<sup>10</sup> The rate of growth of the middle class experienced by Paraguay is similar to the one the whole region, which also grew by 50 percent.<sup>11</sup>

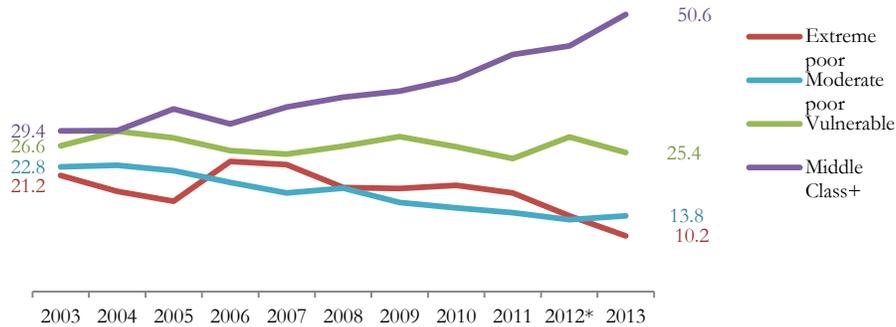
**And yet, as at the beginning of the period, still one in four Paraguayans remain economically insecure (the *vulnerable*), with a sizeable probability of falling back into poverty.** In a context of a highly volatile environment such as that of Paraguay and with the recent sizeable improvements observed, it will be more important than ever to seek mechanisms to ensure that the gains obtained in the good periods are not quickly reversed when the winds change.

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<sup>10</sup> The threshold that separates the vulnerable and the middle class is set at \$10 a day per person (2005 PPP terms), following the definitions in Ferreira et al. (2012)

<sup>11</sup> Ferreira et al (2012).

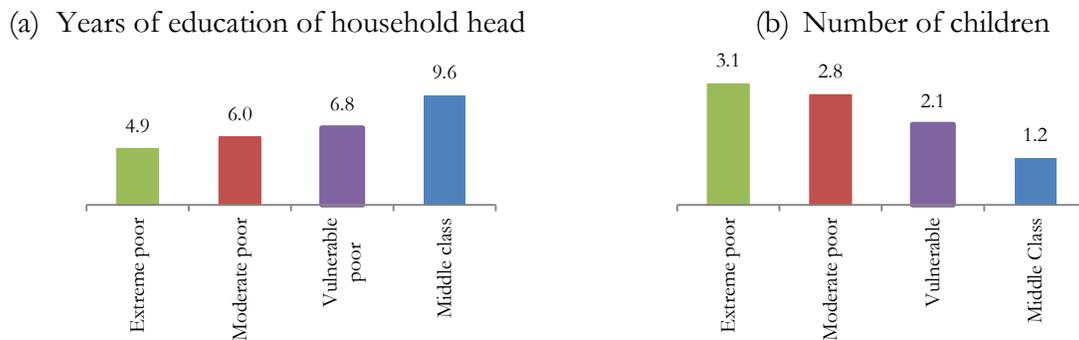
Figure 8: Socioeconomic composition from 2003 to 2013



Source: Author’s calculations using EPH (2003-2013). Official poverty lines were used for extreme and total poverty. The vulnerability line (separating the vulnerable group from the middle class and above) is set at 10 US\$/day in PPP. All values are expressed in Asuncion prices.

**Households that are in poverty are headed by significantly less educated individuals than those currently in the middle class or higher** [Figure 9]. Indeed, household heads in the middle class have four more years of education than the poor and at least two more than the vulnerable. Similarly, middle class families tend to have less than half the number of children than poor families (on average 1.2 as opposed to more than 3) and largely reside in urban areas. Finally, and in relation to opportunities available to different groups, only a small minority of the extreme poor speak only Spanish at home, in contrast to a third among middle class families.

Figure 9: Socioeconomic characteristics by economic groups in 2013

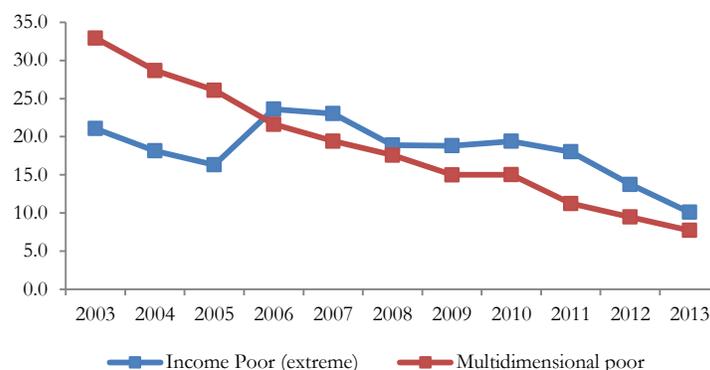


Source: Authors’ calculations using EPH 2013.

**Despite the sizeable proportion of people that are still moderately poor or vulnerable to fall into poverty, there are some signs of some structural and lasting changes to poverty as the extent of deprivations in non-monetary dimensions fell throughout the decade even in periods when monetary poverty did not decline as much such as between 2003 and 2011**

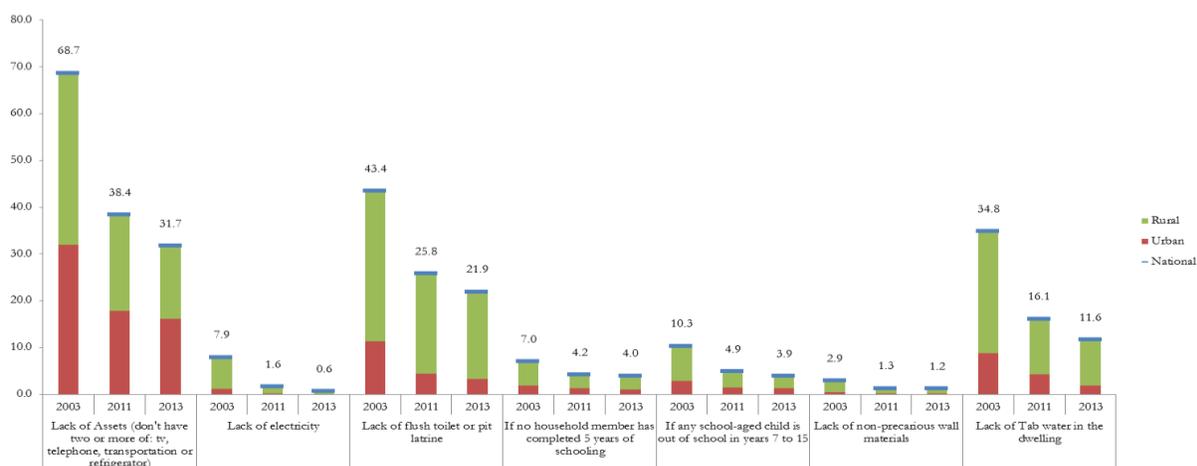
[Figure 10]. Unlike monetary measures, which rely on cut-offs based on income or consumption, non-monetary indicators of poverty measure the share of the population deprived of a key good or service using defined standards.<sup>12</sup> The proportion of Paraguayans that are deprived in at least four out of seven key non-monetary dimensions of well-being, including education, housing quality, water, sanitation, electricity, and assets, has gone down from a third of the population to less than a tenth.

Figure 10: Multidimensional poverty and income poverty incidences, 2003 to 2013



Source: Authors' calculations using EPH

Figure 11: Deprivations by dimension and area, 2003, 2011 and 2013



Source: Calculations based on EPH 2003 and 2011.

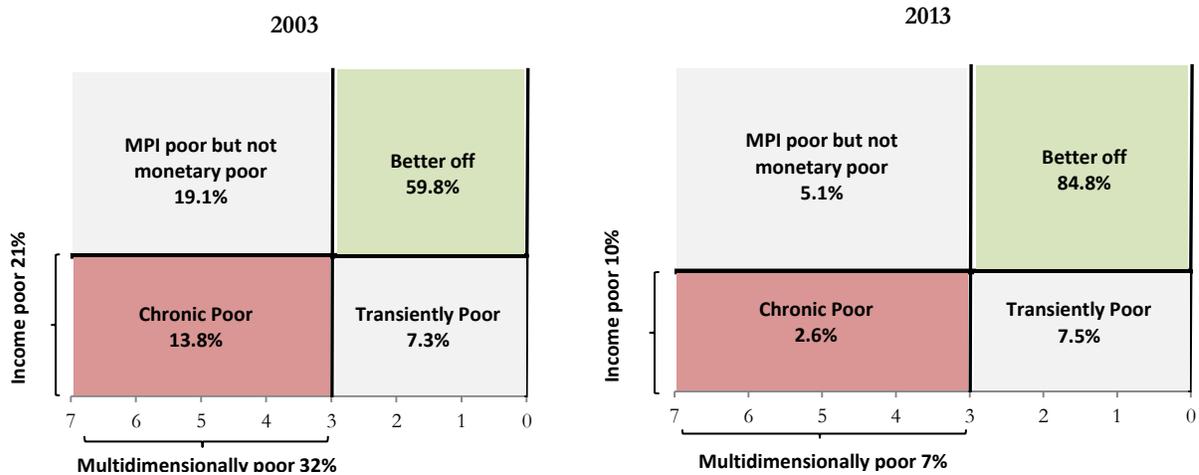
**While important progress in non-monetary dimensions have been observed in both urban and rural areas, the country still faces challenges especially in rural areas.** Between 2003 and 2013, Paraguay has successfully brought down the degree of deprivation to less than 5 percent in terms of access to electricity, education attainment and enrolment in secondary education. At the

<sup>12</sup> Countries are increasingly adopting multidimensional poverty approaches to assess their progress. One of the pioneers in Latin America is Mexico, see: [http://www.coneval.gob.mx/rw/resource/Metodologia\\_Medicion\\_Multidimensional.pdf](http://www.coneval.gob.mx/rw/resource/Metodologia_Medicion_Multidimensional.pdf).

national level, the amount of people who did not own at least two key assets (e.g., TV, telephone, transportation device, refrigerator) decreased from 69 percent of the population in 2003 to 32 percent in 2013 [Figure 11]. Similarly, the proportion of people who lived in dwellings without piped water or toilet facility decreased by 23 percentage points and 22 percentage points respectively.

**Improvements in non-monetary dimensions of well-being during this period suggest also a lower level of chronic poverty.** While chronicity refers to the persistence of poverty over time, in the absence of nation-wide data that reflects individual-level income over time, the chronic poor are identified as those who are both income poor and are also deprived in at least three non-monetary indicators.<sup>13</sup> This relies on the idea that multidimensionally poor individuals are more likely to have been monetary poor in more than one period.<sup>14</sup> With both the improvement in monetary and non-monetary poverty in the last decade, there has been a sizeable decrease in the share of the population considered chronically poor, falling from 14 percent in 2003 to less than 3 percent in 2013 [Figure 12]. At the same time, the percentage of people who were not poor across either dimension (the better off – blue area) rose by 25 percentage points, reaching 85 percent in 2013.

Figure 12: Matrix of multidimensional and income poverty, 2003 and 2011



*Source:* Authors’ calculations based on EPH 2003 and 2011. The horizontal line shows the monetary extreme poverty line. X-axis measures the number of household deprivations; Y-axis is the household per capita income. Seven dimensions were considered for the multidimensional axis: lack of assets (does not own two or more of the following items: TV, telephone, transportation device or refrigerator), lack of electricity, lack of flush toilet or pit latrine, if no household member has completed 5 years of schooling, if any school-aged child is out of school in years 7 to 15, lack of non-precarious wall materials and lack of running water in the dwelling.

<sup>13</sup> These are the “multi-dimensionally poor” in the Alkire-Foster (2011) sense.

<sup>14</sup> Lopez-Calva, et al. (2014).

**In sum, in the last decade Paraguay has experienced substantial increases in individuals' well-being.** Today, the majority of the country has reached a level of income that is regionally considered as the middle class threshold. The improvements in non-monetary dimensions also suggest that the advances might be long-lasting. However, the challenges remain. A sizeable proportion of the population, while not poor, remains vulnerable to falling back into poverty, and the large bulk of the monetary and non-monetary deprivations are concentrated in rural areas - intrinsically dependent on the highly volatile agriculture sector.

The following section will dig into the drivers behind the trends in poverty and inequality described above. Due to the essentially rural nature of the poverty in the country, the analysis will be done separately for the urban and rural extreme poor.

## 2. First Pillar: Mobility out of Poverty

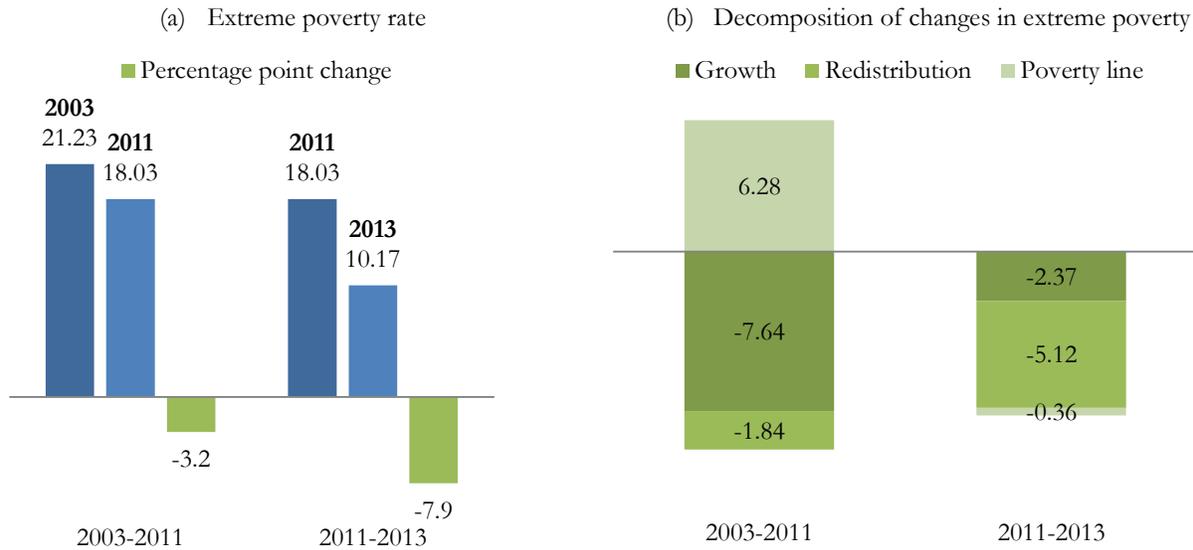
The present section analyzes the factors behind the observed changes in poverty and inequality in the last decade. As described in the next subsection, growth, redistribution and food prices all play an important role in explaining the both the stickiness of extreme poverty until 2011 and the sizeable improvement since then. Since labor incomes represent a driving force behind the improvements in well-being, subsections 2.2, 2.3., and 2.4 focus primarily on the role of the labor markets, first at the national level linking evolution of output and employment, and then by deepening into the specific factors in rural and urban areas, respectively.

### 2.1 Main factors

**Three factors explain changes in poverty rates between two years: (1) changes in the position of the poverty line, (2) changes in position of the distribution (growth), and (3) changes in the shape of the distribution (redistribution).** In the case of Paraguay these three factors have been at play in explaining both the stickiness of the extreme poverty headcount between 2003 and 2011, as well as the impressive decline in poverty between 2011 and 2013. This sub-section explains the role that these three factors had in explaining the observed evolution in poverty and income inequality. Sub-section 2.2 digs deeper into the link between macroeconomic growth and households incomes. Finally, sub-sections 2.3 and 2.4 explore the role of labor markets as a means towards exiting poverty in rural and urban areas respectively.

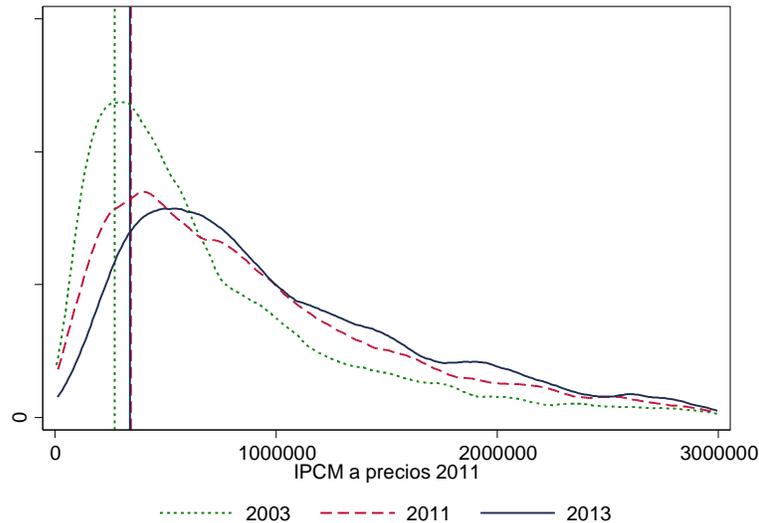
**Extreme poverty fell significantly between 2011 and 2013 after stubbornly fluctuating around 18 percent between 1997 and 2011 despite periods of impressive economic growth.** While the extreme poverty rate fell only slightly between 2003 and 2011 by 3.2 percentage points, it fell by 7.85 percentage points between 2011 and 2013 [Figure 13]. This impressive drop in the extreme poverty rate was driven by two factors: 1) the continuing effects of growth and redistribution and 2) a decrease in food price inflation. As the extreme poverty line is determined solely based on the price of a selected basket of food, increases in food prices generated sizeable increases in the extreme poverty line.

Figure 13: Extreme poverty change (left) and decomposition of extreme poverty changes (right), between 2003 and 2011 and between 2011 and 2013



Source: WB calculations based on EPH 2003, 2011, and 2013.

Figure 14: Per capita household income distributions in 2003, 2011 and 2013 with respective extreme poverty lines



Source: WB calculations based on EPH 2003, 2011, and 2013. Per capita household incomes are expressed in 2011 prices, using the General CPI as deflator.

**Between 2003 and 2011, while both growth and distribution were contributing to a significant reduction in poverty, food prices were rising at a higher rate than general prices**

**in the economy and thus mitigated to a significant extent the reduction in extreme poverty rate.** This can be seen by comparing in Figure 14 the shift to the right and widening on the income distribution between 2003 (dotted green line) and 2011 (dashed red line), as at the same time the extreme poverty line moves to the right. Quantifying the effects of these three forces, growth and improved income distribution contributed to a decline of 9.48 percentage points in poverty between 2003 and 2011, while rapid increases in the price of the food basket (relative to general prices) increased poverty by 6.28 percentage points [

Figure 13]. The net effect was minor poverty reduction in spite of the sizeable economic growth and gains in redistribution of that period.

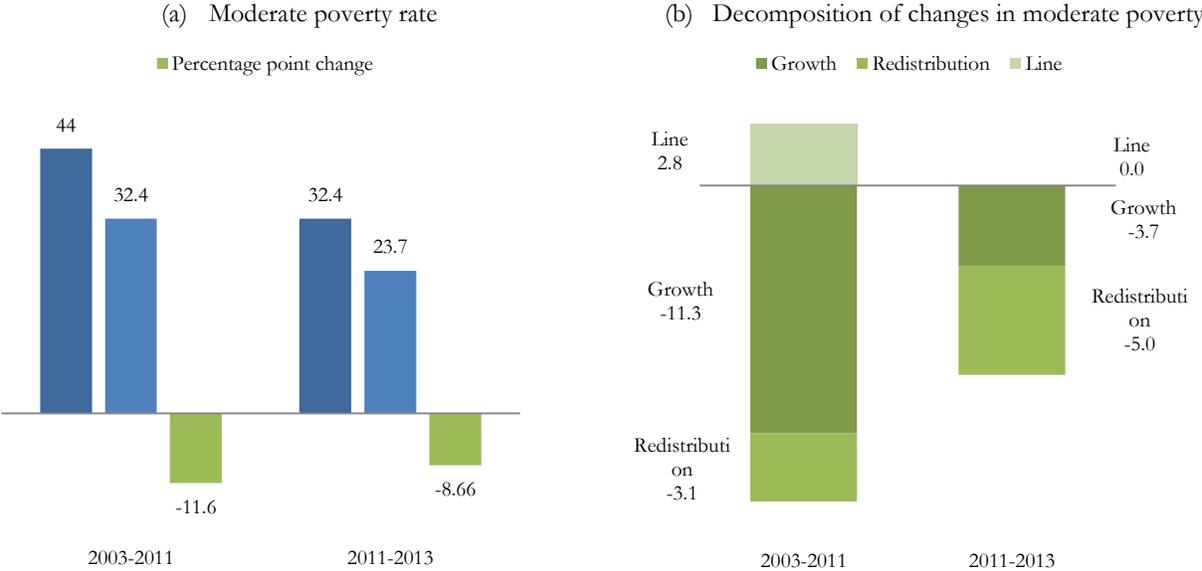
**In contrast, since 2011 all three forces have been working in the same direction.** The deceleration of the increase in food prices between 2011 and 2013 means that, in real terms, the extreme poverty line (updated using food prices from Central Bank of Paraguay) was marginally lower in 2013 than the line in 2011. As a consequence, prices play a limited (but positive) role in the decrease in extreme poverty rate, whereas a better distribution of incomes –reflected in the widening of the distribution (solid blue line in Figure 14 - is behind 65 percent of the total change in the headcount (5 percentage points out of close to 8), and average income growth – the shift to the right of the distribution - explains the remaining 35 percent of the fall [

Figure 13].

**An additional contributing factor that is behind the sensitivity to food prices and the extreme poverty line is related to the fact that a large proportion of Paraguay's population has household incomes very near the extreme poverty line** [Figure 14]. Due to this clustering near the extreme poverty line, even slight shifts in the poverty line can have noticeable impacts on the observed poverty rates.

**In the case of moderate poverty, food prices played a less crucial role in explaining the observed fall in poverty throughout the decade.** Increases in the moderate poverty line associated with rising food prices have limited the reduction in moderate poverty between 2003 and 2011, but to a lower extent, because the basket used to define the line contains also non-food items [Figure 15]. Growth have been the driving force in this first period, while changes in the distribution have contributed substantially to the equally impressive fall in moderate poverty between 2011 and 2013.

Figure 15: Moderate poverty change (left) and decomposition of moderate poverty changes (right), between 2003 and 2011 and between 2011 and 2013

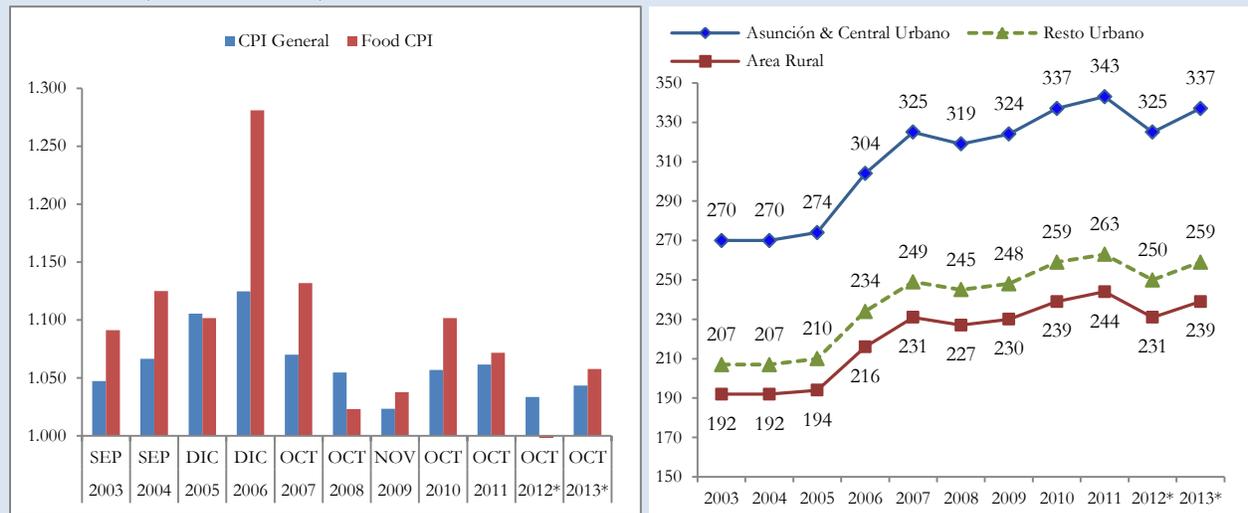


Source: WB calculations based on EPH 2003, 2011, and 2013.

**Box 1. Food prices and the extreme poverty rate**

**Between 2006 and 2011, food price inflation outpaced overall inflation in Paraguay resulting in higher extreme poverty** [Figure B1.1]. Following the traditional approach to measuring income poverty, the extreme poverty line is based on a basket of basic food items as determined using the 1997/98 Household Income and Expenditure Survey. The value of the basket is annually adjusted according to the increase in the Food Consumer Price Index (from Asunción, constructed by the Central Bank of Paraguay). Therefore, increases in food prices in the past decade, which were larger than the price of the overall basket, led to a sizeable appreciation of the extreme poverty line, rising almost 30 percent from 270 thousand *Guarani* in 2003 to 343 thousand *Guarani* in 2011 (both expressed in 2011 prices).

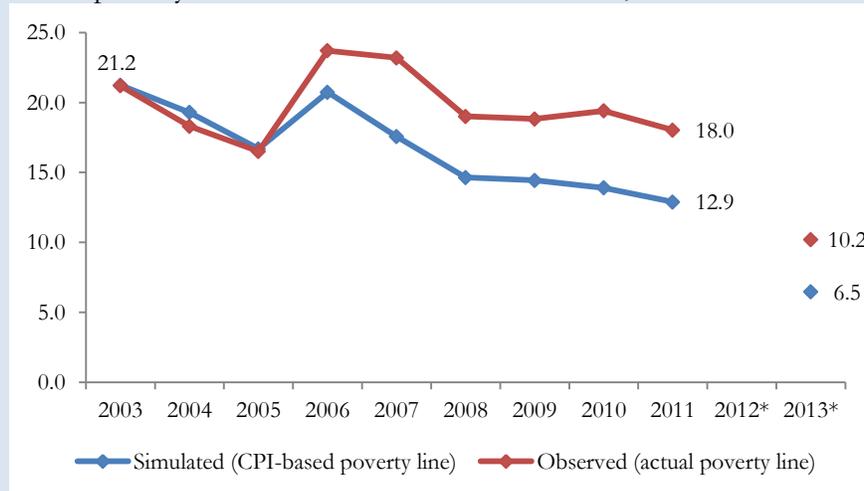
Figure B1.1: Increase in food CPI and general CPI between survey years and extreme poverty line in real terms (2011 October)



Source: Authors' calculations based on Central Bank of Paraguay and DGEEC.

If food prices had increased at the same rate as overall inflation poverty would have fallen substantially between 2006 and 2007, from 20.7 to 17.6 percent, a year when it actually fell by less than one percentage point [Figure B1.2]. That is, gains in the income of the poorest were largely absorbed by the increases in the price of the basic food basket. As the poorest spend most of their budgets on food, this captures not just a mathematical relationship but an actual stagnation in their food purchasing ability. As food prices remained relatively high, poverty hovered around 18 percent between 2008 and 2011, roughly 5 percentage points higher than it would otherwise have been. In 2012 and 2013, however, food price inflation fell to closely trend overall CPI [Figure B1.2]. As a result, 2012 and 2013 saw significant drops in extreme poverty as income gains among the poorest overtook the increase in the prices of food.

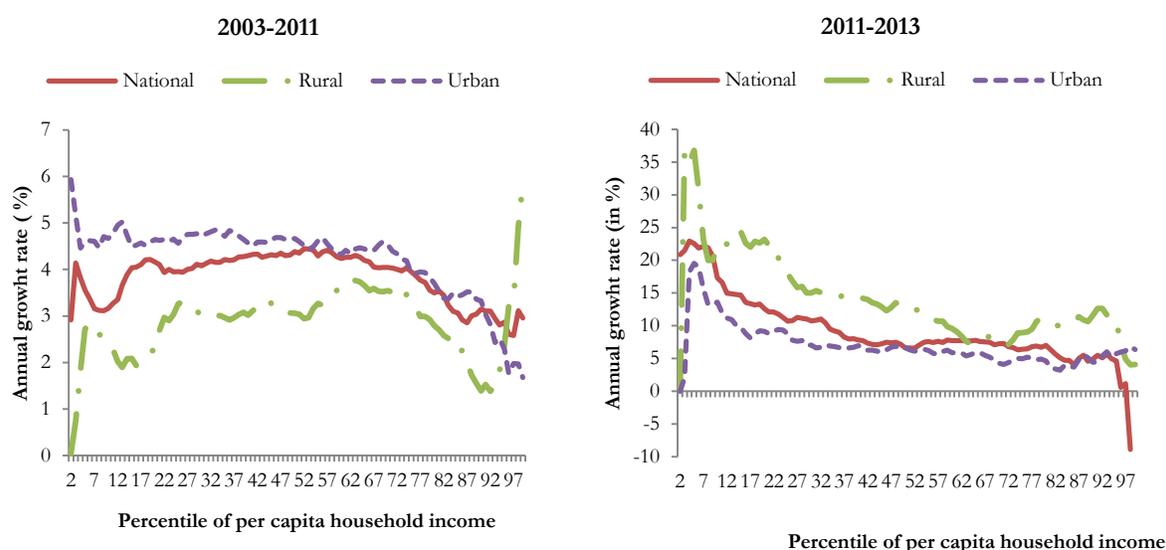
Figure B1.2: Extreme poverty headcount between 2003 and 2013, observed and simulated



Source: Authors' calculations based on EPH 2003-2011 and 2013.

**Disproportionate income growth for the less well-off is a strong factor behind the observed improvements in poverty.** As mentioned above, average per capita household income grew more strongly between 2011 and 2013 than in the previous eight years, but quite crucially, the growth in the recent years was disproportionately stronger among those at the bottom of the distribution. The Growth Incidence Curves [Figure 16] depict the annual per capita household income growth rates by percentile of the distribution. Three features emerge. First, annual growth rates are significantly lower between 2003 and 2011 than in the 2011-2013 period (see change in values of the vertical axes). Second, the latter is considerably more progressive than the former. Finally, in contrast to the first part of the period, income growth has been everywhere higher in rural areas than in urban ones in recent years.

Figure 16: Growth Incidence Curve, 2003-2011 and 2011-2013

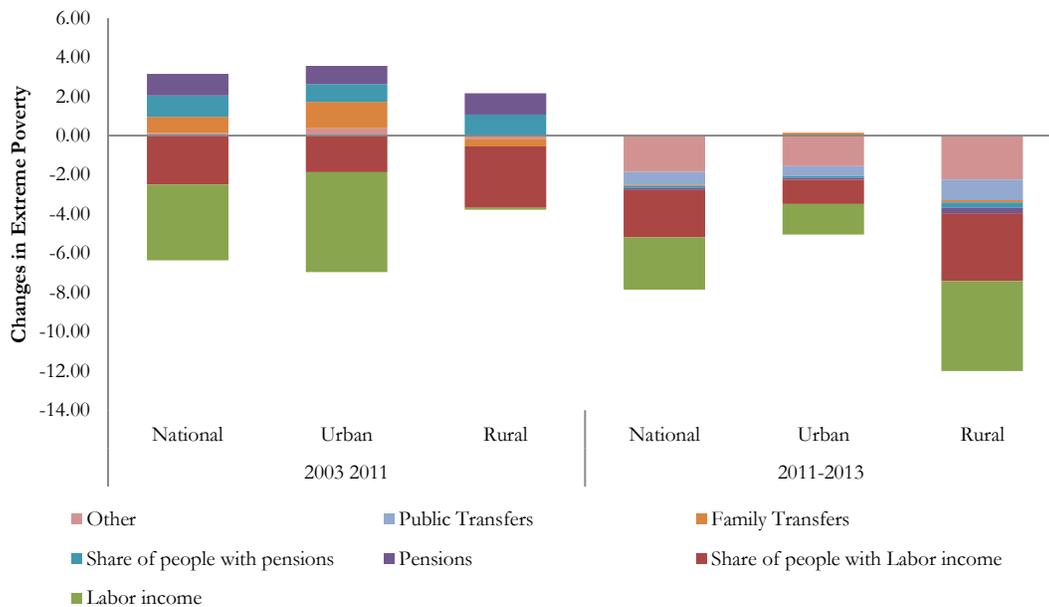


Source: Authors' calculations based on EPH 2003, 2011, 2013. Percentiles 1 and 99 are excluded from the figures.

**Rising labor income has been the driving force behind the reduction in both extreme and moderate poverty.** Income from labor is not only the main source of income for poor families – representing two-thirds of incomes of the bottom quintile-, it is, in fact, the factor that has led many to move out of poverty [Figure 17]. This is both (and in similar proportions) because of increased earnings and due to an increased number of earners. The prominent role of labor income in reducing poverty is consistent with the trends observed for LAC as a whole: labor income accounts for 70 percent of the reduction of poverty in recent years in the region.<sup>15</sup>

<sup>15</sup> World Bank (2014).

Figure 17: Shapley decomposition by components of welfare measure; changes in extreme poverty 2003-2011 and 2011-2013.



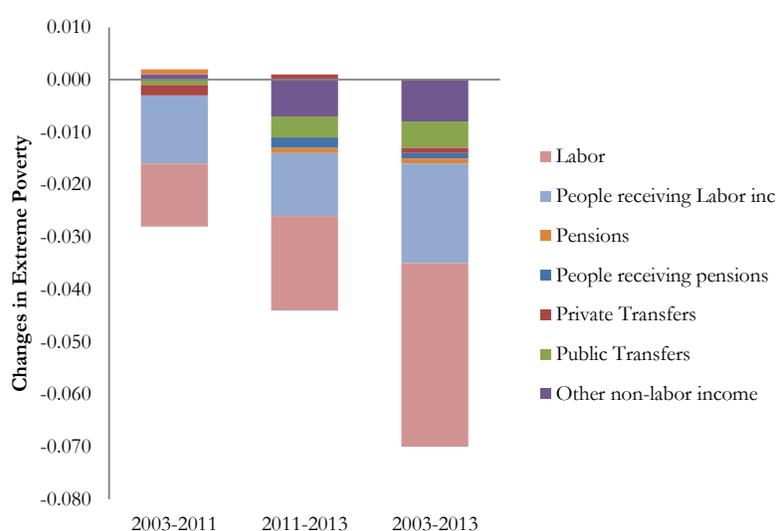
Source: Authors' calculations based on EPH 2003, 2011 and 2013. Azevedo et al. (2012)

**In the case of extreme poverty reduction between 2003 and 2011, the changes over time of the non-labor components of income—including pensions and transfers—were regressive.** For rural households the negative effect is largely arising from pensions – or rather, their lack of access to pensions - whereas in urban households it is equally divided between transfers from family and pensions. It is worth noting that, according to household data, government transfers such as *Tekopora*, which are included in the “other non-labor income” category, have had very little impact on poverty, which may be explained by its still low coverage during this time period. Also interesting is the role of family transfers (contributing to poverty reduction in rural areas, while opposing it in urban), suggesting that low income rural households are net recipients of private transfers (from abroad and nationally), while worse off urban households have seen a fall in private transfers. The role of transfers to cope with income fluctuations among rural poor is further explored in Section 2.3.

**Between 2011 and 2013, however, all labor and non-labor income components contributed to the reduction in extreme poverty.** While labor income continues to be the main force behind the improvement, public transfers as well as “other incomes” (which include, notably, property value in the form of imputed rents) play a significant role as well [Figure 17]. While public transfers represent at the end of the period a larger share of total family income, they still account for less than 5 percent of the total at the national level and less than 10 percent in urban areas. It is also important to highlight that private (family) transfers continue to be benefiting the rural poor, while the opposite is true for the urban poor.

**As in the case of poverty reduction, almost 80 percent of the improvement in equality in the last decade – a 7 Gini points fall—is driven by rising labor incomes.** This is both because of increase incomes of earners as well as a rise in the proportion of people working. Public transfers, while to a lesser extent, contribute to 7 percent of the decline in inequality observed in both periods, though in recent years these became more effective [Figure 18]. Interestingly, private transfers (remittances as well as within country transfers) had an equalizing effect between 2003 and 2011 but ceased to be so in the following two years. Finally, an important contributor to the decline in inequality in the last few years is represented by the “other non-labor income” component, which includes property value as well as capital income and rents.

Figure 18: Shapley decomposition by components of welfare measure; changes in inequality between 2003-2011 and 2011-2013. Urban and rural areas



Source: Calculations based on EPH 2003, 2011 and 2013. Azevedo et al. (2012)

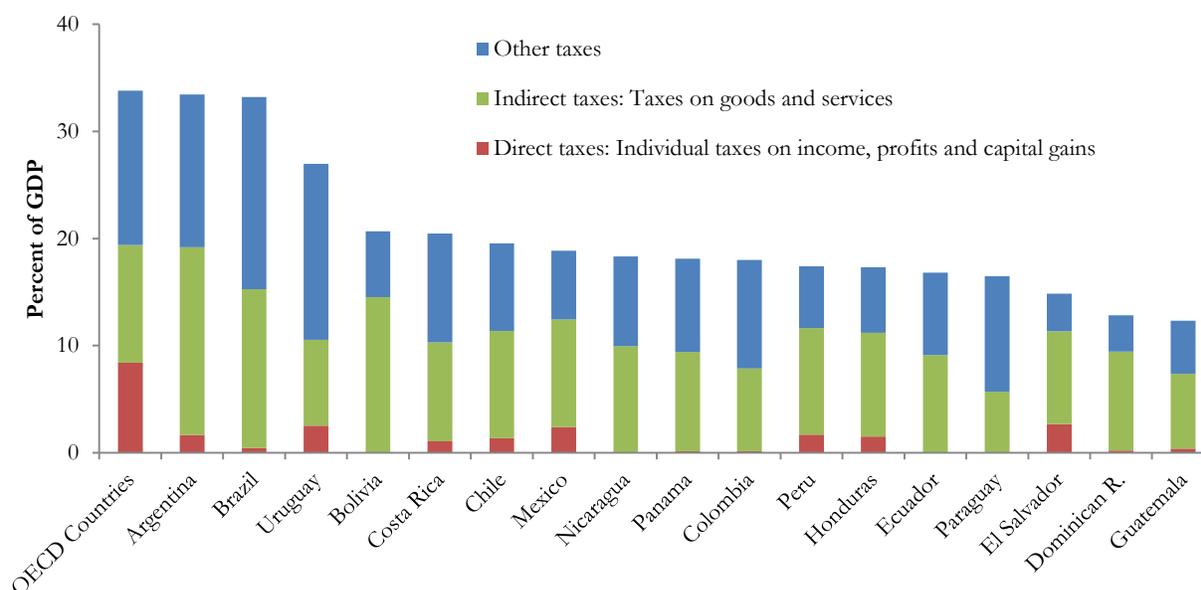
## Fiscal Policy: Results from the Commitment to Equity Project

**The limited role of public transfers in reducing poverty and inequality brings the question of the importance of fiscal policy from a broader perspective, including taxes and government expenditures in transfers as well as public services.** The Commitment to Equity (CEQ) project, a joint initiative of Tulane University and the Inter-American Dialogue,<sup>16</sup> produced a comparative analysis of a few countries in the region, including Paraguay, on the degree of progressivity of the countries’ fiscal systems.

<sup>16</sup> For more information, see the Commitment to Equity (CEQ) project website ([www.commitmenttoequity.org/](http://www.commitmenttoequity.org/)) and Lustig, Pessino and Scott (2014).

**In line with other LAC countries, Paraguay’s tax collection is low relative to the OECD average and relies more heavily on consumer taxes.** In 2010, Paraguay’s tax revenue was only 16.5 percent of its GDP, compared to an average of 34 percent in the OECD [Figure 19].<sup>17</sup> Lower tax revenues imply less fiscal space for social investments, such as improved education and infrastructure. Furthermore, while a quarter of the OECD’s tax revenue was derived from personal income tax, a typically progressive tax, Paraguay did not enact personal income taxation until 2012.<sup>18</sup> Instead, Paraguay relies heavily on the Value Added Tax, which alone accounted for 48 percent of tax revenues in 2010.<sup>19</sup> This type of consumption tax is disproportionately paid by low-income consumers who spend a higher proportion of their income on necessities.

Figure 19: Tax collection as proportion of GDP for Latin American and the Caribbean countries and OECD.



Source: World Bank. 2014. "Social Gains in the Balance. A Fiscal Policy Challenge for Latin American and the Caribbean". Washington, DC: LCSPP Poverty and Labor Brief. No 6. Note: OECD Stats: 2010 Tax Data Base. NOTE: Other includes corporate taxes, social security contributions, payroll taxes, property taxes and other sources.

**Paraguay’s fiscal system is among the weakest in the region.** Using comparable methodology and harmonized data for a set of Latin American countries, Paraguay is the least effective of the seven countries (Argentina, Bolivia, Brazil, Guatemala, Mexico, Paraguay, Peru, and Uruguay)

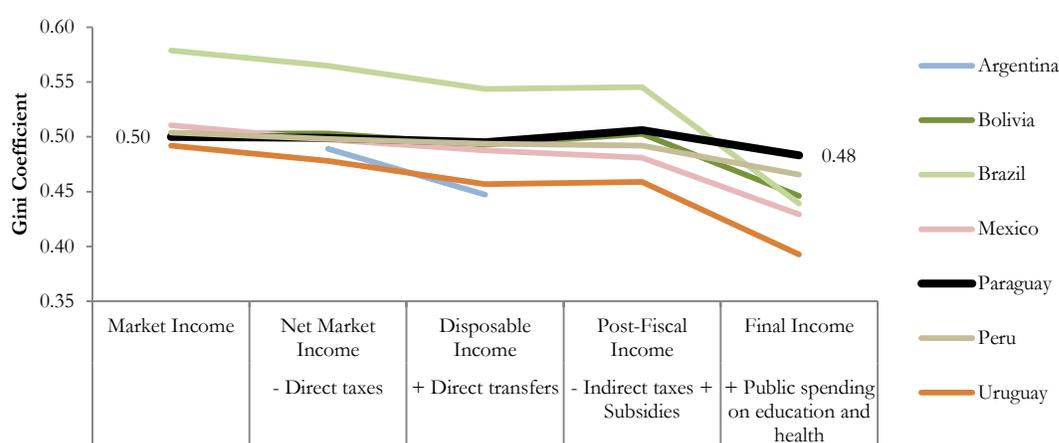
<sup>17</sup> OECD (2014). *Revenue Statistics in Latin America 2014*, OECD Publishing. doi: [10.1787/9789264207943-en-fr](https://doi.org/10.1787/9789264207943-en-fr). Tax revenue in Paraguay in the latest available year in the report is 17.6 percent of GDP for the year 2012 (estimated).

<sup>18</sup> Higgins et al (2014).

<sup>19</sup> Higgins et al (2014).

analyzed at mitigating inequality through fiscal policy [Figure 20 **Error! Reference source not found.**].<sup>20</sup> The Gini coefficient for market income, earnings before all taxes and transfers, in Paraguay is 0.50 – similar to most of the other LAC countries analyzed. Direct taxes and transfers reduce the Gini coefficient by less than one percent while indirect taxes reverse this progress: the post-fiscal income Gini coefficient is slightly higher than the market income Gini meaning that income inequality is slightly greater after transfers and taxes are taken into account. Finally, the provision of public education and public health services decreases the effective income inequality somewhat to 0.48. Though slightly lower than the initial Gini of 0.50, Paraguay’s decline of 0.02 Gini points through fiscal policy is the smallest reported.

Figure 20: Comparative Redistribution Effectiveness of Fiscal Systems in LAC



*Source:* Bucheli et al. (2014), Higgins et al (2014), Higgins and Pereira (2014), Jaramillo (2014), Lustig and Pessino (2014), Paz Arauco et al. (2014), and Scott (2014). The figure shows the Gini coefficients calculated using each of the five CEQ income definitions using 2009 data in every country except for Mexico and Paraguay, which are 2010.

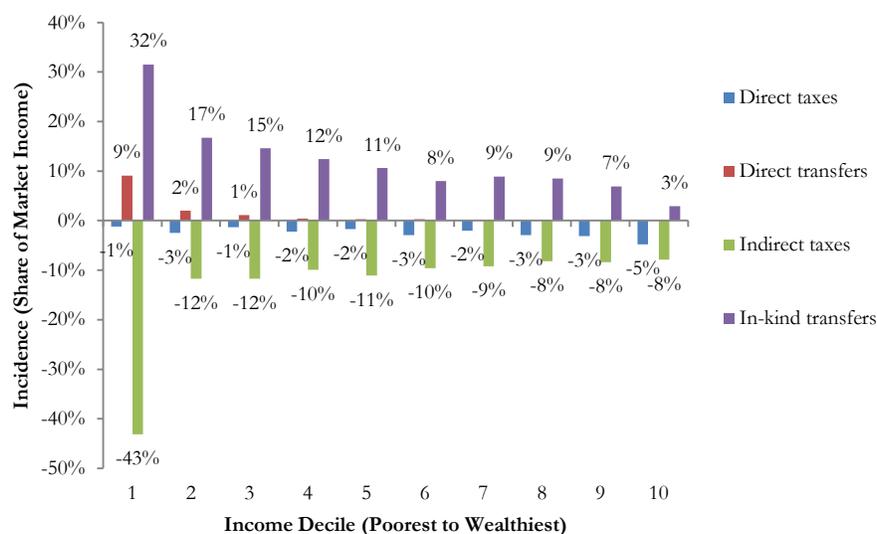
**The combination of taxes and transfers in Paraguay results in every income decile being a net payer to the fiscal system – the only country of those included in this analysis in which this happens.**<sup>21</sup> [Figure 21] **Error! Reference source not found.** reports the average share of market income either paid in tax or received in direct transfers or in-kind transfers (such as public education). The bottom deciles, though largely impoverished, report paying direct taxes. This differs from many countries, where typically the poor do not pay any direct taxes. In addition, the bottom decile pays a significant share of their market income, an average of 43 percent, in indirect taxes

<sup>20</sup> Higgins et al. (2014) and Lustig, Pessino and Scott (2014) report the Gini coefficient before and after taxes and transfers for several countries in the region.

<sup>21</sup> Higgins et al (2014).

such as Value Added Taxes and combustibles tax. These indirect taxes result in increases in extreme poverty from 14.4 percent based on Disposable Income (Market Income minus direct taxes plus direct transfers) to 16.2 percent, as measured by the international poverty line of \$2.50/day. While direct taxes are progressive (that is, those with more income pay a higher share), indirect taxes are regressive. As indirect taxes are a larger share of all taxes collected, the net effect is a slightly regressive tax system.<sup>22</sup>

Figure 21: Incidence of selected taxes and transfers in 2010, by income decile



Source: Higgins et al (2014).

**Only four out of ten individuals living on less than \$4 per day (including a quarter of those living on less than \$2.50 per day) were recipients of any direct transfer programs in 2010.**<sup>23</sup>

While the spending was well targeted with 47 percent of expenditure reaching the extreme poor (measured at \$2.50 per day) and a total of 68 percent reaching those living on less than \$4 per day, the low coverage rate suggests expansions of these programs could result in significant poverty reduction gains. Furthermore, the transfers received are not large enough to raise households out of poverty. For those living on less than \$2.50 per day who received any direct transfer, the amount received was on average \$0.38 per day.

**Though the Commitment to Equity analysis paints a stark picture of the fiscal policies found in Paraguay in 2010, several recent policy changes have been enacted to address these**

<sup>22</sup> Higgins et al (2014). The Kakwani coefficient is a measure of progressivity in taxation, calculated as the tax concentration coefficient minus the market income Gini coefficient. A regressive tax has a negative Kakwani coefficient. The Kakwani coefficient in Paraguay 2010 is -0.02 (Higgins et al 2014). For comparison, the Kakwani coefficients reported in the other countries included above are as follow: -0.13 in Bolivia, 0.04 in Brazil, 0.11 in Mexico, 0.08 in Peru and 0.07 in Uruguay (Bucheli et al. 2014, Higgins and Pereira 2014, Jaramillo 2014, Lustig and Pessino 2014, Paz Arauco et al. 2014, and Scott 2014).

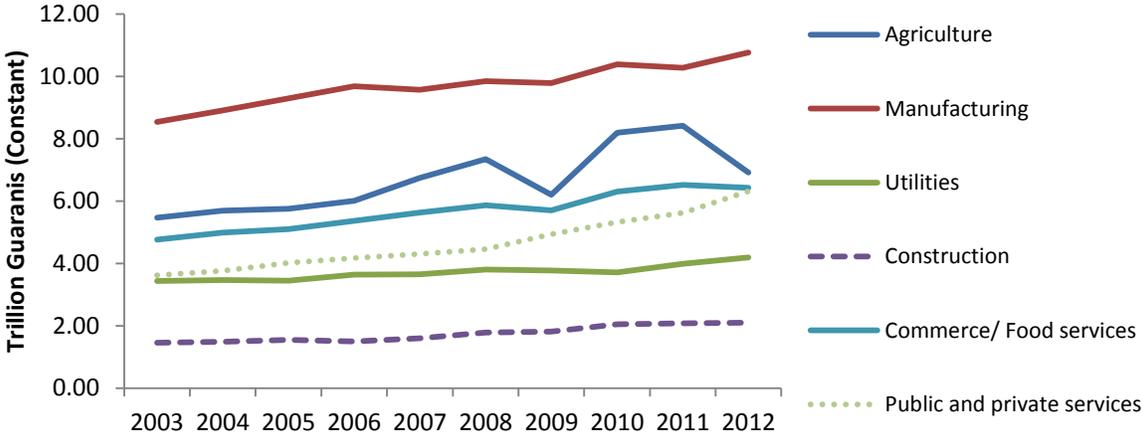
<sup>23</sup> Higgins et al (2014).

**shortcomings.** As mentioned above, direct personal income taxation was introduced in 2012. Additionally, a tax of 10 percent on income from agriculture was passed in 2013. These taxes should have the effect of reducing the regressivity of the country’s taxation. On the other hand, these changes are also accompanied by a new VAT on agricultural and livestock products and an expansion of the current VAT on most products – potentially decreasing the progressivity associated with higher direct taxation. On the spending side, the Government’s *Sembrando Oportunidades* poverty reduction plan aims to fight poverty by targeting a quarter of a million families living in extreme poverty. This plan involves the expansion of cash transfer programs (such as the Tekopora, Tekoha, and Propais II), both in terms of coverage and amount of benefits. Adultos Mayores has also been expanded. Additionally, the FONACIDE law passed in 2012 by Congress regulates the spending of extra revenue from electricity sold to Brazil on infrastructure projects, including investments in educational infrastructure.

## 2.2 Economic Growth and the Labor Market

**As in other economies in Latin America and the Caribbean, improvement in labor market outcomes, both employment rates and wages, has fueled much of the poverty reduction seen in Paraguay since 2003.** While agriculture remains the primary sector of employment for Paraguay’s poor, other occupations, particularly traditionally male-dominated sectors such as construction have become more relevant and, with higher wages than agriculture, present improved labor opportunities for low-skilled labor. This section explores how macroeconomic growth has translated into improved labor market opportunities and the sectoral shifts underlying these changes, particularly for those at the bottom of the skills distribution.

Figure 22: Output by sector, 2003-2012



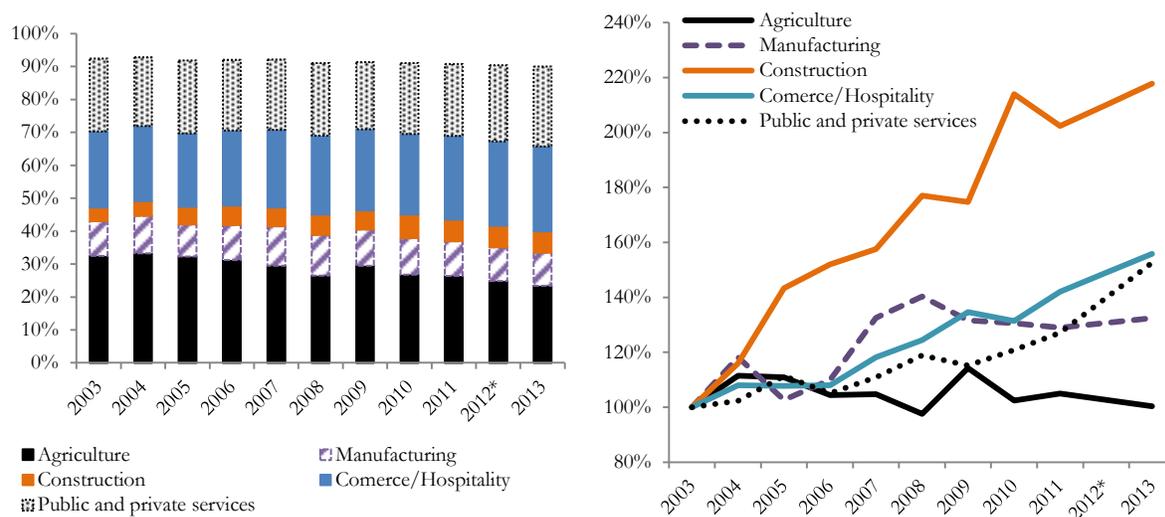
Source: GDP per sector from national accounts, Central Bank of Paraguay. Commerce and food services include commerce and restaurant and hotel services. Agricultural output includes agriculture, animal husbandry, forestry and fisheries. Commerce/Food services also include workers in the accommodations sector. Public and private services include real estate and management services, public administration and defense, education, social and health services,

private household services, external organizations, and other community, social and personal services. Excluded sectors are finance and transportation/communications.

**Economic growth in the past decade has been driven in large part by the two largest sectors in the economy: agriculture and manufacturing.** Though the manufacturing sector consistently dominated the Paraguayan economy in terms of output during this period, accounting for 29 percent of national output in 2003 and 26 percent in 2012, a significant proportion of this output is based on agricultural inputs [Figure 22]. The two largest manufacturing subsectors in 2012, for example, were meat products (2.38 trillion *Guarani*) and beverages and tobacco production (1.58 trillion *Guarani*).

**However, these gains in output in manufacturing and agriculture have not translated into significantly higher employment growth in these activities, particularly for the less skilled.** Though agriculture remains the largest sector of employment, accounting for 26 percent of individuals' main occupations in 2013, this sector showed minimal employment growth between 2003 and 2013 [Figure 23]. Given the employment growth in other sectors, today total employment is much less reliant on agriculture than it was at the beginning of the decade, when it accounted for a third of total employment. Similarly, manufacturing still represents the largest sectors in terms of output (around 25 percent of the total economy) and yet, continues to account for only 10 percent of total employment. The fastest sector of employment growth has been construction— more than doubling between 2003 and 2013 from 98,000 to 214,000. Still, in 2013 only 7 percent of total employment is concentrated in construction.

Figure 23: Sectoral employment participation and growth relative to 2003 for the five largest employment sectors

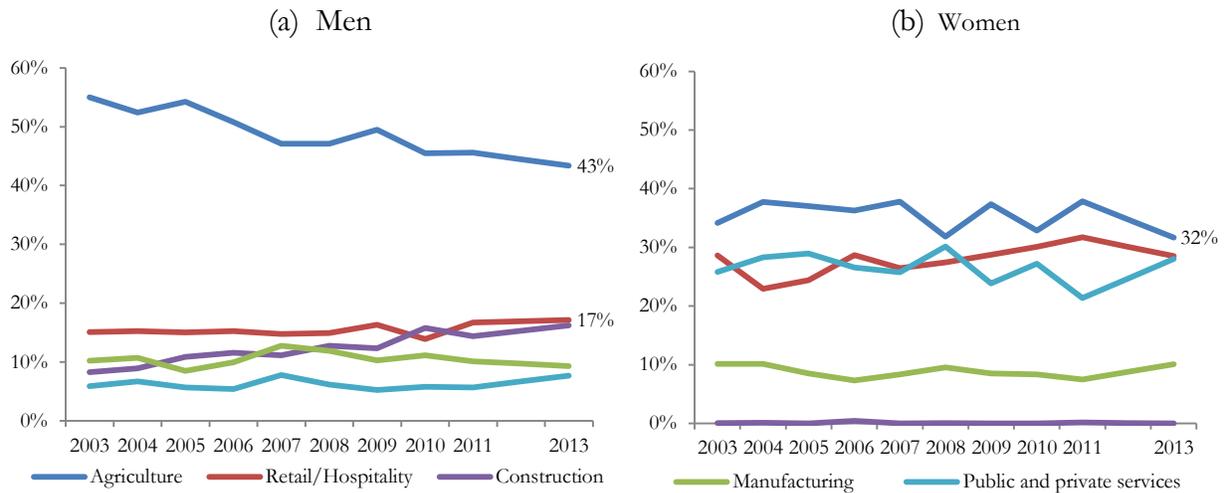


Source: Authors' calculations using EPH data based on main sector of employment. Values for 2012 reported in these figures are the average of 2011 and 2013 and do not use the EPH microdata (as these are still preliminary and subject to change).

**Though agriculture is the main sector of employment for only a fifth of Paraguay's employed adults in 2013, it was the main sector of employment for 43 percent of low-skilled**

**employed men and 32 percent of low-skilled employed women** [Figure 24]. The low-skilled, here defined as adults with only a primary education or less, are disproportionately more likely to live in extreme poverty, accounting for two-thirds of all adults living in extreme poverty in 2011. Between 2003 and 2013, low-skilled men moved away from agriculture, with employment in agriculture falling from 55 percent in 2003 to 43 percent in 2013 among this group. At the same time, employment in construction increased from 9 percent to 16 percent. Low-skilled women slightly increased their attachment to agriculture throughout the period, though employment patterns in agriculture and services (including domestic services) suggest a high degree of mobility between the two sectors for low-skilled women. – no structural change in employment for women.

Figure 24: Sector of employment for low-skill workers

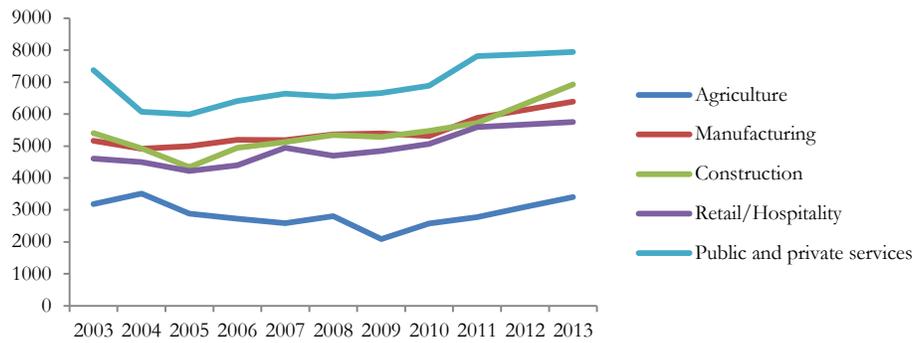


Source: Authors' calculations using EPH. The figures report the proportion of adults with a primary education or less who work in selected sectors. Values for 2012 reported in these figures are the average of 2011 and 2013 and do not use the EPH microdata (as these are still preliminary and subject to change).

**Not only did employment in agriculture for the low-skilled lose preponderance during the data, but also hourly wages continued to be lower and have not grown as much as in other occupations [**

Figure 25]. It should be noted that, as agriculture is particularly dominated by self-employed workers, hourly wages may be more difficult to estimate and prone to misreporting. However, the same pattern is observed in monthly income, suggesting that the hourly wages reported are accurate. While the other sectors saw their monthly income grow to a median of about 1.25 million *Guarani* per month, monthly income from agriculture remained flat at 600 thousand per month (in 2005 *Guarani*). Instead, agricultural workers reported significant income from other employment (their secondary job), accounting for 40 to 50 percent of reported monthly income for low-skilled agricultural workers.

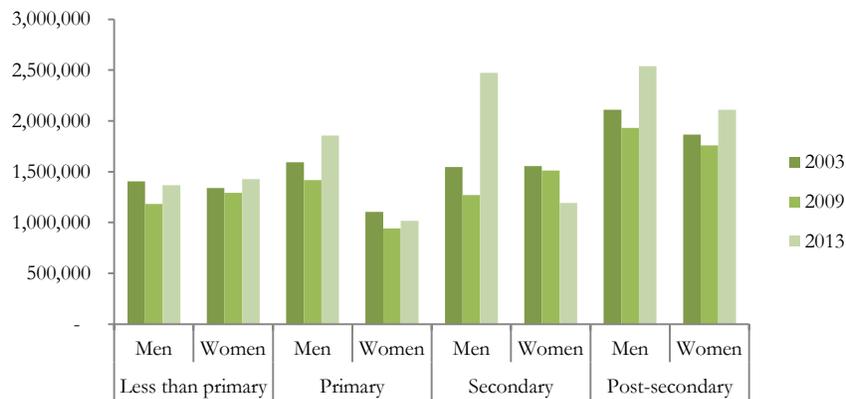
Figure 25: Median hourly wage for employed men with primary schooling or less



Source: Authors' calculations of hourly wages for main occupation using the EPH. Values for 2012 reported in these figures are the average of 2011 and 2013 and do not use the EPH microdata (as these are still preliminary and subject to change). The figure reports median hourly wage for main job in 2005 constant *Guaranis*.

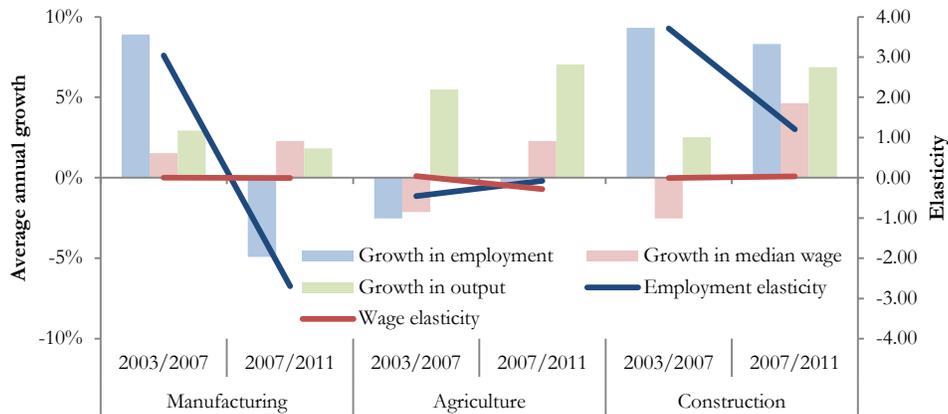
**Public administration and defense, on the contrary, represent a niche for low-skilled men with the highest hourly wages (averaging 9,300 *Guarani* in 2005 terms) and with the biggest gains in employment – a gain not shared with similarly educated women [Figure 26].** This is particularly the case for men who finished secondary school but have no post-secondary training. For this group, the median earnings increased from 1.5 million *Guarani* (2005 constant prices) in 2003 to 2.5 million in 2013. Instead, women who completed secondary schooling and work in public administration or defense saw their median real earnings fall – from 1.6 million *Guaranis* to 1.2 million during this period.

Figure 26: Median monthly earnings of public administration and defense workers, by gender and educational attainment



Source: Authors' calculations of using the EPH (2003, 2009, 2013). The figure reports median hourly wage for main job in 2005 constant *Guaranis*.

Figure 27: Employment and wage elasticity of men with primary schooling or less



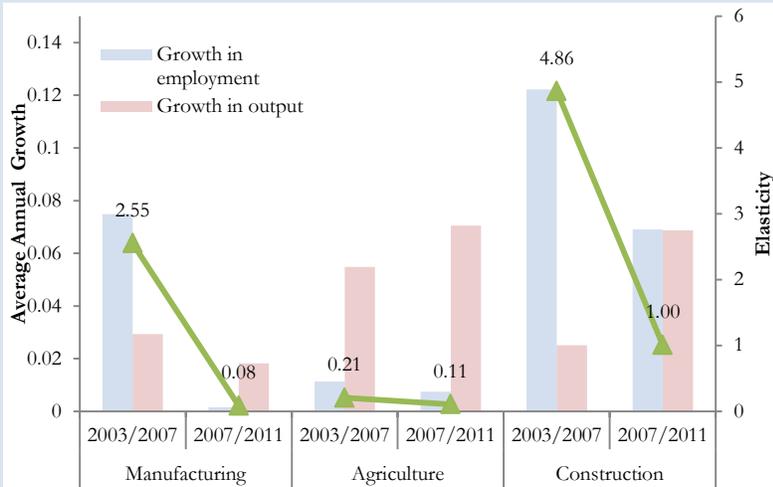
*Source:* Authors' calculations based on EPH and National Accounts data. Wages are measured as median hourly wage in the main job for men with only primary schooling or less and who are employed.

**Wage elasticities remained flat and close to zero during this period, suggesting that changes in output are not reflected in the price of low-skilled labor. This may suggest that adjustments to low-skill labor demand are made along the extensive margin (employment level) rather than in price of labor.** While overall employment elasticity remained positive in the agriculture and manufacturing sectors [Box 2], employment elasticity for low-skilled men was negative in both periods for agriculture and in the later period for manufacturing [Figure 27]. This suggests a replacement of low-skilled labor in these two sectors, potentially with new technology and higher skilled labor. On the other hand, employment elasticity of low-skilled men in construction, though falling between the two periods, remained at 1.21 in the second period meaning that labor demand for low-skilled men grew faster than output in that sector.

### Box 2. Productivity gains over the past decade

**In three of the most important sectors of employment – agriculture, manufacturing, and construction – employment elasticity was lower in the period between 2007 and 2011 than it had been in the previous four year period, suggesting increased productivity [Figure B2.1].** Positive employment elasticity means that, on average, increased output was associated with increased employment. However, an elasticity lower than 1 means that output grew faster than employment, attributable to increased productivity and/or increases in the product prices. Employment elasticity lower than 1 was found in agriculture in both periods, suggesting that recent gains in agricultural output are driven by productivity (or price) gains rather than increases in employment. While manufacturing and construction gains in the first period were associated with significant increases in labor, the second period elasticities suggest productivity gains and, as a result, a relative decline in demand for labor.

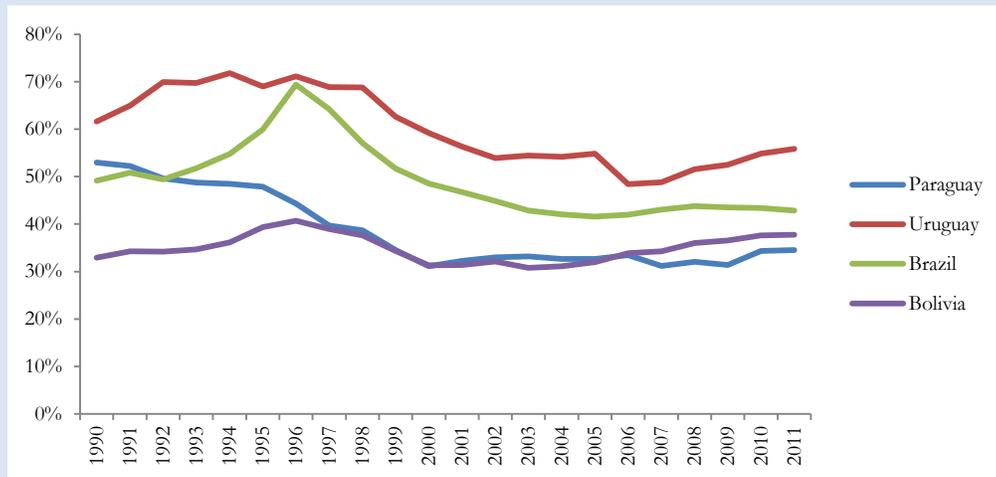
Figure B2.1: Employment elasticity based on average annual growth rate



Source: Sectoral output data is from published national accounts (Central Bank of Paraguay) and employment is from authors' calculations using the EPH.

While recent employment and output trends suggest increases in labor productivity, Paraguay's level of total factor productivity (TFP) remains relatively low [Figure B2.2]. As of 2011, Paraguay's TFP was 35 percent of that of the United States, showing a slight increase from its recent low of 31 percent in 2000; this is a level comparable with Bolivia's TFP (38 percent), but lower than Brazil's (43 percent) and Uruguay's (56 percent).

Figure B2.2: Total Factor Productivity at Current Purchasing Power Parity, as a Percentage of USA TFP

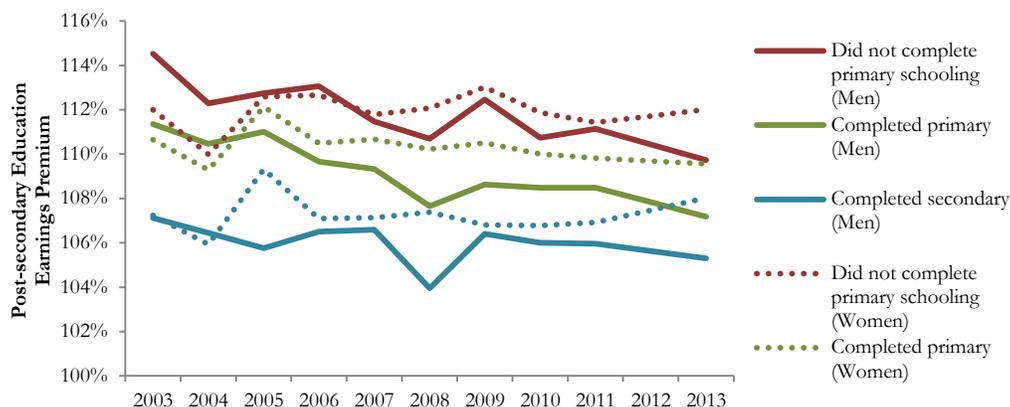


Source: Federal Reserve Bank of St. Louis.

The increase in construction and public sector jobs for low-skilled men may be having an effect on the skills premium, which has fallen slightly since 2003 [Figure 28]. Compared to

men who did not finish primary, the wage premium for post-secondary schooling fell from 1.19 in 2003 to 1.10 in 2013. Similarly, compared to men who completed primary but did not complete secondary schooling, the wage premium fell from 1.14 to 1.07 in 2013. Interestingly, the wage premiums for women in these two schooling groups did not fall as wages for women remained fairly constant in real terms. This highlights the important role of increasing earnings opportunities for low-skilled male labor in sectors like construction and defense and a lack of similar opportunities in sectors with significant female employment.

Figure 28: Wage premium associated with post-secondary schooling has fallen for men since 2003



Source: Authors' calculations based on EPH. This figure plots the ratio of the mean log of hourly wages in the primary occupation for workers with some post-secondary training to the mean log of hourly earnings for three educational attainment groups (did not complete primary, completed primary, completed secondary). The analysis is limited to the employed population reporting positive earnings in their primary occupation. Values for 2012 reported in these figures are the average of 2011 and 2013 and do not use the EPH microdata (as these are still preliminary and subject to change).

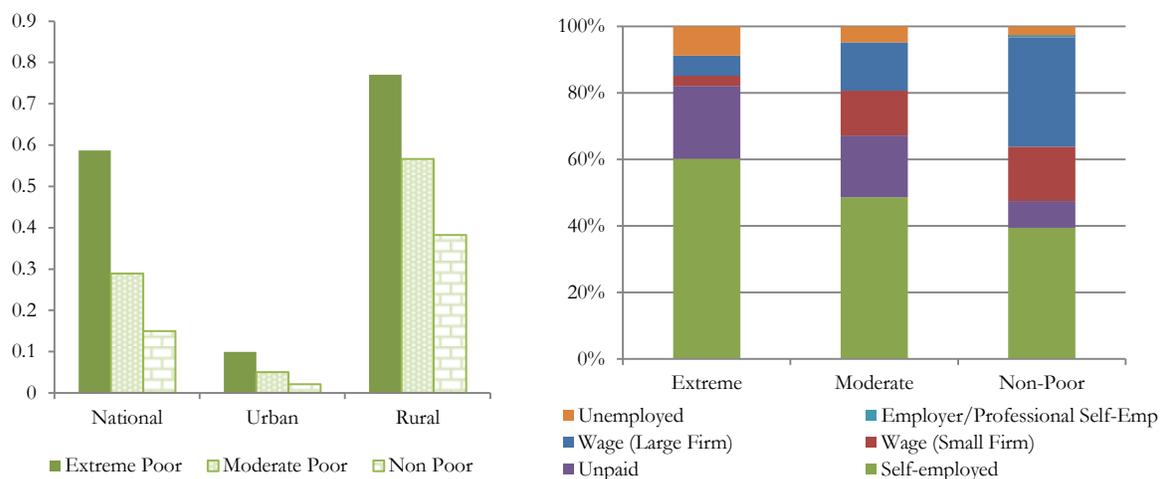
**Overall, the growth seen in Paraguay since 2003 has two features in terms of employment: first, output increases in agriculture and manufacturing have been accompanied by falls in low-skilled employment, suggesting an increase in labor productivity which was not reflected in higher hourly earnings; second, there is a shift to other better paid sectors representing increased employment opportunities for the low-skilled, such as construction and public administratio.** Even in sectors that are not male-dominated, such as employment in private households, restaurants and hotels, low-skilled men have seen a sharper increase in their earnings than similarly educated women. These improvements in employment opportunities for people with moderate education can potentially help families moved out of poverty in both rural and urban areas.

## 2.3 Drivers of rural poverty

**Rural poverty in Paraguay is defined by dependence on highly volatile income sources – particularly agricultural self-employment.** Due to limited access to financial markets and infrastructure, households face limited opportunities to diversify or insure against income volatility. Instead, reliance on informal lending and family transfers are important strategies used by the rural poor.

**Agriculture is the main source of income of the extreme poor living in rural areas, but most are self-employed or unpaid (especially women), cultivating few crops for both home consumption and a few for market.** On average, 77 and 57 percent of household labor income in rural areas below the extreme poverty and moderate poverty lines, respectively, comes from activities in agriculture, cattle or fishery [Figure 29]. In contrast, the share of agricultural income of non-poor rural households is around 40 percent. Family agriculture tends to cultivate a few crops for both consumption and a few for market.<sup>24</sup> For many of these families, agriculture is fairly basic, with insufficient irrigation systems, inadequate agricultural practices and low use of technology. They also have limited access to markets, especially in a context of low connectivity.<sup>25</sup>

Figure 29: Share of income from primary sector activities over total labor income (left) and sector of employment for rural adults by poverty status, 2013.



*Source:* Authors' calculations using the EPH 2013. The data universe refers to all adults ages 16-65 in the labor force. Self-employed professionals (those who finished secondary schooling) are combined with employers.

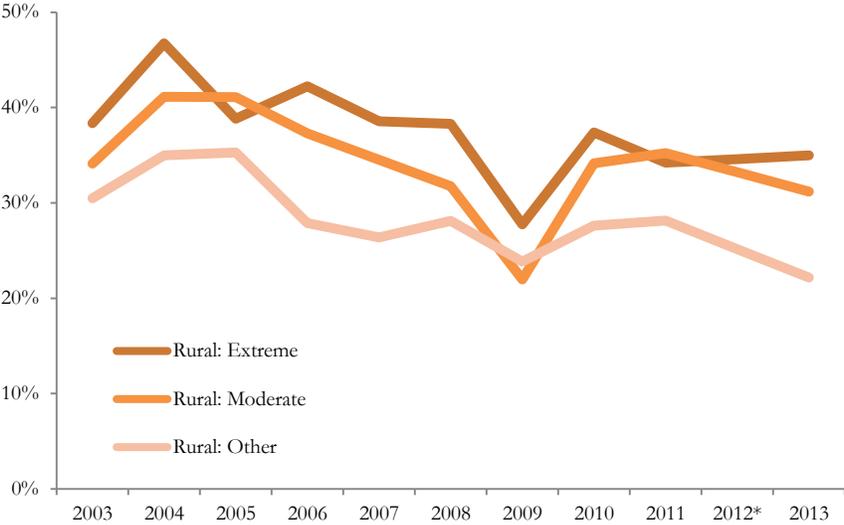
<sup>24</sup> World Bank (2013d).

<sup>25</sup> World Bank (2013d).

**The rural extreme poor are more likely to be self-employed or unpaid workers than the moderate poor.** In 2013, 82 percent of the rural extreme poor who were in the labor force were either self-employed or unpaid workers (typical of family farms and microenterprises), including production for both home consumption as well as for the market. While those living in moderate poverty were also substantially linked to self-employment and unpaid labor, nearly one in three were wage earners working in equal proportions in small and large firms, the latter of which are associated with higher wages and less employment volatility.

**Reliance on a single source of income leaves many rural households exposed to poverty shocks.** This is particularly true when this source itself is volatile, such as rural self-employment. Yet, over a third of rural households in poverty receive over 75 percent of their total household income from self-employment [Figure 30]. These households face volatile earnings year to year, largely dependent on factors outside of their control such as weather conditions and market price fluctuations. A more diverse household portfolio would result in greater shelter from these exogenous shocks.

Figure 30: Proportion of rural households that receive at least 75 percent of their total income through self-employment

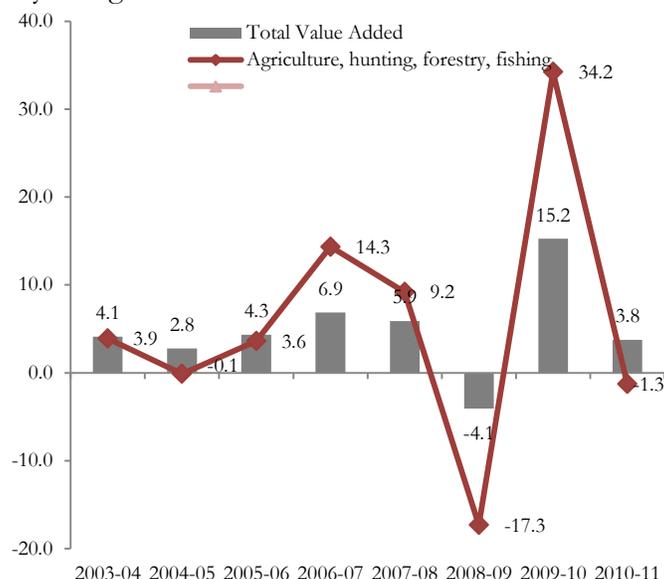


*Source:* Authors’ calculations from the EPH 2003 through 2013. Values for 2012 reported in these figures are the average of 2011 and 2013 and do not use the EPH microdata (as these are still preliminary and subject to change).

**Agricultural activities are highly volatile both at the macro and micro level,** compared to other sectors [Figure 31]. Not only that, but the production risks that the sector face lead to, on average, a

loss equivalent to a 5.4 percent of the agricultural GDP<sup>26</sup> and affect not only the large producers but also can put at risk the food security of families. This is related to the sector's exposure to international commodity price fluctuations and climate shocks.<sup>27</sup> For family agriculture, pests and diseases are can also have a large impact on their production. On the other hand, these risks could be manageable, with the appropriate programs for mitigation, transference and reduction of risks.<sup>28</sup> Despite this volatility, less than 2 percent of agricultural workers purchased agricultural insurance in 2011.<sup>29</sup>

Figure 31: Macro-volatility of agricultural activities



Source: World Bank (2013b).

**The 2009 drought exemplifies the disproportionate impact on the poor.** Households in rural areas were severely affected under the phenomenon but the impact was not equally distributed.<sup>30</sup> Between 2008 and 2009, families in the bottom quintile (which coincide with the pool of extreme poor) saw large decreases in their income, in some cases with negative growth rates of 10 percent [ Figure 32]. At the other end, households in the top 10 percent of the distribution in rural areas actually experienced income growth—in some cases close to 10 percent—possibly due to their more intensive use of irrigation methods and the higher level of diversification of their sources of income.

Figure 32: Growth Incidence Curve, 2008-2009

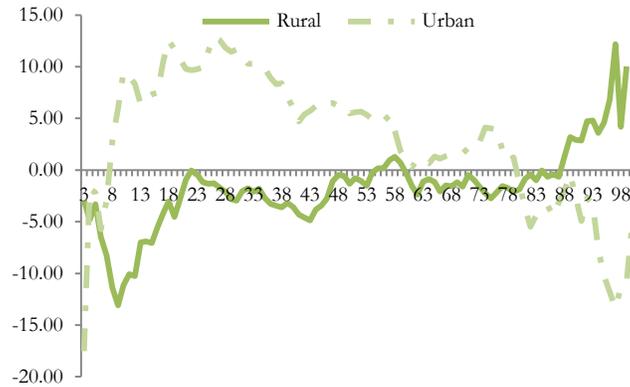
<sup>26</sup> World Bank (2013d).

<sup>27</sup> World Bank (2013b).

<sup>28</sup> World Bank (2013d).

<sup>29</sup> Demirguc-Kunt and Klapper (2012).

<sup>30</sup> World Bank (2010).



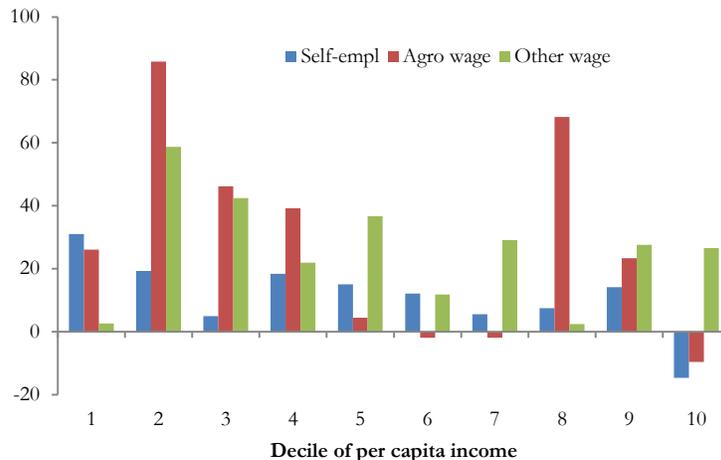
*Source:* Authors' calculations based on EPH.

**In this context of highly volatile agriculture sector, income diversification becomes essential for the rural poor, both in terms of types of crops cultivated (or cattle raising), and of labor and non-labor income sources.** Indeed, in recent years, there has been a movement towards wage employment, both agriculture (larger farms) and non-agriculture (mostly construction, transport and public and private services), generating alternative sources of income which could be more profitable and stable.

**While working their own farm remains important for the rural poor, this group has also seen an increase in wages, both from agricultural and non-agricultural work [**

Figure 33]. Households in the bottom decile saw increases in agricultural wage of the same magnitude as those of self-employment income between 2010 and 2013. But, for households most likely to have exited extreme poverty (the second through fourth decile), the main source of labor income growth came from increases in wages, particularly from agricultural work. Increases in wage income reflect the decreasing reliance on own agricultural production for the rural poor and improved opportunities for income diversification as outside employment opportunities increase. It is notable that many of these opportunities are occurring in other agricultural work, potentially from larger farms. This may indicate the gradual reallocation of rural labor from less productive small farms to more productive agribusinesses.

Figure 33: Annualized growth of labor income by source between 2010 and 2013



Source: Authors' calculations from the EPH 2010 and 2013.

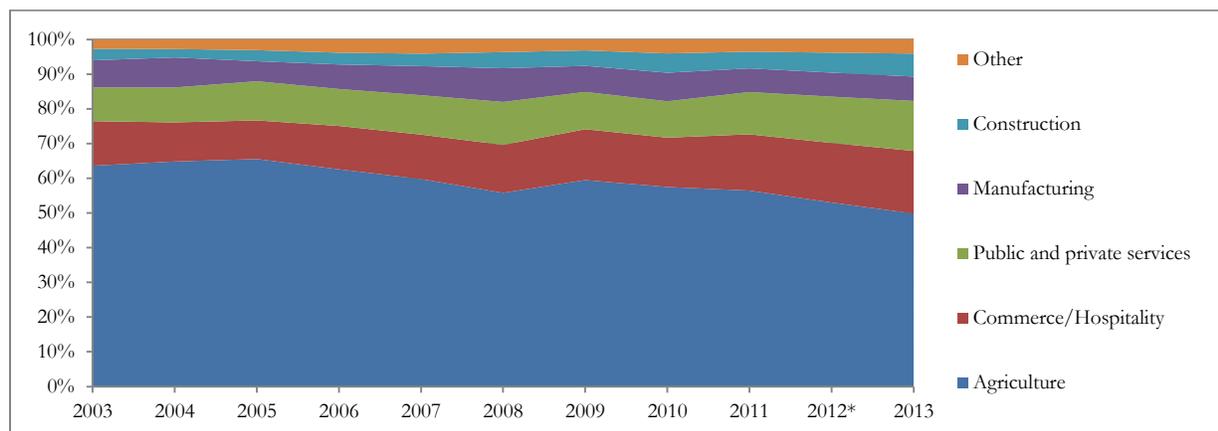
**Over the past decade, differences the self-employed have become increasingly more likely to live in extreme poverty than those with wage employment.** Even among families living below the moderate poverty line, those in which the head was self-employed had odds almost three times higher of living in extreme poverty than those in which the head had wage employment in 2013. This represents a significant shift from 2003 rural poverty, in which those who were self-employed were only slightly more likely to be extreme poor than the wage employed.<sup>31</sup>

**Though agriculture remains the main sector of employment for the rural population, the past decade has seen an increase in employment opportunities in other sectors.** While in 2003 agriculture accounted for two-thirds of all rural employment, this share had fallen to only 50 percent ten years later [

<sup>31</sup> Based on a logistic regression controlling for gender of the household head, dependency ratio, agricultural worker indicator and household head's educational attainment. The odds that a self-employed household head was living in extreme poverty were 287 percent higher than households with wage employment in 2013 and 89 percent in 2003.

Figure 34]. Specifically, while the number of jobs in agriculture was roughly the same in 2003 and in 2013, jobs available to rural families in construction and transportation/communications had more than doubled while jobs in public and private services (including defense and private households) grew by 90 percent. As these sectors grow, they can provide the rural households with the possibility to further diversify their labor income portfolio.

Figure 34: Sector of rural employment, 2003-2013



Source: Authors' calculations from the EPH 2003 through 2013. Values for 2012 reported in these figures are the average of 2011 and 2013 and do not use the EPH microdata (as these are still preliminary and subject to change).

### Addressing labor income volatility

**Family transfers play an increasingly important role in reducing rural extreme poverty, representing one strategy used by rural households to manage risk.** Figure 35 reports how much higher extreme poverty would have been if no family transfers were received.<sup>32</sup> For instance, in 2003, without family transfers (domestic or from abroad), rural extreme poverty would have been 4 percentage points higher (the equivalent of a 15 percent increase in the poverty rate). Through 2009, family transfers increased in importance in reducing rural poverty. Without this type of income, rural poverty would have been as much as 6.6 percentage points higher (or, 20 percent higher than the observed poverty rate). Instead, extreme rural poverty increased only 2 percentage points during 2009, a drought year. Family transfers have continued to reduce extreme rural poverty by between 15 and 20 percent since 2010 even as poverty rates have fallen during this period.

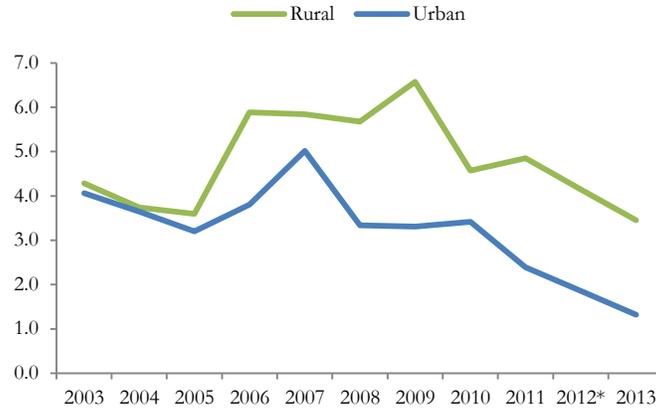
**The elderly and female headed households receive significantly larger family transfers, suggesting migration as a household income diversification and coping mechanism.**<sup>33</sup> In 2011, for example, households with older members received an average of 235 thousand *Guarani* per month per capita (compared to 212 thousand *Guarani* for other households). Female headed households with children received an average of 218 thousand *Guarani* per capita per month versus 84 thousand *Guarani* for male-headed households with children. These results suggest the importance of intergenerational transfers in mitigating elderly and childhood poverty in Paraguay. They may also suggest a household risk management strategy via family migration, wherein family

<sup>32</sup> This exercise should be taken as an upper bound as it assumes no behavioral adjustment by the household. In fact, family transfers and remittances may be used as substitutes for labor income.

<sup>33</sup> The comparison of family transfers received by households with members over the age of 65 and female headed households with children controls for the variation in annual trends across rural and urban areas. These results are based on a log-linear regression of total family transfers received on household composition and year and place fixed effects.

members with higher earnings potential migrate to areas with higher wages and remit earnings back to the family.

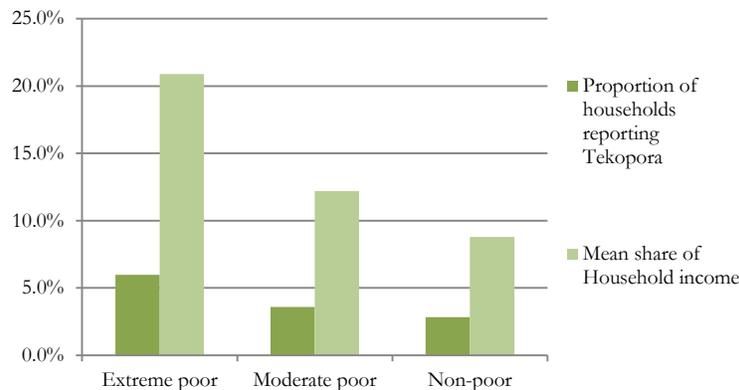
Figure 35: Family transfers play an important role in alleviating extreme poverty



Source: Authors' calculations from the EPH 2003 through 2013. Values for 2012 reported in these figures are the average of 2011 and 2013 and do not use the EPH microdata (as these are still preliminary and subject to change). This figure reports how much higher the estimated extreme poverty rate would be if households did not receive any family transfers.

**The conditional cash transfer program Tekopora (originally designed for the rural poor only) provides a second mechanism to help reduce household income volatility associated with agriculture, though it has its limitation.** For those households that receive the transfer, it represents a significant share of family income, but very few are covered. On average, in 2013 the Tekopora accounts for 20 percent of household income for the 6 percent of rural households living in extreme poverty that received it [Figure 36]. This amounts to an average of over 200 thousand *Guarani* per month for these households. Four percent of households living in moderate poverty also received Tekopora; for them, the Tekopora accounted for an average of 12 percent of their monthly household income.

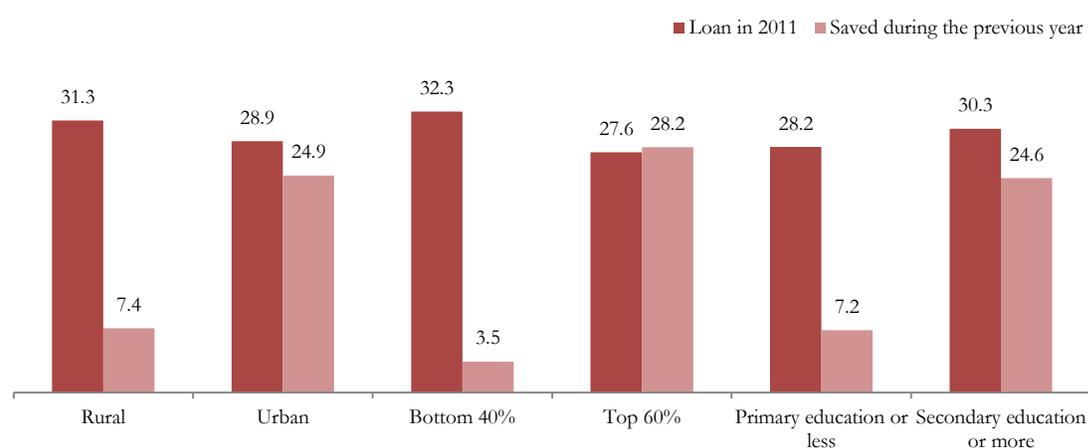
Figure 36: Proportion of households receiving Tekopora and mean share of household income



Source: Authors' calculations from the EPH 2013.

**Limited access to credit and banking limits the ability of households to smooth consumption in the face of income volatility.** Only one out of every five Paraguayans aged 15 and over reported having an account in a formal institution in 2011, less than half the LAC rate of 44 percent.<sup>34</sup> This lack of banking is particularly felt among the rural population, where only 10 percent reported an account. However, only 3 percent of the country’s bottom 40 percent reported having an account. Though figures for formal financial access for the rural bottom 40 percent are unavailable, it is clear that formal banking is rare, if not completely absent, among the rural poor. Additionally, the savings rate (formal and otherwise) is exceptionally low among the rural population: only 7.4 percent reported any savings from the previous year. This combination of low savings and low access to formal financial institutions can prove a challenge in the event of a household shock.

Figure 37: Proportion who had a loan in 2011 or were able to save during the previous year



Source: Demirguc-Kunt and Klapper (2012). Universe population is 15 and over.

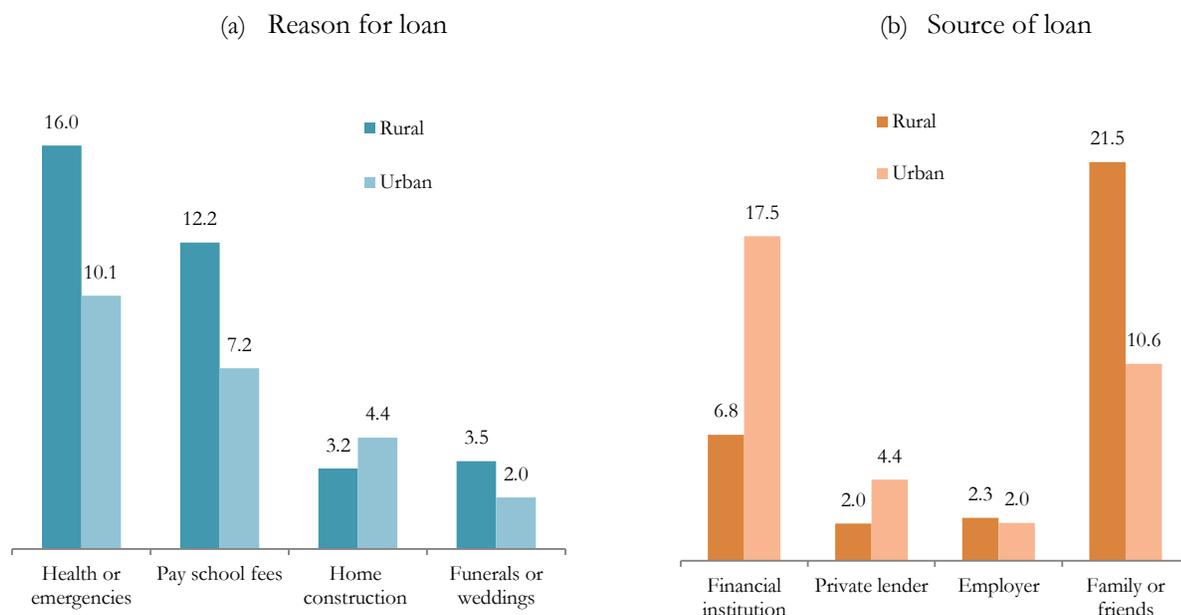
**In this context, informal lending represents an important third mechanism that rural households employed to cope with potential shocks.** Despite a lack of access to formal financial markets, nearly a third of rural Paraguayans reported having a loan in 2011 [Figure 37]. For rural families, the main reasons for requesting loans are either to cover a health issue or other emergency or to pay school fees [

Figure 38].<sup>35</sup> These loans were often obtained from friends and family (21.5 percent of the rural population). Given their insufficient savings and limited access to formal banking and credit, rural households rely on their family and social networks to address negative household shocks.

<sup>34</sup> Demirguc-Kunt and Klapper (2012).

<sup>35</sup> Similarly, 17 percent of the bottom 40 percent of the country’s population (including both rural and urban) reported having a loan for a health or other emergency. Though cross-tabulations are unavailable for the rural bottom 40 percent, this population probably had higher rates of borrowing to address emergencies.

Figure 38: Proportion of population with an outstanding loan in 2011, by reason for loan



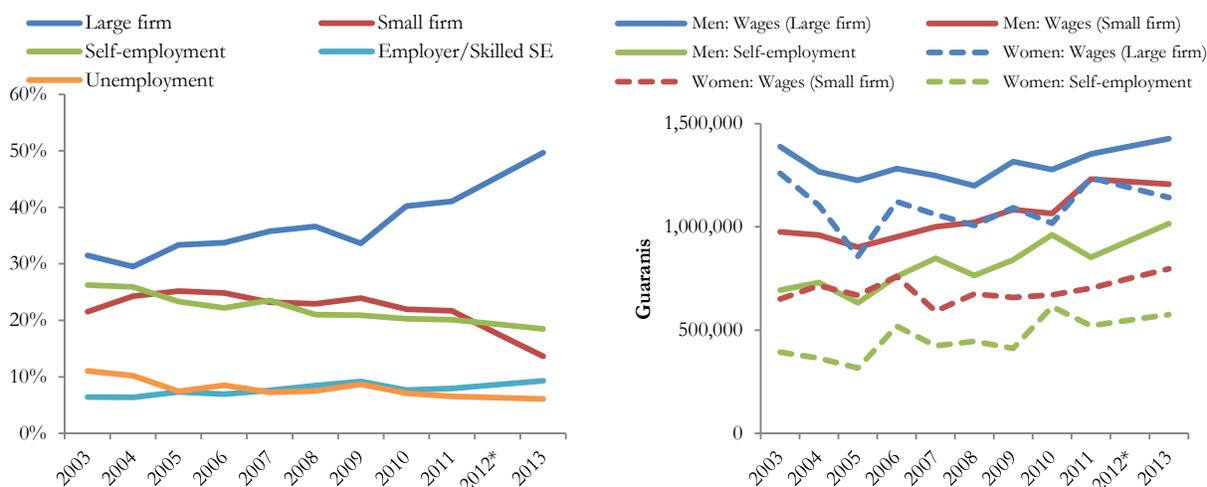
Source: Demirguc-Kunt and Klapper (2012). Universe population is 15 and over.

In sum, agriculture continues to be the main source of income of the extreme poor living in rural areas, exposing families to excessive vulnerability. In recent years, there has been a movement towards wage employment, both agriculture (larger farms) and non-agriculture (mostly construction, transport and public and private services), generating alternative sources of income which could be more profitable and stable. In addition, non-labor incomes have played an important role in alleviating extreme poverty as a diversification strategy (largely, family transfers and informal lending and to a lesser extent, public transfers such as *Tekopora* and *Adultos Mayores*), as well as a strategy to cope with adverse shocks.

## 2.3 Urban Poverty

**The halving of urban poverty corresponds to significant improvements in the urban labor market between 2003 and 2013:** falling unemployment, increases in employment in higher-paying large firms (particularly in the construction and public and private services sectors), and increased labor income for the self-employed and workers in microenterprises. These changes had positive effects on those most likely to be poor – the lowest skilled. For them, self-employment earnings grew by 46 percent and wage earnings from microenterprises grew by 23 percent between 2003 and 2013 [Figure 39]. As noted in section 2.1, the growth in employment opportunities for the low-skilled in sectors like construction played a significant role in raising earnings and decreasing unemployment.

Figure 39: Employment for all adults (left), and median monthly earnings for workers who did not complete primary school, by employer type, between 2003 and 2013

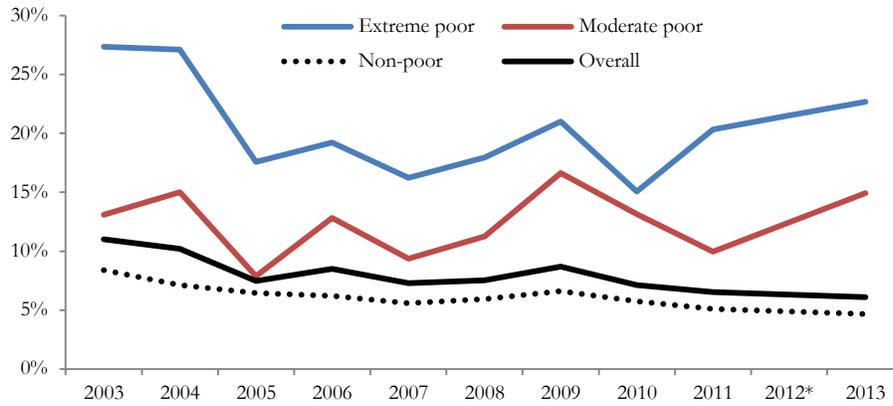


Source: Authors' calculations using EPH. This figure reports the median wages for urban adults who did not complete primary school by employer type.

**Nonetheless, like the rural poor, the urban poor remain exposed to household income volatility through high unemployment rates and high shares of self-employment.** Though unemployment has been steadily falling throughout the past decade, it remains exceptionally high among those living in poverty: The extreme poor are four times more likely than the non-poor to be unemployed, and the moderately poor more than twice as likely as the non-poor to fall in that situation [

Figure 40]. In part, the increase in the unemployment rate of the extreme poor in the last three years reflects the lower propensity to be poor for those who are employed - as earnings and employment opportunities have increased in recent years, many have exited extreme poverty leaving the unemployed to become a larger proportion of the extreme poor. In other words, as the proportion of urban poor halved from 10 percent to 5 percent in the last three years, extreme poverty is more than before associated with not having a job.

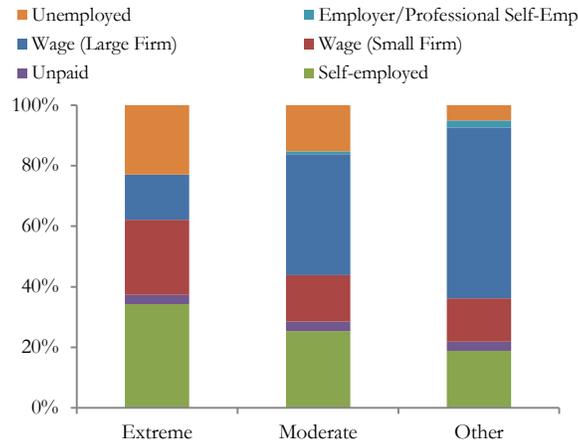
Figure 40: Urban unemployment trends, 2003-2013



Source: Authors' calculations from the EPH 2003 through 2013. Values for 2012 reported in these figures are the average of 2011 and 2013 and do not use the EPH microdata (as these are still preliminary and subject to change).

**Self-employment (mostly in commerce and agriculture) and small firm employment, relatively informal types of labor attachments, are the most dominant employment sector among the urban poor.** A third of the extreme poor are self-employed, and a quarter is employed in microfirms, whereas a quarter of the moderately poor are self-employed, and 15 percent of them are small firm employees. Yet, wage employment in large (higher paying) firms are far more common among the urban poor than the rural poor, particularly among the moderately poor. Jobs in larger firms are not only better paid but are also less volatile and provide more job security and benefits. Specifically, 70 percent of urban workers in large firms have a formal contract and 54 percent have access to a pension or retirement system. Small firms, on the other hand, rarely provide pensions or contracts, at 8 percent and 15 percent respectively. The self-employed have very limited access to pensions, being nonexistent for the low-skilled self-employed and only 6 percent for the skilled self-employed and employers.

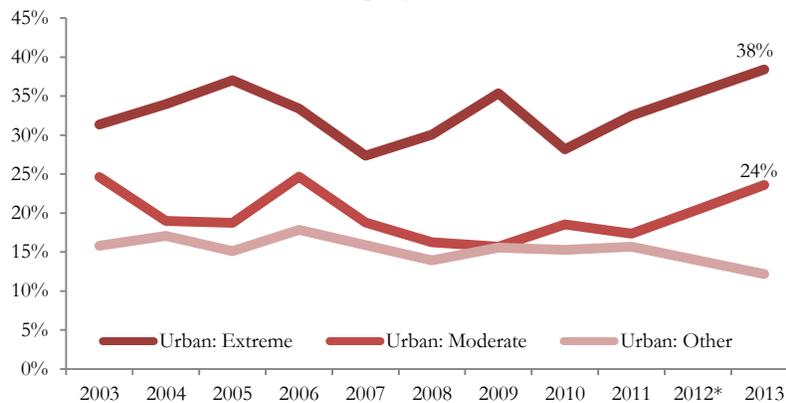
Figure 41: Type of Employment for Urban Adults in the Labor Force by Poverty Status, 2013



Source: Calculations from the EPH 2013. The data universe refers to all adults ages 16-65 in the labor force. Self-employed professionals (those who finished secondary schooling) are combined with employers.

**In spite of more wage employment opportunities in cities, over a third of urban households in extreme poverty rely largely on incomes from self-employment** [Figure 42]. This is a similar share to that seen among the rural poor. The urban moderate poor, on the other hand, are less reliant on self-employment than the rural poor, with only a quarter drawing more than 75 percent income from this source. As in the case of unemployment, the recent increase in the proportion of household deriving more than 75 percent of their income from self-employment in recent years, is in part reflective of the fact that increased employment opportunities in urban areas is associated with the halving of extreme poverty in the period.

Figure 42: Proportion of households deriving more than 75 percent of household income from self-employment



Source: Authors' calculations from the EPH 2003 through 2013. Values for 2012 reported in these figures are the average of 2011 and 2013 and do not use the EPH microdata (as these are still preliminary and subject to change).

**The households most insulated from extreme poverty were those in which the household head was a wage earner in a firm with more than 5 employees.** Among these households, the propensity of living in poverty the following year was only 4 percent [

Figure 43]. On the other hand, households in which the head was self-employed, unemployed or out of the labor force had a 16 percent likelihood of falling into extreme poverty – that is, these households were four times more likely to fall into poverty than households with employment in a large firm. Interestingly, households in which the head was self-employed were more similar in terms of poverty outcomes to households in which the head was not employed than households in which the head was wage-employed.

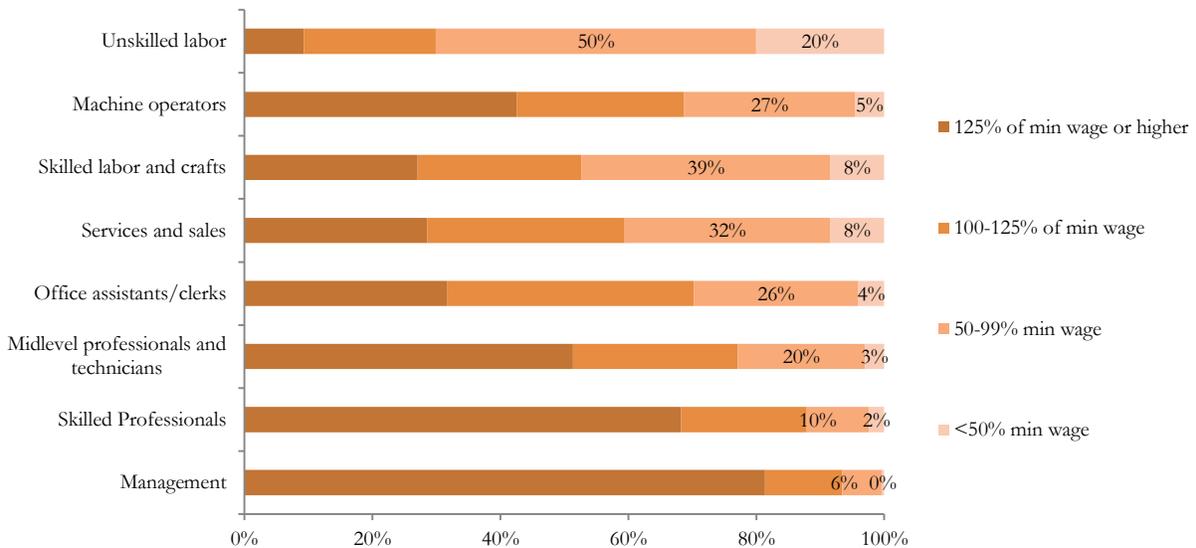
Figure 43: Propensity to be in extreme poverty, by employment status in previous year



Source: Authors' calculations using linked ECE panel data (2010-2011 quarter 1, 2011-2012 quarter 2, and 2012-2013 quarter 3). The figure reports marginal probabilities of living in extreme poverty in year 2 by employment status of the household head in year 1. This was calculated using a logit model, including control variables for year and for poverty status in the initial year. The lines around the point estimate represent the 95 percent confidence interval.

**To a significant degree, low-skilled and unskilled labor – the workers most likely to be in poverty - remain unprotected by the minimum wage legislation [Box 3].** Nearly two of every five full time wage workers in the private sector earn less than the monthly minimum wage [Figure 44] – including 70 percent of unskilled labor. In fact, among unskilled laborers, one in five earns less than half of the minimum wage. On the other hand, over three quarters of the workers in the highest skilled occupations – management, skilled professionals, and midlevel professionals and technicians – earned more than minimum wage.

Figure 44: Monthly earnings as a proportion of the minimum wage for full-time wage workers in the private sector



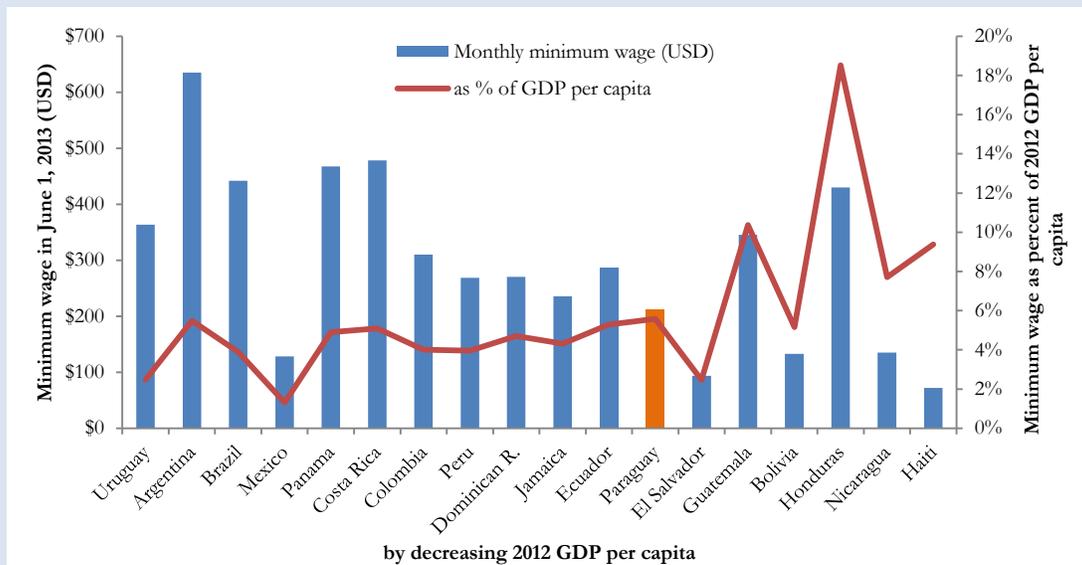
Source: Authors' calculations using ECE 2013 data, quarters 1 through 4. Universe is all adults whose main occupation is reported as wage workers in private firms working than 30 hours in the reference week and whose typical hours are over 30 hours per week. Note that domestic workers and public sector workers are excluded.

The bulk of private-sector employment with earnings below minimum wage is found in microenterprises: 63 percent of wage workers who earn less than half of minimum wage work in firms with 5 or less employees and another 14 percent in firms with only 6 to 10 employees. Similarly, 47 percent of workers who earn between 50 and 99 percent of the minimum wage work in firms with 10 or fewer workers.

**Box 3. An international comparison of minimum wages in Paraguay and selected Latin American countries**

At 6 percent of GDP per capita, Paraguay’s minimum wage in 2013 was in line with minimum wage legislation throughout Latin America. The majority of countries in LAC (10 out of 18 of those selected) have minimum wages that are 4 or 5 percent of their per capita GDP. There are a number of outliers, including Mexico, where the minimum wage is 1 percent of per capita GDP, Uruguay and El Salvador at 2 percent, and Guatemala and Honduras, with minimum wages of 10 and 19 percent respectively. A proposed increase of 25 percent to Paraguay’s minimum wage would raise it to 7 percent of its 2012 GDP per capita – pushing Paraguay’s minimum wage slightly higher than in most Latin American countries.

Figure B3.1: Minimum wage as a proportion of GDP per capita for selected Latin American countries (2013)



Source: Minimum wage values are from the Doing Business Project (International Financial Corporation) and GDP per capita in current US dollars is from the World Development Indicators.

Despite the trend observed throughout the decade of increased employment in higher paying large firms, year-to-year transitions show that mobility into this sector is limited for the self-employed and workers in microenterprises –less than 3 percent of those in either of

these categories is able to transition into large firm wage employment by the following year. A matrix of the five-quarter transition of employment sector reveals evidence of limited mobility from high volatility low-wage sectors to employment in a large firm [Table 2]. Not surprisingly, wage employment in larger firms is the most persistent of the employment sectors. A full 91 percent of wage workers in larger firms report working in a large firm the following year. To some degree, this reflects the higher employment stability and improved labor outcomes associated with larger employers.

**Rather than becoming small business owners, the self-employed typically transition into employment in a micro firm or leave the labor force.** Indeed, the proportion of low skilled workers that are employers is almost negligible. The majority of the self-employed (60 percent), the employment sector most associated with extreme poverty, remains self-employed one year later..

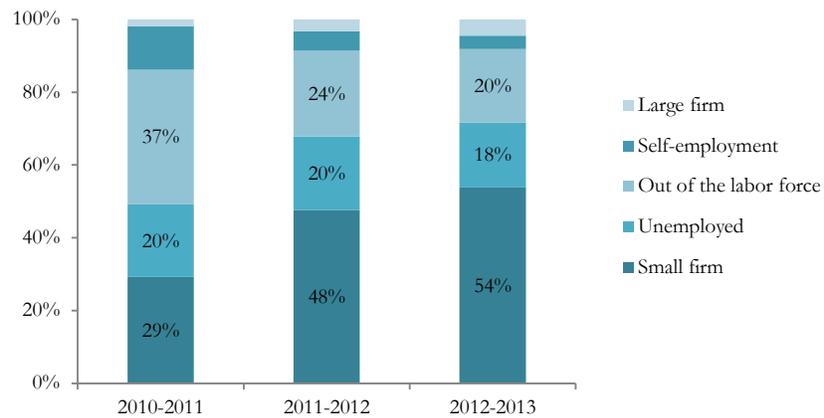
Table 2. Matrix of Five-Quarter Transitions in Sector of Employment

		Sector in Fifth Quarter						Total
		Wage (Large Firm)	Wage (Small Firm)	Self-employed	Unemployed	Out of the LF	Employer/ Professional SE	
Origin	Wage (Large Firm)	91%	4%	2%	2%	1%	1%	11%
	Wage (Small Firm)	2%	80%	4%	4%	7%	3%	36%
	Self-employed	1%	13%	60%	5%	13%	8%	13%
	Unemployed	3%	40%	6%	20%	29%	3%	6%
	Out of the LF	2%	12%	7%	12%	65%	3%	25%
	Employer/ Professional SE	2%	9%	12%	4%	6%	67%	8%
	Total	11%	37%	13%	7%	23%	9%	

*Source:* Authors' calculations using linked ECE panel data (2010-2011 quarter 1, 2011-2012 quarter 2, and 2012-2013 quarter 3). Universe is all adults, 16-65. The unpaid sector (1.7 percent of the total) is excluded from the table.

**Microenterprise employment is also very persistent with 4 out of 5 workers in small firms remaining in a small firm five quarters later.** While employment in microenterprises is a destination for some self-employed or formerly unemployed workers, there is minimal transitioning between small and large firms. That is, while employment in small firms could potentially serve as a stepping stone to large firm employment by providing opportunities for building experience and human capital, this does not seem to be happening. Instead, these one-year employment transitions suggest the existence of two distinct labor markets in urban Paraguay: workers in large firms (largely covered by minimum wage legislation) and workers with more employment uncertainty who may transition from tenuous employment situations (unemployment and self-employment) to microenterprises.

Figure 45: Employment status one year after being unemployed



Source: Authors' calculations using linked ECE panel data (2010-2011 quarter 1, 2011-2012 quarter 2, and 2012-2013 quarter 3).

**The persistence of unemployment is particularly alarming: one in five of the unemployed between 2010 and 2012 remained unemployed one year later [**

Figure 45]. This indicates that part of the population experiences either chronic or frequent spells of unemployment. Additionally, a significant proportion of the unemployed have exited the labor force one year later, potentially as discouraged workers. This tendency has fallen since 2010 when over a third of the unemployed dropped out of the labor force. By 2013, only 20 percent of those who had been employed the previous year had exited the labor force. The most likely outcome for the formerly unemployed, however, is increasingly becoming finding employment in a small firm. While less than a third of the unemployed in 2010 reported being wage employed in a small firm a year later – by 2013, more than half of those who had been unemployed the previous year were now working in a small firm.

**In sum, through increased employment opportunities and earnings, labor markets played an important role in reducing the incidence of both extreme and moderate poverty in urban areas.** The challenges remain twofold: self-employment and unemployment are still prevalent for the worse-off, leaving them exposed to fluctuations in the economy and largely untouched by minimum wage legislations. In addition, and despite the trend observed throughout the decade of increased employment in higher paying more stable jobs in large firms, year-to-year transitions show that mobility into this sector is limited for the self-employed and workers in microenterprises, even in good periods for the economy, such as in recent years. These challenges can threaten the sustainability of the country's recent improvements.

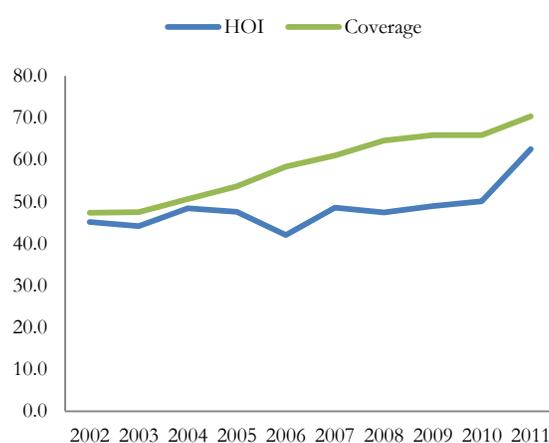
### 3. Second Pillar: The pursuit of opportunities for all

Among the greatest challenges that Paraguay faces today as a structural barrier to equity is the high and persistent level of inequality in terms of opportunities for different groups. An equitable society is one in which socioeconomic achievement and access to opportunities should be unrelated to circumstances of birth upon which individuals have no control, including family background. When inequality in one generation affects the life chances of children, it transmits the existing pattern to the next generation. A growing literature shows that deficiencies in nutrition, education and health at early stages in life can have long-lasting effects. In Paraguay, differences in living standards across the country are significant in many dimensions of well-being, and expressed at various points throughout the life cycle.

#### 3.1 Equality of Opportunities

Equality of opportunities for children in Paraguay have been improving since 2003, in line with the findings in Section 1 regarding improvements in non-monetary dimensions. The Human Opportunity Index (HOI) measures inequality-adjusted access to services for children, according to circumstances at birth, which are beyond their control such as ethnicity, the socioeconomic level of their parents, place of birth or gender.<sup>36</sup> The evolution of the index for Paraguay shows that while overall inequality of opportunity has been rising, the penalization due to unequal access today is larger than it was at the beginning of the decade [Figure 46].

Figure 46: Evolution of the Human Opportunity Index (2003-2011)

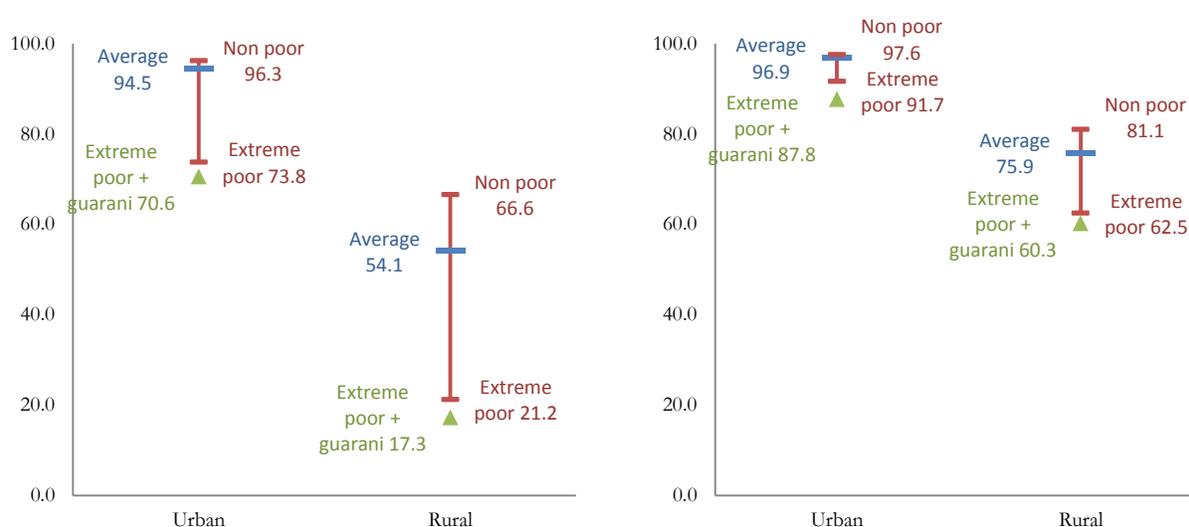


*Source:* Authors' calculations based on EPH (2003 to 2011). Note: The HOI includes Electricity, Completion of sixth grade on time, Sanitation, School attendance and Water.

<sup>36</sup> Molinas et al (2012).

**Access to basic services still depends to a large extent on whether the child is born in rural or urban areas, and to a lesser extent (although still significant) on the socioeconomic status of the family.** Half of the children born in rural areas have access to flushing toilets inside their home, while almost all of those in urban areas do, particularly among the non-poor households [Figure 47]. The situation is significantly worse for those born in extremely poor households: only one in five children in poor families will have proper sanitation—and slightly less if the family only speaks *Guarani* at home. A similar, although less pronounced situation is found with respect to access to water in the dwelling. A child born in rural areas has a 76 percent chance of having tap water in her home, whereas if she had been born in a city her chances would increase to 97 percent. Chances are not much better if she was born in a non-poor household in the rural area (81 percent).

Figure 47: Access to flushing toilet (left) and tap water (right) in the dwelling, 2013

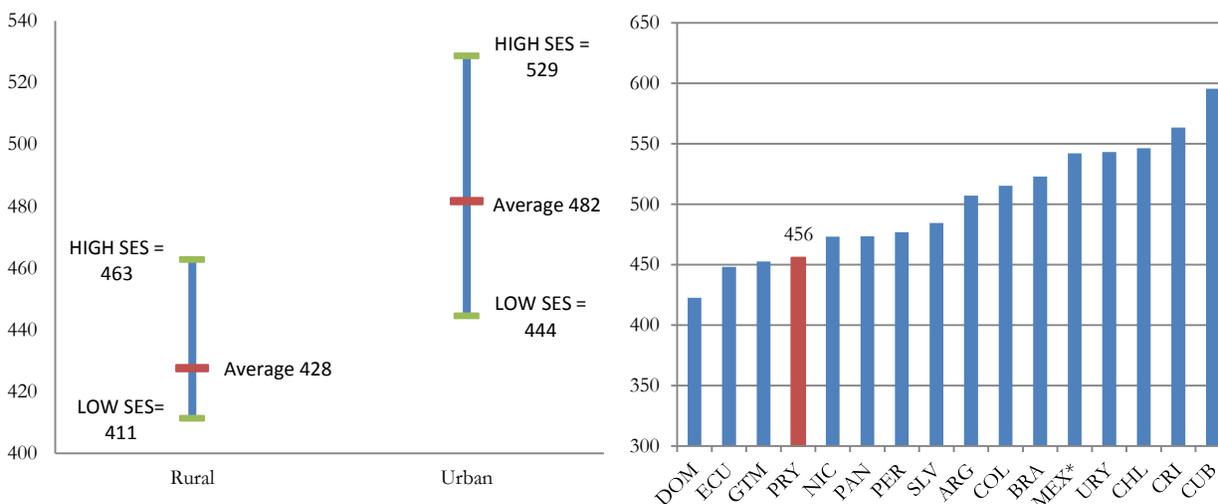


Source: Authors' calculations based on EPH 2013.

**While differences in school enrolment are less pronounced, quality of schooling varies significantly across groups, particularly between urban and rural areas.** While the coverage rate of school enrolment for children ages 7 to 15 is quite high, the extreme poor in rural areas have markedly lower likelihood of attending school than non-poor children living in urban areas (89 percent compared to 99 percent), although this trend has been improving over time. School quality in Paraguay at the elementary level is extremely low by Latin American standards. According to the 2006 Second Regional Comparative and Explanatory Study (SERCE) carried out by UNESCO, Paraguay is in the bottom five countries out of the 17 Latin American countries included. Additionally, there are noticeable differences in the performance of the Paraguayan children who reach sixth grade, depending on where they live and the level of education of their parents. Children from high socioeconomic status in rural areas perform only marginally better than socioeconomic kids from low socioeconomic status in urban areas [Figure 48]. In addition, an urban child from a high socioeconomic background obtains a similar test score as the average Brazilian child (whose country placed sixth in the Latin American distribution), whereas a poor rural child is likely to have a

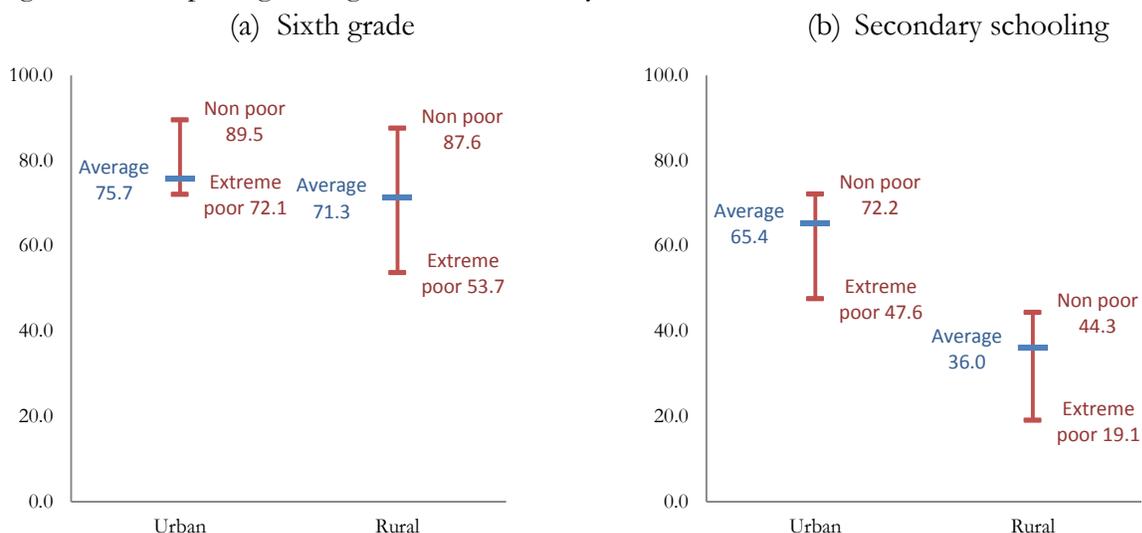
test score below the mean of any Latin American country in the sample, including the Dominican Republic, Ecuador and Guatemala – the three lowest performers.

Figure 48: Test scores of sixth-graders in Paraguay according to urban/rural area and parental background, and compared to other Latin American countries, 2006.



Source: Authors' calculations using SERCE. "High SES" denotes parents who have completed tertiary education; "low SES" denotes parents who have at most completed primary education. Mexico is represented by the state of Nueva Leon only.

Figure 49: Completing sixth grade and secondary school on time, 2013



Source: Authors' calculations based on EPH 2013.

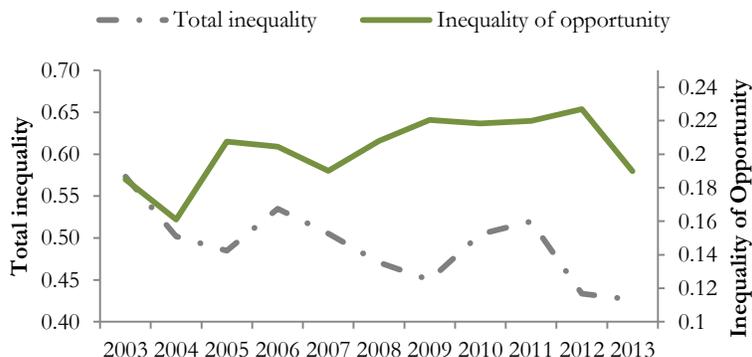
**Significant differences are also found in the completion of grades on time**, another indicator of school quality. The grade on time indicator aims to capture the capacity -- of the education system in general and of the schools in particular -- to deal with children from different backgrounds, and the ability to guide them to complete their studies without desertion or grade

repetitions. There are striking disparities between urban and rural areas and within them by socioeconomic group in both the completion of sixth grade and in finalizing secondary education. While the noon-poor group in urban areas has a completion rate of around 90 percent in sixth grade and over 70 percent in secondary, the extreme poor in rural areas lies below 55 and 20 percent, respectively [Figure 49]

### 3.2 Equality of Opportunities in the Labor Market

**Inequality of opportunities in the labor market has been rising in recent years.** Inequality of opportunities is measured by the differences in mean income between groups based on circumstances not governed by choice or efforts (such as, language spoken at home, rural or urban area, and region of birth). Whereas total inequality has fluctuated, ultimately dropping between 2003 and 2013, the proportion of that inequality that is accounted for by differences in individuals’ circumstances increased from 18 percent in 2003 to over 22 percent in 2012, and has recently gone down to 19 percent in 2013 [Figure 50]. This worsening in inequality driven-by-circumstance, which is found at the national level, is also observed in rural areas. Indeed, the inequality of opportunity index in rural areas increased by 50 percent between 2003 and 2013.

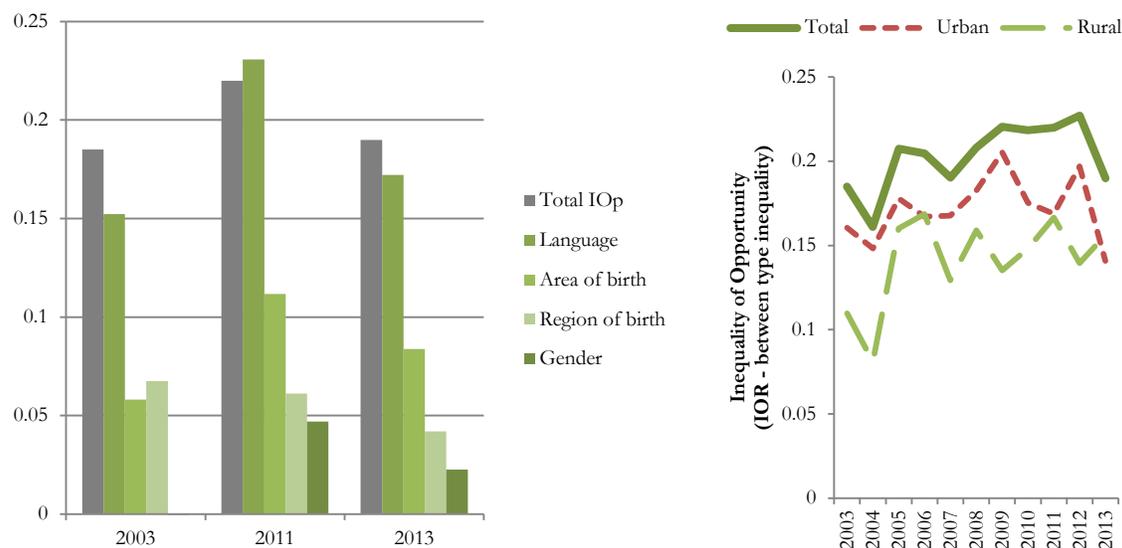
Figure 50: Overall inequality and inequality of opportunity, 2003 to 2013



*Source:* Calculations based on EPH 2003-2013. Total inequality is measured by the mean log deviation, whereas inequality of opportunity is measured as the between- group inequality relative to overall inequality, where groups (types) are defined by language spoken at home, place of birth (rural vs. urban, and region) and gender.

**Location of birth and its related language spoken at home are important factors associated with the observed inequality of opportunities in the labor markets** [Figure 51]. This is in line with the finding that 75 percent of the people who remained in poverty in both 2003 to 2013 only speak *Guarani* at home. While the vast majority of the population is bilingual, the language of choice among the population is highly correlated with economic outcomes. Additionally, gender has become an increasingly important factor in explaining opportunity inequality: while in 2003 gender did not appear as a factor, by 2011 it appears as a contributor to between-group inequality.

Figure 51: Inequality of opportunity by circumstance and area of residence



Source: Calculations based on EPH 2003-2013. Total inequality is measured by the mean log deviation, whereas inequality of opportunity is measured as the between-group inequality relative to overall inequality, where groups (types) are defined by language spoken at home, place of birth (rural vs. urban, and region) and gender.

### 3.3 Challenges in the Delivery of Social Services

**Addressing income inequality and boosting intergenerational mobility require both inclusive growth and the implementation of effective policies to foster future gains among those not directly benefiting from growth.** Access to basic childhood opportunities is low and inequitable in Paraguay. Good delivery of social services and sustainable fiscal policy can play a significant role in reducing inequality and providing access to opportunities. Increasing the fiscal space for investments in expanding access to and the quality of basic opportunities is one essential element for increasing fairness. As seen in section 1, Paraguay has still substantial room for improvement in terms of progressive taxation policies combined with well-targeted transfer programs reduce income inequality and alleviate poverty, providing essential safety nets to weather the fluctuations of any well-functioning labor market while reducing the effects of inequality on childhood access to basic services. Of course, key to well designed and implemented social service delivery is appropriate fiscal policy and social spending. The shortfalls in both delivery of social services and fiscal policies go a long way in explaining the inequality of opportunities and of outcomes seen in Paraguay.

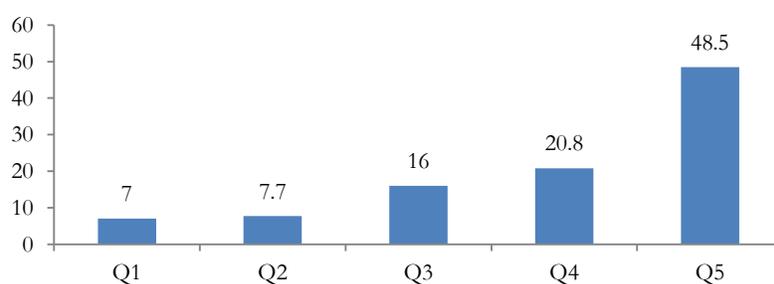
Though Paraguay saw a significant increase in social expenditure from \$95 per capita in 2003 to \$584 in 2010,<sup>37</sup> basic and key social services, such as access to improved sewage systems and running water, continue to be relatively low. The coverage of these basic services that is provided, additionally, is inequitable as shown above through the Human Opportunity Index. To some degree, the persistence of extreme poverty through 2011 despite economic growth can be attributed to ineffectual social services delivery. This paradox of increasing social spending and stubbornly low service delivery can be explained by at least three reasons:

- i) Ineffective allocation of resources
- ii) Institutional and operational inefficiencies, and
- iii) Lack of an effective monitoring and evaluation system.

### *i) Ineffective allocation of resources*

Although there is a process of allocation of resources for social programs included in the Government's poverty strategy<sup>38</sup> based on socioeconomic indicators at geographic level, there are some resource allocations at sector levels that show a regressive allocation. A recent study in education, for example, shows that the public investment in education is not only low (and decreasing) compared to other Latin American countries, but also that investment in new classrooms is concentrated among the schools within the top quintile of the Classroom Availability Index (CAI)<sup>39</sup>, while lower levels of investment are made where the need is most urgent among needier quintiles [Figure 52].<sup>40</sup>

Figure 52: Distribution of new classroom investment by "CAI" quintile



Source: De Hoyos (2014).

<sup>37</sup> Guillen Estella (2010).

<sup>38</sup> The flagship program of the Government of Paraguay, "Sembrando Oportunidades," launched in September 2013

<sup>39</sup> The CAI represents "the number of classrooms available in a school normalized by the number of classrooms that should be available so that a value of 100 means that the school has exactly the number of classrooms it needs given its student population (all schools with an index value at or above 100 are not infrastructure poor)" Wodon, (2014) page 10.

<sup>40</sup> Wodon (2014).

**Other relevant social services such as water and sanitation, electricity and health also show an inefficient process of resource allocation.** In the case of water and sanitation, a recent study finds that while access to treated water is relatively high at 86 percent (including 66 percent of the rural population), particularly in urban areas, reliability and quality is lacking especially for rural areas and for poor households. About 40 percent of the population does not have home connection – as a result, it takes an average of 16 minutes to provide water to household members (by an adult woman in 49 percent of the cases). Even among those with a home connection, only 73 percent have continuous 24 hour service without interruptions at the national level. In the case of sewerage the problem is twofold, coverage and quality: Less than 10 percent of the population is connected to sanitary sewers, and basically none have water treatment.

**Health insurance coverage is low at approximately 24 percent of population and less than 3 percent of the extreme poor** [Table 3]. The poorest quintile is the most underserved with a coverage rate of only 1 percent, sharply lower than the 52 percent coverage rate in the richest income quintile. Unemployed and informal workers receive services by the health care network of the Ministry of Public Health and Welfare (MPHW) which delivers priority programs including the prenatal and child health program, the HIV/AIDS program, the non-communicable disease program and the reproductive health program.<sup>41</sup> Although health services in the public network are provided for free at the point of delivery, the supply of drugs and medical supplies are not always sufficient to meet demand.

Table 3: Percentage of population with health insurance

Health insurance	Total	Poor		Non poor
		Extreme	Total	
Without health insurance	76.5	97.4	93.3	67.6
With health insurance	23.5	2.6	6.7	32.4
IPS	16.5	2.4	5.9	22.1
Private health insurance	5.5	0.1	0.4	8.2
Military or Police Health	1.5	0.1	0.4	2.1

*Source:* World Bank Policy Notes Volume 2 (2013), based on DGEEC: “Main results of poverty and income distribution – EPH 2010”.

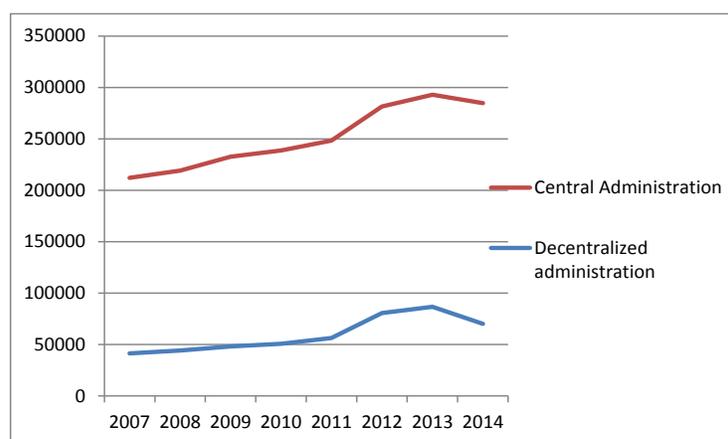
## *ii) Institutional and operational inefficiencies*

**Social services are not fully delivered in a timely, continuous, quality controlled and coordinated manner.** This can be traced back to four reasons. The first is the weak national planning system and specially the lack of tradition of a strong national development plan that aligns

<sup>41</sup> World Bank Policy Notes (2013).

agencies to strategic goals at national, sectoral and territorial levels. Secondly, there is a lack of integration among the planning and programming processes developed by the public and the budgeting processes. This situation prevents public managers from tracking social expenditure linked with the delivery of good and services in a successful and timely way. Thirdly, although the Social Cabinet has been strengthening the coordination among agencies delivering social services, there is still lack of fully efficient fiscal, strategic and managerial coordination between executive agencies, departments and municipalities, and there is still no quality control for the delivery process. Finally, the civil service system is weak. This weakness is expressed in high attrition of public servants, the absence of a formal training system, resulting in public servants' high instability and lack of professional skills. At the same time, there has been a significant increase in the number of public employees: in the last seven years almost 70,000 public sector jobs were included in the budget from both centralized and decentralized public agencies, implying a 32 percent increase [Figure 53].

Figure 53: Public sector employment included in centralized and decentralized public agency budgets



Source: Ministerio de Hacienda

### *iii) Lack of an effective monitoring and evaluation system*

**A final obstacle facing service delivery in Paraguay is the lack of a regular and efficient monitoring and evaluation system for assessing the timeliness, quality and cost of projects.** There is no integrated inventory of beneficiaries of social programs, and no national initiative to integrate the few initiatives of monitoring and evaluation in a system to measure the performance of public sector management<sup>42</sup> with consequences in accountability, improving the management of public programs and influencing the budget allocation process. As there is no mechanism for

<sup>42</sup> With the exception of the evaluation of some programs by the Ministry of Finance as a part of a pilot exercise.

assessing the quality of service delivery, identifying optimal policies and strategies is made even more difficult.

**In sum, while the country has improved the access to basic services to families, there are still high and persistent inequalities for different groups, as defined by their circumstances at birth, such as place of birth and socioeconomic status, to which the individual has no control over. Similarly high level of inequalities is observed in terms of quality of education, and later in life, in the labor market. This poses challenges to the sustainability of the recent improvements for future generations. Social policies are not effective enough to counterbalance these inherited inequalities. In addition to a weak fiscal system, institutional and operational inefficiencies e.g. weak civil service system, and/or the lack of an effective monitoring and evaluation, may enfeeble the deprived social service delivery.**

## 4. Third Pillar: Strengthening agency

The third dimension where the country still has room to make progress towards an equitable society relates to the strengthening of agency, understood as the capacity of people to be actors in their own development, establishing and pursuing effectively life plans they have reasons to value. This pillar has manifestations in different realms and dimensions. There is, however, one aspect that is salient and can be analyzed with existing data: the economic and social role of women. This section describes the improvements in gender outcomes in the last decade, the challenges that still remain, particularly in the labor market, and in three specific manifestations of lack of agency.

### 4.1 Improvements in gender outcomes in endowments

Paraguay has made progress over the last decade in promoting women's empowerment and gender equality, particularly in terms of women's endowments in health, education and legal framework.

Specifically, sexual and reproductive health indicators have improved over the last decade, though Paraguay still lags behind the LAC region in some areas. Both women's and men's life expectancy at birth has increased three years (from 71.4 years in 1996 to 74.4 for women in 2011, and for men from 66.90 in 1996 to 70 in 2011).<sup>43</sup> More pregnant women receive prenatal care (from 94.2 percent in 2004 to 96.3 percent in 2008) and they are more likely to be attended by skilled health staff at birth (from 77 percent in 2004 to 82 percent in 2008), though still below the average for the LAC region (90 percent in 2010).<sup>44</sup> As a result, the Maternal Mortality Rate (MMR) has shown a clear improvement in the last decade: Paraguay presented a MMR of 180 deaths per 100,000 live births in 2002 versus a 100 deaths per 100,000 live births in 2010, 20 per thousand deaths more than the average in the LAC.<sup>45</sup>

**Girls now outperform their male counterparts in educational attainment and achievement.**

While the female to male ratio in primary enrollment has remained almost the same for the last decade at 0.96, the gender gap reverses in favor of girls as level of schooling increases (1.07 and 1.27 for female to male ratio in secondary and tertiary education for 2010 respectively). The percentage of girls finishing primary school was higher than the percentage of boys (83.8 percent and 81.4 percent respectively in 2010). Though lower than ideal, this is en par with the LAC region. Finally, the rate

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<sup>43</sup> If not otherwise stated, data are from the World Development Indicators (November, 2013).

<sup>44</sup> Observatorio de Igualdad de Género de la CEPAL.

<sup>45</sup> Observatorio de Igualdad de Género de la CEPAL.

of male repeaters is higher than female repeaters in primary school (5.7 percent versus 3.6 percent in 2010 respectively) and secondary (1.3 percent versus 0.5 percent in 2010 respectively).

**The legal and institutional framework in Paraguay has improved such that the stage is set for equal rights for women and men in the country.** Paraguay has ratified major international human rights instruments to protect and promote women's rights and gender equality in the country.<sup>46</sup> For instance, the country ratified The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), a key international women's rights bill adopted by Law No. 1215 on November 28<sup>th</sup>, 1986. On June 21<sup>st</sup>, 1995 Paraguay ratified by Law No. 605/95 the Convention on the Prevention, Punishment and Eradication of Violence against Women (Belém do Pará) promoted by the Organization of American States (OAS) and its Optional Protocol ratified by Law No2396/04.

**Over the past decade laws have been amended and new laws have been implemented by the Paraguayan government to promote women's empowerment and gender equality in the country.**<sup>47</sup> Under Law No. 496/95, which amended and updated the Labor Code Law No. 213/93, women and men enjoy the same rights and duties without discrimination in the workplace, including special protections for maternity. It also determines that sexual harassment is a justified cause for termination of employment and that wage discrimination based on sex is prohibited. Law 834/96 of the Electoral Code sets a quota for minimum female participation of 20 percent in the list of candidates, and establishes penalties for parties that do not comply with this requirement. The law also contains an explicit prohibition of discrimination on the grounds of gender in electoral and political campaigns. Finally, Law 1600, passed in 2000, and the Penal Code are the legal instruments to address one of the key problems in Paraguay: domestic violence.

**Furthermore, to promote women's empowerment and gender equality, Paraguay created the Ministry of Women (*Ministerio de la Mujer*) as a public body** by Law No. 4.675/2012, elevating the Women's Secretariat of the Presidency of the Republic (*Secretaría de la Mujer de la Presidencia de la República – SMPR*) to a Ministry level.

## 4.2 Limited economic progress for women

**Despite these improvements, challenges persist in achieving gender equality particularly in the labor market.** The female to male labor force participation ratio remains low at 0.65 for Paraguay, indicating a persistent gender gap in labor force participation. Female unemployment is

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<sup>46</sup> "Observatorio de Género de la Corte Suprema de Justicia de Paraguay" <http://www.pi.gov.py/contenido/537-observatorio-de-genero/537>

<sup>47</sup> "III Plan Nacional de Igualdad de Oportunidades entre Hombres y Mujeres, 2008-2017", unless otherwise indicated. [http://www.mujer.gov.py/userfiles/file/IIIPNIO\(1\).pdf](http://www.mujer.gov.py/userfiles/file/IIIPNIO(1).pdf)

higher than male unemployment (6 percent versus 4 percent in 2012), especially among youth (18 percent for girls vs. 10 percent for their young male counterparts).<sup>48</sup>

**Men’s and women’s jobs differ greatly across sectors, industries, occupations, types of jobs, or types of firms, and thus earnings.** Women are more likely to work in the informal sector than men (51 percent for women in the labor force compared to 44 percent of men), particularly among the rural population (72 percent of all women in the labor force compared to 63 percent of men).<sup>49</sup> Informal workers typically lack the social protection afforded to formal workers, such as worker benefits and health insurance, tend to work under irregular and casual contracts and are paid lower wages than in the formal sector.<sup>50</sup> Indeed, women in Paraguay have lower earnings than men and the gender wage gap has remained constant over the last decade - women earn around 70 percent of their male counterparts.<sup>51</sup> The female-male earnings gap does not necessarily reflect discrimination but tends to be primarily due to differences in the types of activities and jobs done by the two genders. Women tend to hold lower level positions in firms –only one in every five firms has a female top manager (2011)—and only 1.5 percent of women in the labor force are employers, compared to 7.7 percent of men in the labor force in 2013. Furthermore, women tend to work in, not only less productive sectors, but also less productive activities within these sectors: forty percent of female workers in the labor market work in public and private services, many of whom are domestic workers in private households [Figure 54].

Figure 54: Sector and activity of employment by gender (2013)



Source: Authors’ calculations based on SEDLAC data (CEDLAS and the World Bank).

<sup>48</sup> Source: World Development Indicators.

<sup>49</sup> Informal is defined as wage workers in microenterprises, non-professional self-employed, and zero-income workers. Source: EPH 2013.

<sup>50</sup> Chen (2011)

<sup>51</sup> World Bank (2012a)

### 4.3 Manifestations of the lack of women's agency in Paraguay

**Given the progress reported in women's endowments, why are they still trailing men in labor market outcomes?** “Investments in health and education -human capital endowments- shape the ability of men and women to reach their full potential in society. The right mix of such investments allows people to live longer, healthier, and more productive lives.”<sup>52</sup> The quality of women's participation in the labor market might be affected by a combination of different factors, including their human capital endowments, the opportunities available to them, their preferences and goals as well as other societal factors such as social norms and gender roles pushing for a specific division of labor between the genders. In Paraguay, and throughout LAC, women continue to hold primary responsibility for childcare and domestic work – this has consequences for the distribution of work outside the home where women are considered secondary earners while men are the primary breadwinners.

**The lack of women's agency, understood as the capacity of individuals to make effective choices and transform them into desired outcomes, is one of the missing catalyzers keeping women from fully utilizing their human capital endowments.**<sup>53</sup> Increased agency enables women to use endowments and make use of economic opportunities, fostering gender equity. While it is very difficult to measure agency with quantitative methods, it is possible to look at certain manifestations of the *lack* of agency. Concretely, low political participation and voice, high prevalence of domestic violence, and high rates of teenage pregnancy are considered to be such manifestations of the lack of women's agency.

**While political participation of women in ministerial position at the central level has increased in recent years, it is still low in parliament and at local levels. One way in which women's lack of agency is manifested is through the lack of political participation at all levels of government.** Women's representation in ministerial positions has increased significantly, from 14.3 (2008), to 27.8 (2010) and 30 percent as of today (2013).<sup>54</sup> Still, they occupied only 12.5 percent of total parliamentary seats, and the percentage of women mayors continues to be low (at 7.5 percent in 2011)

**Despite Paraguay's recent measures to protect female victims of domestic violence, it remains a serious problem.** In recent years, the first shelter for victims of domestic violence has been created and several provisions for comprehensive services for victims of this crime have been established, including six specialized police stations equipped to receive complaints about violence against women, children and adolescents. However, these measures are insufficient to fully protect victims of these crimes. One in five women in Paraguay has acknowledged experiencing physical or

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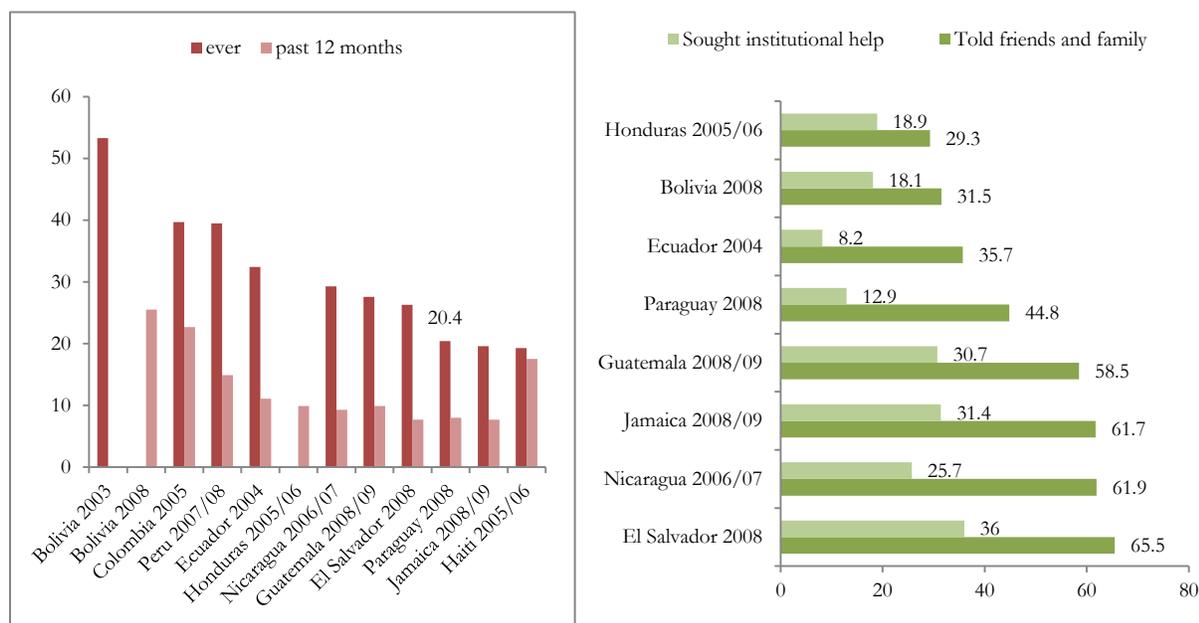
<sup>52</sup> World Bank (2012b).

<sup>53</sup> World Bank (2012b). World Development Report 2012 on Gender Equality.

<sup>54</sup> Economic Commission for Latin America and the Caribbean (2012).

sexual violence by their partners at some point in their lives, and 8 percent in the last year [Figure 55]. And yet, only 12 percent of those turned to institutions for support. Women cited many reasons for not seeking institutional help, including shame, fear of retaliation, not knowing where to go, and not believing that anyone would help. Institutionally, there is a lack of a coordinated and coherent system for collecting data on gender-based violence and the need for further trained medical personnel to properly treat women.<sup>55</sup>

Figure 55: Physical or sexual partner violence ever and within past 12 months in select Latin American and Caribbean countries



Source: Bott et al. (2012) data from ENDSSR 2008.

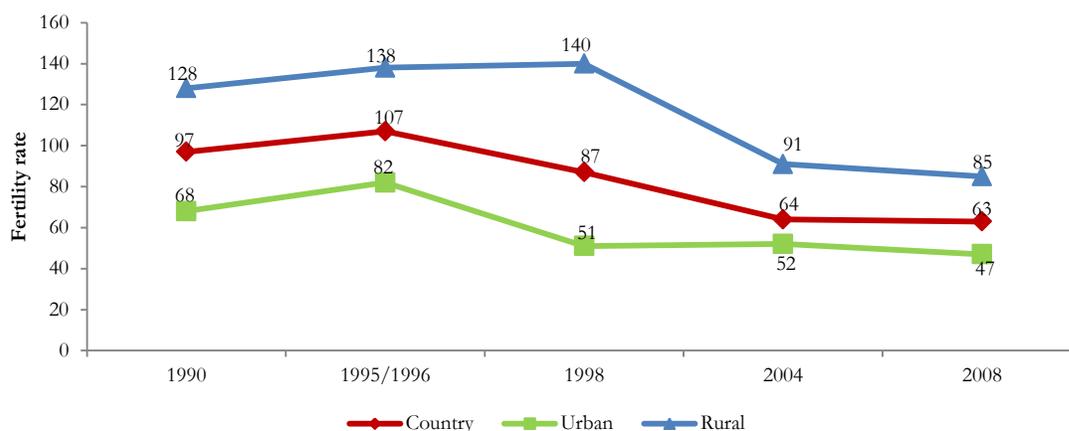
**A third manifestation of lack of agency in women is represented by the rate of pregnancy among teenagers.** As throughout LAC, adolescent fertility in Paraguay is higher than expected considering GDP and primary school completion rate. The rate of adolescent fertility has decreased since 2000 from 86 (births per 1,000 women ages 15-19) to 68 in 2011, slightly below the regional average of 69. However, Paraguay's rate is still higher than the average for lower-middle income countries (49 percent). While adolescent fertility has decreased over time, as has the rate of older ages, the fall has been slower and thus the contribution of adolescent fertility to total fertility actually increased from 10.5 percent in 1987 to 1990 to 12.8 percent between 2005 to 2008.<sup>56</sup>

<sup>55</sup> The Concluding Observations of the Committee on the Elimination of Discrimination against Women, 2011

<sup>56</sup> 2008 Encuesta Nacional de Demografía y Salud Reproductiva (ENDSSR 2008).

**Teenage pregnancy is higher in rural areas than in urban areas and among teenagers of lower socioeconomic status.** While the fertility rate was 85 for rural teenagers in 2008, it was only 47 for urban teenagers [Figure 56]. Similarly, socioeconomic status and the level of education of young women are inversely proportional to the probability of experiencing at least one pregnancy.

Figure 56: Adolescent Fertility Rate (per 1,000 women) per Area of Residence



Source: ENDSSR 1990, 1995/1996, 1998, 2004, and 2008. Universe is limited to women ages 15 to 19.

### Box 3. Teenage pregnancy and lack of agency: Key results from a mixed-methods study in Paraguay<sup>57</sup>

A mixed-method study was conducted in 2012/2013 to understand the risk factors and social circumstances related to adolescent parenthood in Paraguay. This study consisted of semi-structured in-depth interviews and mini focus groups for the qualitative component, and a standardized survey distributed to 1,000 boys and girls in the target age group (15-19 years) for the quantitative component. The goal of this study was

- 1) to gather comprehensive information about perceptions, attitudes, knowledge, values and concerns, and
- 2) to illuminate significant contextual information such as peer effects and cultural and social norms.

<sup>57</sup> This study was implemented by SER (Sociedad de Estudios Rurales y Cultura Popular), led by Daniel Campos Ruiz Díaz, María Celsy Benavidez, and Pedro Amado de Llamas Granada.

**This study found that lower levels of agency and its enablers (such as aspirations and empowerment)<sup>58</sup> are associated with a higher risk of becoming a teenage mother.<sup>59</sup>**

Concretely, a girl may get pregnant because she lacks the capacity to take control over her life projects – instead, life (including pregnancy) just ‘happens’ to her. Furthermore, the context in which adolescent mothers grow up might not provide them with positive role models to help them identify concrete educational and occupational goals to achieve and the steps necessary to achieve them. Additionally, social norms might favor female passivity within relationships, communities and the society – which in itself is contrary to exercising agency. Finally, multiple factors at the relationship and community level may disempower young girls and thus hinder them from taking decisions and engaging in the necessary steps to implement these decisions.

**Both the qualitative and the quantitative parts of the study showed that one of the key constraints to making meaningful choices and taking decisions to shape one’s own future faced by teenage mothers is related to their capacity to aspire.** Adolescent mothers have lower expectations with regards to the quality and the remuneration of the jobs they will be performing in the coming decade when compared to their peers who do not have children in adolescence. When asked about their educational aspirations, adolescent mothers interviewed for this study generally agreed with the importance of education, but this appreciation reveals to be very generic: the acknowledgement of the value of education does not come accompanied by a clear plan of concrete steps to take to improve their own educational outcomes. Furthermore, when asked about their visions for their own lives, they express little clarity in general – and no concrete mechanisms available to them to shape their own future. This lack of control over their life projects is reflected in their pregnancies: the in-depth interviews conducted in the context of this study showed that pregnancy occurred neither completely intended – nor completely unintended in the vast majority of the cases observed. Most interviewees do not mention an explicit and conscious motivation to their pregnancy – but at the same time, the pregnancy does not seem to interrupt careers or planned life paths. Thus, pregnancy ‘occurred’ to most of these girls without them showing signs of control or conscious decisions as to this life event.

**Context-related factors can limit or strengthen adolescent girls’ agency: Not only family environments, but also peers and society are influencing the way these adolescent girls see themselves, how they imagine themselves in the future, and if and how they are enabled to take meaningful decisions regarding their present and their future.** Aspirations are also shaped by observation, thus it is quite striking to note that a smaller share of adolescent mothers described

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<sup>58</sup> Following Lopez-Calva and Cord (2013), this study groups enablers of agency as follows: i) internal enablers (aspirations, self-drive), ii) context-related/environment enablers (norms, informal and formal institutions – enabling or preventing you from ‘doing’) and iii) empowerment (economic, political and other conditions to make others act in one’s own interest).

<sup>59</sup> The results described below are correlations, and do not show causal effects.

their families as providing them with some form of role models compared to their non-pregnant peers (75 percent versus 89 percent).<sup>60</sup> Similarly, several results from the qualitative and the quantitative components of the study indicate that role models amongst teenage mothers' peers are not very common: Teenage mothers are more likely to know male peers that engage in risky behavior, such as violence and gang activities, compared with non-mothers. Teenage mothers also reported earlier sexual debut among their friend group. Gender norms can limit the options an individual sees for herself in terms of behaviors, occupations, roles, for example. Interestingly, the survey shows that teenage mothers agree with stronger gender stereotypes compared to their peers that are not mothers.<sup>61</sup>

**Girls in several social and cultural contexts lack 'power' to influence the behavior of others – which can turn them into passive figures in relationships, in families or in communities.**

Limitations of access to information are motivated to a much higher extent by *constraints* such as fear, economic issues, and shame among teenage mothers than non-mothers (40 percent of teenage mothers declared these to be the reasons why they did not access relevant information compared to 29 percent of non-mothers). This suggests that adolescent mothers are not empowered to receive the information they need and want, while non-mothers lacked access mostly due to choice (no necessity or no interest were more common responses). Having access to accurate and complete information is an essential basis for decision-making processes.<sup>62</sup> Finally, the age gap between teenage mothers and their partner (if in a relationship) was double the age gap as that for non-mothers in a relationship (six years versus 3). Significant age gaps can result in higher constraints to women's decision-making as a result of the power imbalances within the couple. Some adolescent mothers also depended financially on their partners and several interviewees mentioned that their

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<sup>60</sup> Teenage mothers are more likely to have witnessed psychological violence between their parents (concretely: screaming and insults): 31 percent of teenage mothers report this behavior by their parents versus 23 percent of not-pregnant girls.

<sup>61</sup> Teenage mothers responded in a way that reflected more gender stereotypes to the following questions: The woman should not work, should be devoted to the home and the children; The man should be the economic provider of the household; Men should not cry; Studying in university is more important for men compared to women; When jobs are scarce, men should have more rights to a job compared to women; Generally, men are better political leaders compared to women; To be a man it is necessary to have at least one child; To be a woman it is necessary to have at least one child. This extended to sexual behaviors: they tended to respond in a more biased way to statements that reflected traditional gender stereotypes with regards to sex, such as female submission and male domination. The survey included the following questions: The woman is the one who should use contraception during sex.; Condoms are difficult to use.; People who use condoms have sex with lots of people.; I feel very ashamed to buy contraceptives.; My partner does not like to use condoms.; The majority of men do not like to use condoms.; It is not necessary to use condoms if one knows one's partner.; If I use a condom my partner will be suspicious of me.; If a girl goes out with a guy for a long time and does not want to have sexual relations she does not love him.; The majority of my friends has lost their virginity.; If my first sexual experience will be (or was) much later than for my friends – they will make fun of me.; Losing her virginity is an act of love for a woman.

<sup>62</sup> Furthermore, effective contraceptive use is an important factor in a woman's control over her body and fertility. Not surprisingly, teenage mothers also show lower self-efficacy in contraceptive use in their current relationships compared to non-mothers (66 percent of girls that are not mothers responded they were either very or somewhat secure that they would not have sexual intercourse if their partner would not want to use any birth control method, compared to 55 percent of teenage mothers.

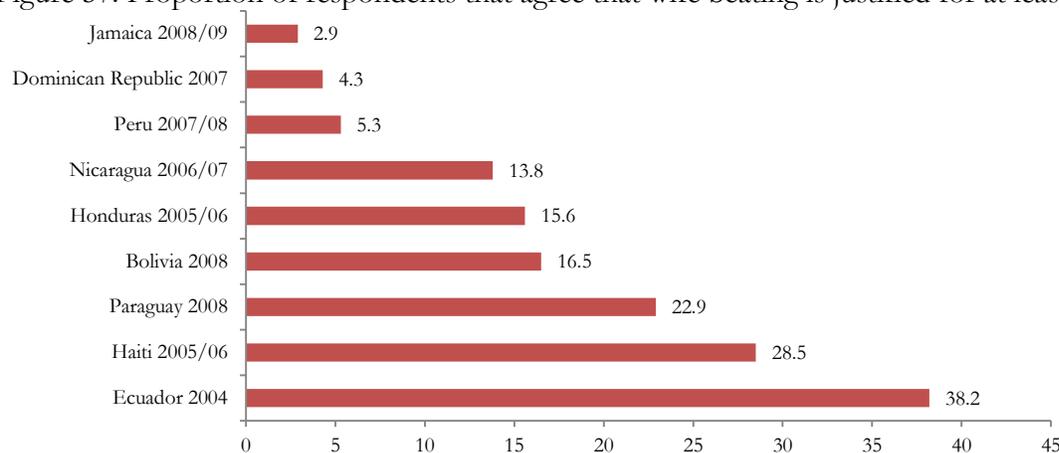
decision-making capacity is limited by their partners. Even more so, a higher proportion of teenage mothers reported some form of controlling behavior from their partners (47 percent for non-mothers versus 76 percent of teenage mothers).

#### 4.4 Perceptions and social norms

**To some extent, the challenges faced by women are related to social norms, as enablers of agency.**<sup>63</sup> According to the ENDSSR 2008 survey, Paraguay comes third in the region regarding women’s agreement that wife-beating is sometimes justified (23 percent) [

Figure 57].<sup>64</sup> A third of interviewees believed that the wife must obey her husband regardless of whether she agrees with him, one in four thought that the man must show his wife that he is the boss, and 8 percent believed that having sex is a wife’s obligation, even if she does not want to.

Figure 57: Proportion of respondents that agree that wife beating is justified for at least one reason



Source: Bott et al. (2012).

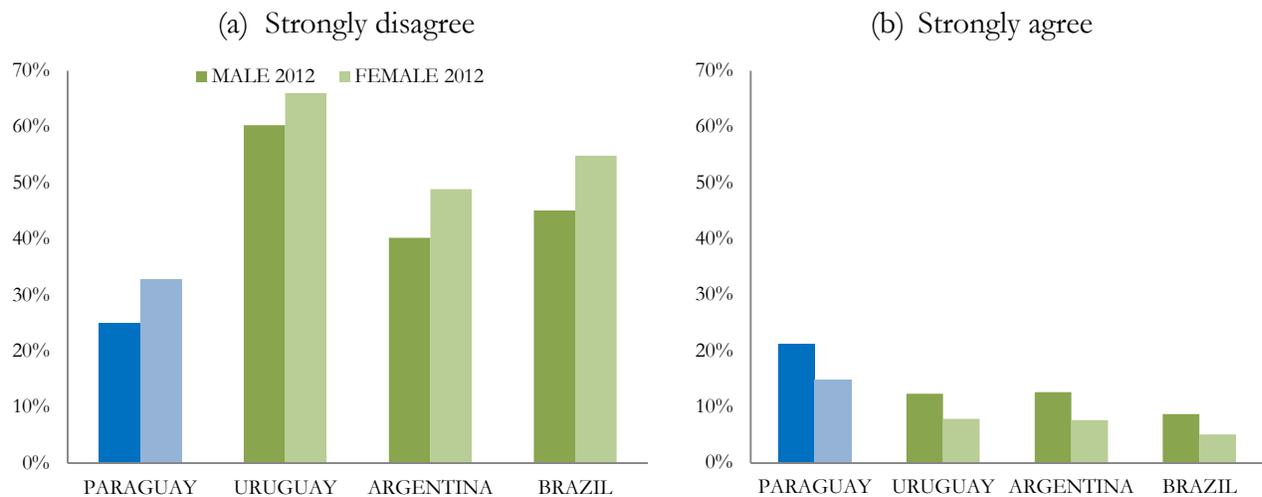
**Almost 40 percent of Paraguayans believe that in times of job scarcity, men should have more rights to paid work than women** [Figure 58]. Men were more likely to agree with this statement. Interestingly, when comparing the extreme answers (very much disagree – very much agree) to its neighboring countries, Paraguay shows more stereotypical attitudes with a fairly lower proportion of both men and women strongly disagreeing with the statement and a slightly higher share strongly agreeing with it. Attitudes such as these are reflective of favoring men as economic

<sup>63</sup> Enablers of agency include: (i) internal such as aspirations and self-drive, (ii) context related enablers such as norms, informal or formal institutions, and (iii) empowerment –economic, political and other to make others act in one’s own interest. Lopez Calva and Cord (2013).

<sup>64</sup> Bott et al. (2012) using ENDSSR 2008 data.

breadwinners rather than fair and equal distribution of jobs and economic opportunities based on merit and talent.

Figure 58: Respondents who strongly disagree and strongly agree with the following statement “When there aren’t enough jobs, men should have more rights to jobs than women”



Source: Latin American Public Opinion Project (LAPOP) 2012 data. Overall agreement is represented by responses 5, to 7 in a 7 point scale with 7 being “agree very much”.

**In sum, Paraguay has made progress over the last decade in promoting women’s empowerment and gender equality, particularly in terms of women’s endowments in health, education and in strengthening the legal framework to promote gender equality.** Despite these improvements, challenges persist in achieving gender equality in the labor market where women tend to not only participate at a lower share compared to their male counterparts (thus having reduced capacity to earn an income of their own) – but also occupy less productive sectors and positions, typically lacking social protection more frequently than men and having lower earnings. One of the dimensions of gender equality where Paraguay seems to still be significantly lagging behind is women’s agency. Women in the country continue to show very low rates of political participation, high prevalence of domestic violence and higher than expected adolescent fertility rates. The lack of women’s agency is not only important as a development outcome of its own – but also it is one of the missing catalyzers keeping women from fully utilizing their human capital endowments. Thus, by effectively promoting women’s agency it is likely that development outcomes in other dimensions will be positively impacted as well.

## Conclusion

**Paraguay has made substantial progress in the last decade in improving its people's welfare and reducing inequality.** There are some reasons for optimism related to increased labor productivity in agriculture and improved employment opportunities, suggesting potentially long-lasting transformations. Still, the country faces challenges that can threaten the sustainability of the observed improvements.

**A key obstacle Paraguay faces today is the fact that a large share of the population faces a volatile economic environment.** Both the rural and urban poor rely on volatile earnings streams, leaving them exposed to labor market and macroeconomic risk. While the urban poor face limited job prospects, leading to high rates of unemployment and self-employment, the rural poor disproportionately depend on agriculture for their income, exposing them to macroeconomic price fluctuations and local risks such as bad weather and agricultural pests. Therefore, large segments of the population who have escaped poverty remain vulnerable to falling back, and seem unable to join the ranks of the middle class.

**A second space of concern relates to the still high and persistent lack of opportunities for all groups: Even though inequality in income has fallen, some aspects related to the structural determinants of inequity remain.** Territorial inequalities persist, and access to good quality basic services, such as safe water and education is limited to those from better off background and living in urban areas. These inequalities are related not only to the lack of productive capacity but also institutional weakness to deliver high quality services.

**Finally, the relevance of strengthening agency and autonomy, particularly of women in their participation in markets, community and relationships, is at the core of an equitable society.** Paraguay's women continue to show very low rates of political participation, domestic violence seems to be a highly prevalent issue of concern and, while adolescent fertility decreased significantly since 2000, it continues to be higher than the average for lower-middle income countries and it now contributes more to total fertility compared to 20 years ago. It is not only important to address each of these manifestations of the lack of agency directly, but furthermore, and considering the catalyzing effect of agency on other development outcomes, it is essential to strengthen women's agency which will most likely show positive effects on other development outcomes, such as for instance their opportunities and outcomes in the labor market.

## Policy Options to strengthen the links between economic growth and equity

**The objective is to reduce structural inequities in monetary and non-monetary outcomes, by addressing their structural determinants, namely: i. Improving the effectiveness of policies to protect those vulnerable to falling into poverty in the face of shocks; ii. Enhancing**

**equality of opportunities; and iii. Increasing the capacity of all individuals to have agency and voice in society.** Equitable dynamics in those dimensions constitute a pre-condition towards ensuring sustainable and shared growth. The following are suggestive policy areas for Paraguay in the coming years:

### **First Pillar: Mobility out of poverty**

- Well-functioning and accessible markets are required to support the ability of all segments of the population to procure well paying, high productivity jobs. For instance,
  - a. Promoting activities aimed at increasing the productivity, income generation and asset accumulation of families who have been able to leave poverty but who remain vulnerable to the risk of downward mobility will facilitate economic security and the growth of the middle class. These include the expansion of benefits to small firm and self-employed workers, including minimum wage coverage for low-skilled wage labor, access to public retirement savings plans (or continued expansion of non-contributory pensions), and access to unemployment insurance. As the poor are largely self-employed, the provision of adult training programs and microcredit could lead to increased productivity for this sector.
  - b. While strengthening value chains linked to the dynamic sectors of the economy and emphasizing value added in the service sector will require high investments in human capital and is important for all areas, investing in connectivity and human capital in rural areas will allow rural households to diversify their income sources and benefit from more dynamic markets.
- Enhanced risk management at the macro and micro levels can protect households from shocks. Particularly,
  - c. As highlighted by a recent World Bank report (2013d), to help prevent, cope, and mitigate agricultural risks faced by poor families in rural areas, it is crucial to ensure diversification of crops (including those less affected by droughts and with short cycles such as sesame) as well as good practices for irrigation and pest control, and promoting the commercialization of their products to incorporate them into value chains
  - d. Increasing access to formal financial markets and insurance instruments (both health and agricultural) can help households mitigate their exposure to income volatility. Additionally, it could be relevant to consider the creation of contingency funds for families affected by weather shocks.
  - e. Additionally, broadening the coverage and enhancing the responsiveness of targeted programs—such as CCTs (Tekopora) and Temporary employment programs—can also help households cope better with price shocks and both systemic and idiosyncratic shocks in general (in the absence of integrated social safety nets).
  - f. Longer-term risk management policy can engage in second-generation reforms to the social protection system, including elements of social assistance for the poor and social

insurance for the large vulnerable population who can easily fall back into poverty were the external environment to deteriorate, such as wide-coverage unemployment insurance programs for the informal sector and temporary food assistance for needy families.

- Equitable, efficient and sustainable fiscal policy can ensure a solid fiscal position that allows for redistributive fiscal policy. Specifically,
  - g. Increase tax revenues through progressive taxation policies to create fiscal space for more effective redistribution via diversification of assets holdings of the poor and the establishment of social safety nets, as well as enhancing targeting mechanisms to reduce ex-post inequality in income distribution in the short run.

### **Second Pillar: The pursuit of opportunities for all**

- Ensuring the fairness and transparency of institutions in the provision of public goods requires the use of credible, stable institutions to deliver high quality services without excluding any segments of the population, and enhance equality of opportunities for all. In particular,
  - a. Conditional targeted programs can continue to promote better and more access to healthcare and education for children, resulting in enhanced equality of opportunities and inter-generational mobility
  - b. Improved quality of services for all will require both infrastructure and human capital investment
  - c. Improved service delivery will imply improving the fiscal and strategic coordination among the central government, departments and municipalities, as well as integrating planning and programming processes with the budget process in order to track progress in social delivery.
  - d. Additionally, it will be crucial to design a monitoring and evaluation system to track progress in social delivery, results and impacts, developing tools for targeting these towards the segments of the population with most urgent needs.

### **Third Pillar: Strengthening agency**

- Policies to expand women's opportunities in the labor market will not only reduce labor gaps (employment, earnings and quality) but also will enhance women's agency, self-esteem and aspirations. To achieve this, it is necessary to
  - a. Strengthen and expand systems that support women's inclusion in the labor market through, for instance, access to childcare and professional training.
  - b. Improve labor conditions in typically female sectors, such as domestic services, by formalizing their activities introducing a minimum wage for this sector, and promoting social security payments towards pensions and health insurance.

- c. Empowering girls through the promotion of life skills trainings, and raising expectations through career development and activities likely to enhance the aspirations and agency for girls and boys, through, for instance, youth mentoring programs.
- d. Mitigation efforts in the short run to ameliorate the effect of adolescent childbearing can include support to teenage mothers through access to alternative school schedules and childcare to reduce dropout rates of young mothers.

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