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## **The growth-employment-poverty nexus in Latin America in the 2000s**

Venezuela country study

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**Abstract:** Venezuela experienced slow economic growth during the 2000s. The economy suffered a recession in the early years of the period and during the international crisis of 2008, but most labour market indicators improved and moved along with the business cycle over the period. The only indicators that did not improve were the composition of employment by occupational position and the percentage of workers registered with social security, which remained essentially unchanged. Most of the labour market indicators were affected negatively by the international crisis, and some of them had not recovered their pre-crisis levels by 2012.

**Keywords:** Venezuela, Latin America, inclusive growth, labour market, poverty

**JEL classification:** O15, J01, J30

**Figures and tables:** Provided at the end of the paper.

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## 1 Introduction

Latin America in the 2000s witnessed an unprecedented period of growth with poverty and inequality reduction. The region also suffered from the economic crises in Europe and the United States from 2007/08 onwards.

Economic development has been defined as a widespread improvement in the material standards of living of a country's people. Economic growth is defined as an increase in the total amount of goods and services produced in an economy.

This paper on labour markets and growth in Venezuela since 2000 is one of sixteen studies of Latin American countries, each of which aims to answer the following broad questions: Has economic growth resulted in economic development via improved labour market conditions in Latin America in the 2000s, and have these improvements halted or been reversed since the Great Recession? How do the rate and character of economic growth, changes in the various labour market indicators, and changes in poverty relate to each other?

More specifically:

- What was the country's economic growth experience?
  - Characteristics of economic growth: breakdown by sector (agriculture, industry, services).
- How have the following indicators of labour market conditions changed in the course of each country's economic growth?
  - 1. Employment and unemployment:
    - a. Unemployment rate, using International Labour Organization definition.
    - b. Employment-to-population ratio.
    - c. Labour force participation rate.
  - 2. Employment composition:
    - a. Occupational group—professional, managerial, and clerical, etc.
    - b. Occupational position—wage/salaried employee, self-employed, unpaid family worker, etc.
    - c. Sector of employment—agriculture, manufacturing, services, etc.
    - d. Education level—low, medium, high.

- e. Registered/unregistered with the nation's social security system.
- 3. Labour market earnings, real:
    - a. Overall.
    - b. Disaggregated by gender.
    - c. Disaggregated by age (youth/non-youth).
    - d. Disaggregated by occupational group.
    - e. Disaggregated by occupational position.
    - f. Disaggregated by sector (agriculture etc.).
    - g. Disaggregated by education level (low, middle, high).

The answers to the preceding questions are by no means obvious. Claims have been made that economic growth in Latin America has been jobless, that productivity has grown at the expense of employment, and that Latin America, having even greater economic inequality than the United States, may have been following the US's course of rising incomes for those at the very top of the income distribution and stagnating or even falling incomes for the great majority, especially the poor. It has also been claimed that Latin America is caught in a middle-income bind, squeezed between the advanced economies on the one hand and emerging economies, especially China, on the other.

Recent evidence has shown that economic growth generally leads to an improvement in labour market conditions and reductions in poverty within developing countries (Fields 2012). The relatively scarce evidence for Latin America, however, indicates some heterogeneity at the country level. In the case of Argentina, the strong growth that followed the economic meltdown of 2001–02 was accompanied by large employment gains and increases in labour earnings, with higher gains (in relative terms) for less skilled workers. This process led to a large reduction in poverty in the 2003–06 period (Gasparini and Cruces 2010). In Brazil, economic growth during the period 1996–2004 was relatively low. In this context, unemployment remained high and labour earnings low, while poverty increased (Fields and Raju 2007). Nicaragua also experienced economic growth during the period 2001–06, and although there were increases in employment levels, overall poverty did not fall significantly (Gutierrez et al. 2008). The 2000–06 period of economic growth in Mexico was accompanied by improvements in employment composition, rising real labour earnings, and falling poverty, although the country also experienced rising unemployment levels in those years (Rangel 2009). The relatively long period of economic growth in Costa Rica (1976–2000) took place with increases in labour income, a reduction of employment in agriculture, and improvements in education, with a reduction in poverty levels (Fields and Bagg 2003). Finally, the period of economic growth in Colombia between 2002 and 2011 led to a reduction in unemployment and poverty levels (Ham 2013). This mixed evidence indicates that the growth-employment-poverty nexus is fairly complex and the experiences of Latin American countries are far from homogeneous.

Limited evidence is available on the mechanisms underlying the growth-labour markets-poverty nexus in Latin America. For instance, a World Bank (2011) study finds that the increase in men's labour income was higher than that of women's in the 2000s, and that this was the most important factor in lifting households out of poverty, even though World Bank (2013) shows that the increase in the labour force over this period was mainly led by women. Inchauste (2012) reports that job-related events were the main escape route from poverty for Latin American households over the same period, and these events included household heads getting a new job, other family members starting to work, and those employed achieving higher labour earnings than before.

Overall, previous studies generally show a positive association between economic growth, improvement in labour market indicators, and reduction in poverty in Latin American countries. However, the tightness of these relationships is not always clear from these studies. Moreover, these regional aggregates mask the heterogeneity at the country level, which implies that little can be said about the underlying mechanisms at play. This paper on Venezuela is one of sixteen case studies which, taken together, will allow us to separate and identify country-specific from region-wide factors in the relationship between the economy's overall performance and labour market outcomes in the decade of 2000s.

## **2 Data and methodology**

All the statistics in this paper are obtained using microdata from the Encuesta de Hogares por Muestreo (EPM), for the second semester of years 2000 to 2012. The nationwide surveys from 2000 to 2006 were incorporated into the SEDLAC—Socio Economic Database for Latin American and the Caribbean (CEDLAS and the World Bank 2014), while we made our own processing of the remaining surveys; three of the authors of this paper were involved in this project at CEDLAS (Center for Distributive, Labor, and Social Studies), Universidad Nacional de la Plata in Argentina. The EPM's sample size has increased over time; it went from 16,809 households and 80,417 persons in 2000 to 37,643 households and 154,276 persons in 2012 (Table 1). The EPM surveys have always been representative of the total population of the country.

For this study, we processed the microdata from Venezuela to construct time series of comparable data for a wide range of labour market and income distribution indicators. The resulting indicators are compiled into a large number of tables and figures, provided at the end of the paper, which form the basis for the text that follows.

Several definitions and classifications are used in order to assess whether the labour market has improved or deteriorated. Unemployment is defined as usual, i.e. the share of unemployed people over the economically active population. A person is unemployed if s/he is 15 years old or more and during the reference period (one week in the Venezuelan survey), s/he was without work, available for work and seeking work. Youths are those between 15 and 24 years old, while adults are those between 25 and 65 years old.

Occupational groups are defined according to the following classification:<sup>1</sup> management; professionals; technicians and associate professionals; clerical; service and sales workers; agricultural, forestry and fishery workers; craft and related trades workers; plant and machine operators and assemblers; elementary and armed forces. Venezuela has made use of its own categories to classify occupations based on the International Standard Classification of Occupations of 1988 (ISCO-88). We adapted the classification system used by Venezuela to match the categories described above from 2004 to 2012 except for the categories of professionals and technicians that could not be distinguished. The data available in the national surveys from 2000 to 2003 contains the national classification at 1-digit only, preventing us from constructing the occupational categories.

The occupational position is classified into four categories: employer, wage/salaried employee, self-employed and unpaid worker. Given the nature of labour markets in Latin America, the analysis of the employment structure according to occupational positions will identify a decrease of self-employment and an increase in wage/salaried employees as an improvement in the labour market.

The sector of employment was divided into primary activities; low-tech industry; high-tech industry; construction; commerce; utilities and transportation; skilled services; public administration; education and health; and domestic workers. When looking at the sectoral distribution of employment, an improvement in the labour market is implied by an increase in the share of the sectors with higher earnings.

Turning now to the educational level of employed workers, we define three categories for the analysis: low (eight years of schooling or less); medium (from nine to thirteen years of schooling); and high (more than thirteen years of schooling). An increase in the education level of the employed population is considered as an improvement in the labour market as the share of workers that are expected to receive high levels of earnings increases and the share of workers with low earnings' levels decreases.

We also classify employed workers according to whether they are registered with the social security system or not. Household surveys from Venezuela ask about enrolment in the social security system to wage/salaried employees only. We assume that it is better for employed workers to be registered, so an increase in this indicator will be interpreted as an improvement in the labour market.

Labour earnings are expressed on a monthly basis in 2005 purchasing power parity (PPP) dollars, and higher earnings represent an improvement in the labour market. To compute poverty and inequality statistics, we use the per capita household income. Household income is the sum of labour income plus non-labour income; included in non-labour incomes are capital income, pensions, public and private transfers, and the imputed rent from own-housing.

Poverty rates are estimated considering the national lines for moderate and extreme poverty. We compute the poverty headcount ratio for each. We also calculate the share of working poor households (those with at least one member employed and a per capita family income below the moderate poverty line), and the poverty rate according to the international poverty lines of 4 dollars-

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<sup>1</sup> This is the International Standard Classification of Occupations of 2008 (ISCO-08) at one digit level.

a-day and 2.5 dollars-a-day. Income inequality is calculated using the Gini coefficient of per capita household income and labour earnings.

### 3 Empirical results

*Venezuela experienced slow economic growth during the 2000s. The country underwent a recession at the beginning of the period and during the international crisis of 2008. The Venezuelan economy surpassed its pre-recession GDP level in 2012, but GDP per capita was still below the pre-crisis level by the end of the period studied (Figures 1 and 2).*

During the period 2000 to 2012, Venezuela experienced low economic growth by Latin American standards. GDP per capita increased by 22.0 per cent, while the average for the eighteen Latin American countries was 36.2 per cent during the same period. GDP (measured at PPP dollars of 2005) grew by 49.7 per cent, and GDP per employed person rose by 28.4 per cent. The annual growth rate of GDP per capita was 1.2 per cent, and it varied from a minimum of -10.5 per cent in 2002 to a maximum of 16.2 per cent in 2004 (Table 2).

Venezuela is an economy that depends to a great extent on oil revenues and where GDP per capita follows the movements of oil prices. At the beginning of the 2000s, the Venezuelan economy was affected negatively by its political instability and a two-month strike by the state-run oil company (Alvarez and Hanson 2009). The consequence of the strike was a rapid drop in GDP of 8.3 per cent annually from 2001 to 2003. In the following years, rising international oil prices helped the economy to recover. The government regained control over the oil company after the two-month strike. The implementation of changes in the oil revenues' distribution policy along with changes in taxation allowed the government to obtain a larger amount of oil revenues and to implement an expansionary fiscal policy. Indeed, public spending was the driving force of the economy from 2003 to 2008 (Guerra and Olivo 2009). The expansionary fiscal policy was accompanied by an expansionary monetary policy, and foreign exchange rate and price controls. GDP and GDP per capita growth rates averaged 10.5 and 8.6 per cent respectively between 2004 and 2008. The economy was affected adversely by the international crisis of 2008, mostly through the drop in international oil prices. The reduced oil revenues prevented the government from instrumenting countercyclical policies (Guerra and Olivo 2009; Weisbrot and Johnston 2012). The public spending was reduced and taxes were increased in 2009 to face the international crisis. Moreover, the government did not increase its debt significantly despite having a low stock of public and external debt (Weisbrot and Johnston 2012). GDP fell by 3.2 per cent in 2009 while GDP per capita dropped by 4.8 per cent that year. The economy returned to its pre-crisis GDP level in 2012, helped by the recovery in oil prices and the increase in public spending starting in 2010. GDP per capita was slightly below its pre-recession value by 2012.

The share of the industry and agricultural sectors in the economy increased, while the share of the service sector diminished between 2000 and 2010 (when data on this variable stopped becoming available). The share of the industry sector, the largest one in the Venezuelan economy, increased from 49.7 per cent in 2000 to 52.2 per cent in 2010 (Table 2). The increase was led by the growth of the oil subsector which followed the rise in the international oil price between 2004 and 2008. On the contrary, the manufacturing subsector lost share over the period due to price and exchange rate controls, and increases in imports driven by an overvalued currency (Guerra and Olivo 2009). The

share of the service sector, on the other hand, diminished during the same period from 46.1 per cent in 2000 to 41.1 per cent in 2010. The agricultural sector increased its share in the total economy from 4.2 per cent in 2000 to 5.8 per cent in 2010. Turning to the crisis year, industry was the sector most affected by the international crisis of 2008. In 2009, the share of this sector declined by 9.9 percentage points and its value added fell by 5.0 per cent due to both the reduction in oil prices and electricity blackouts (Weisbrot and Ray 2010). The share of the industry sector in the economy and its value added never regained their pre-crisis levels. The agricultural and service sectors suffered smaller changes in their value added compared to the industry sector between 2008 and 2009 (an increase of 1.0 per cent and a drop of 0.9 per cent respectively).

*The unemployment rate dropped from 2000 to 2012 following the movements in the business cycle. It decreased for youths, adults, men, and women. During the international crisis, the unemployment rate increased but recovered its pre-crisis level by 2012 (Figure 3).*

The unemployment rate (measured as the ratio of unemployment to labour force) decreased from 13.2 per cent in 2000 (1,365,752 unemployed people) to 7.4 per cent in 2012 (1,006,400 unemployed people) and moved along with the business cycle over the period. Between 2001 and 2003, the unemployment rate increased from 12.8 per cent to 16.8 per cent while GDP was falling. Between 2004 and 2008, the unemployment rate decreased and reached its lowest value for the period (6.9 per cent in 2008). The international crisis of 2008 led to an increase in the unemployment rate, which rose to 8.1 per cent in 2009 and continued its upward trend until 2010. Both the number of persons in the labour force and the number of employed persons increased between 2008 and 2009 by 245,548 and 73,126 respectively. These figures suggest that the increase in the unemployment rate from 2008 to 2009 was explained by the new entrants into the labour market that could not find a job. In 2012 the unemployment rate returned to its 2007 level, but was still above the level of 2008.

The unemployment rate decreased for youth, adults, men, and women between 2000 and 2012. The unemployment rate for young workers fell from 24.3 to 16.2 per cent over the period, and for adults the decrease was from 10.2 in 2000 to 5.8 per cent in 2012. When broken down by gender, the unemployment rate fell from 12.6 per cent in 2000 to 6.7 per cent in 2012 for men and from 14.4 per cent to 8.4 per cent for women during the same period. The international crisis hit young workers slightly harder than adult workers. The youth unemployment rate increased by 2.4 percentage points between 2008 and 2009 while the rise was of 0.9 percentage points for adult workers. Women were more affected than men by the increase in unemployment during the international crisis. Between 2008 and 2009, the unemployment rate grew by 1.6 percentage points for women while the increase was of 0.9 percentage points for men. For all population groups, the unemployment rate continued to rise until 2011, when it began declining again. By 2012, the unemployment rates of adults and men had recovered their pre-crisis levels. For youth and women, though, their unemployment rates were above the pre-recession values.

*The composition of employment by occupational group improved from 2004 (the earliest when we can construct the classification of occupations described previously) to 2012, shifting overall from low-earning occupations to better-paying occupations. All population groups benefited, especially women. During the international crisis of 2008, the structure of employment by occupational group slightly worsened for youth and men, improved for women, and remained unchanged for adults. Youth and men recovered the pre-crisis structure of employment by the end of the period (Figure 4).*



The share of the following occupations shrank between 2004 and 2012: services and sales occupations (drop of 2.4 percentage points); elementary jobs (drop of 1.5 percentage points); and agricultural, forestry and fishery occupations (drop of 1.0 percentage points). The share of the following occupations grew: professionals (increase of 3.4 percentage points); and plant and machine operators, and assemblers (increase of 1.1 percentage points). The share of the other occupational groups remained largely unchanged. These changes in the occupational composition of employment can be interpreted as an improvement since the share of low-earning occupations (elementary, agricultural, forestry and fishery, and services and sales occupations) decreased by 4.9 percentage points, while the share of high-earning occupations (armed forces, management and professionals) increased by 3.8 percentage points (Tables 3 and 6). The international crisis of 2008 did not affect the employment structure by occupational group in the aggregate.

All population groups benefited from the improvement in the employment structure by occupational group with women benefiting at the fastest rate. The rate of working in low-earning occupations dropped more for young workers (fall of 6.2 percentage points) than for adult workers (drop of 4.0 percentage points). Along similar lines, the increase in the rate of working in high-earning occupations was larger for adult workers than for young workers (growth of 3.8 and 1.1 percentage points respectively). Women benefited from the changes in the employment composition by occupational group more than men. The reduction in the rate of working in low-earning occupations and the increase in the rate of working in high-earning occupations were larger for women compared to men (drops of 4.0 and 6.5 percentage points and increases of 2.2 and 6.2 percentage points for men and women respectively).

During the international crisis of 2008, the occupational structure of employment slightly worsened for young workers and men, improved for women, and remained largely unchanged for adults. Between 2008 and 2009, there was an increase in the rate of young employed workers in both low- and high-earning occupations (rises of 1.0 and 0.7 percentage points respectively), and a small increase in the rate of employed men in low-earning occupations (growth of 0.5 percentage points) with an unchanged rate of male workers in high-earning occupations. The larger increase in the rate of young workers and men working in low-earning compared to high-earning occupations can be interpreted as a slight worsening in the employment structure for both population groups. Women enjoyed a reduction of 0.7 percentage points in the rate of working in low-earning occupations and an increase of 0.9 percentage points in the rate of working in high-earning occupations. Finally, adult workers exhibited small changes in their occupational structure of employment during the international crisis of 2008. Young workers resumed the downward trend in the rate of working in low-earning occupations in 2010, while the recovery for men took place in 2011.

*The employment structure by occupational position remained essentially unchanged between 2000 and 2012 for the employed population as a whole. Adult workers and women exhibited an improvement in their structure of employment by occupational position; men suffered a worsening, while the structure of employment remained largely unchanged for young workers. Within the period, the employment structure by occupational position deteriorated at the beginning of the period, improved in the following years, and worsened once again during the international crisis of 2008. All population groups but young workers were impacted negatively by the Great Recession and only women recovered the pre-recession structure of employment by 2012 (Figure 5).*

Between 2000 and 2012, the share of paid employees in total employment—the largest category—grew from 56.6 to 58.8 per cent. The share of the self-employed also increased but by less, from 36.6 to 37.2 per cent. On the other hand, the shares of employers and unpaid workers fell from 5.1 to 3.3 per cent and from 1.7 to 0.8 per cent respectively (Table 4). These changes implied an unchanged structure of employment by occupational position since the shares of low-earning (self-employment and unpaid employment) and high-earning categories (paid employees and employers) exhibited small changes overall (drop and rise of 0.4 percentage points respectively). Within the period, the employment structure by occupational position suffered a worsening in the early years of the period, when the country underwent a serious recession. It improved in the following years and deteriorated once during the international crisis of 2008. By 2012, low- and high-earning positions returned to their pre-crisis shares. In summary, in contexts of increasing unemployment and economic necessity, workers took up free-entry self-employment activities.

Between 2000 and 2012, the employment structure by occupational position deteriorated for men, improved for adult workers and women, and was essentially unchanged for young workers. From 2000 to 2012, employment in low-earning positions increased in percentage terms for men (2.2 percentage points). The percentage of men in high-earning categories decreased, indicating a worsening in their employment structure by occupational position over time. For adult workers and women, the rates of working in low-earning categories fell over the period, by 1.0 and 4.6 percentage points respectively. As a consequence, there was an improvement in the employment structures by occupational position over the period for these population groups. For young workers, the rates of working in low- and high-earning categories were essentially unchanged (increase and drop of 0.1 percentage points respectively). All population groups suffered a worsening in their employment structure by occupational position at the beginning of the period (from 2001 to 2003) that was followed by an improvement. A new deterioration took place during the international crisis for all population groups except young workers.

The international crisis of 2008 led to a deterioration in the employment structure by occupational position for adult workers, men, and women, while there was no change for young workers. Between 2008 and 2009, the rates of working in low-earning positions increased for adult workers, men, and women by 1.1, 1.0, and 1.0 percentage points respectively. In 2010, the share of low-earning positions in total employment began a downward trend for the three population groups. By 2012, women reached their pre-recession share of low-earning positions. Adult workers and men never reached their pre-crisis levels.

*The employment composition by economic sector improved over the period studied, overall and for all population groups (youth, adults, men, and women). Within the period, the employment structure by economic sector deteriorated in the early years (from 2001 to 2003), improved from 2003 to 2008, and the improving trend stalled during the international crisis and resumed in 2010 (Figure 6).*

The share of the following sectors fell between 2000 and 2012: primary activities (drop of 2.3 percentage points); high-tech industry (drop of 1.4 percentage points); commerce (drop of 1.2 percentage points); and low-tech industry (drop of 1.1 percentage points). Workers employed in the oil subsector are included in the primary activities sector in our classification. The increase in the employment share of the oil subsector in Venezuela mainly between 2004 and 2008 was counteracted by the reduction in the employment share of the agricultural subsector, resulting in a

decline in the share of the primary activities sector over time. The share of the following sectors grew: public administration (increase of 2.4 percentage points); utilities and transportation (increase of 2.1 percentage points); and education and health (increase of 1.1 percentage points). The share of the other sector remained essentially unchanged. These changes clearly reveal a growth process based on public spending, i.e. the public administration sector exhibited the largest increase among all sectors, along with shrinking industry and agricultural sectors which reduced their production due to higher imports and price controls. The employment structure by economic sector improved from 2000 to 2012 since the share of workers in low-earning sectors (domestic workers, primary activities, and commerce) declined from 41.5 per cent to 37.4 per cent and the share of workers in high-earning sectors (skilled services, public administration, and utilities and transportation) grew over the period, from 17.9 per cent in 2000 to 23.1 per cent in 2012 (Tables 5 and 6). Within the period, the employment structure by economic sector suffered a worsening at the beginning of the period (from 2001 to 2003) through an increase in the share of domestic workers (low-earning occupations) and a reduction in the share of industry sectors (mid-earning sectors), and improved in the following years (from 2003 to 2008). The improving trend stalled during the international crisis but resumed in the post-crisis period (from 2010 to 2012).

The improvement in the composition of employment by economic sector during the period took place for all population groups—that is, young and adult workers, men, and women. For young workers, the rate of working in low-earning sectors dropped from 50.0 per cent in 2000 to 44.5 per cent in 2012. In the case of adult workers, the rate of working in low-earning sectors decreased from 38.6 per cent in 2000 to 35.3 per cent in 2012. Both young and adult workers benefited from an increase in the rate of working in high-earning sectors over the period. The growth was from 13.2 per cent in 2000 to 18.3 per cent in 2012 in the case of young workers, and from 19.3 per cent to 24.2 per cent in the case of adults. When we disaggregate by gender, changes in the employment structure by economic sector indicate a reduction in the rate of working in low-earning sectors over the period for both men and women. The decrease was from 38.2 per cent in 2000 to 33.5 per cent in 2012 in the case of men, and from 47.5 per cent to 43.4 per cent in the case of women. The rate of working in high-earning sectors grew for men and women. The increase was from 20.5 per cent in 2000 to 27.1 per cent in 2012 for men and from 13.3 per cent to 16.8 per cent for women. Within the period, all population groups suffered an initial worsening in their employment structure by economic sector (from 2001 to 2003) through an increase in the share of low-earning sectors in total employment and a decrease in the share of high-earning sectors (young workers and women), or through a larger increase in the share of low-earning sectors compared to the increase in the share of high-earning sectors (adult workers and men). An improvement took place in the following years up to 2008. The employment structure remained essentially unchanged during the international crisis of 2008 for adult workers, men, and women, while there was a slight worsening for young workers (the share of low-earning sectors increased by 1.2 percentage points and the share of high-earning sectors grew by 0.8 percentage points). The improving trend resumed in 2010 for adult workers, men, and women. For young workers, the worsening trend continued up to 2012.

*The educational level of the employed population improved over the period overall and for all population groups, and especially among young workers. The economic crisis did not have an effect on this trend (Figure 7).*

The share of employed workers with low educational levels (eight years of schooling or less) dropped from 52.6 per cent in 2000 to 37.2 per cent in 2012, while the share of employed workers

with medium and high educational levels (nine to thirteen years of schooling and over thirteen years of schooling) grew from 31.7 per cent in 2000 to 35.3 per cent in 2012 and from 15.7 per cent to 27.5 per cent respectively.<sup>2</sup> We interpret this result as an improvement for the employed population as the level of education is an important predictor of labour earnings. Consequently, the changes in the employment structure by educational level implied an increase in the share of workers that tend to have high levels of earnings and a decline in the share of workers with low earnings' levels.<sup>3</sup>

The improvement in the educational level of the employed population took place for all population groups, and primarily among young workers. For the youth employed population, the share of workers with low educational levels decreased from 52.5 per cent in 2000 to 30.8 per cent in 2012. The share of young workers with medium or high educational levels grew from 37.0 to 47.5 per cent and from 10.6 to 21.7 per cent respectively. The share of adult employed workers with low educational levels fell from 51.3 to 36.9 per cent; this is a smaller percentage point reduction for adults than was the case for youth. The share of adult workers with medium and high levels of education increased from 31.1 per cent in 2000 to 34.0 per cent in 2012 and from 17.4 to 29.3 per cent respectively. Between 2000 and 2012, the rate of employed men with low educational levels fell from 58.2 to 42.9 per cent, and the share with medium and high educational levels increased from 29.8 to 36.9 per cent and from 12.0 to 20.2 per cent respectively. For women, the share of employed persons with low and medium levels of education fell from 42.6 to 28.2 per cent and from 35.2 to 32.9 per cent over time, while the share with high educational levels grew between 2000 and 2012 from 22.3 per cent to 38.9 per cent.

The pattern of improvement in the level of education of the employed population in Venezuela continued even during the international crisis of 2008. This was also the case for all population groups.

*The share of wage/salaried employees registered with the social security system changed only slightly from 2000 to 2012. The registration rate fell in the early years of this period and increased in the later years. This pattern of change held overall and for all population groups. The international crisis of 2008 did not interrupt the upward trend that the share of registered workers exhibited in the second half of period studied (Figure 8).*

Social security in Venezuela is provided by two types of institutions which serve different segments of the population. The *Instituto Venezolano de los Seguros Sociales* (IVSS) is the main provider of social security for public and private workers in the country; the *Instituto de Prevision Social de las Fuerzas Armadas* (IPSFA) provides social security for military personnel (Fernandez Salas 2010). These institutions provide pension insurance, health insurance, and occupational hazard insurance. Coverage is voluntary for self-employed workers, unemployed pregnant women, and persons who

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<sup>2</sup> The most frequent value of years of education for employed workers in Venezuela was 6 from 2000 to 2007 (around 21.0 per cent of employed workers had six years of education) and 11 from 2008 to 2012 (around 22.2 per cent of employed workers had eleven years of education).

<sup>3</sup> The improvement in the employment structure by educational level is related to changes in the relative demand and supply of workers with high educational levels with corresponding implications for the wage gap by educational group and the unemployment rate of each educational level. We introduce a discussion about the role of these factors in Venezuela in the paragraph on labour earnings.

were previously covered (ISSA 2014). The Venezuelan social security system combines contributory and non-contributory schemes. Under the contributory scheme, social security benefits are financed through contributions from employees, employers, and the government. The non-contributory scheme (*pensiones asistenciales*) covered persons who lack contributory capacity or receive an insufficient pension from the contributory scheme (Fernandez Salas 2010). The non-contributory scheme is funded totally by the government.

The percentage of wage/salaried employees registered with the contributory scheme of the social security system changed slightly from 2000 to 2012, when it increased from 68.6 per cent to 69.1 per cent. Within the period, the share of registered workers fell from 68.6 to 60.3 per cent between 2000 and 2005. From 2005 to 2011, a period that included the Great Recession, that share grew steadily and reached 73.0 per cent in 2011. A downward trend began at the end of the period and the percentage of registered workers was 69.1 per cent in 2012.

All population groups exhibited small changes in the share of workers registered with the social security system, but this variable moved erratically over the period. Among young workers, the share of registered workers fell from 49.1 per cent in 2000 to 48.5 per cent in 2012; the corresponding figures for adult workers were 74.6 and 73.5 per cent respectively. For both age groups, the percentage of registered wage/salaried employees fell at the beginning of the period, then increased, and then dropped again in 2012. Between 2000 and 2012, the share of registered workers increased from 65.1 to 65.5 per cent for men and fell from 74.4 to 74.1 per cent for women. Both groups exhibited an initial reduction in the percentage of workers registered, then a recovery, and finally a decrease at the end of the period studied.

The international crisis of 2008 did not affect the upward trend in the percentage of registered wage/salaried employees that took place in the second half of the period analysed. Between 2008 and 2009, the share of workers registered with the social security system increased overall and for all population groups. In the following years, that share stabilized at a high level and finally fell in 2012.

*Labour earnings increased from 2000 to 2012 overall and for all population groups and employment categories. Low-earning categories had larger percentage income gains than high-earning categories. Workers were affected negatively by the 2008 crisis and not all of the groups recovered the pre-crisis level of incomes by 2012 (Figure 9).*

Average monthly earnings, expressed in dollars at 2005 PPP, increased by 34.3 per cent, going from US\$380 in 2000 to US\$511 in 2012 (Table 6).<sup>4</sup> Labour earnings followed the movements of GDP over the period. They decreased in the first years, reaching a minimum of US\$297 in 2003, increased steadily from 2003 to 2007, and then decreased up to 2011. In 2012, labour earnings surpassed the level of 2008. Part of the increase in labour earnings over the period can be explained by regular increases in the minimum wage which impacted mainly on the lower tail of the wage distribution (Boada and Mayorca 2011).

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<sup>4</sup> The domestic currency of Venezuela was changed from *bolivar* to *bolivar fuerte* in January 2008 at the rate of 1 *bolivar fuerte* = 1000 *bolivares* due to inflation. We considered this change in our calculations.

All population groups and employment categories experienced increases in labour earnings between 2000 and 2012, and low-earning categories had larger percentage income gains than high-earning categories. Labour earnings grew by 33.6 and 38.6 per cent over the period for men and women respectively. The increases were 45.7 per cent for young workers and 30.8 per cent for adults. Among occupational groups, the increase in labour earnings was 63.1 per cent for low-earning occupations and 22.2 per cent for high-earning occupations between 2004 and 2012. Low-earning occupational positions had an income gain of 36.5 per cent from 2000 to 2012, while the increase was 24.7 per cent for high-earning positions. Low-earning economic sectors had an income gain of 44.1 per cent between 2000 and 2012, while the increase in labour earnings was of 29.8 per cent for high-earning economic sectors over the same period. Workers with low educational levels benefited the most from the increase in labour earnings over the period studied. Their rise was 39.0 per cent compared with 26.0 per cent for workers with medium levels of education and just 4.0 per cent for workers with high levels of education.

The evidence of larger earnings gains for workers with low and medium educational levels compared to workers with high educational levels can be interpreted in light of previous findings of improving employment structure by occupational group and economic sector over the period. The improving employment structure by occupational group and economic sector implied an increase in the share of occupations and sectors that can be expected to use workers with high and medium educational levels, such as professional occupations, and public administration, and utilities and transportation sectors, and a reduction in the share of occupations and sectors that employ workers with low educational levels, such as elementary, agricultural, services and sales occupations, and primary activity and commerce sectors. This evidence indicates that the demand for workers with high and medium educational levels relative to those with low educational levels increased between 2000 and 2012 (or from 2004 to 2012 according to our classification of occupations). On the other hand, the educational levels of persons in the labour force improved over the same period, indicating an increase in the relative supply of workers with high and medium levels of education (Table 8). The prediction of a supply and demand analysis is that the relative wages of workers with high and medium educational levels relative to those with low educational levels will rise or fall depending on which effect dominates (increase in the relative demand versus increase in the relative supply). In the Venezuelan labour market the relative wages of workers with high and medium educational levels relative to those with low educational levels fell over the period, and the relative wages of workers with high educational levels relative to those with medium educational levels also decreased (Table 7). The adjustment process also led to a reduction in the unemployment rate of all educational groups with larger reductions for workers with medium and low levels of education (Table 9).

The international crisis of 2008 had a negative impact on labour earnings overall and for most population groups and employment categories. Labour earnings for the working population as a whole decreased by 1.5 per cent between 2008 and 2009 and surpassed the pre-recession level in 2012. Young, adult workers, and men suffered income reductions during the international crisis of 0.5, 2.1, and 2.6 per cent respectively, while women were not affected negatively. Both young and adult workers and also men surpassed their pre-crisis levels of income by 2012. Among occupational groups, the categories most affected by the international crisis were management, professionals, and agriculture, forestry and fishery workers. They suffered income reductions of 5.2, 4.6, and 3.9 per cent respectively between 2008 and 2009, and none of them regained their levels of earnings of 2008 by the end of the period. Among occupational positions, workers in high-earning categories suffered

a reduction in labour earnings between 2008 and 2009 of 2.8 per cent on average, and by 2012 only wage/salaried workers returned to their pre-recession levels of income, while employers were still below that level. Workers from low-earning occupational positions were not impacted by the Great Recession. Among economic sectors, labour earnings of workers from the construction sector and high and low-tech industries exhibited the largest reductions; they were 9.0, 4.0, and 3.4 per cent respectively. Workers from the construction sector had not recovered their pre-crisis level of incomes by the end of the period studied. All of the educational groups suffered income losses during the international crisis. Labour earnings of workers with high levels of education fell by 5.3 per cent and did not recover the pre-crisis level by 2012. Workers with low or medium levels of education suffered earnings reductions of 1.5 and 1.3 per cent respectively and both groups recovered the pre-crisis level of income in 2012.

*Poverty fell over the period studied for all poverty lines used. The rate of working poor households also exhibited a decreasing trend. The pattern of poverty reduction over time was interrupted by the international crisis of 2008 but poverty indices were again declining by 2012 (Figure 10).*

The moderate poverty rate (measured by the country's official poverty line) decreased from 37.4 per cent in 2000 to 23.5 per cent in 2012, and the extreme poverty rate declined from 13.8 per cent to 7.2 per cent. The rate of working poor households (defined as the proportion of persons in the population living in a poor household in which at least one member works) fell from 36.2 per cent to 15.3 per cent over the same period. The evolution of these indicators shows a negative association with GDP: poverty increased from the beginning of the period and up to 2003 while GDP was decreasing; fell from 2003 to 2007 while the economy was growing steadily; rose in 2008 and stabilized in the following years when the economy of Venezuela suffered the effects of the international crisis; and finally dropped in 2012 when economic growth resumed. The analysis based on the 2.5 and 4 dollars-a-day PPP international poverty lines also shows a drop in the poverty rate from 2000 to 2012 and a negative association between the poverty rate and the growth of the economy. Starting in 2009, all of the poverty indicators stopped falling, but in 2012 they were again declining.

The poverty patterns reported in the last paragraph can be interpreted by examining incomes from various sources. The analysis of sources of household total income indicates that labour incomes suffered a decline between 2001 and 2003 when all poverty indicators peaked; increased steadily from 2003 to 2007 when all poverty indicators fell; stabilized by the time of the international crisis when poverty indicators stopped decreasing; and recovered the upward trend by the end of the period when poverty indicators declined again (Figure 11). Incomes from capital followed a similar pattern over the period. Income from pensions did not suffer a major decline during the crisis of 2003, showed a clear upward trend between 2003 and 2006, and finally a decline that determined a similar level of pensions at the household level in 2012 compared to 2000. Finally, incomes from government transfers exhibited an erratic pattern at the beginning of the period studied, between 2000 and 2004, a stable level between 2005 and 2009 and an upward trend by the end of the period. The erratic pattern in the first years of the period can be explained by the erratic pattern of the number of beneficiaries from government transfers. Despite this erratic pattern, a clear finding emerges. The number of beneficiaries from government transfers increased dramatically after the crisis of 2003. The social programmes introduced by mid-2003 (*misiones*) were primarily focused on education, health, and work opportunities and were accompanied by a monetary transfer component

that allowed the beneficiaries to escape extreme poverty and move into moderate poverty. As a result, the extreme poverty rate exhibited a drastic reduction between 2003 and 2007 (Vilorio 2011).

*Household per capita income inequality and labour earnings inequality decreased over the period. The international crisis of 2008 did not affect the downward trend in the inequality indices immediately, but an upward trend began in 2010 (Figure 12).*

Between 2000 and 2012, the Gini coefficient of household per capita income inequality fell from 0.440 to 0.402. The Gini coefficient of labour earnings among employed workers also decreased from 0.403 in 2000 to 0.342 in 2012; this reduction in labour earnings inequality is in accord with the evidence presented above showing larger earning increases for low-earning categories in comparison to high-earning categories. Disaggregating for different years, the inequality of household per capita income and labour earnings increased from 2000 to 2002 while GDP was decreasing, and they decreased from 2002 to 2008 when GDP was increasing with one exception: 2005 was a growth year in which inequality increased. During the international crisis, both inequality indices decreased while GDP was also falling. From 2010 until the end of the period studied, the Gini coefficient of household per capita income and labour earnings began an upward trend.

The decreasing trend in labour earnings inequality in Venezuela has been analysed by Gallo (2010). Through a decomposition approach, the author found that most of the change in labour earnings inequality (measured by the Theil index) between 1997 and 2007 remained unexplained. Among the observable factors he used in the analysis, those with greater explanatory power were the level of education, the occupational group, and the occupational position. This result implies that changes in labour earnings inequality are partly explained by changes in labour earnings inequality between educational groups, between occupational groups, and between occupational positions. Gasparini et al. (2011) analysed the period 2002–06 and found a significant fall in the education wage premium in Venezuela which is explained by an increase in the relative supply of highly educated workers (those with some college education), and a decrease in their relative demand. Some institutional factors were also at play in the decreasing trend in labour earnings inequality in Venezuela. Boada and Mayorca (2011) claimed that the continuous increases in the minimum wage impacted mainly in the lower tail of the earnings distribution.

#### **4 Conclusions**

By Latin American standards, Venezuela experienced slow economic growth during the 2000s. The country underwent a recession in the early years of the period and during the international crisis of 2008. The Venezuelan economy returned to pre-recession GDP level in 2012, but GDP per capita was still below the pre-crisis level by the end of the period studied.

The evidence regarding the changes in labour market indicators indicated that most of these improved between 2000 and 2012 and moved along with the business cycle, with a worsening at the beginning of the period (from 2001 to 2003), a following improvement, and a deterioration during the international crisis of 2008. Specifically, the unemployment rate exhibited an increase in the early years of the period, a downward trend in the following years, and a new increase during the international crisis, falling overall between 2000 and 2012. The composition of the employed



population by occupational group improved from 2004 (the earliest year of that time series) to 2012, shifting overall from low-earning occupations such as elementary, agricultural, forestry and fishery, and services and sales occupations to better-paying occupations such as professional occupations, and did not suffer any impact from the international crisis in the aggregate. The employment composition by economic sector improved overall between 2000 and 2012 and exhibited a worsening at the beginning of the period, an improving trend in the following years which stalled during the international crisis and resumed in the following years. The educational level of the employed population improved steadily over the period. Finally, labour earnings fell in the early years of the period, improved from 2003 to 2007, deteriorated once again during the international crisis, and recovered the upward trend by the end of the period, improving overall from 2000 to 2012. The only labour market indicators that did not improve over the period studied were the employment structure by occupational position and the share of registered workers with the social security system which remained essentially unchanged overall between 2000 and 2012. The moderate and extreme poverty rates, the rate of working poor households, and the Gini coefficient of household per capita income and labour earnings all decreased over the period following the movements of the business cycle.

Looking specifically at the international crisis of 2008, most labour market indicators were affected negatively by the crisis. The unemployment rate increased but then fell, recovering the pre-recession level by 2012. The employment structure by occupational position worsened during the international crisis and only some of the population groups recovered the pre-recession level by 2012. The improving trend in the employment structure by economic sector stalled during the crisis. Labour earnings were affected negatively by the crisis and, as of 2012, earnings of some employment categories had not returned to pre-crisis levels. The international crisis led to an interruption in the pattern of poverty reduction over time that was recovered in 2012 and to an increase in the Gini coefficient of household per capita income and labour earnings in 2010 that continued by the end of the period. The comparison between the effects of the international crisis of 2008 on labour market indicators and the effects generated by the domestic crisis of 2003 reveals that the crisis at the beginning of the 2000s impacted Venezuela more strongly. The crisis of 2003 generated a larger reduction in GDP, a larger increase in the unemployment rate, a larger increase in the share of low-earning positions in total employment, a decrease in the share of unregistered workers with the social security system, and a larger decrease in labour earnings compared to the Great Recession. Moreover, all poverty indicators reached a peak during the recession of 2003, while they stabilized during the international crisis of 2008.

Young workers and women had worse labour market outcomes over the period compared to adults and men respectively, and while young workers seem to be more vulnerable to macroeconomic crises compared to adults, men were more negatively affected by the crises compared to women. The unemployment rate was higher for young compared to adult workers, the shares of young employed workers in low-earning occupations and economic sectors were larger than the shares of adult workers, the percentage of young workers registered with the social security system was lower when compared to adults, and labour earnings of young workers were below those of adults. On the other hand, the share of young workers in low-earning occupational positions was lower compared to adults. In addition to the generally inferior situation of young workers in the labour market compared to adults, youth labour market indicators were more adversely affected by the episodes of crises. Disaggregating by gender, we found that men had better labour market outcomes than

women, with the only exception being the share of workers registered with the social security system that was larger among women. However, men were hit hardest by both crises in most labour market indicators, with the increase in the unemployment rate during the crisis of 2003 and during the international crisis of 2008 being the only exceptions to this pattern.

In summary, notwithstanding Venezuela's massive downturn from 2001 to 2003 and the international crisis of 2008, Venezuelan labour market conditions were, in general, in a better state in 2012 than they were at the start of the millennium.

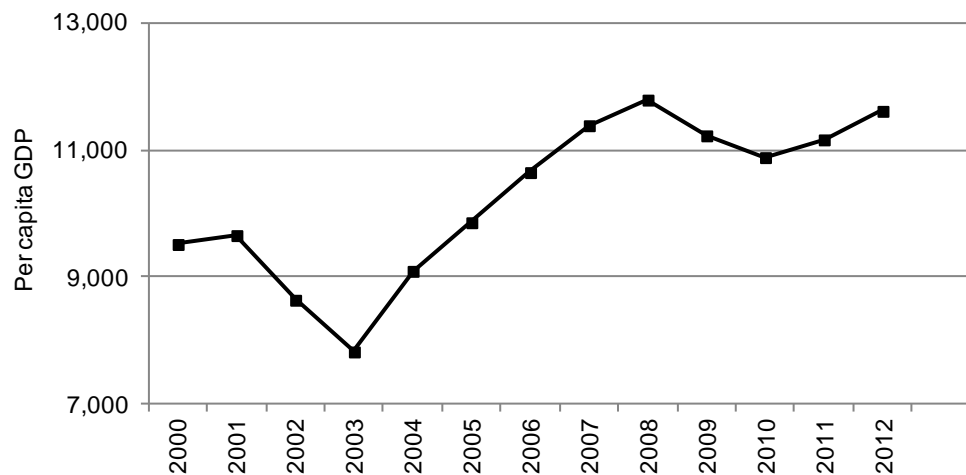
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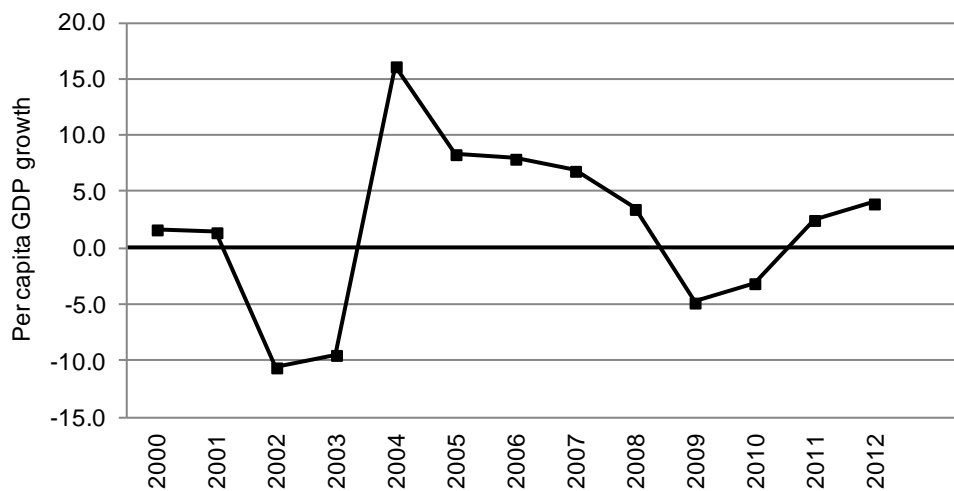
## Figures

Figure 1: GDP per capita at PPP dollars of 2005, 2000–12



Source: World Development Indicators (the World Bank 2014).

Figure 2: Annual growth of GDP per capita at PPP dollars of 2005, 2000–12



Source: World Development Indicators (the World Bank 2014).

Figure 3: Labour force rate, employment-to-population rate and unemployment rate: population 15 years old or more, 2000–12

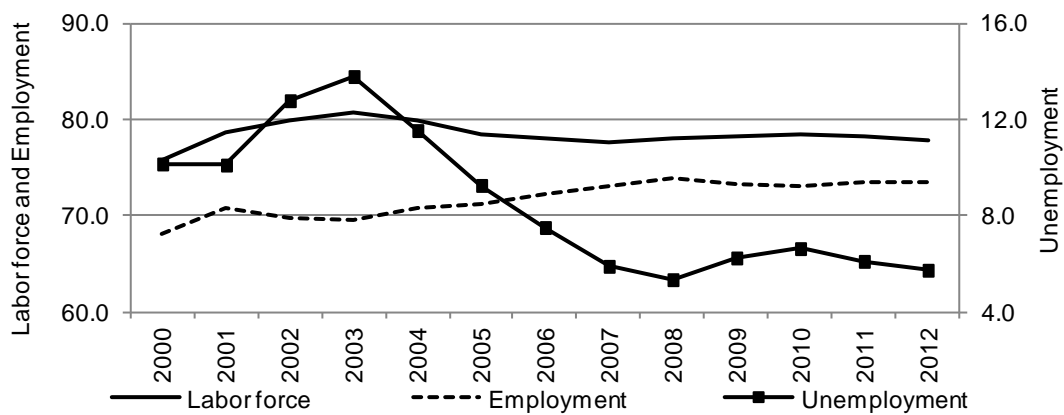
(a) All



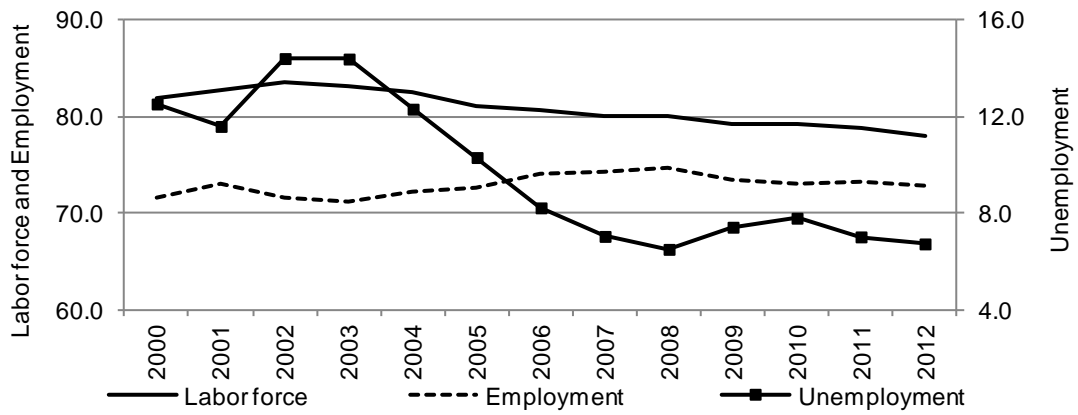
(b) Youth (15 to 24 years old)



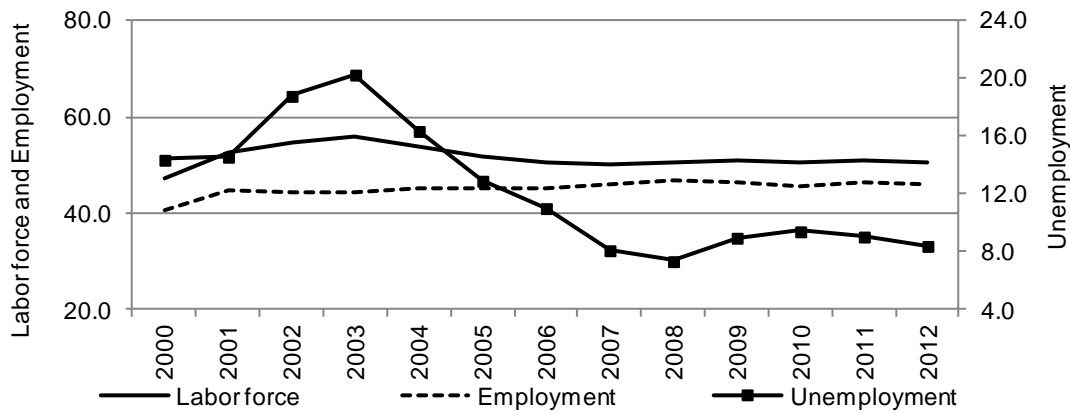
(c) Adults (25 to 64 years old)



(d) Men

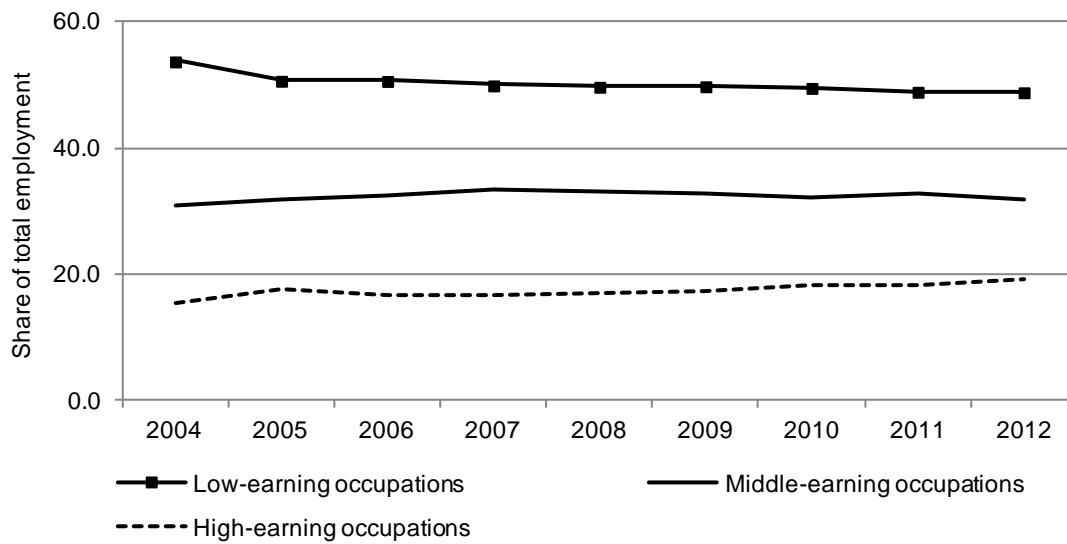


(e) Women



Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

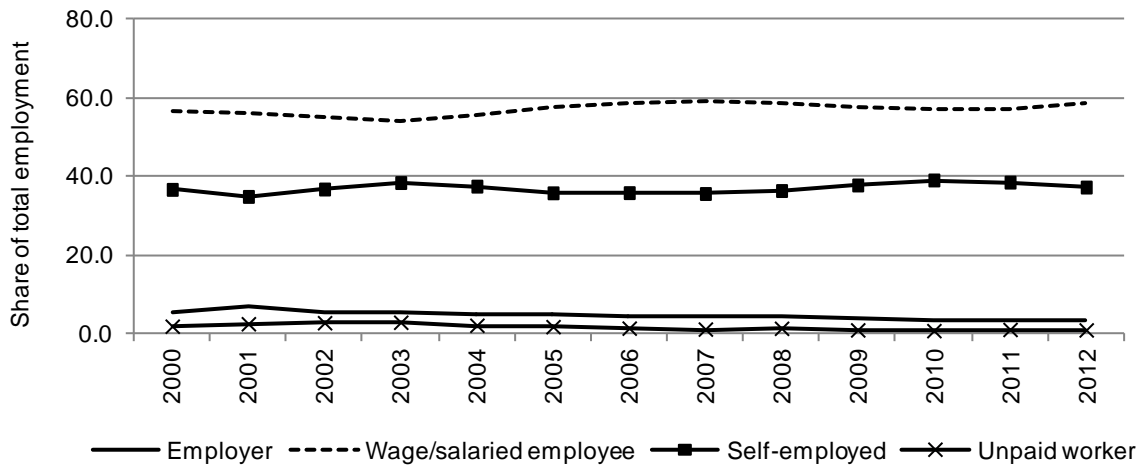
Figure 4: Share of employment by occupational group (categories grouped by earning levels): all employed workers, 15 years old or more, 2004–12



Note: Low-earning occupations: elementary, agricultural, forestry and fishery occupations, services and sales. Medium-earning occupations: craft and trades jobs, plant and machine operators and assemblers, clerical. High-earning occupations: armed forces, management, professionals. The classification of occupations is not available before 2004.

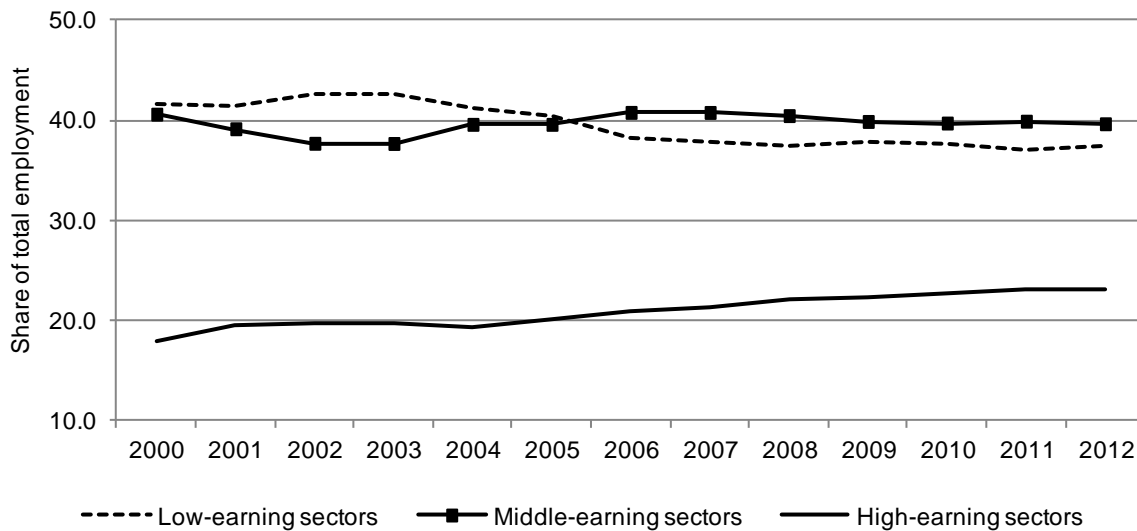
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 5: Share of employment by occupational position: all employed workers, 15 years old or more, 2000–12



Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 6: Share of employment by economic sector (categories grouped by earning levels): all employed workers, 15 years old or more, 2000–12



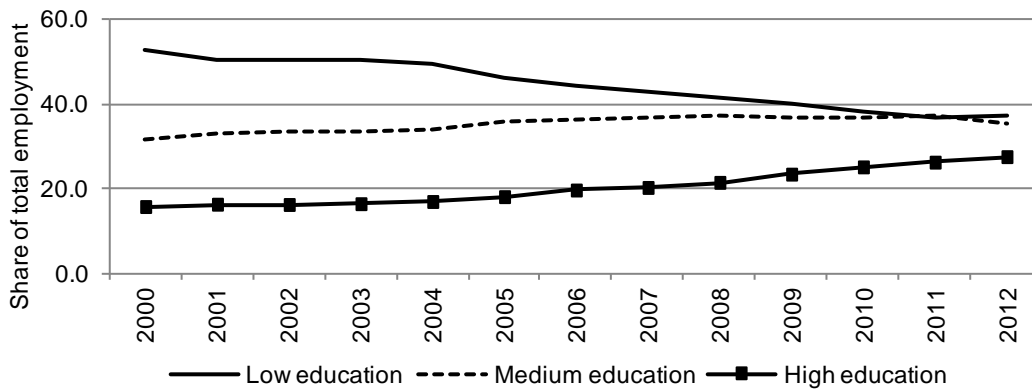
Note: Low-earning sectors: domestic workers, primary activities, commerce. Middle-earning sectors: low-tech industry, high-tech industry, education and health, construction. High-earning sectors: skilled services, public administration, utilities and transportation.

Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

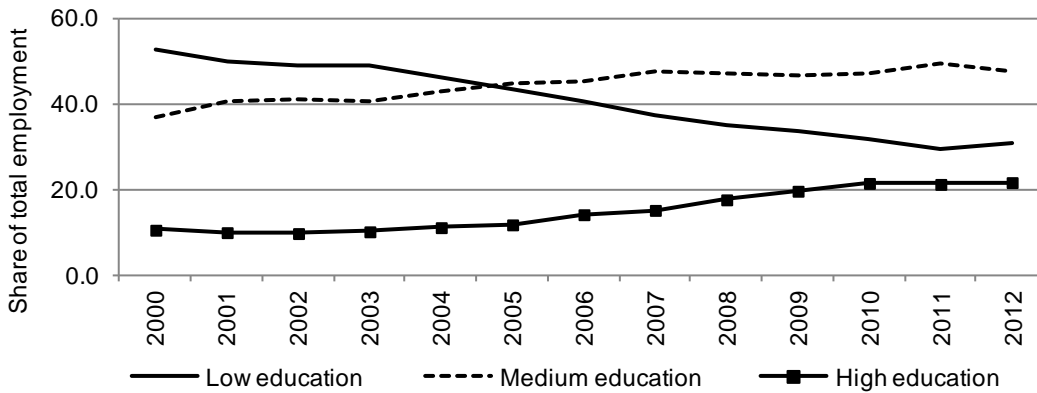


Figure 7: Share of employment by educational level: employed workers, 15 years old or more, 2000–12

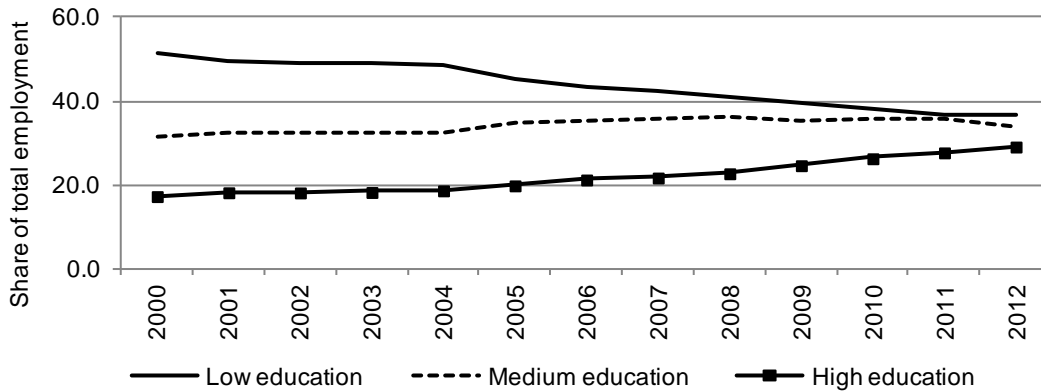
(a) All employed workers



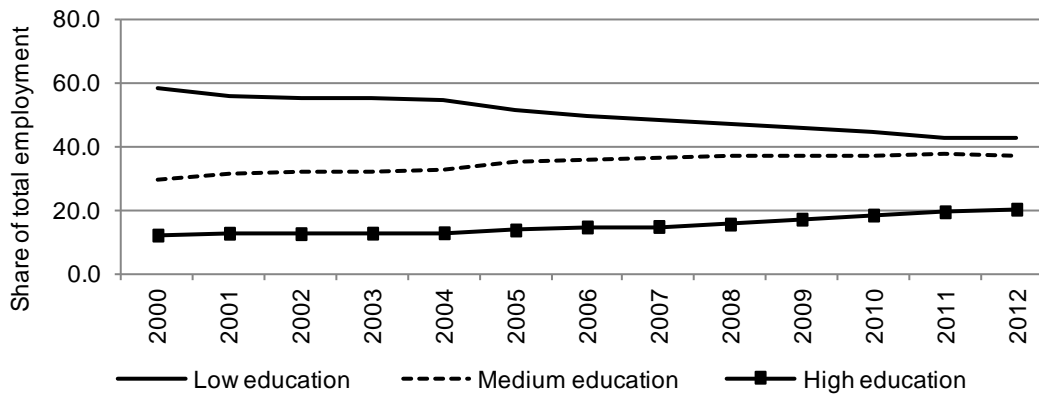
(b) Youth (15 to 24 years old)



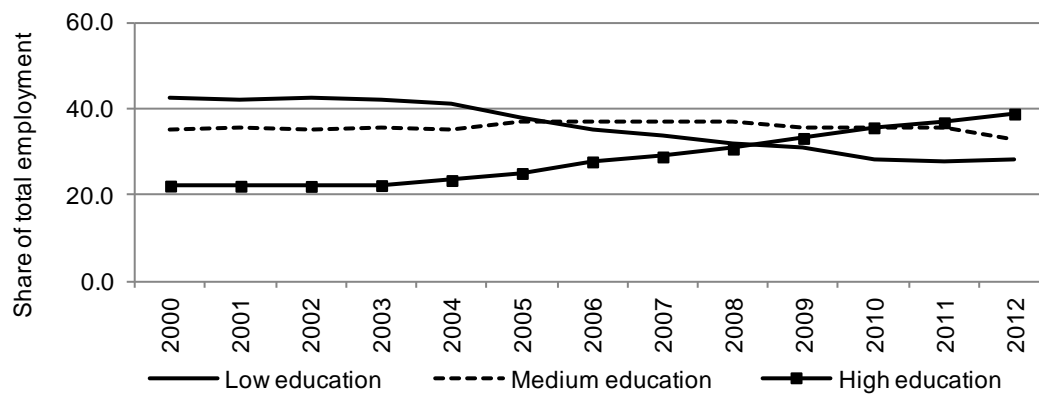
(c) Adults (25 to 64 years old)



(d) Men



(e) Women

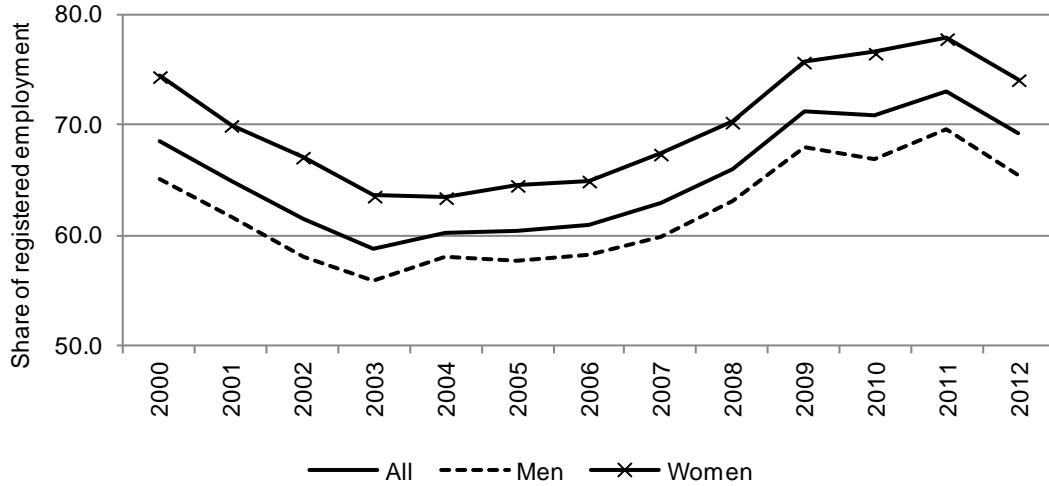


Note: Low: eight years of schooling or less. Medium: from nine to thirteen years of schooling. High: Over thirteen years of schooling.

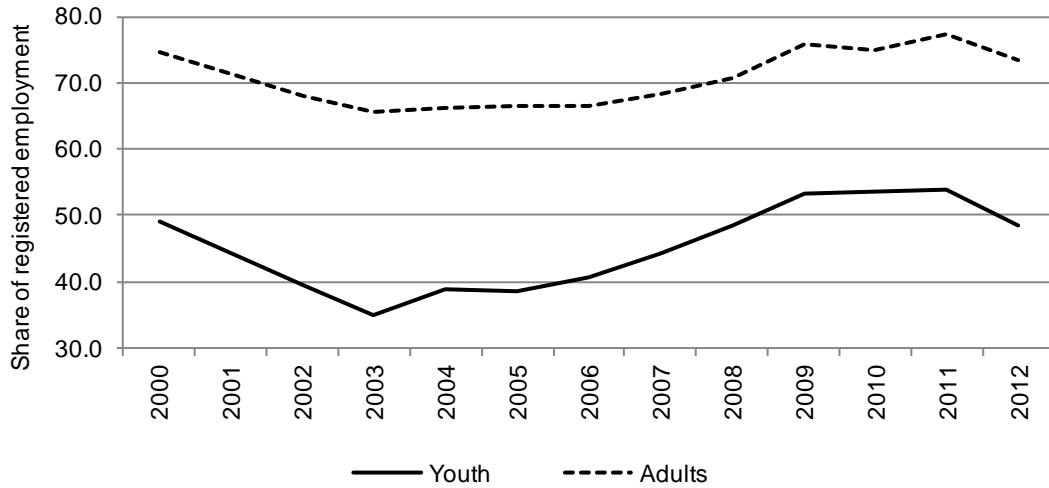
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 8: Share of employment registered with the national social security system: wage/salaried employees, 15 years old or more, 2000–12

(a) Overall and by gender



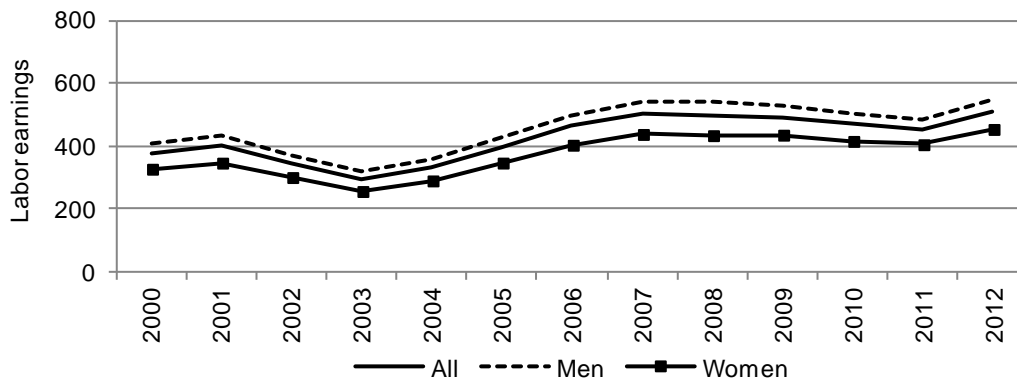
(b) By age group



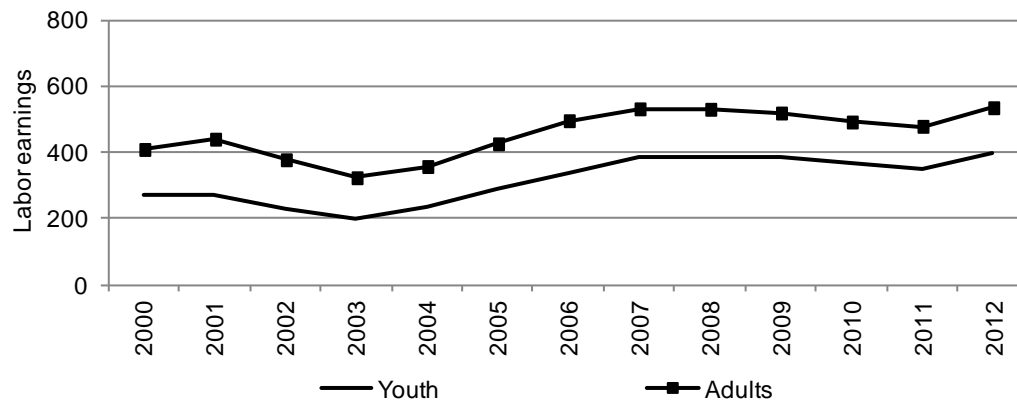
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 9: Monthly labour earnings at PPP dollars of 2005, 2000–12

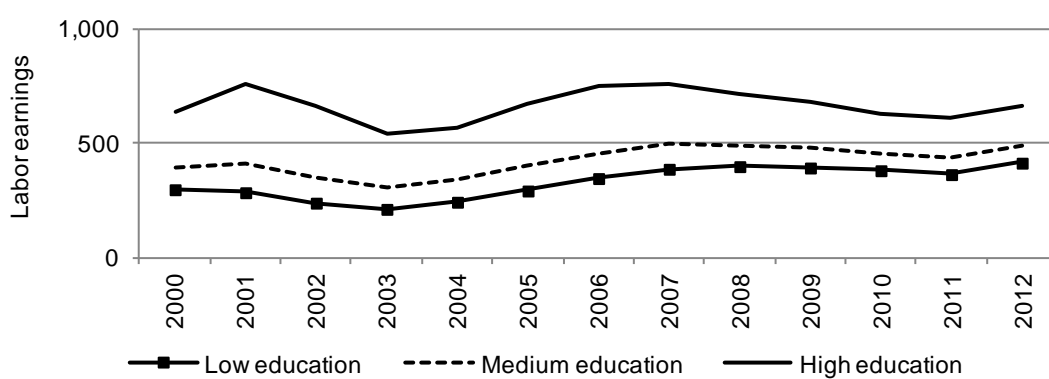
(a) Overall and by gender



(b) By age



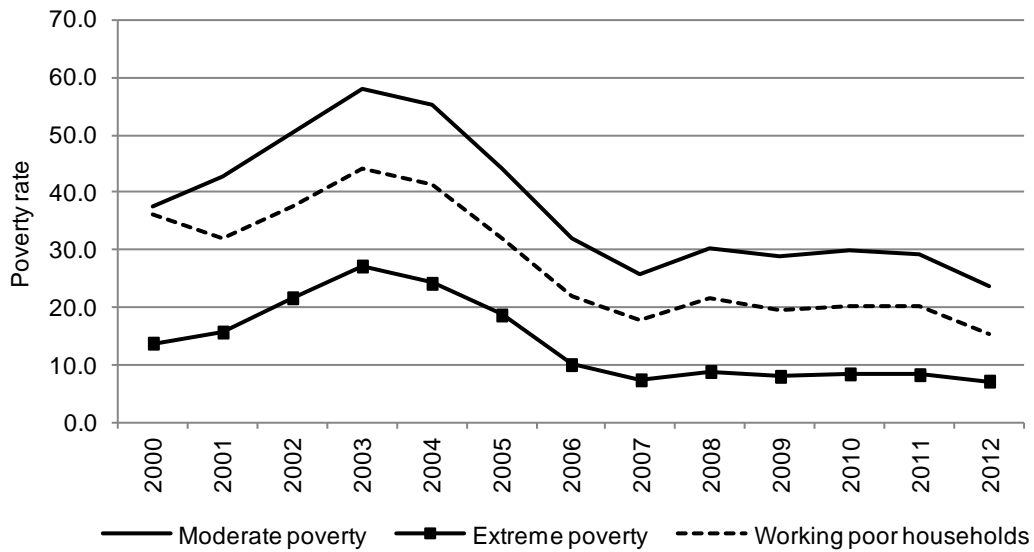
(c) By educational level



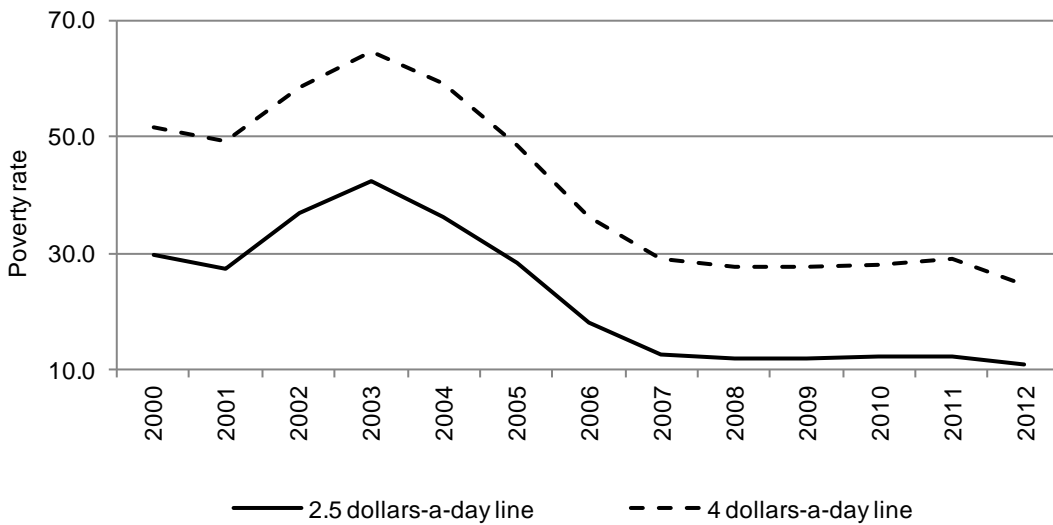
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 10: Poverty rates and working poor households, 2000–12

(a) Official lines

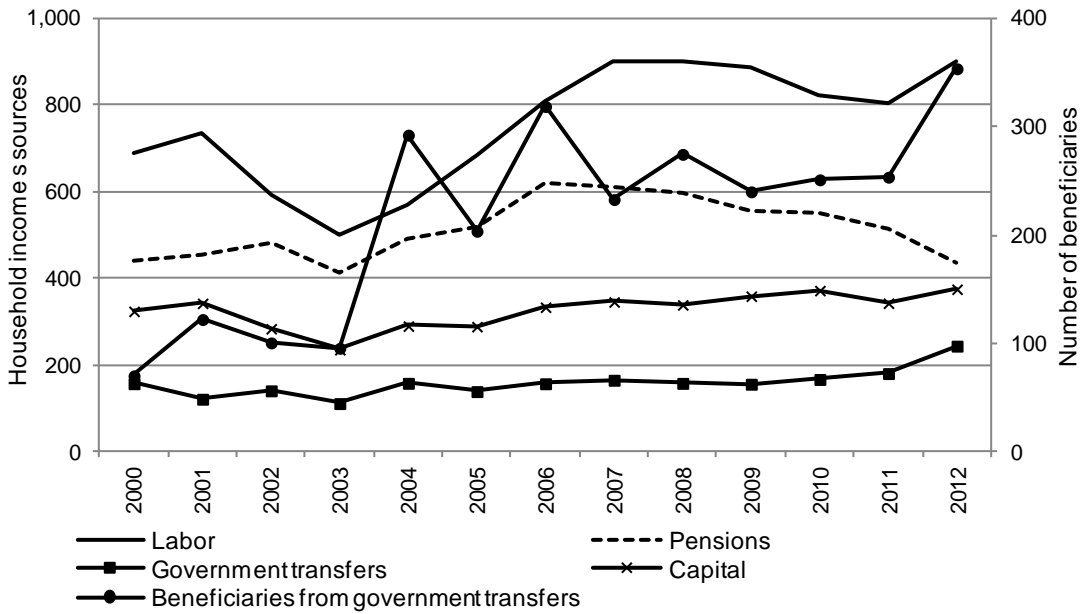


(b) International lines



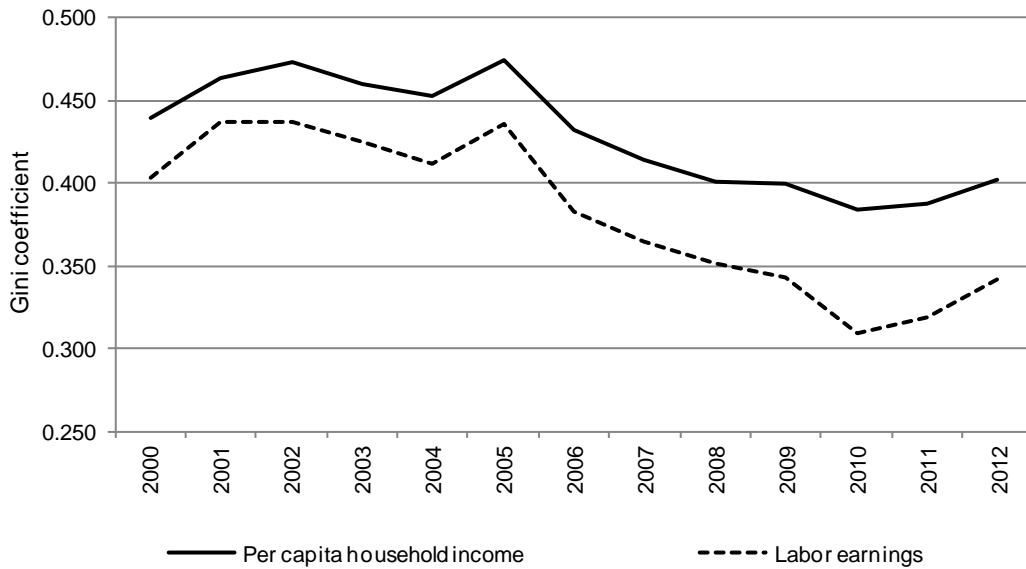
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 11: Sources of monthly household total income at PPP dollars of 2005, 2000–12



Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 12: Gini coefficient of household per capita income and labour earnings, 2000–12



Note: Gini coefficients of household per capita income and labour earnings are calculated among persons with positive household per capita income and positive labour earnings respectively.

Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

## Tables

Table 1: Household surveys' description

	Number of households	Number of persons
2000	16,809	80,417
2001	42,731	195,684
2002	53,124	237,070
2003	46,287	204,647
2004	37,838	166,320
2005	37,843	165,079
2006	38,492	166,506
2007	39,352	168,823
2008	39,026	165,028
2009	37,147	154,482
2010	36,701	151,069
2011	37,217	153,640
2012	37,643	154,276

Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Table 2: Macroeconomic variables, 2000–12

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP <sup>1,2</sup>	232,522	240,414	219,124	202,130	239,093	263,762	289,801	315,169	331,804	321,178	316,397	329,611	348,154
GDP per capita <sup>1</sup>	9,527	9,667	8,650	7,835	9,104	9,869	10,658	11,396	11,799	11,237	10,894	11,173	11,623
GDP per person employed <sup>1</sup>	35,354	35,635	32,660	29,898	35,087	39,561	42,933	46,088	47,342	44,673	42,917	43,792	45,402
GDP growth	3.69	3.39	-8.86	-7.76	18.29	10.32	9.87	8.75	5.28	-3.20	-1.49	4.18	5.63
GDP per capita growth	1.72	1.47	-10.52	-9.41	16.20	8.40	7.99	6.92	3.54	-4.77	-3.05	2.56	4.02
Exports of goods and services <sup>1,2</sup>	58,928	56,837	54,586	48,918	55,612	57,709	55,968	51,741	51,232	44,223	38,528	40,326	40,969
Agriculture, value added (% of GDP)	4.21	4.54	4.10	4.56	4.04	4.02	3.98	4.13	4.44	6.13	5.79		
Industry, value added (% of GDP)	49.67	46.08	49.76	51.59	55.49	57.80	56.48	53.31	54.09	44.17	52.16		
Services, value added (% of GDP)	46.12	49.37	46.13	43.86	40.47	38.18	39.54	42.57	41.46	49.70	42.05		
Agriculture, value added <sup>1,2</sup>	4,695	4,791	4,752	4,690	4,896	5,377	5,433	5,573	5,767	5,825	5,879	6,112	6,429
Industry, value added <sup>1,2</sup>	74,925	77,323	68,184	61,507	72,336	77,251	82,715	86,135	89,305	84,875	82,025	85,456	91,767
Services, etc., value added <sup>1,2</sup>	41,383	42,560	40,939	39,468	45,474	51,033	56,646	63,103	67,389	66,816	66,763	69,295	71,747
Total population <sup>2</sup>	24.41	24.87	25.33	25.80	26.26	26.73	27.19	27.66	28.12	28.58	29.04	29.50	29.95
Working age population (15-64) <sup>2</sup>	15.06	15.45	15.84	16.24	16.64	17.02	17.40	17.78	18.14	18.50	18.85	19.19	19.53

1: Purchasing power parity dollars of 2005.

2: In millions.

Source: World Development Indicators (the World Bank 2014).



Table 3: Share of employment by occupational group: all employed workers, 15 years old or more, 2004–12

(a) All employed workers

	Management	Professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, and assemblers	Elementary	Armed forces
2004	3.40	11.51	6.49	29.72	4.63	5.62	18.79	19.50	0.34
2005	5.66	11.47	6.92	27.26	4.35	5.56	19.26	19.18	0.34
2006	3.80	12.51	6.98	26.54	4.15	5.70	19.91	20.05	0.35
2007	3.84	12.50	7.22	26.65	4.02	5.59	20.43	19.38	0.37
2008	3.73	12.86	7.37	27.09	4.03	5.31	20.50	18.71	0.40
2009	3.67	13.34	7.22	26.78	4.05	5.30	20.16	19.08	0.40
2010	3.66	13.94	7.27	26.72	4.13	5.09	19.92	18.79	0.47
2011	3.44	14.21	7.30	26.95	3.63	4.93	20.62	18.45	0.47
2012	3.77	14.86	7.14	27.31	3.59	4.92	19.90	18.05	0.45

(b) Youth (15 to 24 years old)

	Management	Professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, and assemblers	Elementary	Armed forces
2004	1.48	7.02	7.34	31.76	2.59	5.02	18.24	26.41	0.13
2005	3.21	6.52	7.86	29.62	2.53	5.23	19.08	25.78	0.16
2006	1.56	7.20	8.57	28.10	2.44	5.14	21.55	25.32	0.12
2007	1.79	6.97	9.26	28.58	2.52	4.99	22.79	22.98	0.11
2008	1.72	7.72	9.21	28.98	2.51	4.77	22.61	22.29	0.18
2009	1.83	8.12	8.50	29.49	2.60	4.54	21.92	22.66	0.35
2010	1.51	8.62	9.13	28.75	2.94	5.04	21.81	21.80	0.40
2011	1.61	7.65	8.64	30.12	2.67	4.21	21.92	22.55	0.63
2012	1.62	7.38	8.78	29.58	2.92	4.16	22.73	22.10	0.73

## (c) Adults (25 to 64 years old)

	Management	Professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, and assemblers	Elementary	Armed forces
2004	3.87	12.92	6.49	28.91	4.59	5.76	19.27	17.80	0.40
2005	6.21	12.89	6.90	26.45	4.27	5.64	19.66	17.60	0.39
2006	4.31	14.02	6.84	25.89	4.00	5.79	19.84	18.90	0.42
2007	4.29	13.97	7.00	25.97	3.82	5.70	20.22	18.60	0.44
2008	4.20	14.30	7.21	26.40	3.84	5.37	20.33	17.87	0.47
2009	4.06	14.73	7.20	25.97	3.87	5.43	19.99	18.32	0.43
2010	4.08	15.26	7.17	26.13	3.83	5.08	19.75	18.20	0.50
2011	3.81	15.74	7.28	26.16	3.31	5.03	20.59	17.62	0.46
2012	4.15	16.47	7.07	26.69	3.31	4.98	19.60	17.32	0.41

## (d) Men

	Management	Professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, and assemblers	Elementary	Armed forces
2004	3.91	6.92	3.53	24.23	7.01	6.33	29.99	17.55	0.53
2005	6.33	6.82	3.90	22.24	6.37	6.21	30.56	17.05	0.52
2006	4.28	7.59	3.77	21.51	6.19	6.43	31.65	18.05	0.54
2007	4.26	7.36	3.95	21.42	6.01	6.40	32.60	17.42	0.58
2008	4.22	7.46	4.02	21.66	6.00	6.17	32.91	16.93	0.62
2009	4.17	7.61	4.07	21.63	6.07	6.15	32.31	17.39	0.61
2010	4.11	7.94	3.97	21.54	6.21	5.88	32.07	17.57	0.71
2011	3.83	8.22	3.92	21.58	5.44	6.00	33.08	17.20	0.72
2012	4.13	8.74	3.90	22.18	5.46	5.85	31.95	17.12	0.67

(e) Women

	Management	Professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, and assemblers	Elementary	Armed forces
2004	2.60	18.83	11.23	38.47	0.83	4.48	0.91	22.62	0.03
2005	4.59	18.95	11.77	35.33	1.09	4.52	1.10	22.60	0.05
2006	3.02	20.54	12.21	34.74	0.84	4.51	0.79	23.31	0.04
2007	3.17	20.72	12.44	35.01	0.83	4.30	1.00	22.50	0.03
2008	2.95	21.39	12.67	35.66	0.91	3.94	0.88	21.53	0.06
2009	2.88	22.32	12.14	34.83	0.88	3.98	1.15	21.73	0.09
2010	2.95	23.40	12.49	34.89	0.87	3.83	0.77	20.71	0.09
2011	2.83	23.57	12.58	35.36	0.78	3.27	1.13	20.41	0.08
2012	3.22	24.39	12.19	35.28	0.68	3.49	1.15	19.50	0.10

Note: The classification of occupations is not available before 2004.

Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Table 4: Share of employment by occupational position: all employed workers, 15 years old or more, 2000–12

(a) All employed workers

	Employer	Wage/salaried employee	Self- employed	Unpaid worker
2000	5.10	56.58	36.60	1.71
2001	6.62	56.22	34.81	2.34
2002	5.53	55.17	36.69	2.61
2003	5.08	53.86	38.34	2.72
2004	4.80	55.81	37.43	1.96
2005	4.89	57.79	35.72	1.60
2006	4.49	58.51	35.77	1.22
2007	4.17	59.30	35.55	0.98
2008	4.09	58.43	36.30	1.18
2009	3.78	57.73	37.72	0.77
2010	3.46	56.95	39.00	0.59
2011	3.48	57.19	38.46	0.88
2012	3.26	58.78	37.19	0.77

(b) Youth (15 to 24 years old)

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2000	1.00	67.39	26.96	4.66
2001	1.36	66.65	26.04	5.95
2002	1.23	64.28	27.33	7.17
2003	0.97	61.71	29.60	7.73
2004	0.85	64.88	28.60	5.67
2005	0.83	68.22	26.50	4.45
2006	0.76	68.95	26.57	3.73
2007	0.62	71.36	25.30	2.72
2008	0.82	68.97	26.57	3.63
2009	0.90	68.76	28.05	2.28
2010	0.63	67.07	30.23	2.07
2011	0.75	65.64	30.59	3.02
2012	0.66	67.65	29.03	2.65

(c) Adults (25 to 64 years old)

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2000	5.90	55.20	37.96	0.94
2001	7.77	54.93	35.93	1.37
2002	6.43	54.20	37.94	1.43
2003	5.93	53.28	39.34	1.45
2004	5.50	54.98	38.48	1.04
2005	5.64	56.71	36.73	0.92
2006	5.16	57.59	36.61	0.65
2007	4.73	58.04	36.65	0.59
2008	4.60	57.63	37.19	0.57
2009	4.23	56.93	38.39	0.46
2010	3.82	56.41	39.47	0.30
2011	3.80	57.05	38.70	0.45
2012	3.55	58.59	37.44	0.42

(d) Men

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2000	6.90	55.81	35.89	1.39
2001	8.80	56.40	33.03	1.77
2002	7.43	55.05	35.65	1.87
2003	6.82	53.52	37.68	1.98
2004	6.40	54.62	37.61	1.38
2005	6.51	57.08	35.35	1.07
2006	6.07	57.30	35.78	0.85
2007	5.59	58.46	35.36	0.59
2008	5.46	56.81	36.97	0.76
2009	5.00	56.28	38.24	0.48
2010	4.66	54.82	40.12	0.40
2011	4.64	54.96	39.83	0.58
2012	4.44	56.04	38.98	0.53

(e) Women

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2000	1.92	57.94	37.86	2.28
2001	3.08	55.94	37.72	3.27
2002	2.48	55.37	38.36	3.79
2003	2.30	54.41	39.40	3.90
2004	2.24	57.72	37.15	2.88
2005	2.27	58.93	36.33	2.47
2006	1.91	60.49	35.77	1.83
2007	1.90	60.65	35.85	1.61
2008	1.91	60.99	35.26	1.85
2009	1.87	60.00	36.90	1.23
2010	1.57	60.30	37.24	0.88
2011	1.66	60.67	36.31	1.36
2012	1.44	63.03	34.40	1.14

Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Table 5: Share of employment by economic sector: all employed workers, 15 years old or more, 2000–12

(a) All

	Primary activities	Low-tech Industry	High-tech Industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	11.21	5.44	7.87	8.28	25.83	7.44	4.92	5.54	18.98	4.50
2001	10.21	5.43	7.22	8.33	26.30	7.60	4.96	6.95	18.13	4.88
2002	10.45	5.25	6.53	7.91	26.88	7.87	4.86	7.04	17.97	5.25
2003	11.32	5.42	6.23	7.10	25.74	8.06	4.75	6.92	18.88	5.58
2004	11.14	5.37	6.07	7.73	24.51	8.79	4.83	5.71	20.38	5.47
2005	10.43	5.10	6.60	8.06	24.62	8.71	4.85	6.50	19.78	5.34
2006	9.86	5.24	6.94	9.54	23.63	8.69	4.97	7.29	19.02	4.83
2007	9.63	5.20	7.17	9.68	23.58	9.12	5.14	7.13	18.69	4.66
2008	9.40	4.82	7.15	9.75	23.73	9.27	5.19	7.60	18.70	4.39
2009	9.82	5.05	6.79	9.21	23.66	9.33	5.21	7.77	18.78	4.39
2010	9.82	5.07	6.51	8.97	23.49	9.76	5.53	7.48	19.12	4.25
2011	9.02	4.66	6.67	9.05	23.98	9.76	5.57	7.78	19.49	4.04
2012	8.96	4.33	6.48	8.66	24.58	9.54	5.57	7.93	20.12	3.81

(b) Youth (15 to 24 years old)

	Primary activities	Low-tech Industry	High-tech Industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	15.48	5.11	8.68	8.67	29.03	5.69	4.26	3.20	14.40	5.50
2001	13.11	5.21	7.50	9.21	30.67	5.92	4.15	3.74	14.79	5.71
2002	12.74	4.97	6.39	8.35	31.43	6.32	4.39	3.34	15.99	6.08
2003	14.52	4.97	5.95	7.51	30.30	6.32	3.96	3.12	17.40	5.94
2004	13.64	6.10	5.87	7.42	28.80	7.18	3.95	3.09	18.18	5.79
2005	12.99	5.32	6.61	8.67	29.37	7.02	3.90	3.76	16.79	5.58
2006	11.84	5.65	7.09	10.84	26.78	7.65	4.08	4.01	17.47	4.59
2007	10.99	5.53	7.64	11.84	26.70	8.26	4.24	4.01	16.51	4.28
2008	11.01	5.13	7.52	11.48	28.24	8.15	4.02	4.45	16.58	3.43
2009	12.46	5.26	6.54	11.01	27.94	8.27	4.39	4.72	15.96	3.43
2010	12.00	5.41	6.23	10.63	27.81	8.72	5.03	4.54	16.38	3.25
2011	11.64	4.73	6.14	10.65	29.87	8.90	4.08	5.18	15.79	3.01
2012	11.55	4.26	6.17	11.85	30.27	8.64	4.14	5.49	14.94	2.68

(c) Adults (25 to 64 years old)

	Primary activities	Low-tech Industry	High-tech Industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	9.66	5.52	7.77	8.42	24.60	7.95	5.14	6.24	20.39	4.31
2001	8.96	5.49	7.26	8.27	24.72	8.11	5.21	7.95	19.28	4.75
2002	9.27	5.34	6.65	7.97	25.36	8.34	5.06	8.14	18.77	5.10
2003	9.85	5.53	6.42	7.15	24.22	8.58	5.00	8.05	19.61	5.59
2004	9.93	5.20	6.23	7.94	23.10	9.29	5.08	6.50	21.31	5.41
2005	9.27	5.08	6.72	8.08	23.20	9.19	5.11	7.27	20.82	5.25
2006	8.84	5.16	7.05	9.40	22.51	9.01	5.18	8.21	19.79	4.85
2007	8.76	5.13	7.20	9.35	22.53	9.41	5.34	7.99	19.56	4.72
2008	8.48	4.74	7.18	9.57	22.32	9.58	5.50	8.47	19.59	4.58
2009	8.73	5.04	6.91	8.97	22.43	9.62	5.39	8.64	19.70	4.58
2010	8.86	5.01	6.68	8.78	22.34	10.01	5.65	8.25	20.00	4.42
2011	7.99	4.59	6.83	8.88	22.50	10.02	5.90	8.49	20.58	4.22
2012	8.11	4.33	6.57	8.21	23.21	9.77	5.82	8.59	21.39	4.00

(d) Men

	Primary activities	Low-tech Industry	High-tech Industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	16.52	4.28	10.18	12.43	21.41	10.57	4.83	5.07	14.48	0.23
2001	15.34	4.15	9.62	12.99	21.15	11.18	5.02	6.08	14.30	0.18
2002	15.63	3.91	8.76	12.35	21.90	11.60	4.96	6.05	14.58	0.26
2003	16.91	4.22	8.33	11.09	20.87	11.95	4.94	6.00	15.23	0.46
2004	16.63	4.24	8.20	12.07	19.49	12.68	5.05	5.55	14.93	1.16
2005	15.48	3.95	8.91	12.56	19.92	12.36	5.14	6.11	14.49	1.09
2006	14.63	4.23	9.39	14.67	18.75	12.49	5.17	6.55	13.26	0.86
2007	14.32	4.07	9.62	15.01	18.54	13.29	5.19	6.54	12.63	0.80
2008	13.95	3.87	9.73	15.17	18.49	13.60	5.33	6.96	12.22	0.68
2009	14.74	4.10	9.12	14.37	18.40	13.60	5.30	7.21	12.51	0.65
2010	14.66	4.18	8.80	14.02	18.07	14.55	5.56	6.76	12.59	0.80
2011	13.46	3.94	8.86	14.24	18.47	14.46	5.67	7.07	13.12	0.71
2012	13.39	3.66	8.77	13.61	19.54	14.13	5.64	7.30	13.41	0.56



(e) Women

	Primary activities	Low-tech Industry	High-tech Industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	1.84	7.48	3.80	0.93	33.62	1.90	5.07	6.37	26.92	12.06
2001	1.87	7.51	3.32	0.75	34.67	1.77	4.86	8.38	24.36	12.52
2002	2.13	7.40	2.94	0.77	34.88	1.88	4.71	8.63	23.41	13.26
2003	2.40	7.34	2.90	0.74	33.51	1.84	4.44	8.38	24.70	13.75
2004	2.40	7.17	2.67	0.81	32.51	2.58	4.46	5.98	29.06	12.35
2005	2.32	6.94	2.90	0.82	32.18	2.84	4.40	7.12	28.30	12.17
2006	2.08	6.91	2.93	1.16	31.58	2.49	4.64	8.49	28.43	11.30
2007	2.14	7.02	3.24	1.15	31.64	2.46	5.06	8.08	28.39	10.83
2008	2.21	6.32	3.08	1.17	32.01	2.43	4.97	8.61	28.95	10.25
2009	2.10	6.53	3.13	1.14	31.90	2.64	5.07	8.64	28.60	10.24
2010	2.18	6.47	2.91	1.02	32.05	2.19	5.48	8.61	29.41	9.69
2011	2.06	5.78	3.23	0.92	32.59	2.39	5.42	8.89	29.46	9.25
2012	2.08	5.39	2.92	0.98	32.42	2.42	5.45	8.93	30.56	8.85

Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Table 6: Monthly labour earnings at PPP dollars of 2005, 2000–12

(a) All employed workers, by gender, age group, occupational position, and educational level

	All	Gender		Age		Occupational position			Educational level		
		Men	Women	Youth	Adults	Employer	Wage/salaried employee	Self-employed	Low	Medium	High
2000	380.4	410.0	328.2	271.6	409.1	678.9	397.9	314.0	299.3	391.2	638.7
2001	402.3	436.1	347.6	269.1	440.2	703.2	433.9	293.4	286.2	408.4	758.4
2002	346.0	374.0	301.6	228.7	377.9	619.8	383.7	244.2	240.5	353.2	660.6
2003	297.0	322.3	257.1	196.6	323.6	524.7	331.6	214.2	213.3	304.6	544.2
2004	330.9	356.3	290.9	233.0	357.5	574.4	370.3	238.5	244.5	339.7	571.1
2005	398.2	430.1	347.8	286.7	426.1	724.2	433.3	296.9	293.8	400.8	673.1
2006	463.0	499.6	404.6	336.9	495.9	767.2	504.6	352.2	348.3	453.9	751.1
2007	501.7	541.5	439.0	386.1	531.7	825.4	539.1	398.5	389.1	494.5	760.9
2008	500.4	542.5	435.1	386.5	530.5	822.0	534.9	405.8	400.6	489.0	719.3
2009	493.0	528.4	436.7	384.7	519.2	792.7	524.6	412.1	394.7	482.5	681.2
2010	469.3	503.4	416.8	368.2	492.0	768.0	500.5	394.1	382.7	455.3	627.5
2011	455.7	487.9	406.2	352.3	479.0	706.0	492.8	374.3	365.6	436.3	613.5
2012	511.0	547.7	454.9	395.7	535.1	755.4	549.5	428.7	415.9	493.1	664.3

(b) By economic sector

	Primary activities	Low-tech Industry	High-tech Industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	278.3	315.2	405.9	466.4	338.6	477.7	504.5	477.1	415.0	188.4
2001	287.2	335.5	428.9	471.5	342.0	487.2	578.0	523.9	459.5	179.4
2002	250.1	273.9	376.5	412.1	289.7	413.0	491.2	473.7	398.6	159.8
2003	216.1	246.0	341.6	350.9	245.8	357.6	408.3	426.4	334.9	145.3
2004	238.4	284.2	362.8	384.9	272.5	407.5	452.8	466.7	381.5	149.5
2005	305.2	348.8	417.1	471.8	332.7	490.9	511.3	545.7	449.2	181.8
2006	358.6	401.7	482.7	525.7	374.9	558.5	585.2	672.0	513.7	209.5
2007	396.2	422.3	535.6	563.5	425.0	601.4	678.1	663.0	533.7	248.8
2008	401.7	422.0	548.9	579.9	422.1	604.1	645.6	616.7	530.6	248.3
2009	408.1	407.8	526.8	528.0	419.9	594.0	651.8	643.3	516.9	271.8
2010	376.0	421.0	502.5	511.8	401.6	557.8	610.3	572.8	503.0	260.6
2011	381.8	401.8	496.7	480.8	384.2	527.6	611.4	546.3	487.4	254.8
2012	427.8	460.8	565.2	534.1	451.7	588.8	685.8	621.7	521.7	273.4

(c) By occupational group

	Management	Professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades	Plant & machine operators, and assemblers	Elementary	Armed forces
2004	671.2	538.4	396.0	295.9	254.1	282.2	334.3	204.5	679.5
2005	689.2	654.4	428.3	335.5	322.2	341.2	411.9	255.1	826.3
2006	861.5	735.0	502.3	397.1	341.1	390.5	480.6	305.3	1476.2
2007	865.9	761.9	542.0	437.5	355.6	439.8	532.9	345.5	993.9
2008	825.6	727.4	527.5	438.0	387.0	441.0	542.1	351.1	883.6
2009	782.5	694.2	527.1	438.6	371.9	441.0	525.4	357.0	1082.5
2010	751.6	646.5	499.0	415.2	335.4	434.1	506.9	344.8	774.8
2011	694.7	645.0	479.6	402.1	336.8	418.6	483.7	333.6	694.8
2012	813.2	694.4	544.4	456.1	377.7	460.1	533.7	381.6	790.9

Note: The classification of occupations is not available before 2004.

Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Table 7: Hourly wage in main occupation at PPP dollars of 2005, 2000–12

(a) All employed workers, by gender, by age group, by occupational position, and educational level

	Gender		Age		Occupational position			Educational level			
	All	Men	Women	Youth	Adults	Employer	Wage/salaried employee	Self-employed	Low	Medium	High
2000	2.56	2.53	2.61	2.01	2.70	3.94	2.49	2.48	2.06	2.61	4.28
2001	2.72	2.74	2.67	1.93	2.93	4.39	2.66	2.49	2.03	2.74	4.96
2002	2.33	2.35	2.30	1.67	2.52	3.64	2.34	2.12	1.71	2.35	4.38
2003	2.04	2.04	2.03	1.49	2.18	3.16	2.06	1.86	1.54	2.07	3.64
2004	2.13	2.14	2.11	1.56	2.27	3.45	2.19	1.87	1.64	2.13	3.65
2005	2.42	2.47	2.34	1.89	2.56	4.04	2.50	2.09	1.80	2.47	4.10
2006	2.80	2.87	2.67	2.16	2.95	4.44	2.85	2.49	2.18	2.74	4.45
2007	3.13	3.23	2.99	2.69	3.25	4.67	3.19	2.86	2.46	3.09	4.69
2008	3.09	3.16	2.99	2.49	3.24	4.71	3.14	2.83	2.52	2.95	4.48
2009	2.99	3.04	2.91	2.44	3.12	4.54	3.00	2.82	2.49	2.91	4.07
2010	2.89	2.95	2.80	2.38	3.01	4.37	2.96	2.66	2.39	2.77	3.92
2011	2.82	2.89	2.69	2.27	2.94	4.12	2.91	2.56	2.32	2.66	3.81
2012	3.16	3.24	3.03	2.58	3.27	4.52	3.19	3.00	2.62	3.03	4.14

(b) By economic sector

	Primary activities	Low-tech Industry	High-tech Industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	1.7	2.2	2.5	2.9	2.4	3.0	3.5	2.8	3.0	1.7
2001	1.9	2.4	2.8	3.1	2.5	3.0	3.9	3.2	3.2	1.5
2002	1.5	1.9	2.4	2.8	2.1	2.6	3.4	2.9	2.7	1.4
2003	1.4	1.9	2.2	2.3	1.8	2.3	2.8	2.6	2.4	1.2
2004	1.4	1.8	2.2	2.4	2.0	2.3	3.0	2.7	2.6	1.1
2005	1.7	2.1	2.5	3.0	2.1	2.8	3.1	3.1	2.8	1.3
2006	2.0	2.4	2.8	3.1	2.4	3.3	3.5	3.6	3.2	1.6
2007	2.3	2.7	3.2	3.8	2.7	3.4	4.0	3.8	3.5	1.8
2008	2.4	2.7	3.2	3.5	2.8	3.4	3.9	3.5	3.4	1.8
2009	2.4	2.7	3.1	3.2	2.7	3.4	3.7	3.4	3.3	2.0
2010	2.2	2.7	3.1	3.1	2.6	3.1	3.7	3.4	3.2	2.0
2011	2.3	2.6	3.0	3.0	2.4	3.1	3.7	3.2	3.1	1.9
2012	2.5	2.9	3.4	3.3	2.9	3.5	4.1	3.5	3.4	2.1

(c) By occupational group

	Management	Professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades	Plant & machine operators, and assemblers	Elementary	Armed forces
2004	3.9	3.6	2.4	1.9	1.5	2.0	2.0	1.6	3.0
2005	3.7	4.2	2.6	2.0	1.8	2.2	2.4	1.9	4.0
2006	4.9	4.6	2.9	2.4	2.0	2.5	2.8	2.1	4.1
2007	4.8	4.9	3.2	2.7	2.1	2.8	3.3	2.4	4.8
2008	4.6	4.7	3.2	2.7	2.3	2.8	3.2	2.5	4.3
2009	4.5	4.4	3.0	2.6	2.3	2.9	3.1	2.4	3.6
2010	4.3	4.2	3.0	2.5	1.9	2.8	3.0	2.3	3.9
2011	4.0	4.1	2.9	2.5	2.0	2.7	2.9	2.3	3.7
2012	4.7	4.4	3.2	2.8	2.2	2.9	3.2	2.6	4.0

Note: The classification of occupations is not available before 2004.

Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Table 8: Share of persons in the labour force by educational levels:  
population 15 years old or more, 2000–12

	Low	Medium	High
2000	12.39	15.18	11.99
2001	12.21	14.16	11.69
2002	15.50	17.83	14.84
2003	15.69	18.85	15.92
2004	13.61	15.00	12.76
2005	10.42	12.81	10.80
2006	8.69	10.47	8.71
2007	6.74	8.12	7.84
2008	6.27	7.23	7.32
2009	7.28	8.67	8.38
2010	7.66	8.85	9.09
2011	6.16	8.47	9.23
2012	6.33	7.66	8.58

Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Table 9: Unemployment rate by educational levels:  
population 15 years old or more, 2000–12

	Low	Medium	High
2000	52.04	32.46	15.50
2001	50.26	33.67	16.08
2002	49.96	34.09	15.95
2003	49.58	34.19	16.23
2004	49.18	34.13	16.69
2005	45.72	36.33	17.95
2006	43.86	36.65	19.49
2007	42.61	37.07	20.32
2008	40.98	37.47	21.55
2009	39.68	36.85	23.47
2010	38.02	36.71	25.27
2011	36.09	37.29	26.62
2012	36.75	35.39	27.86

Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).