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

Panama country study

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Abstract: Between 2000 and 2012, Panama boasted the strongest economic growth in Latin America. The growth experience was not uniform: the 2000–02 period was marked by slow or negative growth rates, after which growth was exceptionally rapid. Although the international economic crisis of 2008 slowed the growth process down, it rebounded in the years following the crisis. Labour market indicators have clearly improved. The economic crisis led to a temporary increase in unemployment, a drop in the share of paid employees, and a rise in some poverty indicators; all these effects were reversed by the end of the period studied.

Keywords: Panama, 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 persons. 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 Panama 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.

In the case of Panama, Galiani (2009) analysed the period 2003–08, concluding that together with a period of high economic growth, labour market indicators showed major improvements: an increase in the employment rate, a reduction in unemployment, a moderate increase in real salaries, and a decline in inequality. ECLAC (2008) analysed the eight-year period 2001–08 and also found that during this period of high economic growth, employment rose while the unemployment rate, poverty, and inequality all fell. However, the ECLAC report also showed that despite economic growth, average labour earnings fell by 13 per cent between 2001 and 2007 in real terms.

Limited evidence is available on the mechanisms underlying the growth-labour markets-poverty nexus in Latin America. For instance, a World Bank (2011a) 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 Panama 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 (EH), for the years 2001–12. The nationwide surveys were incorporated into the SEDLAC—Socio Economic Database for Latin American and the Caribbean (CEDLAS and the World Bank 2014); 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 survey's sample size has decreased over time; it went from 13,372 households and 55,891 persons in 2001 to 12,298 households and 45,636 persons in 2012 (Table 1). Despite the reduction in the sample size, the EH surveys have always been representative of the total population of Panama.

For this study, we processed the microdata from Panama 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, which form the basis for the text that follows. We use a vertical line in a figure or a horizontal line in a table when the series are consistent on each side of the line but not from one side of the line to the other, e.g. when the country changed a classification, so that it is not possible to use a consistent definition throughout the full time period. Each time a line is used, a note stating its meaning is added to the table or figure.

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 persons over the economically active population. A person is unemployed if s/he is 15 years old or more and during the reference period (1 month in the Panamanian 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:[1] 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; and elementary. An improvement in the labour market would be implied by a decrease in the share of low-earning occupations and an increase in the share of high-earning occupations. We map the classification used by Panama to this one. However, a methodological change in the year 2011 prevents us from comparing the series 2001–10 to the years 2011–12. In 2011, the *Clasificación Nacional de Ocupaciones 2000* was replaced by the *Clasificación Nacional de Ocupaciones 2010*. The analysis of the employment structure by occupational group will analyse the series 2001–10 and 2011–12 separately.

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 levels 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 would like to classify employed workers according to whether they are registered with the social security system or not. In the case of Panama, the way the survey is conducted only allows us to establish whether the person surveyed received some kind of social security. It is not possible to know whether this status is based on their job. This question is only available from 2004 to 2012, and we restrict our analysis to the employed population. We assume that it is better for employed workers to have social security, 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.

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

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-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

The Panamanian economy grew rapidly during the period 2000–12. The international crisis of 2008 did not affect the economy substantially (Figures 1 and 2).

Panama is the Latin American economy that exhibited the highest economic growth from 2000 to 2012. The country's GDP (measured at PPP 2005) grew by 126.5 per cent, GDP per capita increased by 81.9 per cent, and GDP per person employed rose by 51.8 per cent. The annual growth of GDP per capita averaged 4.8 per cent, varying from -1.4 per cent in 2001 to 10.1 in 2007 (Table 2). From 2000 to 2002, the growth of the Panamanian economy was sluggish. GDP and GDP per capita annual growth rates averaged 1.8 and -0.2 per cent respectively. The poor performance of the Panamanian economy at the beginning of the 2000s is mainly attributable to the slow growth of the developed world and also to the setback of the Latin American region in 2002. As a consequence, three out of the four sectors which depend on external demand suffered a contraction (ECLAC 2002).[2] From 2003 to 2012, the country experienced a real boom in the economy, even during the international crisis of 2008. On average, GDP increased by 8.3 per cent per year between 2003 and 2012, while GDP per capita grew at 6.3 per cent annually over the same period. The growth of the economy took place in a context of an expanding world economy and was led by sectors that provide services to the rest of the world, such as the Panama Canal, the international banking centre, the Colon Free Trade Zone, and also by the construction, communication, and transportation sectors (ECLAC 2005; IMF 2009). During the international economic crisis of 2008, economic growth slowed due to the contraction in domestic credit, the slowdown of private construction, and the reduction in the international demand for tourism (ECLAC 2008; IMF 2010). However, economic growth remained positive. GDP and GDP per capita grew by 3.9 and 2.1 per cent in 2009. In the following years, GDP per capita growth accelerated quickly to 5.6 per cent in 2010, 9.0 per cent in 2011, and 8.9 per cent in 2012. The recovery of high growth rates was related to public infrastructure projects, mainly the expansion of the Panama Canal, and to the increase in domestic consumption (IADB 2014).

The share of the service sector in the economy grew, while the shares of the agricultural and industry sectors diminished between 2000 and 2012. The share of the service sector—the largest sector in the Panamanian economy—increased from 73.9 per cent in 2000 to 78.3 per cent in 2012 (Table 2). On the other hand, the shares of the agricultural and industry sectors fell from 7.2 per cent in 2000 to 3.9 per cent in 2012, and from 18.9 per cent in 2000 to 17.8 per cent in 2012

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2 The international banking centre, the Colon Free Trade Zone, and exports contracted between 2000 and 2002, while the Panama Canal continued to grow.

respectively. Some of the reasons that explain the structure of the Panamanian economy, where a large dynamic and competitive service sector co-exists with less developed and domestic-oriented agricultural and industry sectors, are infrastructure deficiencies and US products competition (IADB 2014). The international crisis of 2008 impacted on the agricultural sector. The value added of the agricultural sector decreased by 7.8 per cent in 2009 and 14.2 per cent in 2010. By 2012, the agricultural sector had not recovered its pre-crisis value added level. The industrial and service sectors experienced a slowdown during the international crisis. The value added of the industry sector grew by 1.5 per cent in 2009, while it had grown by 14.5 per cent in 2008. For the service sector, these figures were 5.0 and 9.9 per cent respectively. Both the industry and the service sectors recovered their pre-crisis growth rates in 2012 and 2011 respectively.

The 2001–12 period witnessed a significant drop in the aggregate unemployment rate and in the unemployment rate for all population groups. The international crisis of 2008 led to a temporary increase in the unemployment rate (Figure 3).

Panama experienced a dramatic reduction in its unemployment rate between 2001 and 2012, which was one of the main improvements in the Panamanian labour market over the period. In the year 2001, the unemployment rate stood at 9.6 per cent (111,099 unemployed persons); twelve years later, it had fallen to only 3.7 per cent (61,714 unemployed persons), less than half its original level. This is undoubtedly a major labour market improvement, one which mainly took place during the period of rapid economic growth. Between 2001 and 2005, the behaviour of the unemployment rate was erratic, with several ups and downs and an average level of 9.2 per cent. Starting in 2006, the unemployment rate began to fall. The downward trend was interrupted in 2009 and 2010, a period that included the Great Recession, when the unemployment rate reached 6.1 per cent (18,011 new unemployed persons in 2009 compared to 2008). Both the number of persons in the labour force and the number of employed persons increased between 2008 and 2009 by 36,850 and 18,801 respectively. These figures suggest that the increase in the unemployment rate during the international crisis was brought about by the entry of new persons into the labour market who could not find a job. In 2011, the unemployment rate recovered the downward trend and closed the period at 4.0 per cent in 2012.

The unemployment rate decreased between 2001 and 2012 for all population groups (youth, adults, men, and women), and all of them suffered a temporary increase in their unemployment rate during the international crisis. The youth unemployment rate decreased from 20.0 per cent in 2001 to 9.6 per cent in 2012, while the unemployment rate of adult workers fell from 7.2 per cent in 2001 to 2.6 per cent in 2012. Disaggregating by gender, the unemployment rate decreased from 9.0 per cent in 2001 to 3.1 per cent in 2012 for men, and from 10.8 to 4.5 per cent for women. All population groups were affected negatively by the international crisis. The unemployment rate of youth, adults, men, and women increased in 2009 and recovered the downward trend in 2010 (young workers and women) or 2011 (adults and men). By 2012, the unemployment rates of all population groups were below their pre-crisis level.

The employment composition by occupational group improved between 2001 and 2010 overall, for young and adult workers, and men, while there was a slight worsening for women. The international crisis of 2008 did not affect the improving trend in the aggregate, and for young, adult workers, and men, while it led to an improvement for women.

Between 2011 and 2012 there was a slight improvement in the structure of employment by occupational group in the aggregate and for youth, adults, and men, and a worsening for women (Figure 4).

The share of the following occupations shrank between 2001 and 2010: agricultural, forestry and fishery jobs (drop of 3.7 percentage points); and elementary occupations (drop of 1.0 percentage points). The share of the following occupations grew: crafts and trades occupations (increase of 1.7 percentage points); services and sales workers (increase of 1.4 percentage points); and professionals (increase of 1.2 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 low-earning occupations (agricultural, elementary, and services and sales occupations) reduced their share in total employment by 3.3 percentage points between 2001 and 2010, while high-earning occupations (management, professionals, and technicians and associate professionals) gained share in total employment (increase of 1.8 percentage points). These changes resulted in an increase in the share of mid-earning occupations (clerical jobs, plant and machine operators, craft and related trades occupations) in total employment over the period (increase of 1.5 percentage points) (Tables 3 and 6). Between 2011 and 2012, the share of low and high-earning occupations in total employment exhibited a slight increase (rise of 0.5 and 0.8 percentage points respectively), and consequently, the share of mid-earning occupations fell (drop of 1.3 percentage points).

The improvements in the occupational composition of employment between 2001 and 2010 were observed for young and adult workers and for men, while there was a slight worsening for women. The decrease in the rate of working in low-earning occupations in total employment was larger among youth compared to adult workers (drop of 6.5 percentage points for youth versus 2.7 for adults), as was the increase in the rate of working in high-earning occupations (2.2 and 1.8 percentage points respectively for youth and adults). When the analysis is broken down by gender, men exhibited an improvement in their employment structure by occupational group through a reduction in the share of low-earning occupations in total employment (drop of 5.5 percentage points) and an increase in the share of high-earning occupations (growth of 1.4 percentage points). Women experienced an increase in both the share of low- and high-earning occupations in total employment (1.4 and 1.2 percentage points respectively). These changes in the women's employment structure by occupational group can be interpreted as a slight deterioration due to the larger increase in the share of low-earning occupations compared to the share of high-earning occupations. Between 2011 and 2012, young workers, adults, and men exhibited a small increase in the share of both low- and high-earning occupations, while women suffered a deterioration in the structure of employment through a reduction in the share of high-earning occupations and an increase in the share of low-earning occupations.

The international crisis of 2008 did not affect adversely the improvement in the composition of employment by occupational group in the aggregate and for young workers, adults, and men, while it led to an improvement for women. Between 2008 and 2009 the share of low-earning occupations continued to fall and the share of high-earning occupations increased in the aggregate and for youth, adults, and men. For women, an improvement in their structure of employment took place between 2008 and 2009, reversing the slight deterioration of the previous years.

The employment structure by occupational position improved between 2001 and 2012 overall, and for young, adult workers, and men, while there was a worsening for women. The international crisis of 2008 affected negatively the employment structure by occupational position mainly through a reduction in the share of wage/salaried employees in total employment, which recovered its pre-crisis level by 2011 (Figure 5).

Between 2001 and 2012, the employment structure by occupational position exhibited a substantial increase in the share of wage/salaried employees in total employment and a corresponding reduction in the share of self-employed. The share of wage/salaried employees in total employment—the largest employment category in Panama—increased from 63.2 per cent in 2001 to 68.1 per cent in 2012, while the percentage of self-employed diminished from 29.4 to 24.4 per cent during the same period (Table 4). The shares of employers and unpaid workers remained largely unchanged over the period. These changes in the employment structure by occupational position can be interpreted as an improvement since the share of high-earning positions in total employment (wage/salaried employees and employers) increased, and the share of low-earning positions (self-employed and unpaid workers) diminished.

The distribution of employment by occupational position improved for youth, adults, and men, and deteriorated for women. From 2001 to 2012, the share of high-earning positions in total employment (wage/salaried employees and employers) grew for young and adult workers (9.4 and 4.8 percentage points respectively), while the shares of low-earning positions (self-employed and unpaid workers) fell for both population groups. The share of high-earning positions increased over the period for men (growth of 9.1 percentage points), with a corresponding decrease in the share of low-earning positions, while it decreased for women (drop of 3.8 percentage points).

The international crisis of 2008 led to a deterioration in the employment structure by occupational position overall and for young, adult workers, and men, while it did not interrupt the deterioration that was taking place for women. Between 2008 and 2009, the share of high-earning positions in total employment decreased by 1.5 percentage points, mainly through the reduction in the share of wage/salaried employees. Consequently, the share of low-earning positions in total employment increased by the same magnitude. The increase in the share of low-earning positions took place through an increase in the share of self-employment. The worsening in the employment structure by occupational position is in accord with the increase in the unemployment rate, as economic necessity may compel workers to look for free-entry self-employment activities. Young, adult workers, and men suffered a worsening in their employment structure by occupational position during the international crisis. The share of high-earning positions fell between 2008 and 2009, and the share of low-earning positions increased. The worsening trend in the employment structure by occupational position for women continued during the international crisis. All population groups returned to their pre-crisis structure of employment by 2010.

The employment composition by economic sector improved over the course of the period studied overall and for all population groups. The international crisis of 2008 did not interrupt the improving trend in the structure of employment by economic sector (Figure 6).

The period from 2001 to 2012 witnessed a reduction (from 31.7 per cent to 25.3 per cent) in the share of workers in low-earning sectors in total employment (domestic workers, primary activities, and low-tech industry). The primary activities sector was the one that experienced the largest reduction in the share of workers in total employment, in accordance with the shrinking of the agricultural sector as a share of GDP. There was, during the same period, an increase (from 20.7 per cent to 23.5 per cent) in the share of high-earning sectors (skilled services, utilities and transportation, and public administration) in the total. Among the high-earning sectors, the skilled services sector was the one that exhibited the largest increase in the share of workers in total employment. This evidence is in keeping with the role that finance services and real estate activities had in the Panamanian growth process. All these changes resulted in an increase in the share of mid-earning sectors in total employment (education and health, construction, high-tech industry, and commerce) over the period. Construction and commerce were the sectors that led this increase (Tables 5 and 6).

The employment composition by economic sector improved between 2001 and 2012 for young and adult workers, men, and women, as they moved from low-earning sectors to high-earning sectors. For young workers, the share in low-earning sectors dropped from 40.2 per cent in 2001 to 28.7 per cent in 2012. For adult workers, the share in low-earning sectors fell from 28.5 per cent in 2001 to 22.6 per cent in 2012. At the other end of the scale, the share of young and adult workers in high-earning sectors increased from 13.9 per cent in 2001 to 18.8 per cent in 2012 and from 22.8 per cent to 25.2 per cent respectively. For both genders, the share working in low-earning sectors fell: from 34.3 per cent in 2001 to 25.8 per cent in 2012 for men, and from 26.4 per cent to 24.4 per cent for women. The share of high-earning sectors in total employment grew from 21.5 per cent to 25.6 per cent for men and from 19.0 per cent to 20.2 per cent for women.

The international crisis of 2008 did not halt the improving trend in the employment composition by economic sector overall and for adult workers, men, and women, but led to a slight worsening for youth. Between 2008 and 2009 the share of low-earning sectors continued to decrease, while the share of high-earning sectors in total employment kept on increasing in the aggregate and for adult workers, men, and women. Young workers exhibited an increase in the share of both low- and high-earning sectors in total employment between 2008 and 2009. By 2010, young workers recovered their pre-crisis structure of employment by economic sector.

The educational level of the Panamanian employed population improved steadily over the period, overall and for all population groups. The international crisis of 2008 had no effect on this upward trend (Figure 7).

The share of workers with low educational levels (eight years of schooling or less) declined from 45.4 per cent in 2001 to 33.5 per cent in 2012, while the share of workers with medium education levels (nine to thirteen years of schooling) grew from 36.1 per cent in 2001 to 40.5 per cent in 2012, and those with high levels of education (over thirteen years of schooling) increased from 18.5 to 26.0 per cent.[3] 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

3 The most frequent value of years of education for employed workers in Panama was 6 from 2001 to 2009 (around 21.2 per cent of employed workers had six years of education) and 12 from 2010 to 2012 (around 22.4 per cent of employed workers had twelve years of education).

have high levels of earnings and a decline in the share of workers with low earnings' levels.[4] Panama has one of the highest shares of employed workers with medium and high educational levels in the Latin American region. However, the quality of education in Panama, measured by PISA and national evaluations, is among the lowest in the region (Harris 2007; OECD 2010). The government has launched several programmes during the 2000s aimed at increasing coverage and improving the quality of Panamanian education, such as school nutrition programmes, delivery of resources for students, scholarships, and a curricular change programme (Rodriguez Mojica 2013).

The educational level of the employed population improved between 2001 and 2012 for all population groups. The share of young employed workers with low educational levels decreased from 47.5 per cent in 2001 to 30.5 per cent in 2012 (drop of 17.0 percentage points). The share of young workers with medium and high educational levels grew by 12.3 and 4.6 percentage points respectively over the same period. For adult workers, the changes were in the same direction but different in magnitude: the share of adult workers with low educational levels fell by 11.7 percentage points between 2001 and 2012, while the shares of adult workers with medium and high educational levels rose by 3.4 and 8.3 percentage points respectively. Turning to a disaggregation by gender, women employed workers are better educated than men, but changes in the employment structure by educational level over the period were larger for men. The share of men with low educational levels fell from 51.6 per cent in 2001 to 38.3 per cent in 2012 (drop of 13.3 percentage points), while for women it decreased from 32.6 to 26.5 per cent (drop of 6.5 percentage points). The percentage of workers with medium and low educational levels increased by 7.5 and 5.8 percentage points for men. Women exhibited a reduction of 1.1 percentage points in the share of workers with medium educational levels and an increase of 7.6 percentage points in the share with high levels of education.

The pattern of improvement in the educational level of the employed population in Panama was not affected negatively on the aggregate or at the population group level by the international crisis of 2008.

The share of workers registered with the social security system increased from 2004 (the earliest year with data on this indicator) to 2012, overall, for youth and adults, and for men and women. The international crisis of 2008 led to a slowdown in the upward trend of the registration rate (Figure 8).

The Panamanian social security system is administered by the *Caja del Seguro Social* (CSS), which is organized in three programmes: 1) disability, old age, and death benefits; 2) health and maternity care; and 3) professional risks. A reform of the social security system in 2005 created two contributory sub-systems. First, the old defined benefit system, in which affiliates at the moment of the reform could decide whether to remain or not. Second, a mixed sub-system which combines a defined-benefits component with an individual savings component. The affiliation to the CSS is mandatory for all workers employed in public and private firms and, since 2007, for independent workers. The affiliation for informal workers, domestic workers, and housekeepers is voluntary. The

4 The improvement in the employment structure by educational level is related to changes in the relative demand and supply of workers with high levels of education with corresponding implications for the wage gap by educational groups and the unemployment rate of each educational level. We introduce a discussion about the role of these factors in Panama in the paragraph on labour earnings.

system is financed by employees' and employers' contributions and by government funds. The social security system also contains non-contributory programmes totally funded by the government, such as the *100 a los 70* programme (Rodriguez Mojica 2013).

Social security records show an increase in the percentage of workers registered with the contributory schemes of the system, from 52.8 per cent in 2004 (632,497 registered workers) to 62.3 per cent in 2012 (1,011,130 registered workers). Between 2004 and 2008, the share of workers registered with the social security system increased by 1.2 percentage points annually. The Great Recession led to a slowdown in this upward trend and between 2008 and 2010, the share of registered workers increased only by 0.6 percentage points a year (19,078 new registered workers per year). In 2011, the share of registered workers grew rapidly (3.2 percentage points), and in 2012 it slowed down again (increase of 0.5 percentage points).

All population groups exhibited an increase in the share of workers registered with the social security system between 2004 and 2012, and the increase was larger for youth compared to adults, and for men compared to women. Young workers were the least likely to be registered with the social security system, though they were the group that experienced the largest increase in the share of registered workers. In 2004, 37.5 per cent of young workers were registered with the social security system. In 2012, this increased to 50.9 per cent (increase of 13.4 percentage points). For adults, the share of registered workers was 56.4 per cent in 2004 and 65.0 per cent in 2012 (increase of 8.6 percentage points). Women were more likely to be registered with the social security system than men, but men benefited more from the upward trend in registered employment than did women. The rate of registered employment grew from 47.9 per cent in 2004 to 58.0 per cent in 2012 for men (increase of 10.1 percentage points), and from 61.8 to 69.0 per cent for women (increase of 7.2 percentage points) over the same period.

The international crisis of 2008 led to a slowdown in the upward trend of registered employment overall, for young and adult workers, and men, while the improving trend stalled for women. From 2004 to 2008, the share of registered employment increased by 1.2 percentage points annually in the aggregate, 1.9 percentage points a year for young workers, 1.0 percentage point for adults, and 1.4 percentage points for men. In 2009, the increases were just 0.7 percentage points overall, 1.2 for young workers, 0.5 for adults, and 1.1 for men. The share of employed women registered with the social security system stopped increasing during the international crisis but recovered the upward trend by 2010.

Real labour market earnings increased overall from 2001 to 2012. Within the period, labour earnings decreased from 2001 to 2005, and increased from 2006 to 2012, rising even during the international crisis. Labour earnings increased for all population groups over the period, and workers in low-earning categories tended to experience a larger increase in labour earnings than did workers in high-earning categories (Figure 9).

Average monthly earnings, expressed in dollars at 2005 purchasing power parity (PPP) increased by 13.8 per cent, from US$642 in 2001 to US$730 in 2012 (Table 6). However, there were substantial fluctuations in labour incomes during this period, which cannot be entirely attributed to the variations in the country's economic performance. Average labour earnings decreased slightly at the beginning of the period (from 2001 to 2002), mirroring the slow growth in GDP per capita. In the following years, from 2003 to 2005, GDP per capita rose by around 11.0 per cent while average labour earnings fell by 6.5 per cent. Galiani (2009) claims that the decrease in average real earnings during the 2001–05 period was due to a composition effect. The jobs created during this period were mainly informal (without a contract) which paid less compared to a formal job, bringing down average labour earnings. From 2006 to 2008, real labour earnings were stable (increase of just 0.8 per cent), while GDP per capita was increasing (growth of 19.1 per cent). From 2009 to 2012, real labour earnings increased jointly to GDP per capita, although at a slower pace (14.6 and 25.4 per cent respectively). An interesting characteristic of the Panamanian labour market is that the minimum wage has increased more than the mean hourly wage of the economy over the 2000s, indicating an increase in the rate of non-compliance with labour market regulations (Cruces and Galiani 2013).

When changes in earnings are analysed by population groups and employment categories, they follow the overall pattern: a reduction from 2001 to 2005 followed by a stabilization from 2006 to 2008, and an increase from 2009 to 2012. Men exhibited a larger earnings gain compared to women (14.9 per cent and 13.0 per cent respectively). Young workers increased their labour incomes by more than adult workers (29.2 per cent and 13.3 per cent respectively). Among occupational groups, workers in low-earning occupations experienced a mild increase in labour earnings between 2001 and 2010 (increase of 0.8 per cent), while workers in high-earning occupations suffered a reduction (drop of 9.2 per cent).[5] Among occupational positions, workers in low-earning positions increased their labour earnings more than workers in high-earning positions (18.4 and 13.0 per cent respectively). Labour earnings of workers in low-earning sectors were largely unchanged between 2001 and 2012 (drop of 0.2 per cent), while earnings of workers in high-earning sectors increased (rise of 6.0 per cent). Workers with medium educational levels experienced the largest increase in labour incomes (rise of 4.5 per cent), followed by workers with low levels of education (increase of 2.7 per cent). Workers with high levels of education suffered an earnings reduction (drop of 1.8 per cent).

The evidence of falling labour earnings for workers with high educational levels and labour earnings increases for workers with medium and low levels of education 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 employ workers with high and medium levels of education, like professional and technical occupations, and skilled services sectors, and a reduction in the share of occupations and sectors that employ workers with low educational levels, like agricultural and elementary occupations, domestic workers, primary activities, and low-tech industry sectors. This evidence indicates that the demand for workers with high and medium educational levels relative to those with low educational levels increased between 2001 and 2012. On the other hand, the educational levels of people 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

5 Labour earnings by occupational group can only be analysed from 2001 to 2010 and from 2011 to 2012 due to comparability problems in the classification of occupations.

increase in the relative supply). In the Panamanian labour market the relative wages of workers with high and medium educational levels relative to those with low educational levels fell over the period, though slightly, and the relative wages of workers with high educational levels relative to those with medium levels of education 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 levels of education (Table 9).

The international crisis of 2008 did not affect the upward trend in labour earnings overall, for all population groups, and most employment categories. Average labour earnings in Panama increased by 4.4 per cent from 2008 to 2009. Young and adult workers also experienced an increase in their labour earnings during the international crisis of 4.9 and 4.2 per cent respectively. Labour earnings increases for men and women were 3.8 and 5.7 per cent. Among employment categories, some groups were hurt by the crisis. Managers and plant and machine operators suffered an earnings reduction of 0.7 and 4.2 per cent respectively between 2008 and 2009. By 2010, they had not reached their pre-crisis earning levels. Workers in low-tech industry, utilities and transportation, and public administration sectors exhibited an earnings fall of 6.4, 2.7, and 5.7 per cent respectively between 2008 and 2009, and all of them surpassed their pre-crisis level of earning by the end of the period.

Poverty fell between 2001 and 2012 for all poverty lines used. The rate of working poor households also exhibited a decreasing trend. The pattern of poverty reduction over time was slowed down or temporarily reversed during the international crisis of 2008 depending on the poverty line used (Figure 10).

The moderate poverty rate (measured by the country's official poverty line) fell from 45.9 per cent in 2001 to 22.4 per cent in 2012; the extreme poverty rate decreased from 22.4 to 9.8 per cent; the percentage of the working poor (defined as the proportion of persons in the population living in poor households with at least one working member) decreased from 31.3 to 13.5 per cent over the same period. An analysis based on the 2.5 and 4 dollars-a-day PPP international poverty lines also shows a drop in the poverty rate from 2001 to 2012. The 4 dollars-a-day poverty rate fell from 43.4 per cent in 2001 to 20.9 per cent in 2012, and the 2.5 dollars-a-day poverty rate diminished from 28.7 to 11.8 per cent over the same period. Despite the superb growth performance, poverty reduction in Panama was less responsive to economic growth compared to other Latin American countries. The low growth elasticity of poverty reduction in Panama compared to the rest of the region is associated with the large contribution of indigenous population to poverty, as the indigenous poor have very low levels of human capital and skills, and are less able to take advantage of the growth process (World Bank 2011b).

The international crisis of 2008 led to a slowdown in the pattern of poverty reduction measured by the moderate poverty line and the 4 dollars-a-day international poverty line, and in the percentage of working poor, while the extreme poverty rate and the 2.5 dollars-a-day poverty rate increased slightly between 2009 and 2010. The moderate poverty rate fell by only 0.4 percentage points between 2008 and 2009, while it had decreased by 2.6 percentage points a year from 2001 to 2008. Those figures were 0.8 and 2.5 percentage points for the 4 dollars-a-day poverty rate, and 0.5 and 1.9 percentage points for the percentage of working poor. The extreme and 2.5 dollars-a-day poverty rates suffered a slight increase between 2009 and 2010 (46,861 new extremely poor persons and 35,551 new poor by the 2.5 dollars-a-day poverty line). The 2.5 dollars-a-day poverty rate was below the level of 2009 by 2011. The extreme poverty rate never reached the level of 2009, but was below the level of 2008 by 2012.

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 income increased between 2001 and 2012. Government transfers increased between 2001 and 2011, but an important reduction took place in 2012 determining an overall reduction from 2001 to 2012. Incomes from pensions and capital income diminished over the same period (Figure 11). From 2004 to 2009, the government of Panama implemented the *Red de Oportunidades* conditional cash transfer programme, which targeted extremely poor households. During this period, government transfers captured by the EH increased at 3.4 per cent annually. The programme accounted for one-quarter of the extreme poverty reduction among the indigenous population between 2003 and 2008, who make up the largest share of the extremely poor in Panama (World Bank 2011b).

Household per capita income inequality diminished substantially between 2001 and 2012, and labour earnings inequality also fell, but to a smaller extent (Figure 12).

Household per capita income inequality decreased slowly but steadily from 2001 to 2012. The overall evolution is captured by the Gini coefficient, which fell from 0.565 in 2001 to 0.519 in 2010, remaining at that level until 2012. On the other hand, the inequality of labour earnings also decreased over the period under study. The Gini of labour earnings among employed workers was 0.501 in 2001 and 0.481 in 2012. It increased from 2001 to 2002, when it peaked at 0.535, and then fell steadily until 2010, when it reached the lowest level of the twelve-year period (0.472) before rising to the level of 2012 (0.481). This reduction in labour earnings inequality is in keeping with the fact that earnings increased more for low-earning employment categories compared to high-earning categories. However, it is interesting to notice that earnings declined for some high-earning employment categories. Consequently, the reduction in labour earning inequality occurred at the expense of income losses for some categories.

Changes in household per capita income inequality in Panama have been related mainly to changes in labour income. Azevedo et al. (2013b) decomposed the change in the Gini coefficient of household per capita income for the period 2002–10 and found that changes in labour incomes contributed the most to the inequality reduction over this period (the Gini coefficient of household per capita income decreased from 0.564 to 0.519 between 2002 and 2010). Changes in non-labour incomes, such as government transfers and pension were also inequality reducing, while demographic changes, like the share of adults per household, were inequality increasing. Other studies have analysed the factors behind the evolution of labour income inequality. Azevedo et al. (2013a) used a decomposition approach and found that changes in the education wage premium (or the 'price effect') were inequality reducing, while changes in the distribution of the stock of education (the 'quantity effect') were inequality increasing in Panama between 2001 and 2009. Gasparini et al. (2011) found a reduction in the gap between the wages of skilled workers (those with complete or incomplete college education) and unskilled workers (those who have completed secondary education or less) in Panama between 2001 and 2009. The shrinking educational earnings gap can be explained by factors related to supply and demand: the relative supply of skilled workers increased steadily while the relative demand for those workers fell.

4 Conclusions

The economic performance of Panama during the years 2000 to 2012 was outstanding, and it boasted the strongest economic growth in Latin America in that period. The economy suffered a slowdown as a consequence of the international crisis of 2008, but Panama was one of the few countries in Latin America to have sustained positive growth during that episode.

The result of this impressive economic growth was a clear improvement in labour market indicators. By 2012, unemployment had fallen to less than half its level in 2001. The composition of employment also improved steadily in a number of dimensions. The share of workers in agricultural and elementary occupations diminished, while the share in professional and technical jobs increased. The share of wage/salaried employees rose and the share of self-employed workers decreased. The employment composition by economic sector improved as workers moved from primary activity, domestic workers, and low-tech industry sectors to better paying sectors, such as skilled services. The share of registered workers increased between 2004 and 2012. There was also a steady improvement in the educational level of the employed population. Average labour market earnings increased between 2001 and 2012, though not steadily. All poverty indicators decreased between 2001 and 2012, as did the Gini coefficient of household per capita income and labour earnings.

The international crisis of 2008 affected some of these indicators, even while GDP continued to rise. The unemployment rate rose, the share of paid employees fell between 2008 and 2009, and some poverty indicators increased between 2009 and 2010. The worsening of these indicators was reversed by the end of the period studied.

Young workers had worse labour market outcomes over the period compared to adults and were more vulnerable to the international crisis. Men experienced worse labour market outcomes compared to women, but women suffered more from the negative impacts of the international crisis. The unemployment rate was higher for young compared to adult workers; the share of young employed workers in low-earning occupations, positions, and economic sectors was 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. 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 crisis. The youth unemployment rate increased by more than the adult unemployment rate, and the share of workers in low-earning positions increased for young workers, while it decreased for adults. Disaggregating by gender, we found that women had better labour market outcomes than men, with the only exceptions being the unemployment rate that was larger among women and labour earnings that were higher for men. However, women were hit hardest by the international crisis, as the unemployment rate and the share of workers in low-earning positions increased more among women.

In summary, Panamanian workers benefited from the impressive economic growth over the decade as their labour market conditions were in a better state in 2012 than they were at the start of the millennium.

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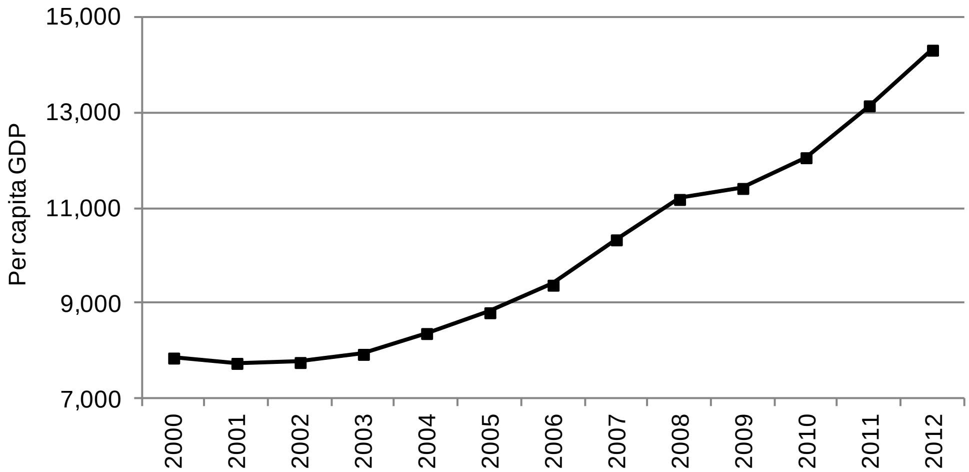
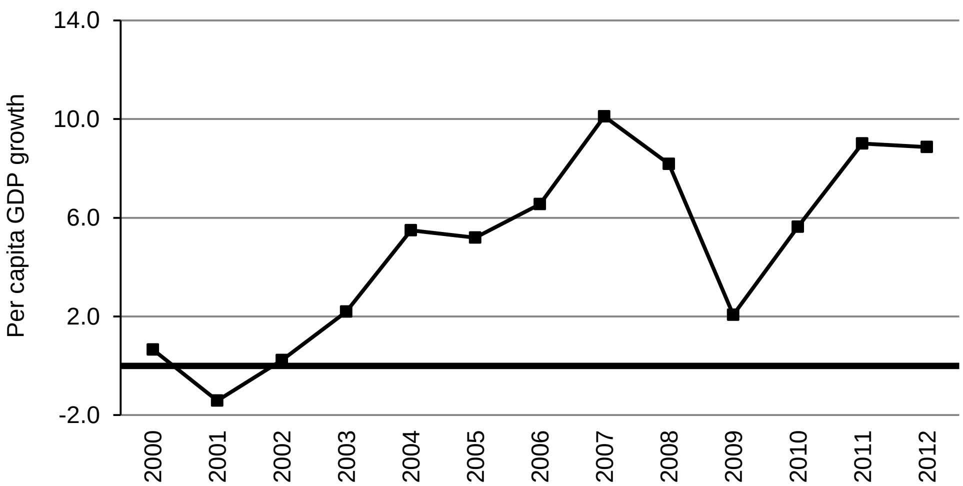
Figures

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



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

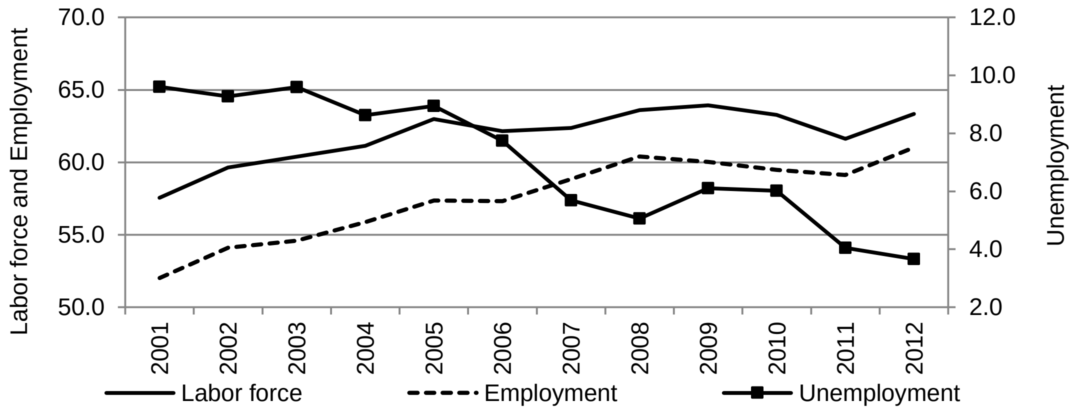
Figure 2: Annual growth of GDP per capita at PPP dollars of 2005, 2000–12



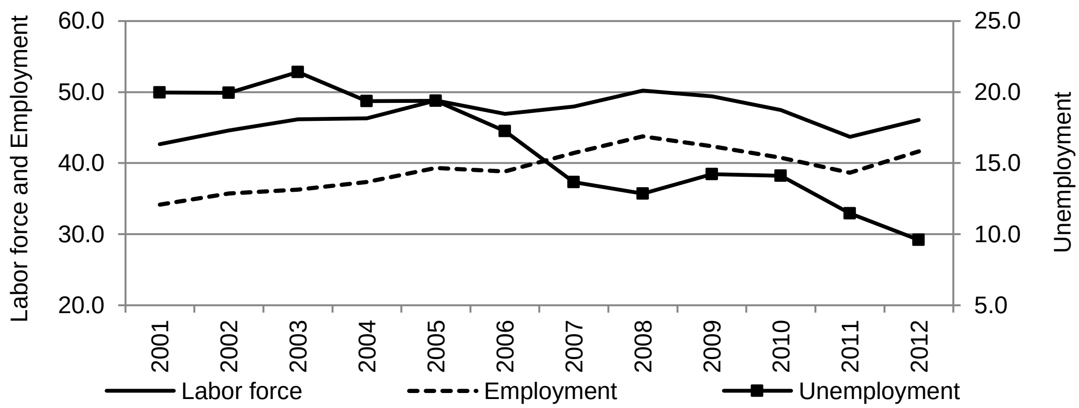
Source: World Development Indicators (the World Bank 2014).

Figure 3: Labour force rate, employment-to-population rate and unemployment rate: population 15 years old or more, 2001–12

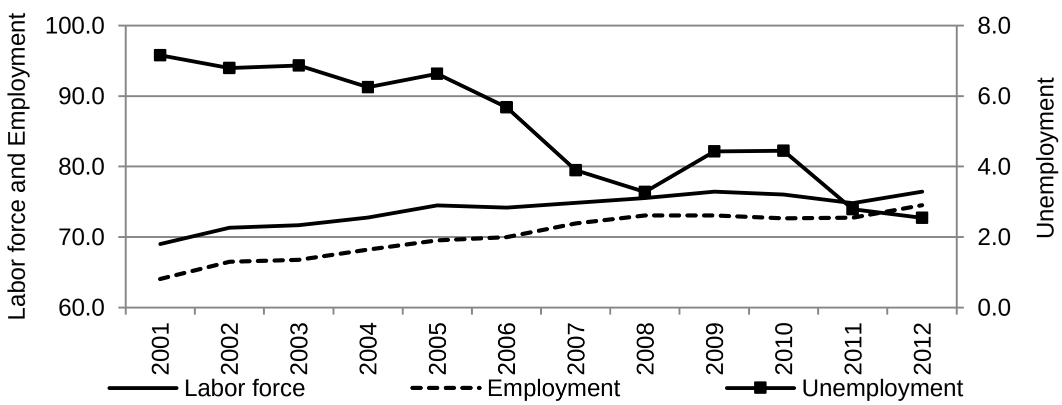
(a) All



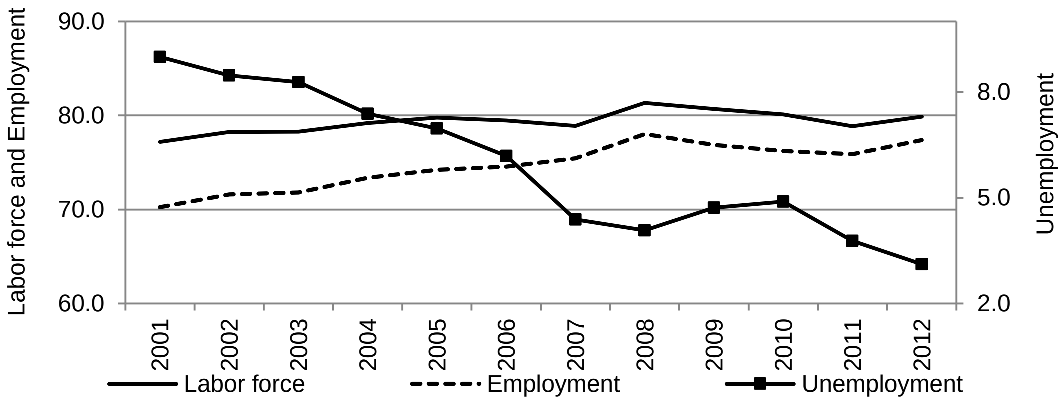
(b) Youth (15 to 24 years old)



(c) Adults (25 to 64 years old)



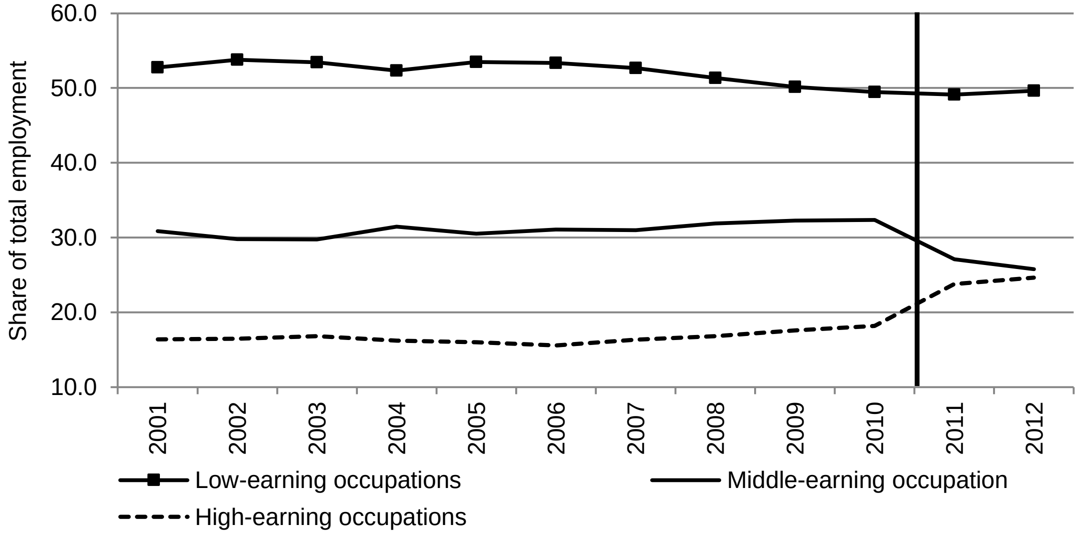
(d) Men



(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, 2001–12



Notes: Low-earning occupations: elementary, agricultural, forestry and fishery occupations, services and sales occupations. Medium-earning occupations: craft and related trade jobs, plant and machine operators and assemblers, clerical jobs. High-earning occupations: management, professionals, technicians and associate professionals.

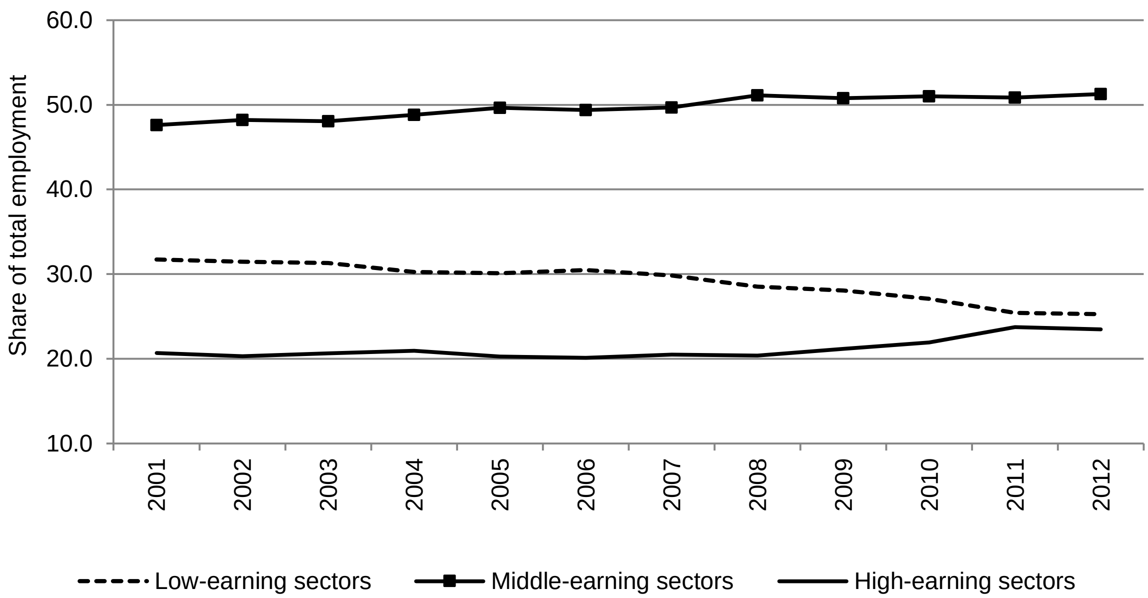
The series 2001–10 is not fully comparable with 2011–12 due to a change in the classifications of occupations in the surveys.

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, 2001–12

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, 2001–12

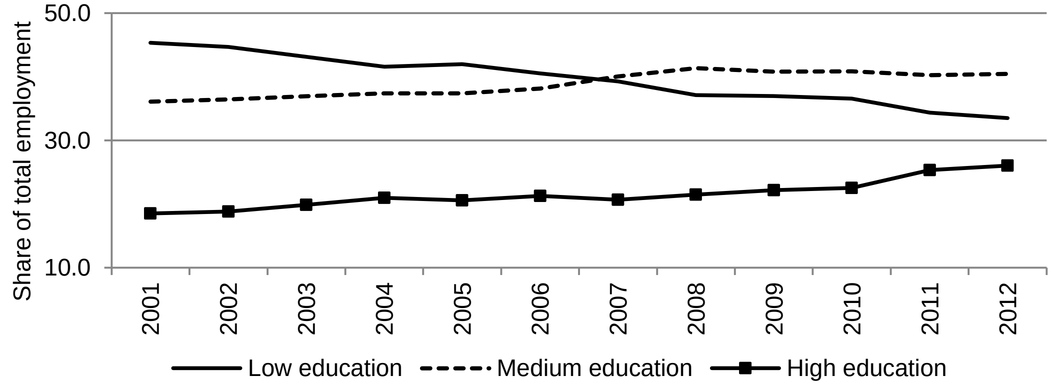


Note: Low-earning sectors: domestic workers, primary activities, low-tech industry. Middle-earning sectors: commerce, high-tech industry, construction, education and health. High-earning sectors: skilled services, utilities and transportation, public administration.

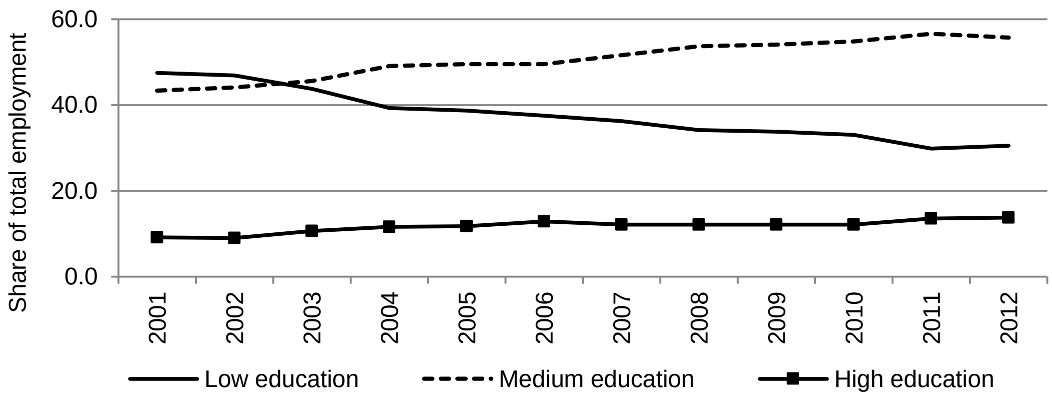
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 7: Share of employment by educational level: employed workers, 15 years old or more, 2001–12

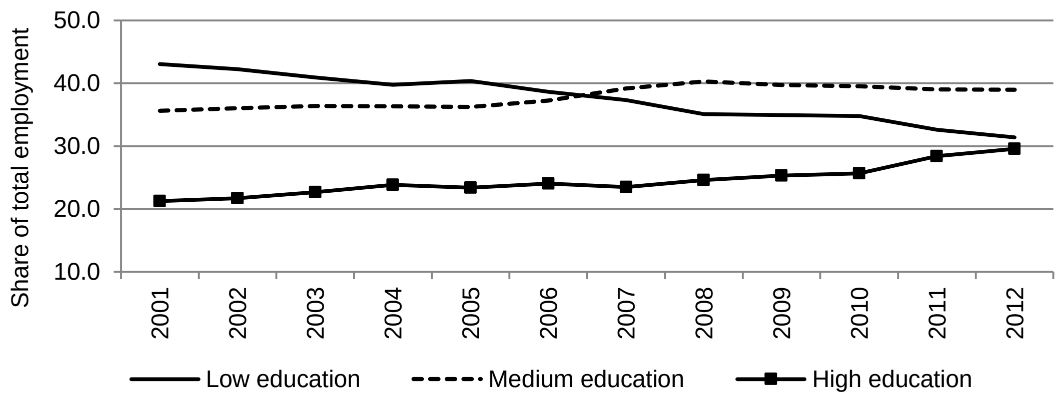
(a) All employed workers



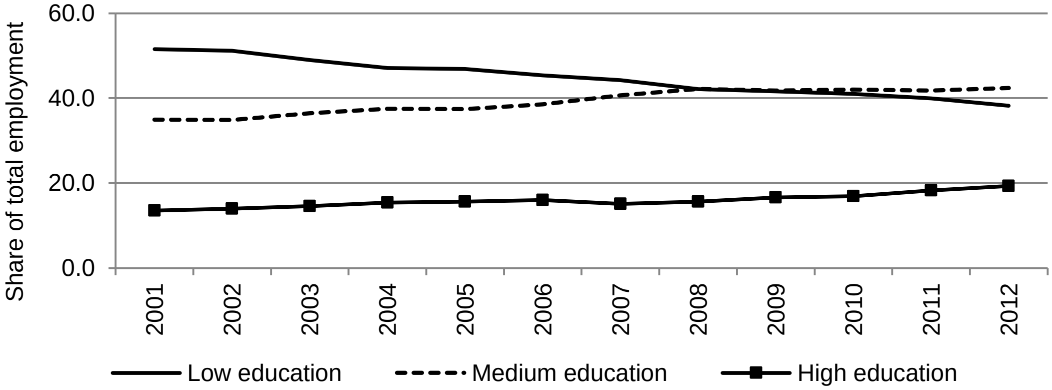
(b) Youth (15 to 24 years old)



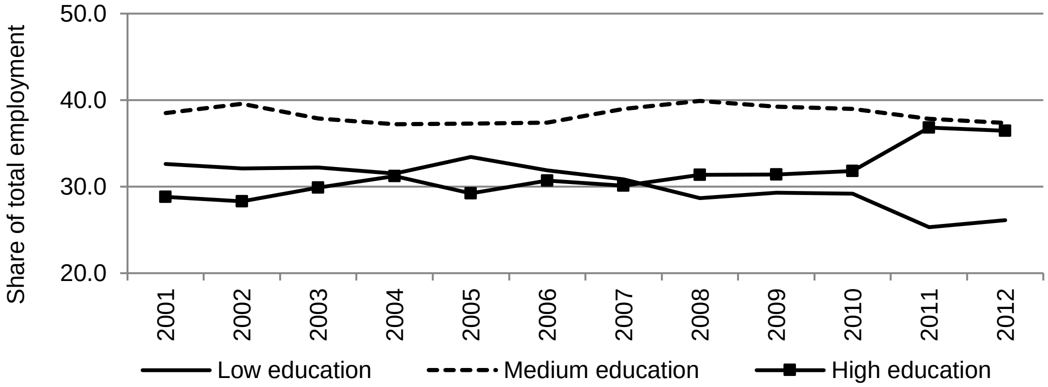
(c) Adults (25 to 64 years old)



(d) Men



(e) Women

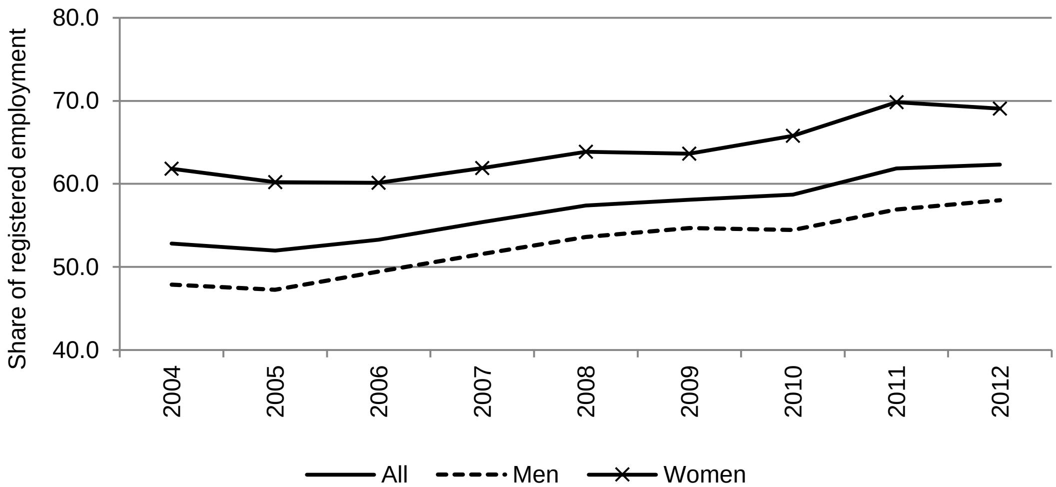


Note: Low: eight years of schooling or less. Medium: from nine to thirteen years of schooling. High: Over thirteen years of schooling.

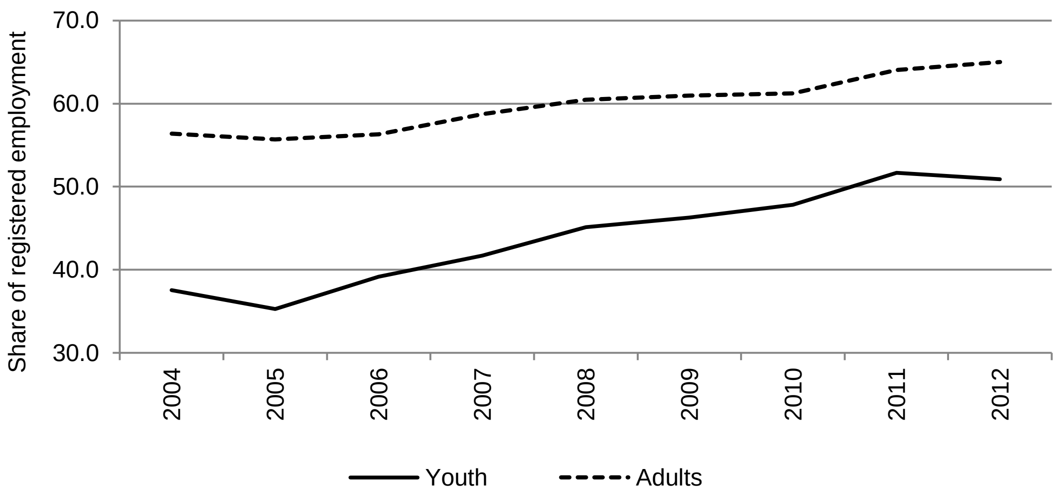
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 8: Share of employment registered with the national social security system: employed workers, 15 years old or more, 2004–12

(a) Overall and by gender



(b) By age group

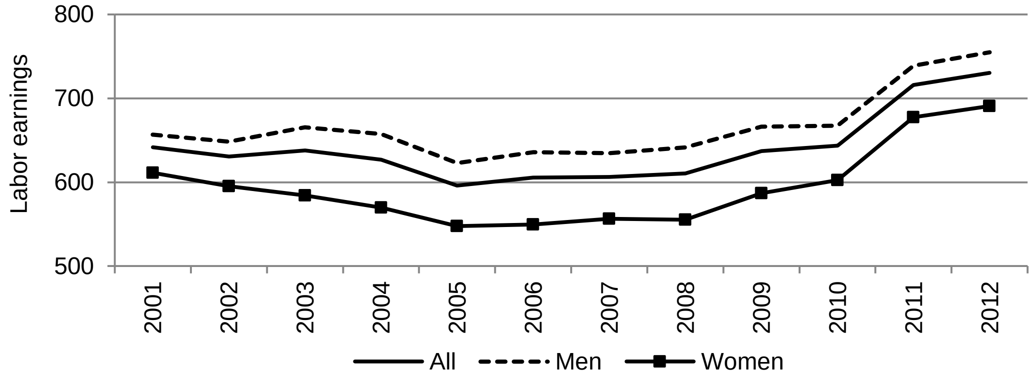


Note: Data on the registration of workers with the national social security system is not available before 2004.

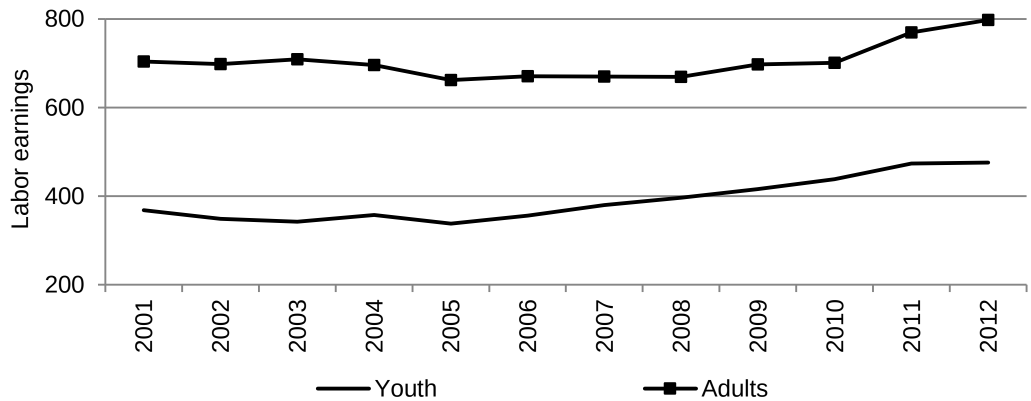
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 9: Monthly labour earnings at PPP dollars of 2005, 2001–12

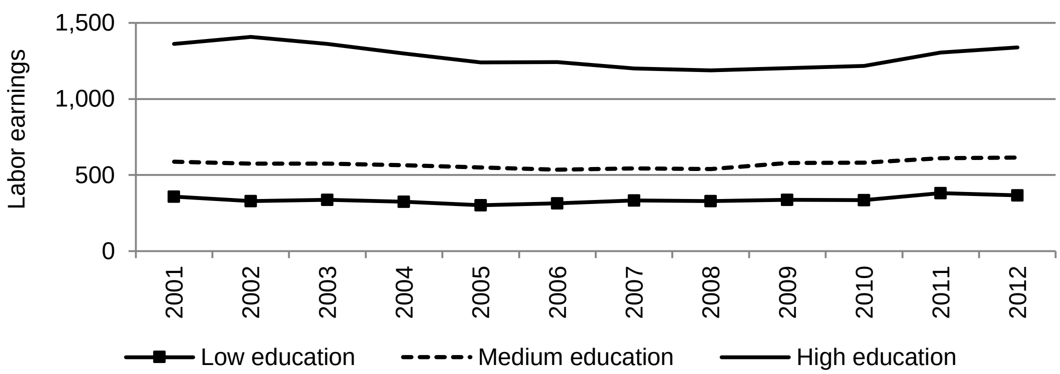
(a) Overall and by gender



(b) By age



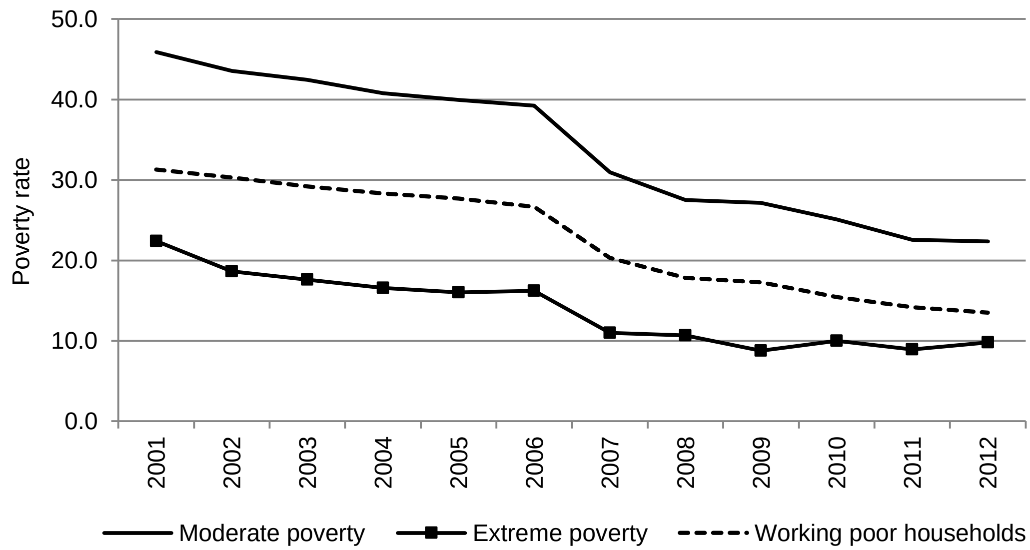
(c) By educational level



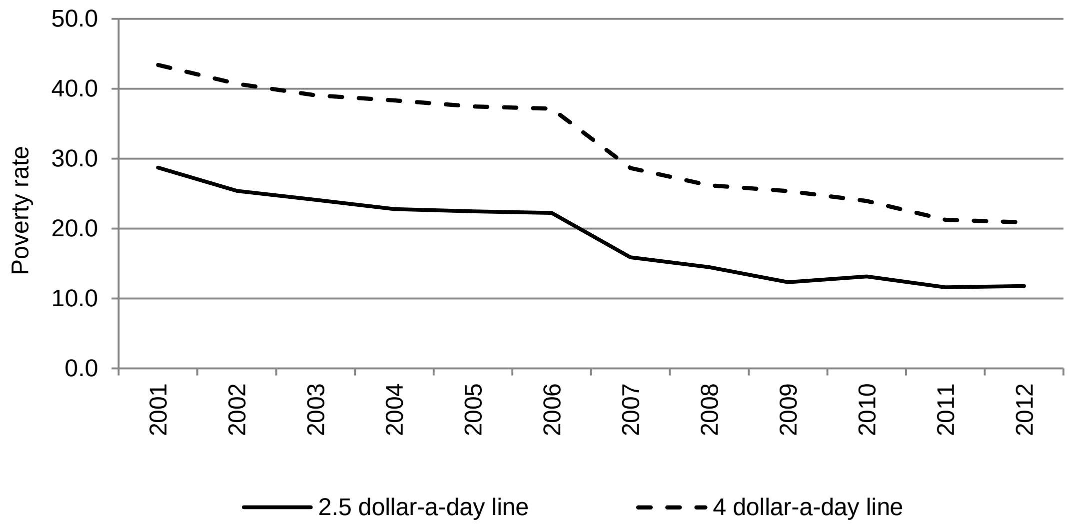
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 10: Poverty rates and working poor households, 2001–12

(a) Official lines

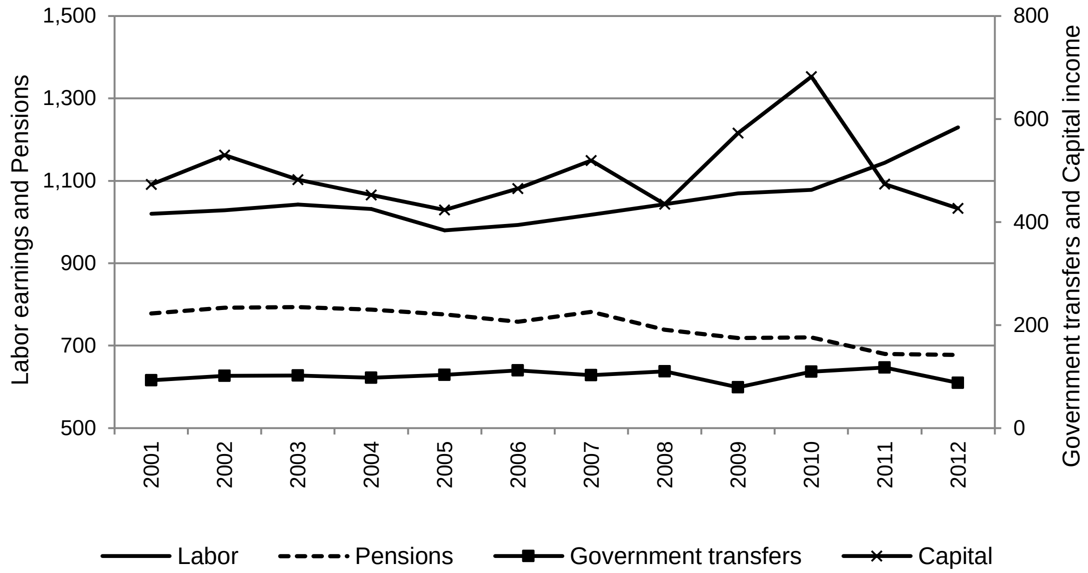


(b) International lines



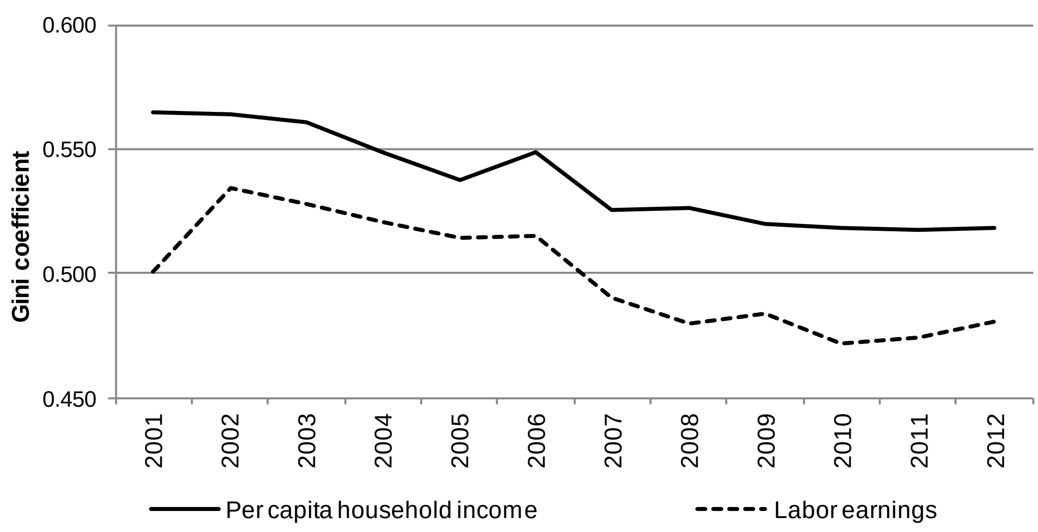
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 11: Sources of monthly household total income at PPP dollars of 2005, 2001–12



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

Figure 12: Gini coefficient of household per capita income and labour earnings, 2001–12



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
2001	13,372	55,891
2002	13,308	54,500
2003	13,330	53,834
2004	13,500	52,957
2005	12,753	48,596
2006	12,865	48,762
2007	13,091	49,399
2008	13,143	48,900
2009	13,386	49,573
2010	13,391	48,881
2011	12,379	46,611
2012	12,298	45,636

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[1,2]	24,039	24,177	24,716	25,755	27,693	29,684	32,216	36,118	39,772	41,306	44,384	49,199	54,449
GDP per capita [1]	7,869	7,758	7,776	7,947	8,383	8,819	9,396	10,346	11,192	11,424	12,067	13,154	14,320
GDP per person employed [1]	21,118	20,847	20,658	20,800	21,392	21,838	23,218	24,619	25,675	26,309	27,896	29,591	32,060
GDP growth	2.72	0.57	2.23	4.21	7.52	7.19	8.53	12.11	10.12	3.86	7.45	10.85	10.67
GDP per capita growth	0.66	-1.41	0.23	2.20	5.49	5.20	6.55	10.10	8.18	2.06	5.63	9.01	8.87
Exports of goods and services [1,2]	72.58	72.72	67.46	63.60	67.61	75.49	76.71	81.20	85.19	81.04	76.48	84.24	83.54
Agriculture, value added (% of GDP)	7.24	7.73	7.54	7.75	8.03	6.98	6.53	5.95	5.44	5.03	4.66	4.11	3.89
Industry, value added (% of GDP)	18.90	16.79	15.78	16.89	18.18	16.56	16.58	16.54	17.84	17.24	16.91	16.70	17.82
Services, value added (% of GDP)	73.86	75.48	76.67	75.36	73.79	76.46	76.89	77.51	76.72	77.73	78.43	79.19	78.29
Agriculture, value added [1,2]	805	857	886	968	981	1,007	1,049	1,055	1,142	1,054	904	898	938
Industry, value added [1,2]	2,274	2,047	2,027	2,169	2,312	2,389	2,626	2,944	3,372	3,424	3,588	3,994	4,705
Services, etc., value added [1,2]	8,640	8,874	9,065	9,375	10,180	11,027	11,994	13,496	14,834	15,581	17,049	18,907	20,637
Total population [2]	3.05	3.12	3.18	3.24	3.30	3.37	3.43	3.49	3.55	3.62	3.68	3.74	3.80
Working age population (15-64) [2]	1.90	1.95	1.99	2.04	2.08	2.13	2.17	2.22	2.26	2.31	2.35	2.40	2.44

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, 2001–12

(a) All employed workers

	Manage-ment	Professio-nals	Technicians & associate professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, assemblers	Elementary
2001	2.91	8.99	4.47	11.23	14.06	18.40	12.36	7.27	20.30
2002	2.85	8.97	4.63	10.69	15.69	18.05	12.02	7.06	20.04
2003	2.71	9.27	4.84	10.23	15.03	17.87	12.60	6.93	20.53
2004	2.85	8.83	4.52	10.63	15.33	16.29	13.65	7.19	20.70
2005	2.70	8.75	4.56	10.38	16.71	16.26	13.21	6.93	20.50
2006	2.76	8.67	4.15	10.82	15.43	16.82	13.98	6.28	21.09
2007	2.83	8.90	4.61	10.58	15.67	16.17	14.15	6.26	20.82
2008	2.96	8.99	4.85	10.80	15.36	15.34	14.18	6.90	20.63
2009	2.91	9.26	5.39	10.95	15.43	15.45	14.55	6.79	19.28
2010	2.92	10.18	5.09	11.02	15.49	14.71	14.09	7.24	19.26
2011	5.78	9.85	8.13	7.02	17.78	11.53	12.60	7.49	19.81
2012	6.49	10.27	7.85	6.75	18.26	11.60	11.96	7.06	19.75

(b) Youth (15 to 24 years old)

	Manage-ment	Professio-nals	Technicians & associate professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, assemblers	Elementary
2001	0.53	3.45	3.18	11.21	16.01	23.73	11.14	3.59	27.15
2002	0.53	3.10	4.03	10.41	18.70	22.66	10.48	3.55	26.54
2003	0.65	3.67	3.66	9.41	18.30	21.92	11.58	2.85	27.95
2004	0.83	3.52	3.54	10.27	19.54	18.25	12.93	3.06	28.07
2005	0.57	3.19	3.42	10.36	21.66	18.27	11.81	2.68	28.04
2006	0.35	3.48	3.53	11.52	18.19	20.40	11.72	2.81	27.99
2007	0.85	3.63	3.78	10.64	18.86	19.95	12.48	2.29	27.53
2008	0.79	4.14	3.97	11.24	18.14	18.39	12.56	2.95	27.82
2009	0.98	3.56	4.74	11.71	18.94	19.44	13.53	3.49	23.60
2010	0.81	3.98	4.53	12.78	19.44	17.72	13.79	3.76	23.20
2011	1.41	4.08	6.60	9.68	21.63	12.63	12.29	4.20	27.49
2012	2.21	3.69	6.66	10.05	20.73	14.25	11.21	4.21	26.99

(c) Adults (25 to 64 years old)

	Manage-ment	Professio-nals	Technicians & associate professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, assemblers	Elementary
2001	3.49	10.55	4.83	11.69	13.76	15.71	12.70	8.31	18.96
2002	3.37	10.58	4.90	11.23	15.11	15.30	12.50	8.15	18.87
2003	3.19	10.80	5.29	10.85	14.51	15.13	12.95	8.10	19.18
2004	3.29	10.29	4.87	11.21	14.69	13.92	13.89	8.40	19.44
2005	3.18	10.24	5.00	10.90	15.81	13.86	13.70	8.14	19.18
2006	3.27	10.14	4.47	11.21	15.14	14.09	14.56	7.21	19.91
2007	3.30	10.42	5.00	11.13	15.16	13.32	14.68	7.41	19.57
2008	3.52	10.46	5.21	11.34	14.81	12.77	14.55	8.11	19.23
2009	3.31	10.85	5.76	11.39	14.85	12.60	14.94	7.69	18.61
2010	3.42	11.83	5.39	11.27	14.81	12.29	14.18	8.14	18.68
2011	6.78	11.20	8.77	6.88	17.34	9.59	12.66	8.30	18.48
2012	7.58	11.95	8.42	6.42	18.07	9.23	12.09	7.85	18.38

(d) Men

	Manage-ment	Professio-nals	Technicians & associate professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, assemblers	Elementary
2001	2.60	5.91	4.24	5.48	12.13	24.83	15.83	10.37	18.61
2002	2.71	5.94	4.56	5.15	13.52	24.71	15.41	10.12	17.89
2003	2.52	6.11	4.82	4.62	13.08	24.33	16.01	10.04	18.46
2004	2.67	5.93	4.27	4.95	13.29	22.68	16.70	10.61	18.91
2005	2.40	6.02	4.26	5.02	14.29	22.16	16.68	10.45	18.72
2006	2.37	6.03	4.12	5.52	12.78	22.48	17.56	9.43	19.70
2007	2.55	6.10	4.29	5.25	12.72	21.32	18.28	9.59	19.90
2008	2.45	6.01	4.34	5.59	12.61	20.32	18.72	10.52	19.45
2009	2.52	6.18	4.91	5.91	12.60	20.23	19.08	10.52	18.06
2010	2.43	7.07	4.62	5.72	12.62	19.16	18.89	11.22	18.27
2011	5.05	6.68	6.48	3.49	14.26	14.80	17.05	11.75	20.45
2012	5.55	7.09	6.89	3.30	14.43	14.08	16.30	11.18	21.18

(e) Women

	Management	Professionals	Technicians & associate professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, assemblers	Elementary
2001	3.55	15.29	4.94	23.00	18.04	5.24	5.26	0.91	23.77
2002	3.12	14.85	4.77	21.45	19.90	5.12	5.45	1.13	24.21
2003	3.05	15.22	4.88	20.79	18.71	5.69	6.17	1.06	24.42
2004	3.17	14.15	4.98	21.03	19.07	4.61	8.09	0.94	23.97
2005	3.21	13.51	5.10	19.76	20.95	5.95	7.14	0.76	23.61
2006	3.46	13.38	4.19	20.30	20.18	6.70	7.58	0.63	23.58
2007	3.32	13.65	5.15	19.63	20.67	7.44	7.16	0.59	22.38
2008	3.82	14.04	5.71	19.61	20.01	6.91	6.49	0.78	22.64
2009	3.55	14.36	6.18	19.29	20.11	7.55	7.04	0.64	21.29
2010	3.73	15.34	5.89	19.82	20.26	7.32	6.12	0.62	20.90
2011	6.95	15.00	10.81	12.74	23.49	6.23	5.40	0.60	18.78
2012	7.95	15.23	9.35	12.11	24.24	7.75	5.21	0.65	17.53

Note: The series 2001–10 is not fully comparable with 2011–12 due to a change in the classifications of occupations in the surveys.

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, 2001–12

(a) All employed workers

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2001	2.54	63.20	29.45	4.82
2002	2.94	62.45	30.29	4.32
2003	2.90	61.71	30.75	4.64
2004	3.23	62.63	30.00	4.14
2005	3.07	61.77	30.33	4.83
2006	3.08	62.99	28.96	4.97
2007	3.06	65.33	26.44	5.18
2008	3.21	66.06	25.87	4.86
2009	3.11	64.67	27.13	5.09
2010	3.21	65.89	26.48	4.42
2011	3.05	68.00	25.20	3.75
2012	2.74	68.06	24.39	4.80

(b) Youth (15 to 24 years old)

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2001	0.18	62.37	22.54	14.91
2002	0.23	64.13	23.06	12.58
2003	0.51	63.33	22.91	13.26
2004	0.96	65.83	22.36	10.85
2005	0.30	65.65	21.47	12.58
2006	0.34	66.96	18.77	13.92
2007	0.27	69.25	16.26	14.22
2008	0.30	71.72	14.93	13.04
2009	0.47	69.33	15.98	14.22
2010	0.32	71.84	15.48	12.36
2011	0.55	73.55	14.36	11.54
2012	0.40	71.59	14.57	13.44

(c) Adults (25 to 64 years old)

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2001	2.91	65.24	29.24	2.60
2002	3.35	64.18	29.92	2.55
2003	3.21	63.51	30.41	2.87
2004	3.45	64.19	29.59	2.78
2005	3.45	63.24	30.05	3.26
2006	3.43	64.69	28.74	3.14
2007	3.48	67.03	26.35	3.14
2008	3.68	67.33	25.95	3.04
2009	3.53	66.35	26.92	3.20
2010	3.62	67.40	26.15	2.83
2011	3.40	69.34	24.83	2.43
2012	3.13	69.84	23.90	3.12

(d) Men

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2001	3.13	57.18	35.38	4.32
2002	3.59	57.32	35.33	3.76
2003	3.60	56.58	35.83	3.99
2004	4.20	58.32	33.91	3.58
2005	3.91	58.16	34.52	3.41
2006	3.82	59.87	32.42	3.90
2007	3.85	62.70	29.56	3.89
2008	3.87	64.12	28.34	3.68
2009	3.86	63.27	29.18	3.68
2010	3.97	63.51	29.53	2.99
2011	3.61	64.15	29.49	2.75
2012	3.38	65.98	27.36	3.28

(e) Women

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2001	1.32	75.53	17.32	5.83
2002	1.67	72.41	20.51	5.41
2003	1.60	71.37	21.18	5.86
2004	1.47	70.52	22.86	5.15
2005	1.61	68.08	23.00	7.31
2006	1.76	68.58	22.78	6.88
2007	1.72	69.78	21.14	7.36
2008	2.09	69.36	21.70	6.85
2009	1.87	66.97	23.73	7.42
2010	1.95	69.85	21.41	6.79
2011	2.15	74.23	18.25	5.37
2012	1.75	71.30	19.78	7.17

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, 2001–12

(a) All

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2001	21.93	4.44	4.62	6.76	21.60	8.44	5.46	6.75	14.65	5.35
2002	21.26	4.63	4.37	6.47	21.91	8.15	5.81	6.36	15.47	5.58
2003	21.03	4.70	4.54	6.97	21.80	8.26	5.77	6.59	14.74	5.59
2004	19.16	5.33	4.08	7.55	22.58	8.13	6.57	6.23	14.60	5.78
2005	19.33	5.25	3.86	7.23	23.67	7.90	6.80	5.56	14.88	5.53
2006	19.68	4.96	4.19	7.96	22.86	7.69	6.87	5.56	14.38	5.85
2007	19.15	5.02	3.84	9.17	23.04	7.41	7.07	6.02	13.63	5.66
2008	18.13	4.91	3.73	9.70	23.40	7.64	7.06	5.67	14.30	5.47
2009	18.26	4.85	3.86	9.71	22.69	8.10	7.35	5.73	14.52	4.94
2010	17.61	4.73	3.54	9.71	22.54	8.31	7.59	6.04	15.19	4.73
2011	16.74	4.02	3.20	10.53	23.01	8.17	9.09	6.46	14.12	4.65
2012	16.92	3.76	3.31	10.27	23.20	8.26	9.10	6.10	14.50	4.59

(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
2001	28.34	3.57	5.59	7.30	22.73	5.91	4.68	3.27	10.28	8.32
2002	26.64	3.58	5.02	6.65	24.26	5.60	5.40	2.83	11.97	8.04
2003	26.46	4.18	5.59	7.66	23.55	5.10	5.47	3.06	10.75	8.19
2004	22.44	4.99	4.26	9.43	25.94	5.83	6.13	3.00	11.01	6.97
2005	23.37	3.56	4.42	8.10	28.83	4.90	7.30	2.08	10.43	7.00
2006	24.43	3.96	4.73	8.14	27.56	5.64	6.01	1.80	11.00	6.73
2007	23.93	3.99	4.22	10.19	28.59	5.26	6.48	2.58	9.56	5.20
2008	21.88	3.13	3.95	12.80	28.32	5.84	6.98	2.10	9.89	5.11
2009	22.42	4.24	4.65	11.39	26.32	5.91	8.17	2.40	9.45	5.06
2010	21.66	4.44	4.66	11.88	26.49	6.10	8.36	2.26	9.27	4.86
2011	20.13	3.78	3.36	12.09	29.45	6.57	9.47	3.34	8.17	3.64
2012	21.90	3.46	2.98	12.37	27.77	7.11	8.82	2.86	9.42	3.31

(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
2001	19.01	4.68	4.44	6.74	21.56	9.28	5.83	7.71	15.94	4.81
2002	18.34	4.88	4.29	6.61	21.72	9.05	6.08	7.38	16.47	5.17
2003	18.03	4.81	4.38	7.01	21.80	9.26	5.98	7.60	15.96	5.18
2004	16.53	5.36	4.06	7.34	22.29	8.94	6.92	7.19	15.75	5.63
2005	16.55	5.64	3.79	7.23	22.94	8.88	6.95	6.55	16.17	5.30
2006	16.78	5.11	4.22	8.10	22.11	8.39	7.36	6.64	15.49	5.80
2007	16.03	5.19	3.79	9.25	22.04	8.20	7.52	7.07	14.97	5.93
2008	15.40	5.12	3.77	9.29	22.62	8.37	7.38	6.80	15.67	5.58
2009	15.42	4.91	3.82	9.70	22.14	8.84	7.44	6.73	15.97	5.02
2010	15.00	4.66	3.38	9.63	22.08	9.03	7.73	7.07	16.70	4.72
2011	14.37	3.93	3.21	10.64	22.37	8.71	9.18	7.26	15.53	4.79
2012	14.10	3.65	3.44	10.16	22.66	8.78	9.43	7.00	15.89	4.89

(d) Men

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2001	29.70	3.83	5.44	9.64	19.54	10.67	4.71	6.07	9.60	0.81
2002	29.27	3.82	5.35	9.40	19.34	10.64	5.15	5.83	10.17	1.02
2003	28.92	3.69	5.61	10.26	19.30	11.09	4.93	5.89	9.36	0.94
2004	26.88	3.60	5.11	11.44	20.30	10.79	5.30	5.67	9.87	1.04
2005	26.44	3.66	5.02	10.96	20.84	10.79	6.01	5.07	10.09	1.12
2006	26.70	3.51	5.36	11.99	20.34	10.21	6.20	5.20	9.58	0.92
2007	25.84	3.48	4.99	14.03	19.99	10.04	6.15	5.63	8.83	1.01
2008	24.49	3.35	4.94	15.04	20.21	10.63	5.93	5.27	9.18	0.96
2009	24.41	3.29	5.31	15.00	18.96	11.07	6.26	5.09	9.68	0.93
2010	23.55	3.25	4.92	15.10	19.18	11.26	6.76	5.36	9.69	0.92
2011	22.74	2.89	4.32	16.01	19.63	10.98	8.27	5.95	8.14	1.06
2012	22.25	2.73	4.57	15.84	19.67	11.39	8.49	5.67	8.56	0.82

(e) Women

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2001	6.04	5.70	2.93	0.86	25.81	3.87	7.01	8.16	24.98	14.65
2002	5.69	6.19	2.47	0.77	26.91	3.32	7.09	7.38	25.76	14.43
2003	6.17	6.59	2.51	0.78	26.51	2.92	7.37	7.91	24.88	14.34
2004	5.03	8.49	2.20	0.42	26.74	3.25	8.89	7.27	23.26	14.45
2005	6.89	8.03	1.82	0.71	28.62	2.84	8.18	6.40	23.26	13.25
2006	7.11	7.56	2.09	0.77	27.36	3.18	8.09	6.21	22.96	14.67
2007	7.80	7.63	1.87	0.91	28.21	2.95	8.63	6.68	21.77	13.55
2008	7.37	7.54	1.68	0.68	28.80	2.58	8.97	6.34	22.96	13.09
2009	8.09	7.42	1.46	0.96	28.87	3.19	9.14	6.79	22.51	11.57
2010	7.74	7.19	1.25	0.76	28.12	3.40	8.98	7.17	24.33	11.05
2011	7.04	5.85	1.39	1.67	28.47	3.62	10.42	7.29	23.80	10.46
2012	8.62	5.36	1.35	1.59	28.70	3.39	10.04	6.76	23.74	10.45

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

Table 6: Monthly labour earnings at PPP dollars of 2005, 2001–12

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

	All	Gender		Age		Occupational position			Educational level		
		Male	Female	Youth	Adult	Employer	Wage/salaried employee	Self-employed	Low	Medium	High
2001	641.7	656.8	611.4	368.1	703.7	1480.3	734.3	348.4	297.2	550.2	592.2
2002	630.7	648.5	595.2	348.6	698.4	1626.6	738.4	315.1	291.3	474.9	624.3
2003	637.7	665.5	584.4	342.5	709.1	1559.2	747.1	330.1	304.5	419.0	566.0
2004	626.7	657.4	569.7	357.2	696.1	1447.4	734.4	315.1	274.6	389.1	649.5
2005	596.3	622.9	547.7	337.9	662.0	1389.8	706.7	292.6	250.0	415.3	600.5
2006	605.5	635.8	549.7	356.0	670.8	1429.6	702.6	307.6	253.5	419.4	627.7
2007	606.2	634.6	556.3	379.9	669.9	1312.6	685.8	328.1	263.2	449.6	629.0
2008	610.3	641.7	555.5	396.4	669.5	1511.0	673.6	337.9	281.6	418.0	583.1
2009	637.1	666.2	587.1	415.7	697.5	1586.6	711.4	353.6	296.6	391.1	689.3
2010	643.7	667.3	602.7	438.3	700.9	1310.7	729.8	348.9	280.4	371.4	627.7
2011	715.8	739.0	677.4	473.5	769.5	1944.0	776.3	408.7	333.7	477.7	712.2
2012	730.5	754.9	690.8	475.5	797.6	1721.7	804.9	412.6	306.1	433.5	745.6

(b) By economic sector

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2001	297.2	550.2	592.2	602.9	576.7	1013.1	1085.9	915.5	819.0	221.6
2002	291.3	474.9	624.3	565.8	585.0	1033.0	1087.1	1004.6	775.7	205.9
2003	304.5	419.0	566.0	598.6	584.8	1064.7	1037.2	1042.8	803.6	212.4
2004	274.6	389.1	649.5	611.6	567.6	1012.4	969.3	967.8	842.8	211.6
2005	250.0	415.3	600.5	611.3	526.9	965.7	982.3	908.9	784.9	223.8
2006	253.5	419.4	627.7	646.8	545.6	927.0	1057.0	909.0	782.0	204.0
2007	263.2	449.6	629.0	622.9	523.8	970.4	1057.6	914.3	757.5	209.2
2008	281.6	418.0	583.1	638.2	556.0	983.9	928.3	893.3	760.7	220.3
2009	296.6	391.1	689.3	676.3	571.3	957.5	1038.6	842.5	790.7	228.3
2010	280.4	371.4	627.7	659.2	586.0	917.7	1057.3	907.6	808.5	240.5
2011	333.7	477.7	712.2	745.4	687.5	977.1	1063.9	928.9	860.2	257.5
2012	306.1	433.5	745.6	751.6	664.8	999.0	1211.7	987.3	865.6	260.6

(c) By occupational group

	Manage-ment	Professio-nals	Technicians & associate professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, assemblers	Elementary
2001	1934.0	1473.5	994.3	772.8	469.0	269.7	566.6	641.6	341.0
2002	2376.4	1465.1	1001.2	797.8	423.0	259.1	532.0	671.9	321.8
2003	2172.1	1458.6	1062.6	799.1	450.7	266.0	538.1	695.7	321.4
2004	2154.6	1460.2	1057.4	778.7	457.0	245.4	503.4	698.0	322.3
2005	1911.4	1359.6	1052.3	756.1	419.7	228.5	502.1	678.0	328.8
2006	1938.7	1411.4	982.9	770.6	438.3	233.2	523.1	676.1	325.7
2007	1973.8	1307.4	899.7	754.6	438.7	236.1	545.9	697.5	331.5
2008	1912.6	1279.6	857.8	714.6	457.8	260.3	529.8	741.2	336.9
2009	1898.4	1341.8	1000.3	739.6	481.6	269.0	550.0	710.2	338.8
2010	1620.9	1384.6	940.1	749.4	497.0	241.2	541.4	718.5	364.8
2011	1663.1	1412.0	1014.6	647.7	578.7	300.4	588.4	741.9	372.0
2012	1711.2	1473.7	1058.7	691.7	534.7	261.6	561.2	763.3	369.6

Note: For occupational categories, the series 2001-2010 is not fully comparable with 2011-2012 due to a change in the classifications of occupations in the survey.

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

Table 7: Hourly wage in main occupation at PPP dollars of 2005, 2001–12

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

	All	Gender		Age		Occupational position			Educational level		
		Male	Female	Youth	Adult	Employer	Wage/salaried employee	Self-employed	Low	Medium	High
2001	4.04	4.04	4.04	2.40	4.35	7.91	4.41	2.81	2.19	3.72	3.53
2002	4.04	3.97	4.16	2.37	4.34	10.85	4.38	2.68	1.89	3.01	5.18
2003	3.96	3.97	3.92	2.31	4.32	8.36	4.38	2.68	2.09	2.42	3.49
2004	3.94	3.97	3.88	2.38	4.30	8.71	4.30	2.67	1.92	2.36	3.84
2005	3.79	3.77	3.83	2.34	4.12	8.13	4.12	2.68	1.85	2.59	3.81
2006	3.86	3.87	3.84	2.45	4.19	8.84	4.13	2.77	1.94	2.77	3.73
2007	3.89	3.89	3.88	2.67	4.16	7.68	4.04	3.07	1.98	2.90	3.62
2008	3.81	3.83	3.77	2.62	4.08	8.58	3.89	3.01	2.10	2.80	3.49
2009	4.16	4.16	4.16	2.77	4.45	10.30	4.24	3.29	2.32	2.84	4.12
2010	4.26	4.27	4.23	2.90	4.58	7.84	4.51	3.19	2.18	3.14	3.91
2011	4.50	4.48	4.54	3.00	4.72	11.28	4.57	3.51	2.56	3.07	4.22
2012	4.87	4.90	4.82	3.19	5.21	11.07	4.85	4.23	2.82	3.07	4.58

(b) By economic sector

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2001	2.19	3.72	3.53	3.58	3.49	5.96	6.52	5.97	5.31	1.51
2002	1.89	3.01	5.18	3.49	3.65	6.01	6.51	5.85	5.42	1.55
2003	2.09	2.42	3.49	3.71	3.61	6.21	6.19	5.97	5.31	1.53
2004	1.92	2.36	3.84	3.51	3.50	5.97	6.31	5.73	5.66	1.45
2005	1.85	2.59	3.81	3.65	3.26	5.58	6.41	5.39	5.27	1.61
2006	1.94	2.77	3.73	3.73	3.46	5.62	6.49	5.28	5.30	1.58
2007	1.98	2.90	3.62	3.76	3.50	5.69	6.23	5.51	5.18	1.65
2008	2.10	2.80	3.49	3.62	3.48	5.58	5.88	5.08	4.94	1.64
2009	2.32	2.84	4.12	3.73	3.74	5.81	7.06	4.90	5.51	1.72
2010	2.18	3.14	3.91	4.50	3.86	5.49	6.52	5.58	5.48	1.81
2011	2.56	3.07	4.22	4.33	4.21	6.01	6.45	5.43	5.72	2.03
2012	2.82	3.07	4.58	4.60	4.30	6.17	7.88	5.94	6.13	2.12

(c) By occupational group

	Manage-ment	Professio-nals	Technicians & associate professionals	Clerical	Service & sales workers	Agricultural, forestry & fishery workers	Craft & related trades workers	Plant & machine operators, assemblers	Elementary
2001	10.85	9.09	5.97	4.61	3.04	2.17	3.60	3.72	2.34
2002	12.58	9.76	6.67	4.66	2.75	1.74	3.46	3.82	2.47
2003	11.86	8.88	6.76	4.63	2.74	1.93	3.36	3.92	2.36
2004	12.40	9.35	6.86	4.52	2.68	1.84	3.19	3.90	2.33
2005	10.68	8.55	6.64	4.41	2.62	1.76	3.35	3.80	2.43
2006	11.00	8.78	6.68	4.46	2.73	1.95	3.31	3.79	2.43
2007	10.89	8.22	6.10	4.40	2.80	1.91	3.38	4.16	2.54
2008	10.54	7.97	5.46	4.17	2.76	2.08	3.29	4.17	2.40
2009	10.98	9.30	6.68	4.28	2.93	2.26	3.49	4.08	2.57
2010	9.51	9.05	6.12	4.34	3.31	2.03	3.73	4.18	2.86
2011	9.37	8.93	6.38	3.83	3.44	2.71	3.67	4.47	2.62
2012	9.73	10.32	6.52	4.15	3.47	3.10	3.75	4.73	2.77

Note: For occupational categories, the series 2001–10 is not fully comparable with 2011–12 due to a change in the classifications of occupations in the survey.

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, 2001–12

	Low	Medium	High
2001	43.90	38.01	18.09
2002	43.23	38.06	18.71
2003	41.65	38.46	19.89
2004	40.34	38.74	20.92
2005	40.25	38.86	20.88
2006	39.43	39.30	21.27
2007	38.44	40.92	20.65
2008	36.57	42.00	21.44
2009	36.21	41.71	22.08
2010	35.81	41.72	22.48
2011	33.96	40.97	25.07
2012	33.09	41.00	25.92

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

Table 9: Unemployment rate by educational levels: population 15 years old or more, 2001–12

	Low	Medium	High
2001	6.62	14.11	7.37
2002	6.19	13.09	8.65
2003	6.27	13.17	9.59
2004	5.77	11.75	8.33
2005	4.96	12.41	10.20
2006	5.10	10.47	7.63
2007	3.64	7.64	5.59
2008	3.53	6.47	4.85
2009	4.10	8.07	5.65
2010	3.96	7.90	5.83
2011	2.86	5.69	3.00
2012	2.40	4.96	3.24

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