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WIDER Working Paper 2015/074

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

Costa Rica country study

Guillermo Cruces,¹ Gary Fields,² David Jaume,³ and Mariana Viollaz⁴

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Abstract: In the 2000s, Costa Rica experienced moderate economic growth and a general improvement in labour market conditions. From 2000 to 2012, Costa Rica grew at the Latin American average. Most labour market indicators improved during 2001–09 and 2010–12 (the series with comparable data). However, the unemployment rate increased in both periods, the mix of employment by occupations polarized from 2010 to 2012, and some poverty and inequality indicators increased from 2010 to 2012. The international crisis had substantial negative effects on the economic growth rate, unemployment, poverty, and inequality indicators, and not all of them recovered after the crisis.

Keywords: Costa Rica, 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 Costa Rica 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). 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 specific case of Costa Rica, some previous papers show that labour market conditions improved in the course of economic growth up to 2000, but changes in the period since then have not been examined. Fields and Bagg (2003) studied the relatively long period of economic growth of 1976–2000 and found that it was accompanied by increases in labour income, a reduction of

employment in agriculture, improvements in education, and a reduction in poverty. They conclude that when economic growth took place in Costa Rica, workers benefited. The evidence we present in this paper supports this general conclusion for the period 2001–12, except for the increase in unemployment.

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 Costa Rica 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 de Propósitos Múltiples (EHPM) from 2001 to 2009, and Encuesta Nacional de Hogares (ENAH) from 2010 to 2012. 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 EHPM's sample size has increased over time; it went from 10,332 households and 41,782 persons in 2001 to 13,244 households and 48,031 persons in 2009 (Table 1). On the contrary, the size of the ENAH has decreased from 11,603 households and 41,163 persons in 2010 to 11,374 households and 39,390 persons in 2012. Both surveys have always been representative of the total population of the country.

For this study, we processed the microdata from Costa Rica 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. In the case of Costa Rica, the statistics from the 2001–09 household surveys are not comparable with the surveys for the years 2010–12 for several reasons: change in the sampling frame, change in the method for measuring incomes, and change in the poverty line. Because of these non-comparabilities, the figures and tables have lines drawn between 2009 and 2010. These lines have been inserted to remind the reader that figures are comparable within 2001–09 and within 2010–12, but not between 2001–09 and 2010–2012.

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 (one month in the Costa Rican 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. Household surveys of Costa Rica, both the EHPM and the ENAHO, follow this classification. The procedure used to categorize workers into occupational groups appears to have changed, beginning in 2012. For this reason, the 2012 occupational figures will not be used in this paper. 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.

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 position 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 levels of earnings decreases.

We also classify employed workers according to whether they are registered with the social security system or not. In Costa Rica's household surveys, only wage and salaried employees are asked about registration in the social security system. We assume that it is better for employed workers to be registered, so an increase in the rate of registration 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. We use the per capita household income to compute poverty and inequality statistics. 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.

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 calculate 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. Between the years up to 2009 and the years from 2010 and beyond, the national poverty rates (moderate and extreme) are not comparable. Income inequality is calculated using the Gini coefficient of per capita household income and labour earnings.

3 Empirical results

Costa Rica achieved moderate and sustained economic growth in the 2000s, except for the international crisis of 2008, from which it quickly recovered, surpassing pre-crisis GDP levels by 2010 (Figures 1 and 2).

From 2000 to 2012, the Costa Rican economy grew at an average rate by Latin American standards. GDP per capita (measured at 2005 PPP dollars) increased by 37.4 per cent, while the average for the region's eighteen countries was 36.2 per cent during the same period. GDP (measured at 2005 PPP dollars) grew by 68.1 per cent, and GDP per employed person rose by 21.1 per cent. The annual growth rate of GDP per capita was 2.5 per cent, and it varied from a minimum of -2.5 per cent in 2009 to a maximum of 7.0 per cent in 2006 (Table 2). The early part of the period was marked by minimal growth in the Costa Rican economy. GDP growth rates were 1.8 and 1.1 per cent in 2000 and 2001, while GDP per capita fell by 0.5 and 1.0 per cent during the same period. The poor performance of the Costa Rican economy reflected the deterioration in the terms of trade, the end of the construction phase of a large foreign direct investment project by INTEL, and the effect of high real interest rates on domestic demand (IMF 2002). The economy gained momentum quickly. Exports, mainly those from offshoring manufacturing and service activities with high technological content, led the rise in output, followed by domestic demand, which increased through a substantial acceleration of private investment and consumption, and by the boom in construction (IMF 2006; IMF 2008). The average annual growth rate of GDP per capita was 4.2 per cent from 2002 to 2007, while GDP increased by 6.0 per cent a year during the same period. The international crisis of 2008, referred to below as the Great Recession, had an impact on the Costa Rican economy. There was a slowdown in 2008, when GDP per capita grew by just 1.2 per cent, and negative growth rates in 2009, when GDP per capita fell by 2.5 per cent and overall GDP by 1.0 per cent. GDP contraction was driven by a sharp fall in exports and incomes from tourism, the sectors most dependent on external conditions (ECLAC 2009). However, Costa Rica recovered quickly. In response to the downturn, the authorities implemented a fiscal stimulus plan (*Plan Escudo*) which included the coverage expansion of the cash transfer programme *Avancemos*, interest rate reductions in the housing sector, increases in non-contributory pensions, and public works stimulus (ILO 2013). Between 2010 and 2012, the rate of GDP per capita growth stabilized at around 3.3 per cent.

The sectoral composition of GDP changed significantly from 2000 to 2012 as the share of the service sector grew and the shares of agricultural and industry sectors decreased. The service sector was by far the largest in terms of share of the GDP over the period, followed by the industrial and agricultural sectors. Services share in GDP increased from 58.5 per cent in 2000 to 68.6 per cent in 2012 (Table 2). The expansion of the service sector was related to the increase in foreign direct investment addressed to this sector (for instance, tourism related companies are foreign owned),

which led to an important growth of service exports in total Costa Rican exports (Martinez et al. 2008). The share of the industrial sector declined from 32.1 per cent in 2000 to 25.1 per cent in 2012. The share of the agricultural sector shrank over the period from 9.5 per cent in 2000 to 6.3 per cent in 2012. The economic crisis of 2008 affected mainly the industrial and agricultural sectors, which lost 3.2 per cent and 2.8 per cent of their value added respectively from 2008 to 2009. By contrast, the production of the service sector increased during the crisis. Both the industrial and agricultural sectors recovered their value added levels in 2010.

The following labour market and income distribution data for Costa Rica is analysed for the 2001–09 and 2010–12 periods separately due to comparability problems arising from a change in the household surveys' sampling frame, a change in the method for measuring incomes, and a change in the poverty lines.

The unemployment rate increased from 2001 to 2009 and remained essentially unchanged from 2010 to 2012 overall and for all population groups. Within the period, the unemployment rate increased from 2001 to 2005, diminished between 2005 and 2007, increased during the international crisis, and barely changed afterwards (Figure 3).

The unemployment rate (measured as the ratio of unemployment to labour force) increased overall, rising from 6.0 per cent in 2001 (98,684 unemployed persons) to 7.8 per cent in 2009 (165,510 unemployed persons), and from 7.3 per cent in 2010 (149,532 unemployed persons) to 7.8 per cent in 2012 (169,490 unemployed persons). Both the number of persons in the labour force and the number of employed persons increased from 2001 to 2009 (increase of 480,894 and 414,068 persons respectively) and from 2010 to 2012 (growth of 130,049 and 110,091 persons respectively). These figures suggest that the increase in the unemployment rate over the period was explained by the new entrants into the labour market that could not find a job. Initially, the unemployment rate exhibited an upward trend between 2001 and 2005, it decreased between 2005 and 2007, and it peaked at 7.8 per cent during the international crisis. After the Great Recession, and as GDP growth slowed relative to the pre-recession years, the unemployment rate oscillated around 7.6 per cent in 2010–12.

The unemployment rate increased for youth and adults, and for men and women between 2001 and 2009, and remained largely unchanged between 2010 and 2012 for all population groups except for young workers who exhibited an increase in their unemployment rate. The unemployment rate for young workers increased from 13.4 per cent in 2001 to 17.9 per cent in 2009, and from 16.7 per cent in 2010 to 18.4 per cent in 2012. For adults, unemployment grew from 3.7 per cent in 2001 to 5.2 per cent in 2009, and oscillated around 5.3 between 2010 and 2012. When broken down by gender, the unemployment rate followed a similar pattern for men and women. For men, it increased from 5.2 per cent in 2001 to 6.6 per cent in 2009, and remained around 6.1 per cent from 2010 to 2012. For women, their unemployment rate grew from 7.6 per cent to 9.9 per cent between 2001 and 2009, and oscillated around 10.0 per cent from 2010 to 2012. All population groups were severely affected by the international crisis. Specifically, between 2008 and 2009, the unemployment rate increased from 11.0 to 17.9 per cent for youth and from 3.3 to 5.2 per cent for adults. Those figures were 4.1 per cent in 2008 and 6.6 per cent in 2009 for men, and 6.3 per cent and 9.9 per cent for women. Following the international crisis, the unemployment rate stagnated for adult workers, men, and women, and continued to increase for young workers.

The composition of employment by occupational group improved from 2001 to 2009, with workers moving from low-earning and middle-earning occupations to high-earning occupations, and polarized between 2010 and 2011 (the latest we can analyse the series of occupations). Adult workers, men, and women exhibited similar trends over the period, while young workers improved their employment structure between 2001 and 2009 but suffered a worsening between 2010 and 2011. During the international crisis, the distribution of employment by occupational group changed very little overall and for adults, men, and women, and deteriorated for young workers (Figure 4).

Between 2001 and 2009, the structure of employment by occupational group improved. Specifically, the share of low-earning occupations in total employment (elementary, services and sales occupations, and agricultural, forestry and fishery jobs) dropped from 47.5 to 44.3 per cent; the share of middle-earning occupations (clerical, crafts and related trade workers, and plant and machine operators and assemblers) decreased slightly from 28.8 to 27.9 per cent; and the share of high-earning occupations (management, professional and technicians) rose from 23.7 to 27.9 per cent (Tables 3 and 6). During the international crisis, between 2008 and 2009, the composition of employment by occupational group remained essentially unchanged, but after the Great Recession, some polarization occurred in the occupation space. The share of middle-earning occupations decreased, while the shares of low- and high-earning occupations increased by a similar magnitude (around 0.7 percentage points) between 2010 and 2011.

Adult workers, men, and women benefited from the improvement in the employment structure by occupational group between 2001 and 2009, exhibited small changes during the international crisis, and experienced a polarization between 2010 and 2011. Young workers exhibited an improvement in their employment composition by occupational group between 2001 and 2009, and a deterioration during and after the international crisis. From 2001 to 2009, the share of low-earning occupations in total employment fell by 4.3 percentage points for young workers and 2.1 percentage points for adults, while the share of high-earning occupations increased by 1.0 and 4.0 percentage points respectively. When broken down by gender, the employment structure by occupational group improved for both men and women from 2001 to 2009. The share of low-earning occupations in total employment fell by 4.7 and 0.9 percentage points for men and women, and the share of high-earning occupations increased by 3.7 and 4.6 percentage points respectively. During the international crisis of 2008, adult workers, men, and women exhibited little changes in their employment structure by occupational group, while young workers suffered a deterioration. The share of low-earning occupations increased by 1.8 percentage points between 2008 and 2009 for young workers, and the share of high-earning occupations dropped by 2.0 percentage points. Between 2010 and 2011, the composition of employment exhibited a polarization for adult workers, men, and women, as the share of low- and high-earning occupations increased by a similar magnitude and the share of middle-earning occupations decreased. The worsening trend in the employment structure by occupational group continued for young workers between 2010 and 2011.

The employment structure by occupational position improved between 2001 and 2009 overall and for all population groups. The international crisis of 2008 led to an increase in the share of low-earning positions in total employment in the aggregate and for young workers and women, but did not affect adversely the composition of employment for adults and men. The improving trend resumed between 2010 and 2012 for young workers, while the structure of employment by occupational position remained unchanged in the aggregate and for adults, men, and women (Figure 5).

Between 2001 and 2009, the employment structure by occupational position improved through a reduction in the share of low-earning positions (self-employed and unpaid workers) in total employment (drop of 2.9 percentage points) and an increase in the share of high-earning positions (wage/salaried employees and employers) (Tables 4 and 6). The improvement was explained by the increase in the share of wage/salaried employees in total employment, the main occupational position in the Costa Rican labour market. The international crisis of 2008 led to a slight deterioration in the composition of employment by occupational position through the reduction in the share of both employers and wage/salaried employees in total employment (total drop of 0.5 percentage points) and the increase in the share of self-employment. The worsening in the employment composition can be understood in the context of increasing unemployment where economic necessity may have compelled workers to take up free-entry self-employment activities. Between 2010 and 2012 the structure of employment by occupational position remained largely unchanged.

The employment structure by occupational position improved from 2001 to 2009 for all population groups, suffered a deterioration during the international crisis, except for adult workers and men whose composition of employment remained essentially unchanged, and barely changed from 2010 to 2012, except for young workers who exhibited an improvement in their employment structure. From 2001 to 2009, the share of high-earning positions in total employment grew for both young and adult workers (3.5 percentage points for young workers and 3.1 for adults), mainly through the increase in the share of wage/salaried employees. The share of low-earning positions dropped accordingly for both youth and adults. The share of high-earning positions in total employment increased for both men and women from 2001 to 2009 (3.2 and 2.5 percentage points respectively), with a corresponding reduction in the share of low-earning positions in total employment. During the international crisis, the share of high-earning positions fell for young workers and women—the population groups who suffered the largest increases in the unemployment rate during the crisis—and remained largely unchanged for adult workers and men. The drop in the share of high-earning positions between 2008 and 2009 was of 1.3 percentage points for young workers and 0.9 percentage points for women. This reduction was compensated for by an increase in the share of self-employment and unpaid positions for young workers, and by an increase in self-employment for women. Between 2010 and 2012, the structure of employment by occupational position exhibited an improvement for young workers, and little changes for adults, men, and women.

The employment composition by economic sector improved over the course of the period studied. Youth particularly benefited, but so did adults, men, and women. The international crisis of 2008 did not affect adversely the improving trend in the composition of employment by economic sector overall and for all population groups, but young workers and men suffered an increase in the share of low-earning sectors (Figure 6).

The share of low-earning sectors in total employment (domestic service, primary activities, and low-tech industry) diminished by 4.8 and 1.6 percentage points from 2001 to 2009 and from 2010 to 2012 respectively. At the other end of the scale, there were increases in the share of high-earning sectors in total employment (public administration, education and health, and skilled services) of 2.6 and 2.1 percentage points over the same periods. The share of middle-earnings sectors (high-tech industry, construction, commerce, and utilities and transportation) increased between 2001 and 2009 (rise of 2.2 percentage points) and suffered a slight decrease between 2010 and 2012 (drop of 0.5 percentage points) (Table 5). Despite the fact that the growth process of Costa Rica during the

2000s was mainly based on offshoring manufacturing and services activities with a high content of technology, the share of the high-tech industry sector in total employment fell both between 2001 and 2009 and between 2010 and 2012. The reason is that the new jobs created by the offshoring activities for skilled workers mainly, was not large enough to compensate for the decline of the manufacturing sector as a whole in total employment (Ernst and Sánchez-Anchorena 2008) (Tables 5 and 6). The international crisis of 2008 did not impact on the improving trend in the employment structure by economic sector that was taking place. The share of low-earning sectors fell by 0.6 percentage points between 2008 and 2009, while the share of high-earning sectors increased by 0.8 percentage points. The continued improving trend in the employment structure by sector during the international crisis can be explained by the large impact of the crisis on the agriculture and industry sectors, which are classified as low-earning sectors in the Costa Rican economy. As such, the share of low-earning sectors in total employment continued to decrease during the crisis episode.

All population groups benefited from the improving trend in the employment composition by economic sector over the period studied, and young workers and men benefited more than adult workers and women. The share of low-earning sectors dropped by 7.7 percentage points from 2001 to 2009 and by 1.1 percentage points from 2010 to 2012 for young workers. For adults, the share of workers in low-earning sectors fell by 3.8 and 1.8 percentage points over the same two periods. At the other end of the scale, the share of high-earning sectors in total youth employment increased by 3.5 and 2.8 percentage points between 2001 and 2009 and between 2010 and 2012 respectively. These figures were 1.9 and 1.7 percentage points for adult workers. When broken down by gender, the share of low-earning sectors in total employment for men decreased by 5.6 percentage points from 2001 to 2009 and by 1.9 percentage points from 2010 to 2012. The share of low-earning sectors for women fell by 3.4 and 0.9 percentage points during the same periods. The increases in the share of high-earning sectors in total employment were 2.9 and 1.3 percentage points from 2001 to 2009 and from 2010 to 2012 for men, and 1.0 and 3.2 percentage points for women over the same periods. The international crisis of 2008 did not affect adversely the improving trend in the employment structure by economic sector for adult workers and women. Young workers and men suffered an increase in the share of low-earning sectors in total employment between 2008 and 2009, but that increase was surpassed by the increase in the share of high-earning sectors.

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

The share of employed workers with low educational levels (eight years of schooling or less) dropped from 57.3 per cent in 2001 to 47.6 in 2009, and from 50.0 per cent in 2010 to 46.5 per cent in 2012. The shares of employed workers with middle and high educational levels (nine to thirteen years of schooling and over thirteen years of schooling) grew from 27.0 to 31.7 per cent and from 15.7 to 20.8 per cent between 2001 and 2009 respectively. The improving trend continued between 2010 and 2012 when the share of employed workers with medium educational levels increased from 30.8 to 32.6 per cent, and the share of employed workers with high levels of education increased from 19.2 to 20.9. The improving trend in the educational level of the employed population was not

affected by the international crisis of 2008.² 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.³ Considering that the Costa Rican growth process during the 2000s was based on offshoring activities in high-technology industries and services that employ highly educated workers, such as tourism, the increase in the share of workers with high levels of education in total employment seems to be low (Sánchez and Sauma 2010). This pattern of slow improvement in the educational level of the employed population could be related to the small fraction of workers employed by these activities and to their limited contribution to technological learning and upgrading in other sectors of the economy (Ernst and Sánchez-Anchorena 2008).

The educational level of the employed population improved over the period studied for all population groups and especially for young workers. The share of young employed workers with low educational levels fell from 61.2 per cent in 2001 to 44.1 per cent in 2009 (drop of 17.1 percentage points) and from 43.8 per cent in 2010 to 38.9 per cent in 2012 (drop of 5.0 percentage points). The reductions in the shares of adult workers with low educational levels were smaller compared to the changes exhibited by young workers (7.5 and 3.2 percentage points from 2001 to 2009 and from 2010 to 2012 respectively). The share of young workers with medium levels of education increased by 14.7 percentage points from 2001 to 2009, and by 4.1 percentage points from 2010 to 2012. These figures for adult workers were 2.4 and 1.8 percentage points. Finally, the increase in the share of employed workers with high levels of education was larger for adult workers compared to young workers. The increase was of 2.5 and 0.9 percentage points between 2001 and 2009 and between 2010 and 2012 for young workers, and of 5.0 and 1.4 percentage points for adult workers. The reductions in the shares of employed workers with low educational levels were similar for men and women (drop of 9.1 percentage points between 2001 and 2009 and 3.5 percentage points between 2010 and 2012 for men and 10.0 and 3.3 percentage points for women over the same two periods). However, the increase in the share of employed workers with high levels of education was larger for women than men (increase of 7.1 percentage points between 2001 and 2009 and 2.1 percentage points between 2010 and 2012 for women, and 3.6 and 1.3 percentage points respectively for men). Consequently, the increase in the share of workers with medium levels of education was larger for men compared to women.

The pattern of improvement in the level of education of the employed population in Costa Rica continued even during the international crisis of 2008, overall and for adult workers and women. The share of employed workers with high levels of education stopped increasing between 2008 and 2009 for young workers and men, but the upward trend resumed between 2010 and 2012.

² The most frequent value of years of education for employed workers in Costa Rica was 6 over the entire period (around 29.0 per cent of employed workers had six years of education).

³ 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 Costa Rica in the paragraph on labour earnings.

The share of wage/salaried employees registered with the contributory schemes of the social security system increased between 2001 and 2009 in the population as a whole and for all population groups. Between 2010 and 2012 the share of registered workers remained largely unchanged overall and for adult workers and women, and suffered a slight deterioration for young workers and men. The international crisis of 2008 did not affect the upward trend in the registration rate (Figure 8).

The social security system in Costa Rica is composed of contributory schemes and non-contributory schemes which provide pensions and health care as well as other benefits to workers and their families through the *Caja Costarricense de Seguridad Social*. The contributory schemes are mandatory for private and public sector employees and voluntary for independent workers. These schemes are funded by contributions from employers, employees, and the government. Different contributory pension schemes exist for public sector employees, which differ in the amount of the contribution. The non-contributory schemes are directed to poor people and provide health care and pensions. They are totally funded by the government (Sánchez and Sauma 2010).

The social security system records show an increase in the percentage of wage/salaried employees registered with the contributory schemes over the period. The share of wage/salaried employees registered with the social security system grew from 50.7 per cent in 2001 (777,345 registered wage/salaried employees) to 55.3 per cent in 2009 (1,076,494 registered wage/salaried employees), and it rose slightly from 55.7 to 56.1 per cent from 2010 to 2012 (69,382 new registered workers). Within the period, the evolution of the share of registered employees was erratic from 2001 to 2005, and the share in 2005 was equal to its level in 2001. The bulk of this increase took place from 2005 to 2009. The international crisis did not affect the improving trend in the share of registered employees that increased even between 2008 and 2009.

The share of wage/salaried employees enrolled in the social security system increased between 2001 and 2009 for all population groups. Between 2010 and 2012, the share of registered workers increased for women, remained essentially unchanged for adult workers, and deteriorated slightly for youth and men. Young workers were the least likely to be registered with the social security system, but between 2001 and 2009 the share of registered young workers increased more than the share for adults. The share of young wage/salaried employees registered with the social security system grew from 48.0 per cent in 2001 to 54.4 per cent in 2009 (increase of 6.4 percentage points), while the increase was from 53.0 to 56.8 per cent for adult workers (increase of 3.8 percentage points). Between 2010 and 2012, the share of young workers registered with the social security system suffered a slight decrease (drop of 0.5 percentage points), while the share for adults exhibited a small increase (growth of 0.6 percentage points). When broken down by gender, the share of registered wage/salaried employees increased by a similar amount for men and women between 2001 and 2009. The share of workers registered with the social security system grew from 49.9 per cent in 2001 to 54.2 per cent in 2009 for women (increase of 4.3 percentage points), and from 51.1 per cent to 55.9 per cent for men (increase of 4.8 percentage points). Between 2010 and 2012, the share of wage/salaried employees registered with the social security system stopped increasing for men (drop of 0.1 percentage points), and continued with the improving trend for women (increase of 1.3 percentage points). The international crisis of 2008 did not affect negatively the improving trend in the share of wage/salaried employees registered with the social security system for any of the population groups.

Five years of falling labour earnings from 2001 to 2005 were followed by four years of rising labour earnings from 2006 to 2009. The increase was large enough to raise labour earnings in 2009 when compared to where they had started (2001). The upward trend continued between 2010 and 2012. The pattern of falling labour earnings between 2001 and 2005 and rising labour earnings from 2006 to 2009 and from 2010 to 2012 held for all population groups. The evidence of earning changes by employment categories indicates that labour earnings increases between 2001 and 2009 were larger for low-earning categories in some cases (educational position and educational level) and for high-earning categories in others (occupational group and economic sector). Labour earning changes between 2010 and 2012 tended to be positive for high-earning categories and negative for low-earning categories. The international crisis of 2008 did not impact negatively on labour earnings overall and for any of the population groups, but led to earnings reductions for some employment categories (Figure 9).

Average monthly earnings expressed in dollars at 2005 purchasing power parity (PPP) increased by 11.0 per cent from 2001 to 2009 and by 5.0 per cent from 2010 to 2012, climbing from US\$750 in 2001 to US\$832 in 2009 and from US\$794 in 2010 to US\$833 in 2012 (Table 6). However, the experiences within the period varied substantially. From 2001 to 2005, Costa Rica suffered a decline of 10.0 per cent in average labour earnings. This reduction was explained by the high level of inflation, especially in 2004 and 2005, and the small adjustment in minimum wages (Sánchez and Sauma 2010). After that period, a long and steady recovery set in that brought with it an increase in labour earnings during all of the subsequent years; by 2007, the level of labour earnings surpassed the 2001 level. The international crisis of 2008 did not affect this upward trend.

The same U-shaped pattern for labour earnings, albeit with different degrees of intensity, appears to apply to all population groups. Young and adult workers, men, and women suffered earnings reductions between 2001 and 2005, and earnings increases from 2006 to 2009 that were large enough to surpass in 2009 the labour income level of 2001. Young workers experienced an increase in their labour earnings of 9.4 per cent between 2001 and 2009. The increase for adult workers was of 8.1 per cent over the same period. Men and women enjoyed a growth in their labour incomes of 11.0 and 12.8 per cent from 2001 to 2009. Between 2010 and 2012, labour earnings continued to increase by 1.8 per cent for young workers, 2.4 per cent for adults, 3.8 per cent for men, and 11.1 per cent for women.

All employment categories exhibited earnings increases between 2001 and 2009 that were larger for low-earning categories in some cases and for high-earning categories in others. Between 2010 and 2012, labour earnings tended to increase for high-earning categories and to decrease for low-earning categories. Among occupational groups, the increase in labour earnings between 2001 and 2009 was larger for workers in high-earning occupations (management, professional, and technicians) compared to the change for workers in low-earning occupations (elementary, agricultural, forestry and fishery occupations, and services and sales jobs) (increase of 7.1 per cent versus 0.1 per cent). From 2001 to 2009, labour earnings of workers in low-earning positions (self-employed) increased by 11.8 per cent, while the increase for workers in high-earning positions (wage/salaried employees and employers) was of 10.3 per cent. Labour earnings increases between 2001 and 2009 were larger for workers in high-earning sectors (public administration, skilled services, education and health) compared to workers in low-earning sectors (domestic workers, primary activities, low-tech industry) (increase of 17.9 per cent versus 4.9 per cent). Workers with low levels of education exhibited an earnings increase of 2.2 per cent between 2001 and 2009, while workers with high levels of education had an increase of only 1.0 per cent and workers with medium levels of education

experienced an earnings reduction of 2.5 per cent. Between 2010 and 2012, workers in low-earning occupations enjoyed an earnings increase of 9.3 per cent, while the increase was of 6.5 per cent for workers in high-earning occupations. Among occupational positions, workers in low-earning positions enjoyed an increase in their labour incomes of 6.3 per cent and workers in high-earning positions exhibited an increase of 4.3 per cent. Labour earnings fell between 2010 and 2012 by 0.5 per cent for workers in low-earning sectors, and increased by 4.6 per cent for workers in high-earning sectors. Workers with low educational levels suffered an earnings reduction of 0.7 per cent between 2010 and 2012, while workers with medium and high levels of education exhibited earnings increases of 0.4 and 5.5 per cent respectively.

The evidence of increasing labour earnings between 2001 and 2009 for workers with low and high levels of education and falling labour earnings for workers with medium levels of education can be interpreted in light of previous findings of improving educational levels of the Costa Rican employed population and improving employment structure by occupational group and economic sector over that 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 educational levels, such as management, professional and technical occupations, skilled services, public administration, and education and health sectors, and a reduction in the share of occupations and sectors that employ workers with low educational levels, such as elementary jobs, agricultural occupations, 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 2009. On the other hand, the educational level of persons in the labour force improved over the same period, indicating an increase in the relative supply of workers with high and medium educational levels (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 Costa Rican labour market the relative wages of workers with high educational levels relative to those with low educational levels was essentially unchanged from 2001 to 2009; the relative wages of workers with medium to low educational levels fell over the period; and the relative wages of workers with high educational levels relative to those with medium educational levels increased (Table 7). The adjustment process also led to an increase in the unemployment rate of all educational groups between 2001 and 2009 with a larger increase for workers with low levels of education (Table 9). For the period from 2010 to 2012 our evidence indicates an ambiguous change in the relative demand for workers with high and medium educational levels relative to those with low educational levels, i.e. the structure of employment by occupational position polarized during those years while the structure by economic sector improved jointly to an increase in the relative supply of workers with high and medium levels of education. The relative wages of workers with high educational levels relative to those with low and medium educational levels increased, and the relative wages of workers with medium to low educational levels also grew. The unemployment rate increased for all educational levels with the largest increases for workers with medium and low levels of education.

The international crisis of 2008 did not impact negatively on the upward trend of labour earnings overall, for any of the population groups, and most of the employment categories. The only employment category that suffered a reduction in labour earnings between 2008 and 2009 was workers in low-earning sectors (drop of 0.6 per cent). Due to the comparability problems between

the 2001–09 and 2010–12 series, it is not possible to assess whether workers in low-earning sectors recovered their pre-crisis earnings level in the following years.

The poverty rate and the rate of working poor households decreased from 2001 to 2009 for all poverty lines. From 2010 to 2012 there was a slight increase in the extreme poverty rate and in the poverty rate measured by the 2.5 dollars-a-day international line. All poverty indicators increased during the international crisis of 2008; because of non-comparability of the underlying survey instruments, the poverty rates for 2009 cannot be compared with the poverty rates afterwards (Figure 10).

The moderate poverty rate (measured by the country's official poverty line) fell from 20.3 per cent in 2001 to 18.5 per cent in 2009, and from 25.9 per cent in 2010 to 24.0 per cent in 2012. The extreme poverty rate decreased from 7.1 per cent in 2001 to 5.1 per cent in 2009 and increased slightly from 5.7 per cent in 2010 to 5.9 per cent in 2012. The percentages of working poor (defined as the proportion of persons in the population living in poor households where at least one member works) decreased from 11.8 to 10.9 per cent between 2001 and 2009 and from 17.2 to 15.4 per cent between 2010 and 2012. Within the period, the poverty indicators decreased from 2001 to 2007, and then increased up to 2009, a period that included the Great Recession. The number of moderately poor persons increased by 118,321 and the number of extremely poor persons rose by 48,997 between 2008 and 2009. The analysis of trends based on the 2.5 and 4 dollars-a-day PPP international poverty lines shows a reduction in the poverty rates between 2001 and 2009. The poverty rate based on the 2.5 dollars-a-day international poverty line fell from 13.8 per cent in 2001 to 7.5 per cent in 2009. The reduction using the 4 dollars-a-day poverty line was from 26.7 per cent in 2001 to 17.4 per cent in 2009. Between 2010 and 2012, both poverty rates changed slightly. There was a reduction when the poverty rate is measured through the 4 dollars-a-day poverty line (from 12.7 to 12.2 per cent) and an increase using the 2.5 dollars-a-day line (from 4.5 to 4.7 per cent). Within the period, both poverty indicators decreased substantially from 2001 to 2007, increased between 2008 and 2009, and stagnated during the post-crisis period.

The poverty patterns reported in the last paragraph can be understood by examining incomes from various sources. The analysis of sources of household total income indicates that labour income and pensions increased between 2001 and 2009 (Figure 11). The increase in pensions (21.7 per cent between 2001 and 2008, the latest we can analyse the series of non-labour incomes over the period 2001–09) was the most important factor to explain the increase in total household income. Between 2010 and 2012, capital income exhibited the largest increase (rise of 19.6 per cent), followed by labour incomes (increase of 5.6). Income from government transfers and pensions fell by 4.2 and 1.0 per cent respectively during those years. However, UNDP (2014) reported that non-contributory pensions, scholarships, assistance to poor families with children, and cash transfers from the national welfare office reduced moderate poverty by 2.5 percentage points and extreme poverty by 2.9 percentage points in 2012.

Household per capita income inequality and labour earnings inequality decreased from 2001 to 2005, and then started an upward trend from 2006 to 2009, that continued between 2010 and 2012. During the international crisis of 2008, inequality increased (Figure 12).

From 2001 to 2005, household per capita income inequality measured by the Gini coefficient decreased from 0.501 in 2001 to 0.473 in 2005. From 2005 to 2009, it increased and reached 0.504 in

2009. The upward trend continued from 2010 to 2012 when the Gini coefficient of household per capita income grew from 0.480 to 0.485. The Gini coefficient of labour earnings among employed workers decreased from 0.464 to 0.440 between 2001 and 2005, rose to 0.459 in 2009, and continued with the upward trend from 2010 to 2012 when the Gini coefficient increased from 0.466 to 0.471. The increase in labour income inequality between 2010 and 2012 is consistent with the evidence of rising labour earnings for workers in high-earning employment categories and reducing labour earnings for workers in low-earning categories during this period.

Changes in household per capita income inequality in Costa Rica 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 2004–08 and found that changes in labour incomes contributed to the inequality increase over this period (the Gini coefficient of household per capita income increased from 0.482 in 2004 to 0.492 in 2007 and closed the sub-period in 0.486). On the other hand, changes in non-labour incomes, such as government transfers and demographic changes (e.g. the share of adults per household) were inequality reducing. Trejos and Oviedo (2012) analysed the period 2002–09, when inequality of household per capita income increased, and found through a decomposition approach that changes in labour income were inequality reducing, while changes in non-labour incomes were inequality increasing with the only exception of incomes from government transfers. Finally, Sauma and Trejos (2014) reported an inequality-reducing effect of social spending, taxes, and social security contributions in Costa Rica in 2010. 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’) and changes in the distribution of the stock of education (the ‘quantity effect’) were inequality increasing in Costa Rica between 2000 and 2009. Gasparini et al. (2011) found a reduction in the wage premium in Costa Rica between 2000 and 2009 that was associated with an increase in the relative supply and a small increase in the relative demand of skilled workers. Finally, the increase in labour earnings inequality between 2004 and 2009 has been associated with different policy measures implemented by the government of Costa Rica, such as the liberalization of trade, tax exemption, and promotion policies for exports, which became more intensive in skilled labour (Sánchez and Sauma 2010).

4 Conclusions

By Latin American standards, Costa Rica experienced moderate economic growth during the 2000s. The international crisis hurt the economy and there was a recession in 2009, from which the country quickly recovered, surpassing pre-crisis GDP levels by 2010.

Most labour market indicators improved from 2001 to 2009 and from 2010 to 2012 (the periods for which we could construct comparable statistics). The employment composition by occupational group improved between 2001 and 2009 as workers moved from elementary and agricultural occupations to better paying occupations, such as management, professional, and technical jobs. The structure of employment by occupational position improved both from 2001 to 2009 and from 2010 to 2012, mainly through the increase in the share of wage/salaried employees in total employment. The employment composition by economic sector also improved between 2001 and 2009 and between 2010 and 2012, as workers moved from low-paying sectors such as primary activities and low-tech industry to better paying sectors such as skilled services, public administration, and

education and health. The share of wage/salaried employees registered with the contributory schemes of the social security system increased from 2001 to 2009. The educational level of the employed population and labour earnings grew between 2001 and 2009 and between 2010 and 2012. All poverty diminished from 2001 to 2009, and the moderate poverty rate and poverty measured by the 4 dollars-a-day poverty line also decreased from 2010 to 2012. The Gini coefficient of labour earnings fell from 2001 to 2009. Some indicators deteriorated during the periods analysed. The unemployment rate increased from 2001 to 2009 and remained largely unchanged from 2010 to 2012. The employment structure by occupational group polarized from 2010 to 2011. The share of wage/salaried employees who contributed to the social security system remained unchanged between 2010 and 2012. The extreme poverty rate, the poverty rate measured by the 2.5 dollars-a-day international line and household per capita income and labour earnings inequality increased between 2010 and 2012.

The international crisis of 2008 impacted negatively on some of the indicators analysed. The unemployment rate increased, the employment structure by occupational position deteriorated slightly, and all poverty and inequality indicators increased between 2008 and 2009. Due to the non-comparability of the underlying survey instruments, it was not possible to assess whether these indicators returned to their pre-crisis levels in the following years.

Young workers and women had worse labour market outcomes over the entire period compared to adults and men respectively, and seemed to be more vulnerable to the international crisis. The unemployment rate was higher for young compared to adult workers, the shares of young employed workers in low-earning occupational groups and economic sectors were larger than the shares of adult workers, the percentage of young wage/salaried employees who contributed to 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 were more affected by the international crisis: the increase in the unemployment rate between 2008 and 2009 was larger for youth than for adults, as was the increase in the share of workers in low-earning positions. Disaggregating by gender, we found that men had better labour market outcomes than women for all of the indicators analysed. Women were more affected than men by the international crisis of 2008. Women suffered a larger increase in the unemployment rate and in the share of workers in low-earning positions between 2008 and 2009.

In summary, most labour market conditions were in a better state in 2009 than they were at the start of the millennium and all population groups were quite resilient to the international crisis. From 2010 to 2012, labour market conditions had a general improvement but a larger number of deteriorations occurred in comparison to the period 2001–09.

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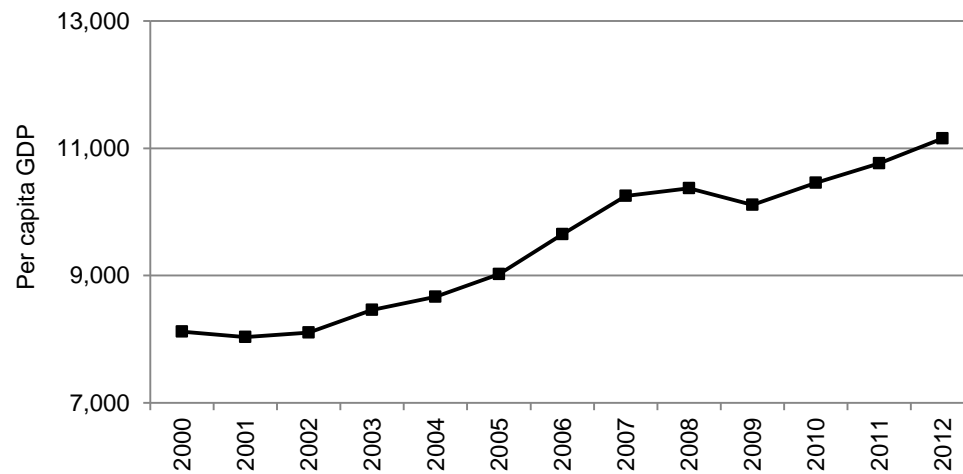
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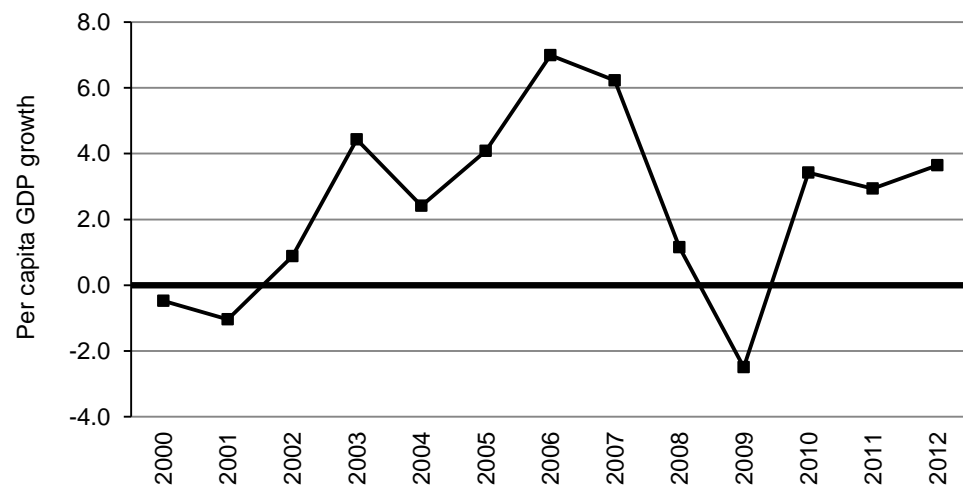
Figures

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



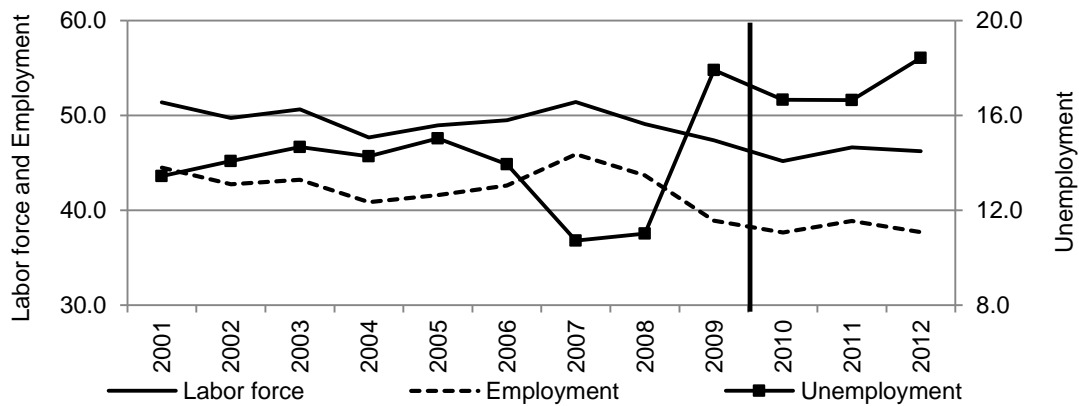
Source: World Development Indicators (the World Bank 2014).

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



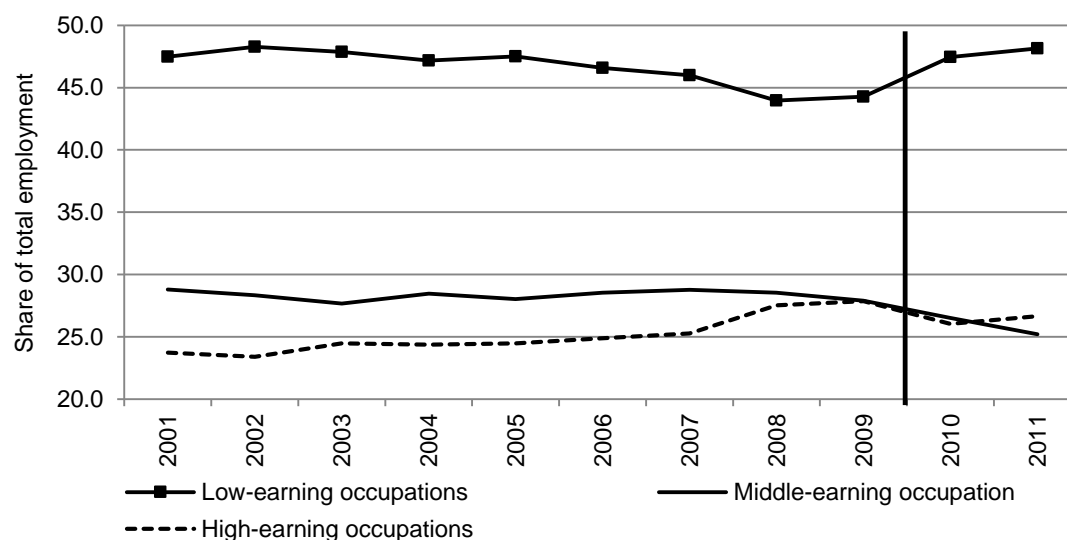
(e) Women



Note: The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

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, 2001–11

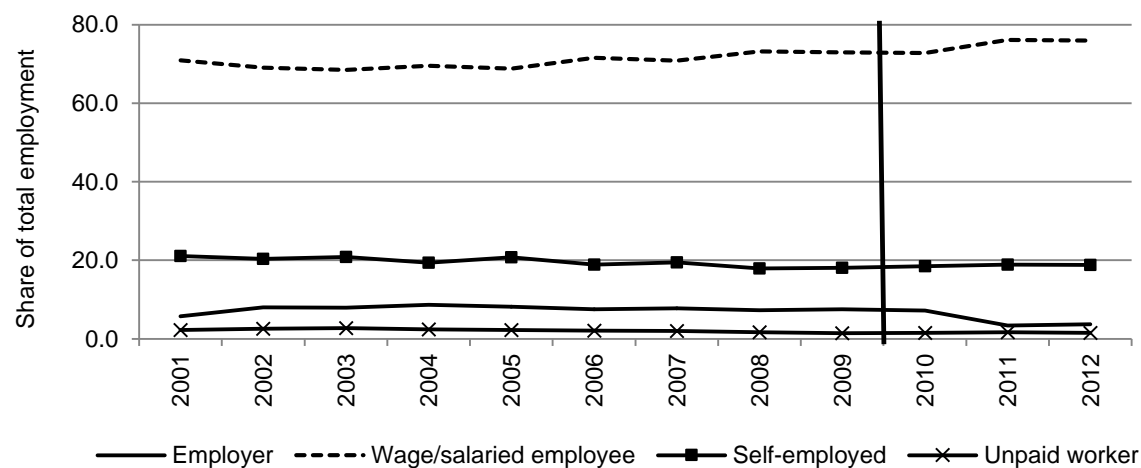


Notes: Low-earning occupations: agricultural, forestry and fishery occupations, elementary and services and sales workers. Medium-earning occupations: plant and machine operators and assemblers, clerical, and craft and related trade workers. High-earning occupations: management, professionals, technicians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

The series 2001–09 and 2010–11 are not comparable due to changes in the household survey.

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

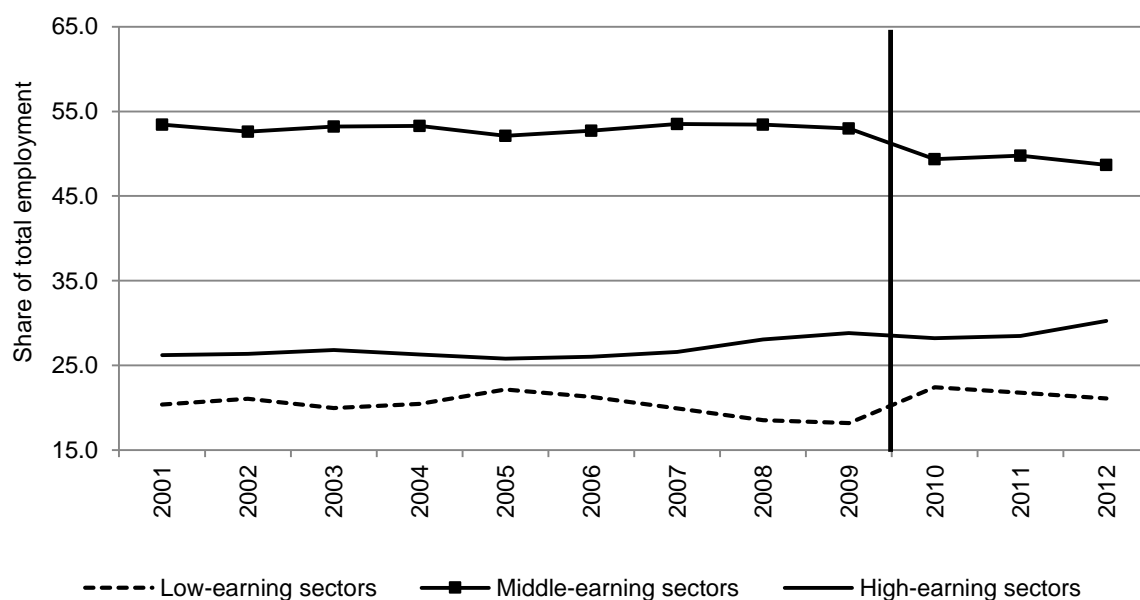
Figure 5: Share of employment by occupational position: all employed workers, 15 years old or more, 2001–12



Note: The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

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

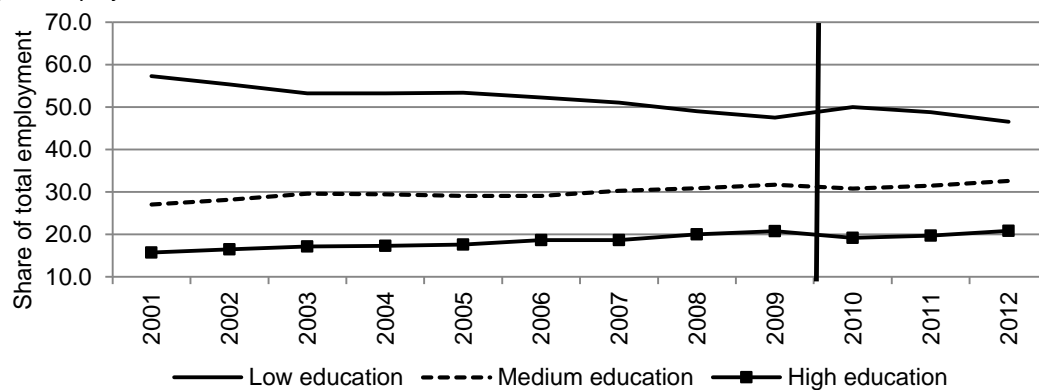


Notes: Low-earning sectors: primary activities, domestic workers and low-tech industry. Middle-earning sectors: construction, commerce, high-tech industry, utilities and transportation. High-earning sectors: skilled services, public administration, education and health. The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

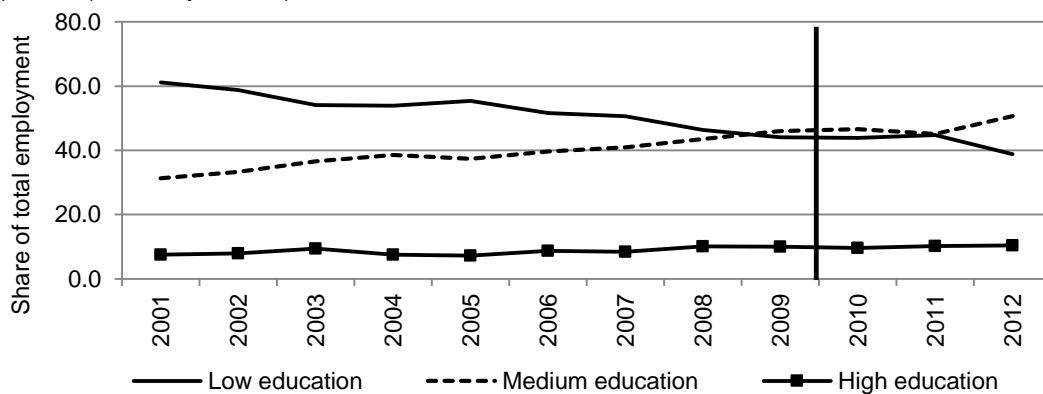
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

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

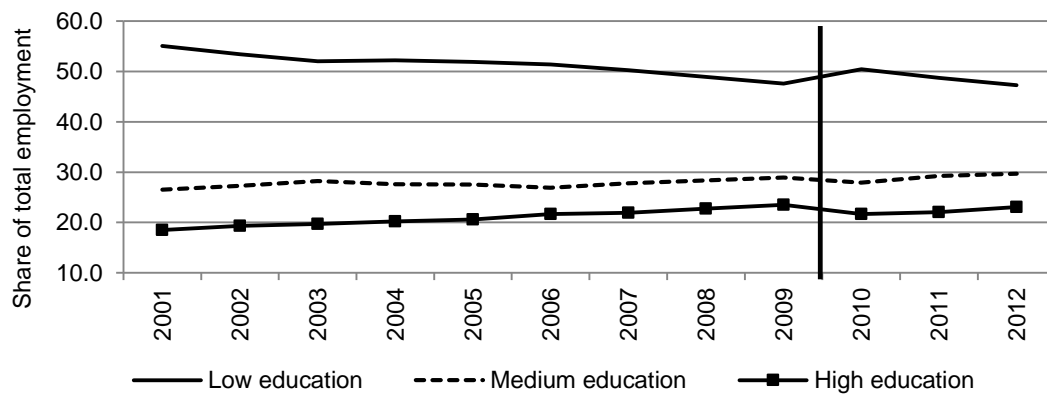
(a) All employed workers



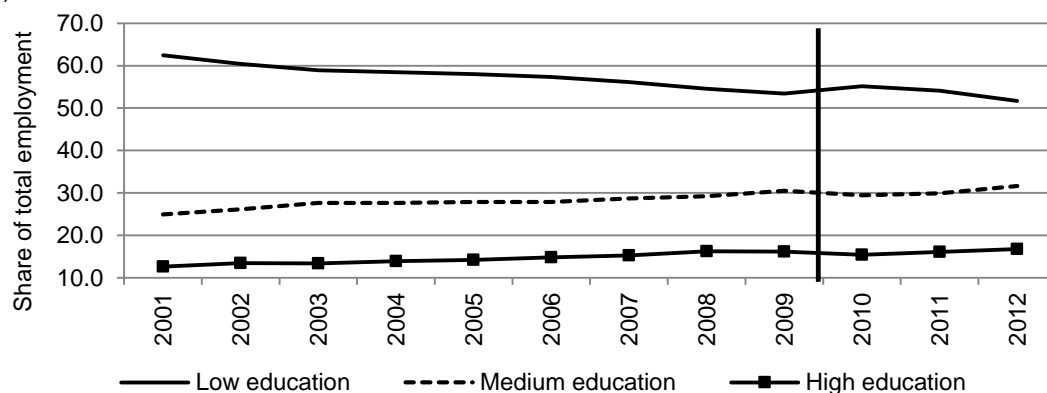
(b) Youth (15 to 24 years old)



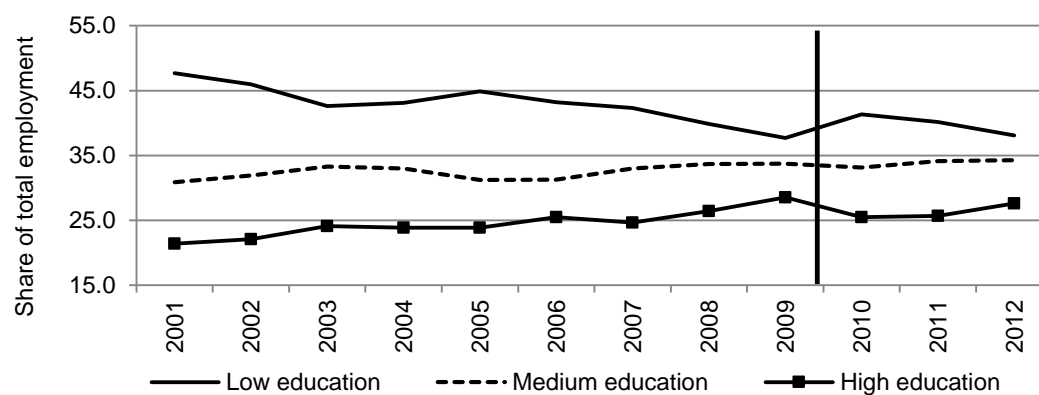
(c) Adults (25 to 64 years old)



(d) Men



(e) Women

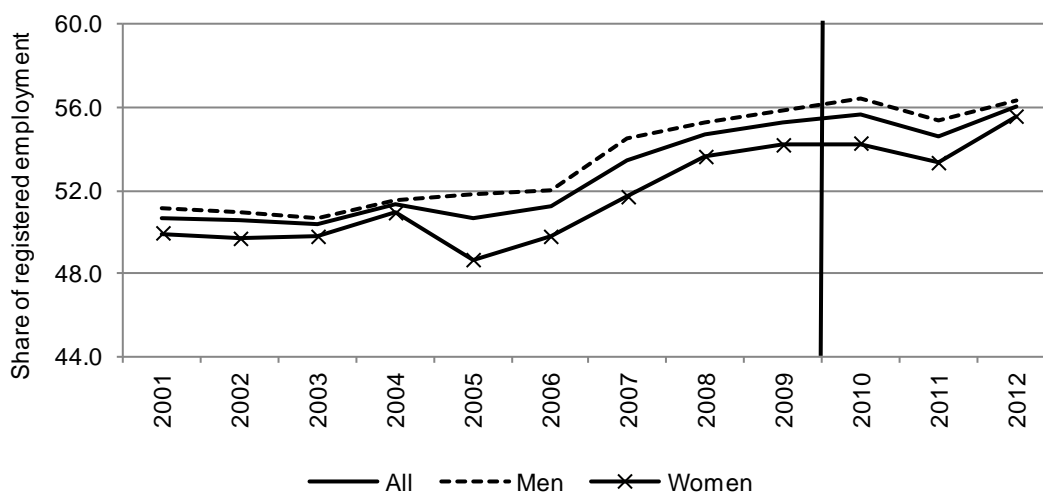


Notes: Low: eight years of schooling or less. Medium: from nine to thirteen years of schooling. High: Over thirteen years of schooling. The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

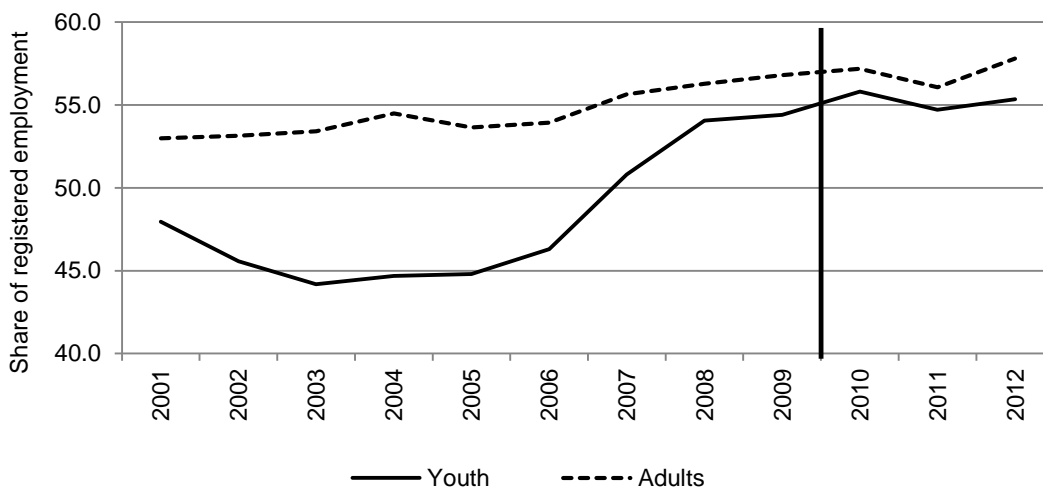
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 8: Share of employment registered with the national social security system: employed workers, 15 years old or more, 2001–12

(a) Overall and by gender



(b) By age groups

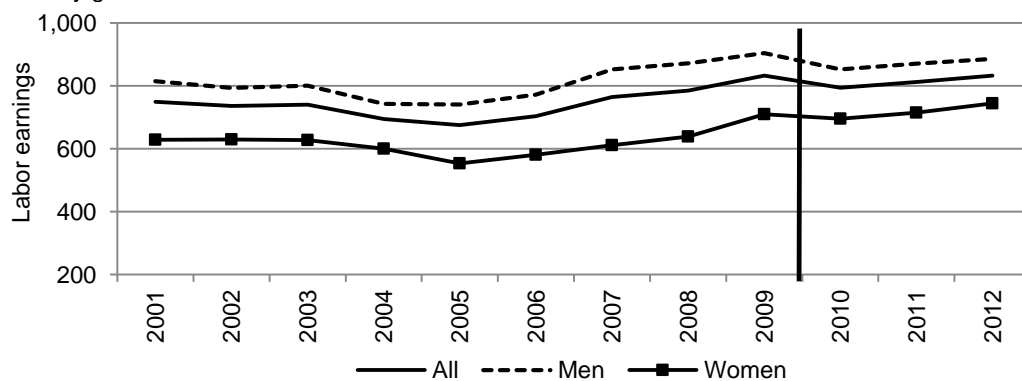


Note: The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

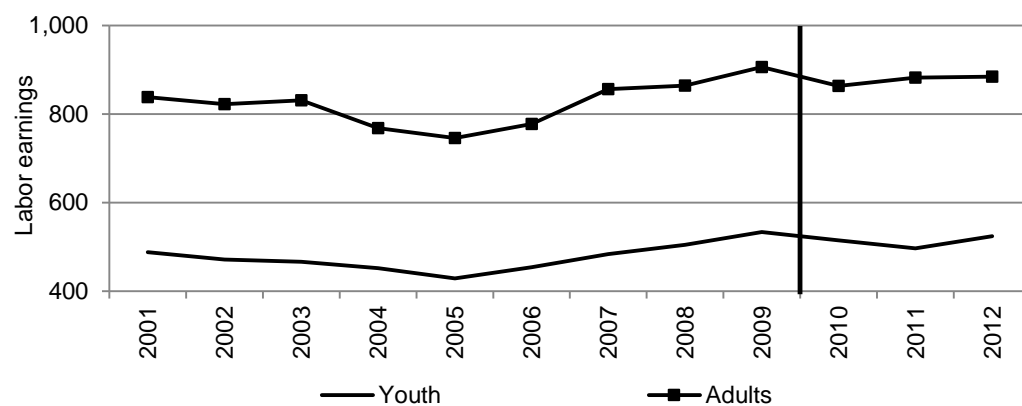
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

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

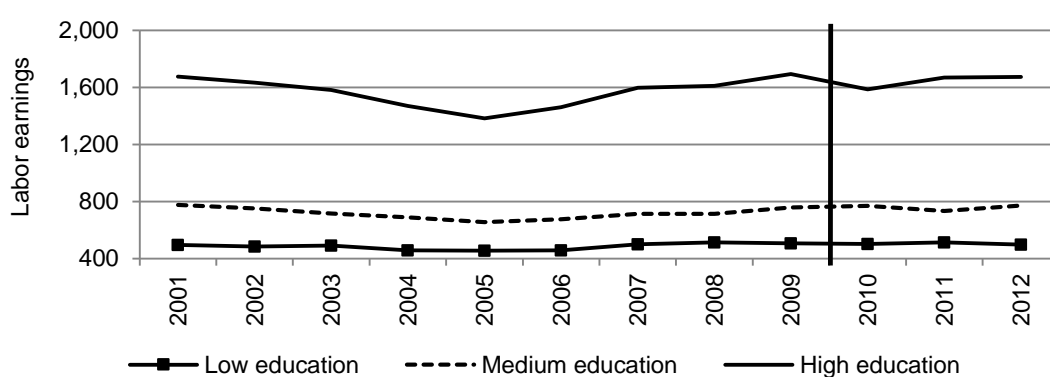
(a) Overall and by gender



(b) By age



(c) By educational level

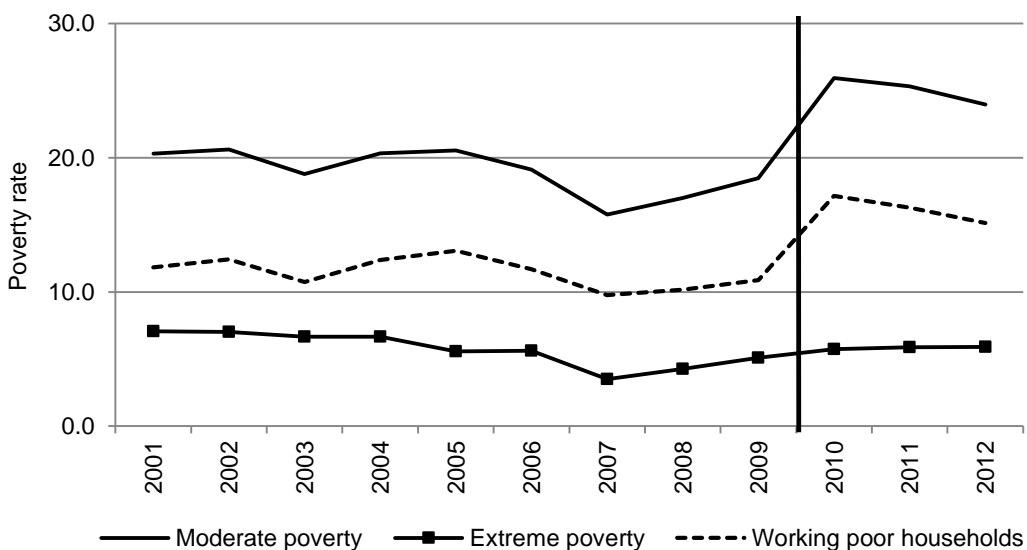


Note: The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

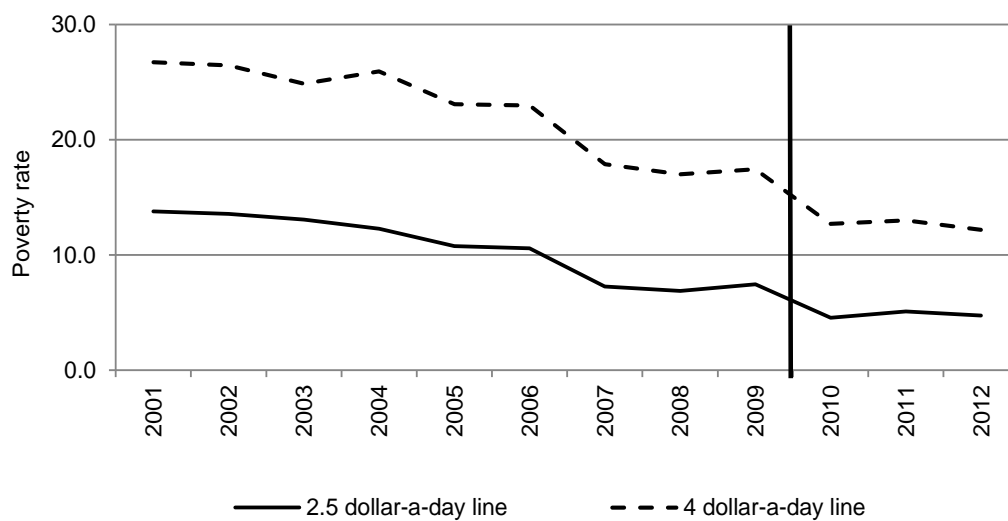
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

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

(a) Official lines



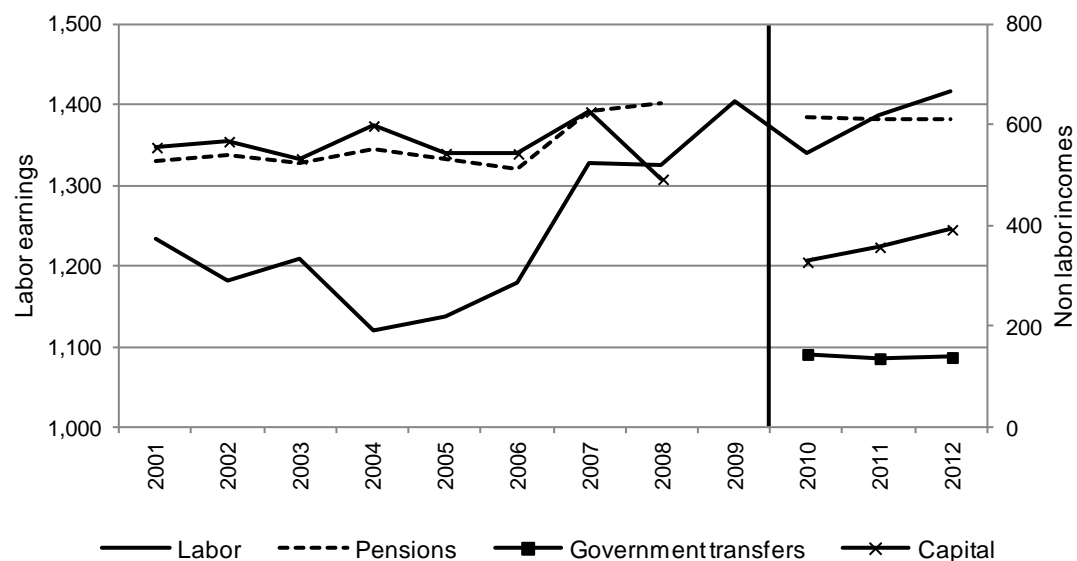
(b) International lines



Note: The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

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

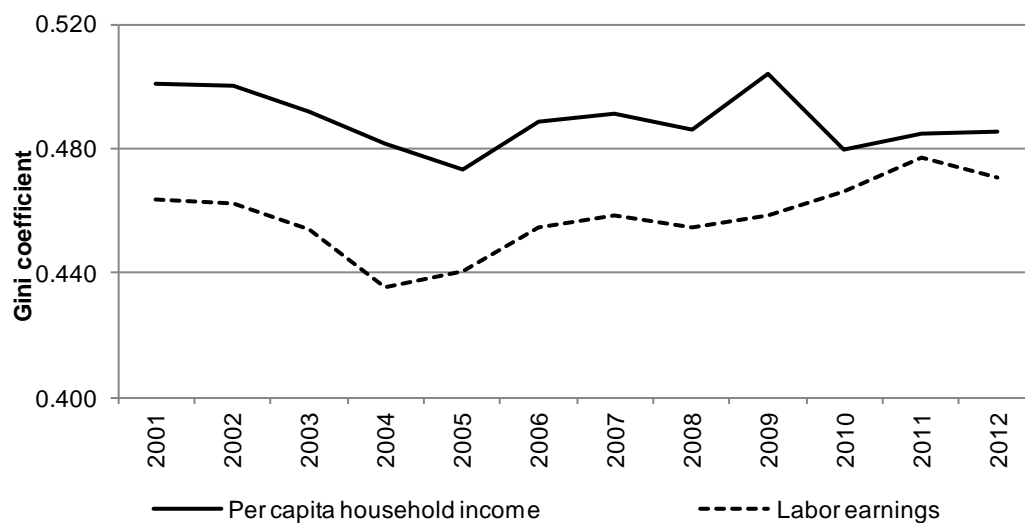
Figure 11: Sources of monthly household total income at PPP dollars of 2005, 2001–12



Notes: Data on incomes from pensions and capital is not available in 2009. Data on income from government transfers is only available from 2010 onwards.

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



Notes: 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. The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

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

Tables

Table 1: Household surveys' description

| | Number of households | Number of persons |
|------|-------------------------|----------------------|
| 2001 | 10,332 | 41,782 |
| 2002 | 11,094 | 44,051 |
| 2003 | 11,150 | 43,610 |
| 2004 | 11,366 | 43,728 |
| 2005 | 11,549 | 43,616 |
| 2006 | 11,991 | 45,102 |
| 2007 | 12,361 | 46,233 |
| 2008 | 12,531 | 46,044 |
| 2009 | 13,244 | 48,031 |
| 2010 | 11,603 | 41,163 |
| 2011 | 11,721 | 40,860 |
| 2012 | 11,374 | 39,390 |

Note: From 2001 to 2009 the survey was the Encuesta de Hogares de Propósitos Múltiples (EHPM), from 2010 to 2012 was the Encuesta Nacional de Hogares (ENAH).

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} | 28,390 | 29,353 | 30,669 | 33,285 | 35,654 | 38,964 | 43,688 | 48,406 | 50,699 | 50,571 | 53,719 | 57,203 | 61,188 |
| GDP per capita ¹ | 7,225 | 7,314 | 7,491 | 7,980 | 8,396 | 9,019 | 9,946 | 10,845 | 11,185 | 10,990 | 11,504 | 12,074 | 12,733 |
| GDP per person employed ¹ | 23,335 | 23,193 | 23,297 | 24,040 | 24,856 | 24,670 | 26,058 | 26,728 | 27,009 | 26,258 | 26,765 | 27,409 | 28,269 |
| GDP growth | -9.38 | 3.39 | 4.48 | 8.53 | 7.12 | 9.28 | 12.12 | 10.80 | 4.74 | -0.25 | 6.22 | 6.49 | 6.97 |
| GDP per capita growth | -11.40 | 1.23 | 2.43 | 6.52 | 5.22 | 7.42 | 10.28 | 9.04 | 3.13 | -1.74 | 4.67 | 4.96 | 5.46 |
| Exports of goods and services ^{1,2} | 7,560 | 6,834 | 7,083 | 7,938 | 8,585 | 9,683 | 10,678 | 11,736 | 11,500 | 10,807 | 11,406 | 12,098 | 13,126 |
| Agriculture, value added (% of GDP) | 9.46 | 8.80 | 8.54 | 8.75 | 8.62 | 8.99 | 8.92 | 8.48 | 7.21 | 7.42 | 7.18 | 6.51 | 6.26 |
| Industry, value added (% of GDP) | 32.08 | 29.75 | 29.09 | 28.62 | 29.53 | 29.14 | 29.18 | 29.27 | 28.68 | 27.36 | 26.16 | 25.31 | 25.11 |
| Services, value added (% of GDP) | 58.46 | 61.45 | 62.37 | 62.64 | 61.85 | 61.87 | 61.90 | 62.25 | 64.11 | 65.23 | 66.66 | 68.18 | 68.63 |
| Agriculture, value added ^{1,2} | 1,467 | 1,487 | 1,439 | 1,545 | 1,556 | 1,623 | 1,829 | 1,931 | 1,869 | 1,817 | 1,938 | 1,961 | 2,030 |
| Industry, value added ^{1,2} | 4,408 | 4,183 | 4,304 | 4,634 | 4,832 | 5,257 | 5,852 | 6,344 | 6,295 | 6,097 | 6,249 | 6,426 | 6,811 |
| Services, etc., value added ^{1,2} | 8,720 | 9,107 | 9,493 | 10,070 | 10,613 | 11,164 | 11,939 | 12,804 | 13,542 | 13,695 | 14,502 | 15,301 | 16,053 |
| Total population ² | 3.93 | 4.01 | 4.09 | 4.17 | 4.25 | 4.32 | 4.39 | 4.46 | 4.53 | 4.60 | 4.67 | 4.74 | 4.81 |
| Working age population (15-64) ² | 2.48 | 2.56 | 2.63 | 2.71 | 2.79 | 2.86 | 2.93 | 3.00 | 3.07 | 3.14 | 3.20 | 3.27 | 3.33 |

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

| | Management | Professionals | Technicians & associate professionals | Clerical | Service & sales workers | Agricultural, forestry & fishery workers | Craft & related trades workers | Plant & machine operators, assemblers | Elementary |
|------|------------|---------------|---------------------------------------|----------|-------------------------|--|--------------------------------|---------------------------------------|------------|
| 2001 | 2.42 | 9.56 | 11.75 | 7.26 | 15.35 | 5.04 | 11.90 | 9.63 | 27.09 |
| 2002 | 2.31 | 9.62 | 11.47 | 7.20 | 16.24 | 4.86 | 12.08 | 9.06 | 27.17 |
| 2003 | 2.48 | 10.10 | 11.89 | 7.49 | 16.03 | 4.58 | 11.63 | 8.54 | 27.26 |
| 2004 | 2.72 | 10.08 | 11.57 | 7.71 | 15.56 | 4.90 | 11.97 | 8.78 | 26.70 |
| 2005 | 2.85 | 10.06 | 11.55 | 7.54 | 16.01 | 4.41 | 11.74 | 8.75 | 27.09 |
| 2006 | 2.73 | 10.51 | 11.63 | 7.65 | 15.64 | 3.96 | 12.09 | 8.81 | 26.98 |
| 2007 | 3.41 | 9.95 | 11.91 | 8.48 | 14.71 | 4.20 | 11.44 | 8.83 | 27.07 |
| 2008 | 3.37 | 10.73 | 13.42 | 8.34 | 15.39 | 4.01 | 11.37 | 8.81 | 24.56 |
| 2009 | 3.52 | 10.73 | 13.60 | 8.90 | 15.84 | 3.71 | 10.17 | 8.82 | 24.71 |
| 2010 | 3.68 | 10.01 | 12.35 | 8.44 | 15.62 | 4.70 | 10.10 | 7.96 | 27.14 |
| 2011 | 2.82 | 10.33 | 13.49 | 7.99 | 15.28 | 4.56 | 9.50 | 7.71 | 28.32 |
| 2012 | 2.79 | 11.53 | 9.56 | 7.95 | 21.05 | 3.95 | 10.94 | 7.54 | 24.68 |

(b) Youth (15 to 24 years old)

| | Management | Professionals | Technicians & associate professionals | Clerical | Service & sales workers | Agricultural, forestry & fishery workers | Craft & related trades workers | Plant & machine operators, assemblers | Elementary |
|------|------------|---------------|---------------------------------------|----------|-------------------------|--|--------------------------------|---------------------------------------|------------|
| 2001 | 0.30 | 4.13 | 9.84 | 11.64 | 17.21 | 1.36 | 9.10 | 9.06 | 37.36 |
| 2002 | 0.28 | 3.77 | 8.58 | 10.82 | 18.85 | 1.47 | 9.05 | 8.34 | 38.84 |
| 2003 | 0.23 | 4.83 | 9.05 | 11.19 | 19.23 | 2.02 | 9.54 | 6.93 | 36.99 |
| 2004 | 0.26 | 4.04 | 9.32 | 10.52 | 19.10 | 2.47 | 10.26 | 7.93 | 36.10 |
| 2005 | 0.39 | 3.79 | 8.37 | 11.11 | 20.53 | 1.44 | 9.84 | 7.09 | 37.44 |
| 2006 | 0.40 | 4.13 | 8.58 | 12.32 | 20.43 | 1.21 | 9.71 | 7.43 | 35.79 |
| 2007 | 0.28 | 3.62 | 10.44 | 12.97 | 18.37 | 1.53 | 10.07 | 7.21 | 35.50 |
| 2008 | 0.46 | 4.86 | 11.89 | 14.77 | 18.32 | 1.66 | 10.81 | 7.43 | 29.80 |
| 2009 | 0.76 | 4.07 | 10.40 | 17.10 | 19.60 | 1.57 | 9.11 | 6.96 | 30.43 |
| 2010 | 0.74 | 3.08 | 11.98 | 14.76 | 19.88 | 2.32 | 9.53 | 6.09 | 31.62 |
| 2011 | 0.37 | 3.35 | 12.39 | 13.63 | 17.82 | 1.83 | 8.35 | 5.81 | 36.45 |
| 2012 | 0.25 | 3.92 | 9.04 | 13.65 | 24.57 | 1.64 | 10.01 | 5.55 | 31.37 |

(c) Adults (25 to 64 years old)

| | Management | Professionals | Technicians & associate professionals | Clerical | Service & sales workers | Agricultural, forestry & fishery workers | Craft & related trades workers | Plant & machine operators, assemblers | Elementary |
|------|------------|---------------|---------------------------------------|----------|-------------------------|--|--------------------------------|---------------------------------------|------------|
| 2001 | 3.09 | 11.39 | 12.55 | 6.17 | 14.79 | 5.45 | 12.61 | 10.07 | 23.88 |
| 2002 | 2.93 | 11.49 | 12.48 | 6.35 | 15.49 | 5.17 | 12.93 | 9.38 | 23.77 |
| 2003 | 3.18 | 11.89 | 12.81 | 6.59 | 15.12 | 4.68 | 12.24 | 9.13 | 24.38 |
| 2004 | 3.32 | 11.88 | 12.41 | 7.22 | 14.67 | 4.98 | 12.30 | 9.16 | 24.05 |
| 2005 | 3.53 | 11.86 | 12.60 | 6.85 | 14.98 | 4.58 | 12.12 | 9.33 | 24.15 |
| 2006 | 3.35 | 12.47 | 12.63 | 6.60 | 14.50 | 4.26 | 12.61 | 9.35 | 24.24 |
| 2007 | 4.31 | 11.92 | 12.47 | 7.34 | 13.74 | 4.38 | 11.71 | 9.43 | 24.69 |
| 2008 | 4.15 | 12.41 | 14.05 | 6.85 | 14.70 | 4.06 | 11.51 | 9.36 | 22.92 |
| 2009 | 4.09 | 12.44 | 14.52 | 7.19 | 14.98 | 3.83 | 10.36 | 9.39 | 23.19 |
| 2010 | 4.29 | 11.75 | 12.64 | 7.28 | 14.56 | 4.82 | 10.22 | 8.49 | 25.95 |
| 2011 | 3.32 | 11.98 | 14.00 | 6.99 | 14.69 | 4.66 | 9.64 | 8.11 | 26.61 |
| 2012 | 3.23 | 13.17 | 9.77 | 7.03 | 20.20 | 3.98 | 11.08 | 8.03 | 23.50 |

(d) Men

| | Management | Professionals | Technicians & associate professionals | Clerical | Service & sales workers | Agricultural, forestry & fishery workers | Craft & related trades workers | Plant & machine operators, assemblers | Elementary |
|------|------------|---------------|---------------------------------------|----------|-------------------------|--|--------------------------------|---------------------------------------|------------|
| 2001 | 2.77 | 6.85 | 12.81 | 4.70 | 11.73 | 7.43 | 15.19 | 11.72 | 26.80 |
| 2002 | 2.62 | 7.19 | 12.29 | 4.91 | 12.63 | 7.03 | 15.31 | 11.53 | 26.49 |
| 2003 | 2.70 | 7.31 | 12.81 | 5.11 | 12.12 | 6.61 | 15.21 | 10.99 | 27.13 |
| 2004 | 3.04 | 7.43 | 12.25 | 4.84 | 12.20 | 7.00 | 15.37 | 11.46 | 26.41 |
| 2005 | 3.30 | 7.36 | 12.55 | 5.11 | 11.57 | 6.38 | 15.23 | 11.86 | 26.64 |
| 2006 | 2.99 | 8.12 | 12.05 | 5.10 | 11.40 | 5.88 | 16.27 | 12.06 | 26.14 |
| 2007 | 3.92 | 7.41 | 12.35 | 5.74 | 10.65 | 6.01 | 15.62 | 12.06 | 26.26 |
| 2008 | 3.74 | 8.05 | 13.68 | 5.87 | 11.51 | 5.96 | 15.78 | 11.86 | 23.57 |
| 2009 | 3.91 | 7.66 | 14.55 | 6.53 | 11.90 | 5.53 | 13.53 | 12.58 | 23.81 |
| 2010 | 4.13 | 7.35 | 13.07 | 6.10 | 11.82 | 6.94 | 13.42 | 11.53 | 25.63 |
| 2011 | 2.95 | 8.00 | 14.14 | 6.05 | 11.68 | 6.80 | 12.60 | 11.44 | 26.34 |
| 2012 | 3.24 | 8.57 | 9.19 | 6.22 | 16.33 | 5.84 | 14.60 | 11.12 | 24.90 |

(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 | 1.76 | 14.63 | 9.79 | 12.04 | 22.13 | 0.57 | 5.75 | 5.72 | 27.62 |
| 2002 | 1.73 | 14.15 | 9.95 | 11.47 | 23.00 | 0.79 | 6.02 | 4.44 | 28.43 |
| 2003 | 2.07 | 15.30 | 10.19 | 11.93 | 23.30 | 0.78 | 4.94 | 3.97 | 27.51 |
| 2004 | 2.10 | 15.23 | 10.25 | 13.32 | 22.09 | 0.82 | 5.34 | 3.56 | 27.28 |
| 2005 | 2.02 | 15.03 | 9.72 | 12.03 | 24.21 | 0.78 | 5.29 | 3.00 | 27.92 |
| 2006 | 2.27 | 14.77 | 10.89 | 12.19 | 23.20 | 0.53 | 4.65 | 3.04 | 28.47 |
| 2007 | 2.51 | 14.34 | 11.16 | 13.22 | 21.73 | 1.09 | 4.21 | 3.25 | 28.48 |
| 2008 | 2.76 | 15.26 | 12.98 | 12.51 | 21.92 | 0.72 | 3.94 | 3.68 | 26.24 |
| 2009 | 2.88 | 15.90 | 11.99 | 12.90 | 22.49 | 0.65 | 4.49 | 2.47 | 26.23 |
| 2010 | 2.93 | 14.47 | 11.12 | 12.37 | 22.00 | 0.93 | 4.53 | 1.97 | 29.68 |
| 2011 | 2.61 | 14.13 | 12.45 | 11.14 | 21.15 | 0.91 | 4.45 | 1.63 | 31.53 |
| 2012 | 2.06 | 16.41 | 10.18 | 10.80 | 28.83 | 0.85 | 4.91 | 1.64 | 24.31 |

Note: The series 2001–09, 2010–01 and 2012 are not comparable due to changes in the household survey and in the occupational classification.

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 | 8.03 | 69.06 | 20.38 | 2.54 |
| 2002 | 7.93 | 68.53 | 20.80 | 2.74 |
| 2003 | 8.65 | 69.58 | 19.35 | 2.42 |
| 2004 | 8.16 | 68.84 | 20.77 | 2.24 |
| 2005 | 7.50 | 71.56 | 18.90 | 2.04 |
| 2006 | 7.75 | 70.85 | 19.42 | 1.97 |
| 2007 | 7.26 | 73.17 | 17.93 | 1.64 |
| 2008 | 7.52 | 72.95 | 18.06 | 1.46 |
| 2009 | 7.22 | 72.77 | 18.52 | 1.49 |
| 2010 | 3.37 | 76.11 | 18.87 | 1.65 |
| 2011 | 3.72 | 76.00 | 18.77 | 1.50 |
| 2012 | 3.56 | 76.09 | 18.69 | 1.66 |

(b) Youth (15 to 24 years old)

| | Employer | Wage/salaried employee | Self-employed | Unpaid worker |
|------|----------|------------------------|---------------|---------------|
| 2001 | 1.82 | 83.33 | 9.28 | 5.56 |
| 2002 | 1.96 | 81.81 | 10.10 | 6.13 |
| 2003 | 2.67 | 82.93 | 9.33 | 5.07 |
| 2004 | 3.41 | 81.10 | 10.39 | 5.10 |
| 2005 | 1.99 | 85.30 | 8.32 | 4.39 |
| 2006 | 2.09 | 83.74 | 9.64 | 4.53 |
| 2007 | 1.60 | 87.76 | 7.59 | 3.05 |
| 2008 | 2.23 | 87.72 | 7.48 | 2.57 |
| 2009 | 2.59 | 86.02 | 7.99 | 3.39 |
| 2010 | 0.32 | 87.42 | 7.86 | 4.40 |
| 2011 | 0.43 | 88.96 | 7.32 | 3.29 |
| 2012 | 0.45 | 88.50 | 7.34 | 3.71 |

(c) Adults (25 to 64 years old)

| | Employer | Wage/salaried employee | Self-employed | Unpaid worker |
|------|----------|------------------------|---------------|---------------|
| 2001 | 9.52 | 66.36 | 22.62 | 1.50 |
| 2002 | 9.41 | 66.06 | 22.84 | 1.70 |
| 2003 | 10.06 | 67.12 | 21.25 | 1.57 |
| 2004 | 9.04 | 67.09 | 22.43 | 1.44 |
| 2005 | 8.54 | 69.57 | 20.52 | 1.36 |
| 2006 | 8.99 | 68.67 | 21.11 | 1.23 |
| 2007 | 8.54 | 70.52 | 19.77 | 1.18 |
| 2008 | 8.54 | 70.47 | 19.84 | 1.16 |
| 2009 | 8.09 | 70.90 | 19.95 | 1.05 |
| 2010 | 3.89 | 74.94 | 20.19 | 0.98 |
| 2011 | 4.36 | 74.64 | 19.94 | 1.07 |
| 2012 | 3.88 | 75.08 | 19.92 | 1.12 |

(d) Men

| | Employer | Wage/salaried employee | Self- employed | Unpaid worker |
|------|----------|---------------------------|-------------------|------------------|
| 2001 | 9.67 | 67.81 | 20.47 | 2.05 |
| 2002 | 9.70 | 67.23 | 21.09 | 1.97 |
| 2003 | 10.64 | 68.72 | 18.80 | 1.84 |
| 2004 | 10.08 | 67.89 | 20.43 | 1.60 |
| 2005 | 9.25 | 70.64 | 18.73 | 1.38 |
| 2006 | 9.46 | 69.12 | 20.02 | 1.40 |
| 2007 | 9.14 | 71.43 | 18.41 | 1.02 |
| 2008 | 9.44 | 71.46 | 18.29 | 0.82 |
| 2009 | 9.10 | 71.56 | 18.35 | 0.99 |
| 2010 | 4.36 | 74.02 | 20.12 | 1.50 |
| 2011 | 4.76 | 74.23 | 19.89 | 1.11 |
| 2012 | 4.66 | 73.86 | 20.21 | 1.26 |

(e) Women

| | Employer | Wage/salaried employee | Self- employed | Unpaid worker |
|------|----------|---------------------------|-------------------|------------------|
| 2001 | 4.97 | 71.39 | 20.20 | 3.44 |
| 2002 | 4.61 | 70.96 | 20.26 | 4.18 |
| 2003 | 4.93 | 71.18 | 20.38 | 3.51 |
| 2004 | 4.41 | 70.69 | 21.43 | 3.47 |
| 2005 | 4.27 | 73.26 | 19.20 | 3.26 |
| 2006 | 4.72 | 73.93 | 18.36 | 2.99 |
| 2007 | 4.02 | 76.19 | 17.09 | 2.71 |
| 2008 | 4.29 | 75.47 | 17.68 | 2.55 |
| 2009 | 4.05 | 74.81 | 18.81 | 2.34 |
| 2010 | 1.69 | 79.62 | 16.77 | 1.92 |
| 2011 | 2.03 | 78.89 | 16.94 | 2.14 |
| 2012 | 1.74 | 79.76 | 16.17 | 2.33 |

Note: The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

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 | 15.51 | 8.59 | 6.53 | 6.99 | 24.42 | 6.90 | 7.97 | 4.93 | 13.32 | 4.85 |
| 2002 | 15.78 | 7.70 | 6.61 | 6.76 | 24.40 | 7.14 | 8.62 | 4.75 | 12.96 | 5.27 |
| 2003 | 15.12 | 7.56 | 6.55 | 6.74 | 25.22 | 7.15 | 8.42 | 4.85 | 13.55 | 4.84 |
| 2004 | 14.96 | 6.95 | 6.99 | 6.54 | 25.51 | 7.28 | 8.45 | 5.02 | 12.80 | 5.49 |
| 2005 | 15.29 | 6.82 | 6.90 | 6.54 | 24.31 | 7.52 | 7.90 | 4.74 | 13.14 | 6.84 |
| 2006 | 14.11 | 6.45 | 6.98 | 6.93 | 24.62 | 7.76 | 8.05 | 4.92 | 13.04 | 7.15 |
| 2007 | 13.22 | 6.52 | 6.60 | 7.94 | 24.77 | 7.67 | 8.94 | 4.70 | 12.93 | 6.71 |
| 2008 | 12.47 | 6.20 | 6.08 | 7.82 | 24.51 | 8.80 | 9.80 | 4.97 | 13.29 | 6.06 |
| 2009 | 11.89 | 5.95 | 6.00 | 6.60 | 25.40 | 9.04 | 9.22 | 6.07 | 13.53 | 6.30 |
| 2010 | 15.24 | 5.57 | 6.46 | 5.55 | 23.56 | 8.22 | 9.36 | 5.04 | 13.81 | 7.19 |
| 2011 | 14.21 | 5.33 | 6.52 | 6.24 | 23.45 | 8.23 | 9.43 | 5.71 | 13.32 | 7.57 |
| 2012 | 14.11 | 5.37 | 6.09 | 6.34 | 23.01 | 7.86 | 11.23 | 4.81 | 14.22 | 6.96 |

(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 | 16.89 | 9.09 | 7.81 | 8.16 | 28.42 | 4.71 | 8.02 | 2.10 | 9.41 | 5.40 |
| 2002 | 17.67 | 8.60 | 7.54 | 7.59 | 29.31 | 4.50 | 8.42 | 2.02 | 8.53 | 5.81 |
| 2003 | 16.53 | 7.36 | 7.33 | 8.01 | 29.72 | 5.36 | 7.95 | 1.75 | 11.04 | 4.96 |
| 2004 | 16.45 | 6.74 | 8.38 | 7.79 | 31.54 | 5.58 | 8.22 | 1.37 | 9.15 | 4.78 |
| 2005 | 17.08 | 6.30 | 8.88 | 7.99 | 29.95 | 5.45 | 7.33 | 1.15 | 8.53 | 7.33 |
| 2006 | 15.12 | 5.98 | 8.44 | 7.42 | 31.34 | 5.80 | 8.40 | 1.69 | 9.83 | 5.98 |
| 2007 | 14.01 | 7.47 | 8.15 | 10.22 | 29.71 | 6.33 | 8.64 | 1.31 | 9.12 | 5.03 |
| 2008 | 12.64 | 6.27 | 6.68 | 9.83 | 29.50 | 8.09 | 10.96 | 2.04 | 9.54 | 4.45 |
| 2009 | 13.67 | 6.00 | 7.01 | 6.53 | 31.97 | 7.78 | 10.01 | 2.75 | 10.25 | 4.03 |
| 2010 | 16.74 | 5.19 | 8.72 | 6.37 | 28.36 | 6.64 | 10.39 | 2.83 | 10.02 | 4.75 |
| 2011 | 16.20 | 5.53 | 8.51 | 6.57 | 26.30 | 7.67 | 10.68 | 2.56 | 10.06 | 5.93 |
| 2012 | 15.81 | 4.98 | 7.29 | 6.98 | 28.57 | 5.57 | 14.30 | 1.55 | 10.20 | 4.75 |

(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 | 14.39 | 8.45 | 6.21 | 6.79 | 23.23 | 7.67 | 7.96 | 5.92 | 14.73 | 4.64 |
| 2002 | 14.49 | 7.46 | 6.50 | 6.58 | 22.97 | 8.02 | 8.75 | 5.62 | 14.49 | 5.11 |
| 2003 | 13.96 | 7.57 | 6.46 | 6.46 | 23.96 | 7.78 | 8.57 | 5.86 | 14.57 | 4.83 |
| 2004 | 13.84 | 7.09 | 6.71 | 6.29 | 23.86 | 7.80 | 8.60 | 6.16 | 13.96 | 5.69 |
| 2005 | 14.08 | 6.99 | 6.52 | 6.21 | 22.91 | 8.15 | 8.18 | 5.75 | 14.54 | 6.68 |
| 2006 | 13.30 | 6.51 | 6.68 | 6.86 | 22.91 | 8.42 | 8.01 | 5.91 | 14.14 | 7.28 |
| 2007 | 12.35 | 6.28 | 6.25 | 7.38 | 23.21 | 8.15 | 9.16 | 5.82 | 14.25 | 7.15 |
| 2008 | 11.81 | 6.21 | 6.05 | 7.32 | 23.16 | 9.14 | 9.58 | 5.89 | 14.46 | 6.37 |
| 2009 | 11.00 | 5.98 | 5.85 | 6.62 | 23.84 | 9.47 | 9.09 | 6.94 | 14.45 | 6.74 |
| 2010 | 14.44 | 5.69 | 5.99 | 5.39 | 22.35 | 8.67 | 9.26 | 5.61 | 14.91 | 7.69 |
| 2011 | 13.24 | 5.28 | 6.15 | 6.23 | 22.69 | 8.43 | 9.24 | 6.47 | 14.27 | 8.01 |
| 2012 | 13.24 | 5.43 | 5.94 | 6.26 | 21.85 | 8.42 | 10.69 | 5.62 | 15.15 | 7.40 |

(d) Men

| | Primary activities | Low-tech industry | High-tech industry | Construction | Commerce | Utilities & transportation | Skilled services | Public administration | Education & Health | Domestic workers |
|------|--------------------|-------------------|--------------------|--------------|----------|----------------------------|------------------|-----------------------|--------------------|------------------|
| 2001 | 21.83 | 6.82 | 7.95 | 10.35 | 23.10 | 9.21 | 7.70 | 4.81 | 7.66 | 0.57 |
| 2002 | 22.05 | 6.46 | 8.17 | 10.17 | 22.58 | 9.57 | 8.39 | 4.51 | 7.53 | 0.57 |
| 2003 | 21.09 | 6.57 | 7.86 | 10.23 | 23.53 | 9.51 | 8.30 | 4.67 | 7.63 | 0.61 |
| 2004 | 20.55 | 6.26 | 8.71 | 9.69 | 23.86 | 9.63 | 8.75 | 4.59 | 7.11 | 0.85 |
| 2005 | 20.95 | 6.37 | 8.53 | 9.85 | 22.41 | 10.13 | 8.37 | 4.71 | 7.82 | 0.85 |
| 2006 | 19.53 | 5.72 | 8.64 | 10.64 | 23.01 | 10.47 | 8.29 | 4.90 | 7.60 | 1.21 |
| 2007 | 17.89 | 5.38 | 8.64 | 12.09 | 23.17 | 10.35 | 9.06 | 4.58 | 7.70 | 1.14 |
| 2008 | 17.35 | 4.96 | 7.70 | 12.13 | 23.26 | 11.60 | 9.41 | 4.91 | 7.98 | 0.69 |
| 2009 | 16.91 | 5.36 | 7.59 | 10.16 | 23.75 | 11.81 | 9.10 | 5.94 | 8.04 | 1.34 |
| 2010 | 21.43 | 5.25 | 7.78 | 8.61 | 22.04 | 10.83 | 9.44 | 5.03 | 8.48 | 1.11 |
| 2011 | 20.27 | 5.21 | 7.91 | 9.60 | 21.71 | 11.00 | 9.25 | 5.37 | 8.71 | 0.96 |
| 2012 | 20.26 | 4.78 | 7.78 | 9.68 | 21.88 | 10.59 | 10.42 | 4.51 | 9.30 | 0.81 |

(e) Women

| | Primary activities | Low-tech industry | High-tech industry | Construction | Commerce | Utilities & transportation | Skilled services | Public administration | Education & Health | Domestic workers |
|------|--------------------|-------------------|--------------------|--------------|----------|----------------------------|------------------|-----------------------|--------------------|------------------|
| 2001 | 3.72 | 11.91 | 3.88 | 0.71 | 26.87 | 2.57 | 8.47 | 5.16 | 23.86 | 12.84 |
| 2002 | 4.04 | 10.02 | 3.68 | 0.38 | 27.81 | 2.61 | 9.06 | 5.21 | 23.13 | 14.07 |
| 2003 | 4.01 | 9.39 | 4.12 | 0.24 | 28.37 | 2.76 | 8.63 | 5.20 | 24.56 | 12.73 |
| 2004 | 4.08 | 8.31 | 3.65 | 0.41 | 28.72 | 2.71 | 7.87 | 5.87 | 23.86 | 14.52 |
| 2005 | 4.86 | 7.65 | 3.91 | 0.45 | 27.82 | 2.72 | 7.03 | 4.79 | 22.94 | 17.85 |
| 2006 | 4.47 | 7.76 | 4.03 | 0.31 | 27.47 | 2.92 | 7.63 | 4.96 | 22.71 | 17.73 |
| 2007 | 5.14 | 8.49 | 3.06 | 0.75 | 27.54 | 3.04 | 8.72 | 4.92 | 21.98 | 16.36 |
| 2008 | 4.24 | 8.28 | 3.36 | 0.57 | 26.62 | 4.09 | 10.46 | 5.06 | 22.22 | 15.10 |
| 2009 | 3.43 | 6.93 | 3.30 | 0.61 | 28.19 | 4.38 | 9.42 | 6.30 | 22.77 | 14.66 |
| 2010 | 4.88 | 6.11 | 4.25 | 0.42 | 26.12 | 3.86 | 9.21 | 5.05 | 22.74 | 17.36 |
| 2011 | 4.32 | 5.51 | 4.25 | 0.76 | 26.28 | 3.71 | 9.72 | 6.25 | 20.85 | 18.34 |
| 2012 | 3.96 | 6.34 | 3.30 | 0.83 | 24.89 | 3.35 | 12.57 | 5.30 | 22.34 | 17.12 |

Note: The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

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 | | |
|------|-----|--------|-------|-------|--------|-----------------------|------------------------|---------------|-------------------|--------|------|
| | | Man | Women | Youth | Adults | Employer | Wage/salaried employee | Self-employed | Low | Medium | High |
| 2001 | 750 | 815 | 629 | 488 | 838 | 1339 | 753 | 527 | 497 | 777 | 1677 |
| 2002 | 736 | 793 | 630 | 471 | 822 | 1283 | 751 | 503 | 484 | 751 | 1634 |
| 2003 | 740 | 800 | 628 | 466 | 831 | 1225 | 747 | 513 | 491 | 717 | 1583 |
| 2004 | 695 | 743 | 601 | 452 | 768 | 1088 | 724 | 455 | 458 | 689 | 1471 |
| 2005 | 675 | 741 | 554 | 429 | 746 | 998 | 698 | 467 | 457 | 656 | 1384 |
| 2006 | 704 | 772 | 581 | 454 | 778 | 1201 | 715 | 474 | 459 | 675 | 1462 |
| 2007 | 765 | 853 | 611 | 484 | 856 | 1548 | 744 | 542 | 500 | 714 | 1598 |
| 2008 | 785 | 871 | 639 | 505 | 864 | 1557 | 765 | 567 | 513 | 713 | 1611 |
| 2009 | 832 | 905 | 710 | 533 | 906 | 1472 | 833 | 590 | 508 | 758 | 1694 |
| 2010 | 794 | 852 | 695 | 515 | 863 | 1768 | 800 | 597 | 502 | 769 | 1586 |
| 2011 | 812 | 871 | 715 | 497 | 882 | 1937 | 815 | 576 | 513 | 734 | 1670 |
| 2012 | 833 | 886 | 745 | 524 | 884 | 1845 | 835 | 635 | 498 | 772 | 1673 |

(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 | 468 | 595 | 845 | 704 | 707 | 983 | 1048 | 1192 | 974 | 251 |
| 2002 | 457 | 641 | 852 | 666 | 696 | 945 | 992 | 1112 | 981 | 238 |
| 2003 | 461 | 675 | 869 | 697 | 674 | 895 | 1016 | 1150 | 951 | 234 |
| 2004 | 448 | 618 | 785 | 641 | 619 | 871 | 979 | 1090 | 902 | 236 |
| 2005 | 451 | 598 | 788 | 608 | 595 | 836 | 1015 | 1162 | 871 | 209 |
| 2006 | 473 | 577 | 758 | 602 | 632 | 910 | 1037 | 1269 | 909 | 226 |
| 2007 | 490 | 674 | 812 | 680 | 724 | 1015 | 1164 | 1197 | 907 | 235 |
| 2008 | 517 | 654 | 777 | 688 | 726 | 1006 | 1152 | 1240 | 963 | 241 |
| 2009 | 521 | 643 | 885 | 723 | 688 | 979 | 1326 | 1385 | 1079 | 238 |
| 2010 | 542 | 697 | 755 | 656 | 682 | 989 | 1067 | 1430 | 1089 | 299 |
| 2011 | 531 | 745 | 750 | 676 | 703 | 994 | 1105 | 1456 | 1113 | 296 |
| 2012 | 543 | 685 | 846 | 759 | 725 | 915 | 1106 | 1514 | 1134 | 299 |

(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 | 2401 | 1739 | 1039 | 721 | 558 | 574 | 647 | 681 | 378 |
| 2002 | 2533 | 1594 | 1130 | 696 | 544 | 459 | 639 | 691 | 375 |
| 2003 | 2359 | 1607 | 1036 | 699 | 545 | 508 | 664 | 682 | 373 |
| 2004 | 2307 | 1520 | 943 | 674 | 505 | 434 | 568 | 641 | 366 |
| 2005 | 2077 | 1430 | 962 | 661 | 472 | 501 | 558 | 631 | 351 |
| 2006 | 2255 | 1556 | 952 | 639 | 492 | 522 | 573 | 651 | 360 |
| 2007 | 2746 | 1597 | 988 | 699 | 523 | 539 | 623 | 717 | 385 |
| 2008 | 2283 | 1702 | 1070 | 652 | 540 | 581 | 615 | 716 | 379 |
| 2009 | 2679 | 1785 | 1112 | 767 | 524 | 593 | 606 | 710 | 390 |
| 2010 | 2400 | 1707 | 1068 | 708 | 565 | 592 | 616 | 669 | 401 |
| 2011 | 2794 | 1822 | 1044 | 751 | 615 | 642 | 589 | 681 | 386 |
| 2012 | 2689 | 1813 | 1082 | 800 | 626 | 682 | 643 | 641 | 409 |

Note: The series 2001–09 is not comparable with 2010–12 due to changes in the household survey. For occupational categories, the year 2012 is not comparable with any other year.

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 | | |
|------|-----|--------|-------|-------|--------|-----------------------|------------------------|---------------|-------------------|--------|------|
| | | Man | Women | Youth | Adults | Employer | Wage/salaried employee | Self-employed | Low | Medium | High |
| 2001 | 4.4 | 4.4 | 4.4 | 3.0 | 4.8 | 7.8 | 4.1 | 4.2 | 3.1 | 4.5 | 9.5 |
| 2002 | 4.3 | 4.2 | 4.5 | 3.0 | 4.7 | 7.2 | 4.1 | 4.1 | 2.9 | 4.5 | 9.2 |
| 2003 | 4.3 | 4.3 | 4.4 | 2.9 | 4.8 | 7.0 | 4.1 | 4.1 | 2.9 | 4.3 | 9.0 |
| 2004 | 4.1 | 4.0 | 4.1 | 2.8 | 4.4 | 6.6 | 4.0 | 3.6 | 2.7 | 4.1 | 8.6 |
| 2005 | 4.0 | 4.1 | 3.9 | 2.7 | 4.3 | 6.5 | 3.8 | 3.9 | 2.8 | 3.9 | 8.2 |
| 2006 | 4.1 | 4.1 | 4.0 | 2.8 | 4.4 | 6.7 | 3.8 | 3.9 | 2.7 | 3.8 | 8.3 |
| 2007 | 4.4 | 4.6 | 4.1 | 2.9 | 4.9 | 9.1 | 4.0 | 4.2 | 2.9 | 4.1 | 9.2 |
| 2008 | 4.5 | 4.6 | 4.3 | 3.0 | 4.8 | 8.3 | 4.1 | 4.5 | 3.0 | 4.1 | 9.0 |
| 2009 | 4.9 | 4.9 | 4.9 | 3.3 | 5.2 | 8.0 | 4.5 | 5.0 | 3.1 | 4.3 | 9.7 |
| 2010 | 4.8 | 4.8 | 4.6 | 3.1 | 5.0 | 11.6 | 4.4 | 5.1 | 3.3 | 4.4 | 9.4 |
| 2011 | 4.9 | 4.8 | 4.9 | 3.2 | 5.1 | 10.9 | 4.6 | 4.8 | 3.2 | 4.4 | 10.1 |
| 2012 | 5.2 | 5.0 | 5.5 | 3.1 | 5.3 | 15.5 | 4.7 | 5.1 | 3.2 | 4.8 | 10.6 |

(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 | 2.9 | 3.6 | 4.8 | 3.5 | 4.3 | 5.0 | 6.2 | 6.3 | 6.1 | 2.2 |
| 2002 | 2.7 | 3.7 | 4.4 | 3.4 | 4.0 | 4.9 | 6.0 | 6.0 | 6.8 | 2.2 |
| 2003 | 2.7 | 3.7 | 4.5 | 3.7 | 3.9 | 4.6 | 6.1 | 6.1 | 6.4 | 2.1 |
| 2004 | 2.5 | 3.5 | 4.1 | 3.1 | 3.6 | 4.7 | 5.8 | 5.9 | 6.2 | 2.1 |
| 2005 | 3.0 | 3.5 | 4.1 | 3.0 | 3.6 | 4.4 | 5.9 | 6.1 | 5.7 | 2.0 |
| 2006 | 2.8 | 3.3 | 4.0 | 3.1 | 3.7 | 4.8 | 6.2 | 6.7 | 5.7 | 2.0 |
| 2007 | 3.1 | 4.0 | 4.1 | 3.3 | 4.2 | 5.6 | 6.5 | 6.4 | 5.8 | 2.2 |
| 2008 | 2.9 | 3.7 | 4.0 | 3.3 | 4.0 | 5.0 | 6.8 | 6.6 | 6.4 | 2.2 |
| 2009 | 3.0 | 3.6 | 4.7 | 3.7 | 4.1 | 5.6 | 7.7 | 7.5 | 6.7 | 2.2 |
| 2010 | 3.2 | 3.8 | 4.0 | 3.5 | 4.2 | 6.1 | 7.2 | 8.2 | 6.3 | 2.7 |
| 2011 | 3.4 | 4.6 | 3.9 | 3.6 | 4.3 | 5.2 | 6.5 | 8.5 | 7.2 | 2.7 |
| 2012 | 3.6 | 4.3 | 4.7 | 4.0 | 4.5 | 5.2 | 7.9 | 8.2 | 7.1 | 2.8 |

(c) By occupational group

| | Management | Professionals | Technicians & associate professionals | Clerical | Service & sales workers | Agricultural, forestry & fishery workers | Craft & related trades workers | Plant & machine operators, assemblers | Elementary |
|------|------------|---------------|---------------------------------------|----------|-------------------------|--|--------------------------------|---------------------------------------|------------|
| 2001 | 12.3 | 9.8 | 6.0 | 4.1 | 3.4 | 3.7 | 3.8 | 3.5 | 2.6 |
| 2002 | 13.2 | 9.6 | 6.5 | 3.8 | 3.1 | 2.9 | 3.7 | 3.6 | 2.7 |
| 2003 | 12.4 | 9.4 | 5.7 | 4.2 | 3.1 | 3.3 | 3.8 | 3.5 | 2.6 |
| 2004 | 12.5 | 9.2 | 5.5 | 3.8 | 2.9 | 2.6 | 3.2 | 3.3 | 2.5 |
| 2005 | 12.2 | 8.2 | 5.9 | 3.7 | 2.6 | 3.4 | 3.2 | 3.2 | 2.5 |
| 2006 | 12.1 | 8.6 | 5.7 | 3.5 | 2.7 | 3.2 | 3.2 | 3.3 | 2.5 |
| 2007 | 15.5 | 9.0 | 5.7 | 3.8 | 2.9 | 4.0 | 3.3 | 3.6 | 2.7 |
| 2008 | 11.8 | 9.6 | 6.2 | 3.6 | 3.0 | 3.5 | 3.4 | 3.5 | 2.6 |
| 2009 | 14.0 | 10.2 | 6.5 | 4.2 | 3.0 | 3.6 | 3.5 | 4.1 | 2.8 |
| 2010 | 14.9 | 10.2 | 6.9 | 4.0 | 3.1 | 3.7 | 3.4 | 3.5 | 2.9 |
| 2011 | 15.9 | 11.3 | 6.2 | 4.3 | 3.3 | 4.9 | 3.3 | 3.4 | 2.9 |
| 2012 | 15.0 | 11.2 | 7.0 | 4.7 | 4.4 | 5.8 | 3.9 | 3.3 | 2.7 |

Note: The series 2001–09 is not comparable with 2010–12 due to changes in the household survey. For occupational categories, the year 2012 is not comparable with any other year.

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 | 57.75 | 27.13 | 15.11 |
| 2002 | 56.04 | 28.08 | 15.87 |
| 2003 | 53.88 | 29.65 | 16.47 |
| 2004 | 53.45 | 29.92 | 16.62 |
| 2005 | 53.68 | 29.28 | 17.04 |
| 2006 | 52.58 | 29.39 | 18.02 |
| 2007 | 51.31 | 30.55 | 18.14 |
| 2008 | 49.73 | 30.76 | 19.51 |
| 2009 | 48.61 | 31.64 | 19.74 |
| 2010 | 50.55 | 30.97 | 18.48 |
| 2011 | 48.99 | 31.97 | 19.04 |
| 2012 | 47.07 | 32.91 | 20.02 |

Note: The series 2001–2009 is not comparable with 2010–12 due to changes in the household survey.

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 | 6.77 | 6.54 | 2.57 |
| 2002 | 7.50 | 6.20 | 3.01 |
| 2003 | 7.83 | 6.74 | 2.87 |
| 2004 | 6.79 | 7.94 | 2.77 |
| 2005 | 7.17 | 7.42 | 3.63 |
| 2006 | 6.53 | 6.85 | 2.70 |
| 2007 | 5.03 | 5.44 | 1.78 |
| 2008 | 6.20 | 4.53 | 2.46 |
| 2009 | 9.89 | 7.76 | 3.06 |
| 2010 | 8.25 | 7.78 | 3.89 |
| 2011 | 8.04 | 9.11 | 4.34 |
| 2012 | 8.85 | 8.63 | 3.95 |

Note: The series 2001–09 is not comparable with 2010–12 due to changes in the household survey.

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