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

Argentina country study

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Abstract: Argentina experienced a decline in the early years of the 2000s, from 2000 to 2002, in GDP and in most labour market indicators, followed by improvements in nearly all of them, tracing out a U-shaped pattern. The international crisis of 2008 impacted negatively only on the unemployment rate and the share of paid employees, but both returned to their pre-crisis levels by 2010. Notwithstanding Argentina's massive downturn from 2000 to 2002 and the international crisis of 2008, labour market conditions were in a better state in 2012 than they were at the start of the millennium.

Keywords: Argentina, Latin America, inclusive growth, labour market, poverty

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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 individuals. 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 Argentina 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.¹
 - b. Occupational position—wage/salaried employee, self-employed, unpaid family worker, etc.

¹ In other country studies of this project we used the International Standard Classification of Occupations of 2008 (ISCO-08) to analyse the employment composition by occupational groups. We could not obtain this data from Argentinean household surveys and so this indicator was excluded from this paper.

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

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

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

growth in Colombia between 2002 and 2011 led to a reduction in unemployment and poverty levels (Ham 2013). This mixed evidence indicates that the growth-employment-poverty nexus is fairly complex and the experiences of Latin American countries are far from homogeneous.

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

Overall, previous studies generally show a positive association between economic growth, improvement in labour market indicators, and reduction in poverty in Latin American countries. However, the tightness of these relationships is not always clear from these studies. Moreover, these regional aggregates mask the heterogeneity at the country level, which implies that little can be said about the underlying mechanisms at play. This paper on Argentina 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 Permanente de Hogares (EPH), for the years 2000–02, and Encuesta Permanente de Hogares-Continua (EPH-C) for the years 2003–12. In the year 2003, Argentina implemented a change in its household surveys as it moved from the EPH to the EPH-C; the two surveys—both of which are urban in scope and represent approximately two-thirds of the population—are fully comparable. From 2000 to 2002 we use the October wave of the EPH, and from 2003 to 2012 we use data from the second semester with the exception of the year 2007 which has data only for the fourth quarter.

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 EPH and EPH-C only cover the biggest urban areas of the country. The survey's sample size has increased over time; it went from 22,763 households and 83,399 persons in 2000, to 34,356 households and 110,850 persons in 2012 (Table 1). The sample size of the 2007 survey is smaller due to the availability of data from the fourth quarter only.

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

Several definitions and classifications are used in order to assess whether the labour market has improved or deteriorated. Unemployment is defined as usual, i.e. the share of unemployed 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 Argentine 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.

The occupational position is classified into four categories: employer, wage/salaried employee, self-employed, and unpaid worker. Given the nature of labour markets in Latin America, the analysis of the employment structure according to occupational positions will identify a decrease in 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 of the employed population is considered as an improvement in the labour market as the share of workers that are expected to receive high levels of earnings increases and the share of workers with low earnings' levels decreases.

We also classify employed workers according to whether they are registered with the social security system or not. 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 this indicator will be interpreted as an improvement in the labour market.

Labour earnings are expressed on a monthly basis in 2005 purchasing power parity (PPP) dollars, and higher earnings represent an improvement in the labour market.² In Argentina, there is no information about incomes from secondary occupations for the year 2003, which was when the survey changed. Hence, that year was not taken into account for estimations of labour earnings. To compute poverty and inequality statistics, we use the per capita household income. Household income is the sum of labour income plus non-labour income; included in non-labour incomes are capital income, pensions, public and private transfers, and the imputed rent from own-housing.

² Official inflation statistics are widely considered as untrustworthy since 2008 (Cavallo 2013). We use an average of private, NGO, and public agencies' estimates compiled by the Argentine Congress.

Poverty rates are estimated considering the international poverty lines of 4 dollars-a-day and 2.5 dollars-a-day. We compute the poverty headcount ratio for each. We do not construct poverty rates based on official moderate and extreme poverty lines because they are based on price series suspected of being rigged by the Argentine government. We also calculate the share of working poor households (those with at least one member employed and a per capita family income below the international poverty line of 4 dollars-a-day). Income inequality is calculated using the Gini coefficient of per capita household income and labour earnings.

3 Empirical results

Argentina experienced rapid economic growth during the 2000s overall, despite a devastating crisis at the beginning of the 2000s. The country underwent a mild recession following the international crisis of 2008, but it had completely recovered by 2010 (Figures 1 and 2).

From 2000 to 2012, the Argentine economy grew at an above average rate by Latin American standards. GDP per capita increased by 52.3 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 69.6 per cent, and GDP per employed person rose by 17.5 per cent. While GDP per capita grew at an annual rate of 3.3 per cent, the progress of that indicator was erratic, with a minimum of -11.7 per cent in 2002 and a maximum of 8.2 per cent in 2005 and 2010 (Table 2).

The evolution of GDP in Argentina had a marked U-shape. At the beginning of the 2000s, Argentina underwent a major recession that ended in a severe economic, banking, and financial crisis in December 2001. Prior to the crisis, Argentina was suffering a deep recession, large levels of debt, and deficits in the fiscal and current accounts. The peso was overvalued, but devaluation was not an option without breaking the convertibility law that pegged the peso to the dollar. The country tried to restore its competitiveness through domestic deflation and by improving its fiscal accounts, but none of the efforts worked. The trigger for the crisis in Argentina was a run on the banking system which functioned mainly in dollars but lacked a lender of last resort. In the end, the fixed exchange rate regime collapsed and the country defaulted on its sovereign debt (Kiguel 2011). GDP per capita diminished by 16.3 per cent from 2000 to 2002. In 2002, a new macroeconomic scheme was put into effect; that scheme included a high and stable real exchange rate, fiscal and current account surpluses, and a monetary policy that kept the exchange rate at high levels and re-established the health of the banking system (Cetrángolo et al. 2007). As a consequence, the Argentine economy grew substantially.

Following Argentina's crisis of 2000–02, the economy grew rapidly, registering a GDP per capita growth rate of 82.3 per cent between 2002 and 2012.. The bulk of this increase took place before 2008. The years from 2002 to 2008 were characterized by rapid economic growth, with an average annual rate of 8.6 per cent. In 2007, the economic situation started to deteriorate due to the increase in the inflation rate and the expansionary fiscal policy that progressively reduced the primary surplus. The government failed to put into effect a programme of price stabilization. On the contrary, through several discretionary interventions, the government changed the way the consumer price index was calculated, damaging the credibility of its statistics (World Bank 2014a).

The Argentine economy was affected by the international crisis of 2008. GDP per capita grew by 5.8 per cent in 2008 but stopped growing completely in 2009 (0.0 per cent). At the time of the international crisis, the Argentine economy had a relatively large level of international reserves, a trade surplus, and a fiscal surplus. Additionally, the country was in a situation of financial isolation with a small volume of domestic financial intermediation. All these factors contributed to mitigate the impacts of the international crisis. However, the country suffered some negative effects from the Great Recession. First, Argentina was affected by the reduction in the international demand for its products. This impacted mainly the industrial sector, which had been the driving force of the growth period 2002–08. Second, the country suffered from the flight of capital generated by the inflationary pressures, the uncertainty resulting from the conflict between the government and the agricultural sector with regard to export taxes, and the manipulation of the official inflation statistics (Damill and Frenkel 2009). The space to apply countercyclical policies was limited after the international crisis because of the weakening of the economy. The government decided to apply trade and exchange rate restrictions to control the weakening of external balances and to nationalize the pension system in order to increase its resources. The government also raised its resources through increases in overall tax collection, which represented 18.1 per cent of GDP in 2008 and 20.8 per cent in 2012 (CEPALSTAT 2015). That allowed for increases in social expenditure, like the creation (and subsequent rise in levels) of the *Asignación Universal por Hijo* cash transfer programme, reductions in the tax burden for medium- and high-income earners, and public works (Damill and Frenkel 2009). It also allowed for an increase in public employment. The number of people employed in the public sector grew by 3.5 per cent annually between 2008 and 2012 (INDEC 2015). The pre-crisis upward growth trend resumed in 2010 and 2011, though there was a slowdown in 2012. After the crisis, annual GDP per capita growth rates were 8.2 per cent, 7.9 per cent, and 1.0 per cent in 2010, 2011, and 2012 respectively.

Turning now to changes in the composition of GDP by sector from the start of the period of analysis (2000) to the end (2012), the shares of the agricultural and industrial sectors in the economy grew, while the share of the service sector shrank between 2000 and 2012. The share of the agricultural sector increased from 5.1 per cent in 2000 to 9.1 per cent in 2012 and the share of the industrial sector grew from 28.1 per cent in 2001 to 30.5 per cent in 2012. The share of the service sector—the largest sector in the Argentine economy—shrank from 66.9 per cent in 2000 to 60.4 per cent in 2012 (Table 2). The bulk of the change in the composition of GDP by sector occurred during the crises at the beginning of the 2000s. The year 2002 witnessed an increase in the share of export-oriented sectors in GDP due to a devaluation of the domestic currency, along with an increase in the international price of Argentine export products like soybeans, meat, oil, and steel (Bianco et al. 2007). The share of the agricultural sector in GDP jumped from 4.9 per cent in 2001 to 10.8 per cent in 2002, while the share of the industrial sector grew from 27.0 per cent to 32.4 per cent and the share of the service sector dropped from 68.1 per cent to 56.8 per cent over the same period. The international crisis of 2008 impacted mainly the agricultural sector. In 2009, the share of that sector shrank by 2.3 percentage points due to the drop in foreign demand for Argentine agricultural products and its value added decreased by 15.7 per cent. By 2010, the agricultural sector recovered its pre-crisis value added level and share. The industrial sector experienced a smaller decline in value added and a decrease in its share of 0.4 percentage points. It also recovered immediately, though it was not enough to increase its share to the pre-crises level since the rest of

the economy grew faster. The service sector was the one least affected by the crises and its share increased by 2.7 percentage points in 2009.

The 2000-12 period witnessed a significant drop in the aggregate unemployment rate and in the unemployment rate for all population groups. Within this period, the unemployment rate increased in the early years of the period and diminished until 2007. It remained constant afterwards, except for a brief rise in 2009 and an equal drop in 2010 (Figure 3).

The unemployment rate (measured as the ratio of unemployment to labour force) decreased overall over this period, dropping from 14.8 per cent in 2000 (1,473,288 unemployed persons) to 7.3 per cent in 2012 (856,754 unemployed persons). Initially, the unemployment rate increased in conjunction with a fall in GDP from 2000 to 2002. During the economic crisis of 2001–02, unemployment increased substantially, peaking at 18.4 per cent (1,835,698 unemployed persons). The unemployment rate then fell steadily from 2002 to 2007, when it stood at 7.5 per cent. It remained at that level until 2008. The reduction in the unemployment rate was marked both by the drop in the average duration of unemployment spells and by the reduction in the rate of entry into unemployment (Beccaria and Maurizio 2008). During the Great Recession, and as GDP growth slowed, the unemployment rate increased to 8.6 per cent in 2009 (127,778 new unemployed persons). Both the number of persons in the labour force and the number of employed persons increased between 2008 and 2009 by 194,723 and 66,945 respectively. These figures suggest that the increase in the unemployment rate during the international crisis was brought about by the entry of new people into the labour market who could not find a job. A full recovery took place by 2010, when the unemployment rate returned to its pre-crisis level (7.4 per cent), where it remained in 2011 and 2012.

Looking at the disaggregated patterns and comparing 2000 with 2012, the unemployment rate decreased for youth, adults, men, and women, though it peaked in 2001/2002. The unemployment rate for young workers went from 27.5 per cent in 2000 to 33.5 per cent in 2002, and it diminished to 18.3 per cent in 2012. For adults, unemployment decreased from 11.7 per cent in 2000 to 5.4 per cent in 2012, peaking at 15.3 per cent in 2001. When broken down by gender, the unemployment rate followed a similar pattern for men and women. For men, it rose from 13.6 per cent in 2000 to 18.7 per cent in 2001, then dropped to 5.7 per cent in 2012. For women, the corresponding figures were 16.4 per cent in 2000, 18.0 per cent in 2002, and 9.3 per cent in 2012. All groups of workers were affected by the international crisis. Youth unemployment increased from 18.3 per cent in 2008 to 20.9 per cent in 2009, while the rate for adults grew from 5.6 to 6.3 per cent. The increase in unemployment hit male workers harder than female workers, rising from 6.3 to 7.7 per cent for men and from 9.4 to 9.8 per cent for women. The unemployment rates of all workers, regardless of age and gender, began declining in 2012, though at different paces. The rate for adults and women had returned to pre-crisis levels by 2010, whereas the rate for men did not return to pre-crisis levels until 2011; full recovery for young workers did not take place until 2012.

The employment structure by occupational position improved. The percentage of paid employees in total employment increased overall, for youth, adults, men, and women. In aggregate and for all population groups, the share of paid employees diminished during the recessionary years of the early 2000s, and increased during the period of rapid economic growth which followed. The international crisis of 2008 negatively affected the composition of employment by occupational position, but that setback proved short-lived (Figure 4).

The share of wage/salaried employees—the largest employment category—grew by 5.1 percentage points over the period, rising from 72.1 per cent in 2000 to 77.2 per cent in 2012. The share of the self-employed, on the other hand, decreased by 4.0 percentage points, dropping from 22.1 per cent in 2000 to 18.1 per cent in 2012. The shares of employers and of unpaid workers in total employment were small (around 4.3 and 0.9 per cent respectively) and neither one changed substantially during the 2000–12 period (Table 3). During the economic crisis of 2001–02, the share of wage/salaried employees hit its lowest point (71.3 per cent) and the share of self-employed workers reached its maximum (23.4 per cent). In a context of increasing and high unemployment, economic necessity may have compelled workers to take up free-entry self-employment activities. Afterwards, as the economy recovered, the share of wage/salaried employees increased steadily reaching 76.7 per cent in 2007, almost the same level as in 2012. The share of self-employed workers decreased by up to 18.0 per cent in 2007 and kept around that level until the end of the period.

The employment structure by occupational position improved between 2000 and 2012 for youth and adult workers, men, and women. From 2000 to 2012, the share of paid employees grew for young and adult workers (3.3 percentage points in the case of young workers and 5.8 in the case of adult workers), while the shares of self-employed and unpaid workers dropped for both population groups. The shares of paid employees increased over the period for both men and women (5.1 and 4.9 percentage points respectively), with a corresponding reduction in the shares of self-employed and unpaid workers. Within the period, the employment structure by occupational position deteriorated in the early years of the 2000s when the share of paid employees decreased for all groups. It improved in the following years until 2007/2008, when it suffered a slight deterioration during the international crisis. However, the recovery was quick. The share of paid employees decreased from 76.7 per cent in 2007 to 75.9 per cent in 2009, and then rose to 77.0 per cent in 2010. This upward trend continued until 2012, when it stood at 77.2 per cent. These trends hold true when the analysis is broken down by age and gender.

The employment composition by economic sector exhibited a slight improvement overall, as the share of high-earning sectors increased, the share of middle-earning sectors fell, and the share of low-earning sectors remained largely unchanged. The pattern of improvement in the sectoral composition of employment was not interrupted by the international crisis of 2008, but impacted on the relative shares of low- and mid-earning sectors (Figure 5).

The period from 2000 to 2012 witnessed a stable pattern in the share of workers in low-earning sectors (domestic workers, construction, and commerce) (around 39.6 per cent both in 2000 and 2012). The share of workers in middle-earning sectors (low- and high-tech industry, utilities and transportation, and education and health) decreased from 42.0 to 40.0 per cent. Among middle-earning sectors, the share of the low-tech industry sector—the driving force of the growth period from 2003 to 2008—exhibited an increase in its share of total employment up to 2008 that was undone during the international crisis. Finally, the share in high-earning sectors (primary activities, skilled services, and public administration) rose from 18.3 to 20.5 per cent (Tables 4 and 5).

From 2000 to 2012, the changes in the employment composition by economic sector resulted in a slight improvement for youth, adults, and men, while there was a full improvement for women. In the case of youth, the share of low-earning sectors remained largely unchanged (drop of 0.1 percentage points), the share of mid-earning sectors decreased, and the share of high-earning sectors increased by a similar magnitude (drop of 2.9 percentage points and rise of 3.0 percentage points).

Among adults, the share of low-earning sectors exhibited a slight increase (rise of 0.6 percentage points) along with a reduction in the share of mid-earning sectors and an increase in the share of high-earning sectors (drop of 2.2 and rise of 1.6 percentage points). For men, the evolution of employment composition by economic sector followed a similar pattern: there was a slight increase in the share of the low-earning sectors (rise of 0.5 percentage points), a decline in the share of the mid-earning sectors (drop of 2.4 percentage points), and an increase in the share of high-earning sectors (rise of 1.9 percentage points). For women, the changes were substantially different than for men. The share of low-earning and middle-earning sectors fell (drop of 1.3 percentage points in both cases), and the share of high-earning sectors increased by 2.6 percentage points.

The international crisis of 2008 did not affect the improving or slightly improving trend in the composition of employment by economic sector, but led to a change in the relative shares of low- and mid-earning sectors. Between 2008 and 2009, the share of low-earning sectors exhibited a larger reduction compared to the share of mid-earning sectors in the aggregate, for young workers, and for women, while the share of high-earning sectors continued to increase. For adults, the share of low-earning sectors stopped increasing and had a small reduction. For men, the pre-crisis trends in their employment composition by sector were not impacted by the international crisis.

The educational level of the Argentine employed population improved steadily over the period, overall and for all population groups. The international crisis of 2008 had no effect on this upward trend (Figure 6).

The share of employed workers with low educational levels (eight years of schooling or less) dropped from 37.0 per cent in 2000 to 24.9 per cent in 2012, while the shares of workers with medium and high educational levels (nine to thirteen years of schooling and over thirteen years of schooling) grew from 38.8 per cent in 2000 to 43.9 per cent in 2012 and from 24.2 per cent to 31.1 per cent respectively.³ We interpret this result as an improvement for the employed population as the level of education is an important predictor of labour earnings. Consequently, these 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.⁴

The educational level of the employed population improved between 2000 and 2012 for all population groups, although with some differences between them. For the youth population, the share of employed workers with low educational levels dropped from 32.6 per cent in 2000 to 19.3 per cent in 2012, i.e. 13.4 percentage points. The share of young workers with medium educational levels grew by 13.9 percentage points and the share with high educational levels diminished by 0.5 percentage points. The reduction in the share of adult workers with low educational levels was similar to that of young workers, namely a decrease of 12.0 percentage points over the period. There

³ The most frequent value of years of education for employed workers in Argentina was 7 from 2000 to 2003 (around 24.7 per cent of employed workers had seven years of education) and 12 from 2004 to 2012 (around 26.1 per cent of employed workers had twelve years of education).

⁴ 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 Argentina in the paragraph on labour earnings.

was also an increase in the share of adult workers with medium and high educational levels, with changes of 4.4 percentage points and 7.6 percentage points respectively. The improvement in the educational level of the employed population was different between women and men. The reduction in the share of workers with low educational levels was 10.9 percentage points for women and 12.8 for men; the share of workers with medium educational levels increased by 2.2 percentage points for women and 7.3 percentage points for men; the share of workers with high educational levels climbed 8.8 percentage points for women and 5.5 for men.

The pattern of improvement in the educational level of the employed population in Argentina was not abated on the aggregate or on the population group level by the international crisis of 2008.

The overall share of wage/salaried employees registered with the social security system increased between 2000 and 2012. While this indicator improved for adults, men, and women, it deteriorated for youth. Within this period, the registration rate fell in the early years of the period studied but increased in the later years. This upward trend, which started in 2004, held for all population groups; it was not interrupted by the international crisis of 2008 (Figure 7).

As detailed in ISSA (2014), the social security system in Argentina consists of a set of benefits covering health risks, old age pensions, unemployment insurance, family allowances, and job risks; these benefits are managed by agencies of the *Ministerio de Trabajo, Empleo y Seguridad Social* and the *Ministerio de Desarrollo Social*. There exist both contributory and non-contributory schemes. The contributory scheme is mandatory for wage/salaried employees and self-employed persons. For other workers, like persons insured under professional provincial systems and housewives, participation is voluntary. The non-contributory scheme covers persons with income below a subsistence level who are not receiving any social security benefit or support from family members. The non-contributory scheme is funded fully by the government.

Social security records show an increase in the percentage of wage/salaried employees registered with the contributory schemes of the system between 2000 and 2012, which rose from 61.6 per cent in 2000 (3,769,596 registered workers) to 65.1 per cent in 2012 (5,504,925 registered workers). The change, though, was not smooth. From 2000 to 2003, a period that included the severe crisis of 2001–02, the percentage of workers registered with the social security system dropped from 61.6 per cent to 50.6 per cent. The share of wage/salaried employees who were registered with the social security system then increased steadily from 2003 to 2011. This upward trend was related to several factors such as: the profitability and productivity increases of local firms driven by the high real exchange rate of the macroeconomic scheme established after the 2001–02 crisis; the set-up of a labour inspection system with the objective of monitoring compliance with labour and social security regulations; the simplification of the administrative procedures needed to register workers with the social security system; the reduction in the social security contributions paid by employers; and the implementation of specific policies for those workers most affected by unregistered employment, such as domestic workers (Novick et al. 2008; Bertranou et al. 2013). Finally, the period from 2011 to 2012 witnessed a slight decrease in the share of registered wage/salaried employees.

The rate of registration with the social security system decreased for youths and increased for adults, men, and women over the period. The share of registered wage/salaried employees fell from 40.2 per cent in 2000 to 38.9 per cent in 2012 for young workers. It experienced a large decrease in the

period 2000–03, falling to 26.3 per cent in 2003, then it increased steadily from 2003 to 2010 when the share of wage/salaried employees reached 43.7 per cent, and it finally decreased in 2011 and 2012. For adults, the share of registered wage/salaried employees increased from 66.9 to 70.4 per cent over the period, though not monotonically; the lowest point was 56.1 per cent in 2003. The increase in the share of wage/salaried employees registered over the period was slightly larger for women than for men. For women, it climbed from 57.7 to 61.7 per cent between 2000 and 2012, with a drop in 2003 to 44.7 per cent. For men, the rate increased from 64.5 to 67.5 per cent over the entire period, while it was as low as 56.1 per cent in 2003.

The international crisis did not immediately slow down the upward trend in the share of wage/salaried employees registered with the social security system among youth or adults, or among men or women. The number of registered workers increased in the aggregate by 104,751 between 2008 and 2009, while the number of unregistered workers contracted by 82,881 over the same period. However, the share of workers registered with the social security system dropped slightly from 2010 to 2012 due to the increase in the number of unregistered workers, which climbed by 135,979 workers.

Two years of falling labour earnings from 2000 to 2002 were followed by ten years of rising labour earnings from 2002 to 2012. The increases were large enough so that labour earnings were slightly higher in 2012 than in 2000 in real terms. The pattern of falling labour earnings between 2000 and 2002 and rising labour earnings between 2002 and 2012 held for all population groups, but youth and female workers were the ones who benefited the most. In general, workers in low-earning categories experienced a larger increase in labour earnings than did workers in high-earning categories, whose labour earnings even fell for some groups. Labour earnings were not affected negatively by the 2008 crisis (Figure 8).

Average monthly earnings expressed in dollars at 2005 PPP increased by 2.5 per cent, climbing from US\$761.7 in 2000 to US\$781.0 in 2012 (Table 5). However, the experiences within the period varied substantially. Argentina suffered an inordinate decline in average real labour earnings (–5.6 per cent) during the economic recession at the beginning of the period—that is, from 2000 to 2002; this drop was brought about by a large increase in domestic prices after the devaluation of the peso coupled with the lack of adjustment of nominal earnings in a context of high unemployment and weak unions (Gasparini and Cruces 2010). After that period, a long and steady recovery set in that brought with it an increase in labour earnings during most of the subsequent years. Starting in 2003, the government favoured successive increases in the minimum wage, and labour earnings continued to increase in a context of employment growth; by 2011, the level of labour earnings surpassed the 2000 level. The upward trend post-2002 was interrupted in 2008 when labour earnings fell by 2.0 per cent. In 2009, real earnings resumed their upward trend until 2011. Finally, labour earnings fell by 2.3 per cent in 2012.

When the analysis is broken down by population groups, women and young workers are found to be the ones who benefited the most from 2000 to 2012. Other groups whose earnings increased substantially were wage employees, middle-earning economic sectors, and workers with low educational levels. Employers and the self-employed, workers in high-earning sectors, and workers with high educational levels experienced a drop in their labour earnings over the period. When analysed by gender, labour earnings grew by 10.5 per cent for women, while they increased by only 0.5 per cent for men. When analysed by age, labour earnings of young workers grew more than

those of adults (18.5 per cent for youth and only 0.5 per cent for adults). Both age groups followed the same general trend, with a large fall at the beginning of the 2000s and a steady increase during most of the following years. Labour earnings of self-employed workers and of employers dropped from 2000 to 2012, while labour earnings of wage/salaried employees increased. Of all occupational groups, employers were the ones to experience the largest reduction in labour earnings between 2000 and 2012 with a drop of 38.9 per cent. That category was followed by the self-employed, whose earnings dropped by 5.0 per cent. Labour earnings of wage/salaried employees—the category that includes most Argentine workers (77.2 per cent in 2012)—increased by 7.8 per cent during the period. Labour earnings increased for low- and mid-earning sectors (8.1 and 9.2 per cent respectively), and fell for workers in high-earning sectors (drop of 4.5 per cent). Labour earnings increased for workers with low educational levels, rose slightly for those with medium educational levels, and decreased for those with high educational levels. Workers with low levels of education experienced the largest increase in earnings over the period (an increase of 17.4 per cent). This category was followed by workers with medium educational levels (an increase of 1.3 per cent). The earnings of workers with high educational levels, though, decreased by 18.2 per cent. Hence, when comparing workers with high educational levels to those with low educational levels, the educational earnings ratio fell from 2.9 in 2000 to 2.0 in 2012.

The evidence of falling labour earnings for workers with high educational levels and increasing labour earnings for those with low and medium educational levels can be interpreted in light of previous findings of slight improvement in the employment structure by economic sector and improvement in the educational level of the employed population over the period. Changes in the employment structure by economic sector implied a reduction in the total share of sectors that can be expected to use workers with low and medium educational levels such as utilities and transportation, domestic workers, high-tech industry, and commerce, and an increase in the total share of sectors that employ workers with high educational levels, such as skilled services and public administration. This evidence indicates that the demand for workers with high educational levels relative to those with low and medium educational levels increased between 2000 and 2012. On the other hand, the educational level of people in the labour force improved over the same period, leading to an increase in the relative supply of workers with high and medium levels of education (Table 7). The prediction of a supply and demand analysis is that the relative wages of workers with high educational levels relative to those with low and medium educational levels will rise or fall depending on which effect dominates (increase in the relative demand versus increase in the relative supply). In the Argentinean labour market the relative wages of workers with high and medium educational levels relative to those with low educational levels fell over the period, and the relative wages of workers with high educational levels relative to those with medium educational levels also decreased (Table 6). The adjustment process also led to a reduction in the unemployment rate of all educational groups with a larger reduction for workers with low levels of education (Table 8).

During the international crisis of 2008 and after they experienced a small decrease in 2008, labour earnings continued to grow overall and for all population groups. Some workers in specific economic sectors were negatively affected by the crisis. Labour earnings rose, on average, by 4.0 per cent between 2008 and 2009, the year of the crisis. Increases were similar among most groups analysed, except for workers in high-tech industry (no change) and in the utilities and transportation sector (3.5 per cent decline). The crisis, then, had a mild effect on labour earnings.

Despite large increases in the early 2000s, the poverty rate and the rate of working poor households decreased substantially from 2000 to 2012 (Figure 9).

The 4 dollars-a-day poverty rate fell from 27.5 per cent in 2000 to 10.8 per cent in 2012, after climbing to 45.5 per cent in 2002; the 2.5 dollars-a-day poverty rate dropped from 14.2 per cent to 4.7 per cent from 2000 to 2012, with a peak of 29.2 per cent in 2002; the percentage of the working poor (defined as the proportion of persons in the population living in poor households, according to the 4 dollars-a-day poverty line, where at least one member works) decreased from 14.8 to 5.7 per cent over the same period, with the highest point equal to 27.0 per cent in 2002. The downward trend in all poverty indicators was not affected by the international crisis of 2008.

Thus, poverty rates increased substantially from 2000 to 2002, a period that included the local crisis, and then decreased steadily until 2012, even during the international crisis. The poverty patterns exhibited by Argentina can be understood by examining incomes from various sources as well as government programmes. Household labour earnings, pensions, government transfers, and capital income fell substantially between 2000 and 2002 (Figure 10). The reduction in real earnings after the devaluation of the domestic currency at the beginning of the decade is the most important factor to explain the increase in the poverty rates to unprecedented levels for the country between 2000 and 2002 (Gasparini and Cruces 2010). The reduction in poverty indicators from 2002 to 2011 was related mainly to increases in labour earnings and employment levels. Higher labour earnings and employment levels accounted for nearly 70.0 per cent of the decline in the poverty rate based on the 4 dollar-a-day poverty line between 2004 and 2012. The remaining 30.0 per cent of the decline in the poverty rate was accounted for by the increase in non-labour incomes like pensions and private and public transfers (World Bank 2014a). Pensions increased steadily from 2002 to 2012, while the number of beneficiaries from government transfers exhibited a substantial increase with the implementation of the *Asignación Universal por Hijo* targeted cash transfer programme in 2008. Indeed, it is estimated that poverty measured by the 2.5 dollars-a-day poverty line in 2009 was nearly half what it would have been in the absence of progressive social spending (World Bank 2014a).

Household per capita income inequality and labour earnings inequality increased at the beginning of the period and then started a sustained downward trend, with the result that inequality was much lower at the end of the period (2012) than it had been at the beginning (2000). The international crisis of 2008 did not affect the downward trend in inequality indices that was observed in the last ten years of the period (Figure 11).

The Gini coefficient of household per capita income increased from 2000 to 2002, reaching a maximum of 0.533, and then decreased steadily to 0.423 in 2012, a much lower value than in the year 2000 (0.504). Throughout the period, the Gini coefficient of labour earnings among employed workers was lower than that of household per capita income. Its evolution mirrored the changes in the Gini coefficient of household per capita income, going from 0.459 in 2000 to 0.498 in 2002 and falling every year after, reaching 0.388 in 2012. The overall reduction in labour earnings inequality is in accord with the evidence presented above, showing larger income increases for workers in low-earning employment categories compared to workers in high-earning categories, whose labour incomes even fell for some groups. Consequently, the reduction in labour earnings inequality in Argentina occurred at the expense of income losses for some categories.

Considering that labour earnings are the main source of income for Argentine households, its evolution could be behind the decline in household per capita income inequality. That is confirmed by Bergolo et al. (2011), who used a non-parametric decomposition method to find that the reduction in labour income inequality accounted for around three-quarters of the decline in household per capita income inequality between 2001 and 2009, and the remaining 25.0 per cent was accounted for by the decline in non-labour income inequality. The decline in non-labour income inequality was caused by a more progressive fiscal policy. The initially negative (and disequalizing) effect of the devaluation of the domestic currency on real wages was in part compensated for by the expansion of progressive export taxes, which were used to finance large anti-poverty programmes like *Jefes y Jefas de Hogar Desocupados* in 2002 (Gasparini and Cruces 2010). The excise taxes also had an indirect redistributive impact because they kept domestic prices of traded goods below their international level; this was particularly important for food prices. Within the period 2002–12, the contribution of the increase in the size and progressivity of social spending to the reduction in household income inequality was more important between 2006 and 2009 compared to the period 2003–06. The reason was the introduction of a new non-contributory pension programme, the pension moratorium, in 2004 (Lustig and Pessino 2013).⁵

The literature on labour earnings inequality in Argentina provides some explanations for its decline during the 2000s. Gasparini and Cruces (2010) argue that the fall in labour income inequality over the 2000s can be accounted for by: the expansion of employment generated by the fast economic recovery; the shift of the employment structure in favour of more low-skilled labour-intensive sectors as a result of the devaluation of the Argentine peso at the beginning of the decade; the fading out of the effect of skill-based technical change on the demand for labour in the 1990s; and the rise in the influence of labour unions. All these factors caused the skills premium, measured as relative returns to tertiary education by the authors, to fall. Gasparini et al. (2011) found evidence consistent with the conclusions of Gasparini and Cruces (2010). Their analysis indicates that during the 2000s, demand and institutional factors like the minimum wage were more important for the decline in the skill premium in Argentina than the increase in the relative supply of skilled workers. Other papers analysed the contribution to the declining earnings inequality of changes in the distribution of workers' characteristics and changes in the returns to those characteristics. Azevedo et al. (2013) applied a parametric decomposition method and found that between 2000 and 2010, the changes in the distribution of workers' characteristics like education and experience (or the 'quantity effect') and the changes in the returns to those characteristics (or the 'price effect') were inequality-reducing. However, the results of Battistón et al. (2014), who used a microsimulation approach for the period 2004–09, indicate that the quantity effect was equalizing only when levels of education are used but inequality-increasing when education is measured by years of schooling, as in Azevedo et al. (2013).

⁵ The *Moratoria Previsional*, which has been translated into English as 'pension moratorium', allowed workers of retirement age to receive a pension regardless of whether they had completed the full thirty years of required social security contributions through formal employment (Lustig and Pessino 2013).

4 Conclusions

By Latin American standards, Argentina experienced high economic growth during the 2000s. Within the period, the pattern of economic growth was U-shaped: GDP fell dramatically during 2000–02 and then grew rapidly during 2003–12. Though the economy of Argentina stopped growing during the international crisis of 2008, it recovered the previous growth pattern by 2010.

Most labour market indicators followed the U-shaped pattern of economic growth over the period. The unemployment rate exhibited an increase in the early years of the period and a downward trend in the later years, falling overall between 2000 and 2012. The employment structure by occupational position deteriorated at the beginning of the period and then improved steadily as the share of wage/salaried employees increased and the share of self-employed and unpaid workers decreased. The educational level of the employed population increased steadily between 2000 and 2012. A reduction in the percentage of registered workers at the beginning of the period was followed by a steady upward trend after 2003. The sectoral composition of employment exhibited small changes that can be interpreted as a slight improvement. Labour earnings fell dramatically in the early years of the period and then started an upward trend. The increases were large enough in 2012 to raise labour earnings above where they had been in 2000. Workers in low-earning categories were the ones who benefited the most, while labour earnings even fell for some high-earning categories. In accordance with the pattern of GDP growth, poverty indicators grew by a large amount at the beginning of the period and then started a downward trend. This fall was large enough to bring about a substantial reduction in poverty rates from 2000 to 2012. The Gini coefficients of household per capita income and of labour earnings decreased over the period. Inequality indices increased in the early years of the period and fell in the later years.

Some labour market indicators were affected negatively by the international crisis of 2008: the unemployment rate increased and the composition of employment by occupational position worsened. Both indicators had returned to pre-crises levels by 2010. The comparison between the effects of the international crisis of 2008 on labour market indicators and the effects generated by the 2001–02 crisis reveals that the crisis at the beginning of the 2000s impacted Argentina more strongly. The crisis of 2001–02 generated a larger reduction in GDP, a larger increase in the unemployment rate, and a larger decrease in labour earnings compared to the Great Recession. Moreover, the poverty rates measured by the international poverty lines increased during the first recessionary episode, while they continued to decrease after the international crisis of 2008. The reasons behind the smaller negative impacts of the international crisis compared to the recession at the beginning of the decade were that at the time of the international crisis, the Argentine economy had a relatively high amount of international reserves, a trade and a fiscal surplus, and the country was in a situation of financial isolation.

Young workers and women had worse labour market outcomes over the period compared to adults and men respectively, and while young workers seem to be more vulnerable to macroeconomic crises compared to adults, men were more negatively affected by the crises compared to women. The unemployment rate was higher for young compared to adult workers, the share of young employed workers in low-earning economic sectors was larger than the share of adult workers, the percentage of young workers registered with the social security system was lower when compared to adults, and labour earnings of young workers were below those of adults. On the other hand, the

share of young workers in low-earning occupational positions was lower compared to adults. In addition to the generally inferior situation of young workers in the labour market compared to adults, youth labour market indicators were more adversely affected by the episodes of crises. Disaggregating by gender, we found that men had better labour market outcomes than women, with the only exception being the share of workers in low-earning positions which was larger among men. However, men were hit hardest by both crises in most labour market indicators, with the labour earning reduction during the crisis at the beginning of the period being the only exception to this pattern.

In summary, notwithstanding Argentina's massive downturn from 2000 to 2002 and the international crisis of 2008, Argentine labour market conditions were in a better state in 2012 than they were at the start of the millennium.

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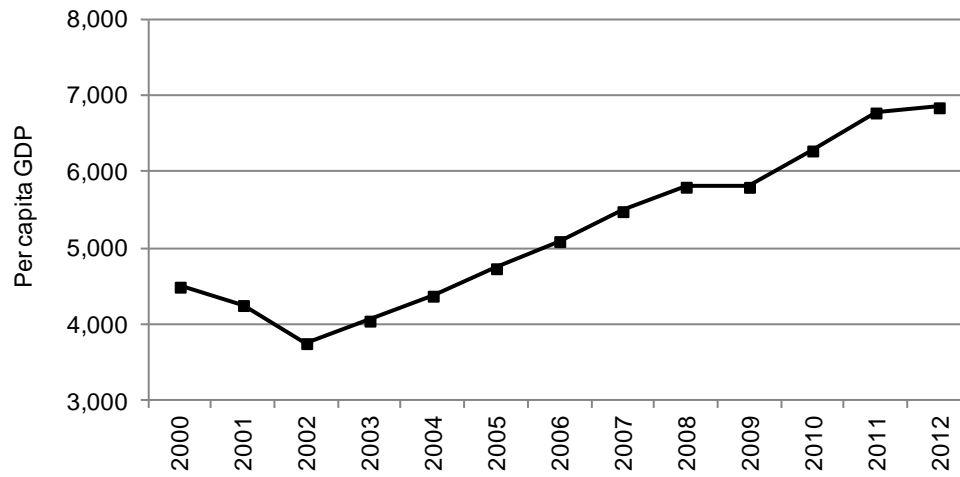
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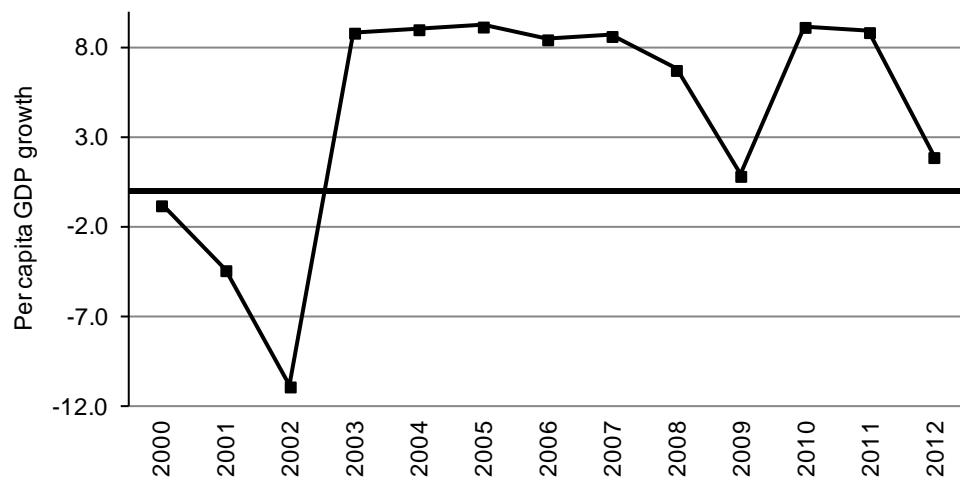
Figures

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



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

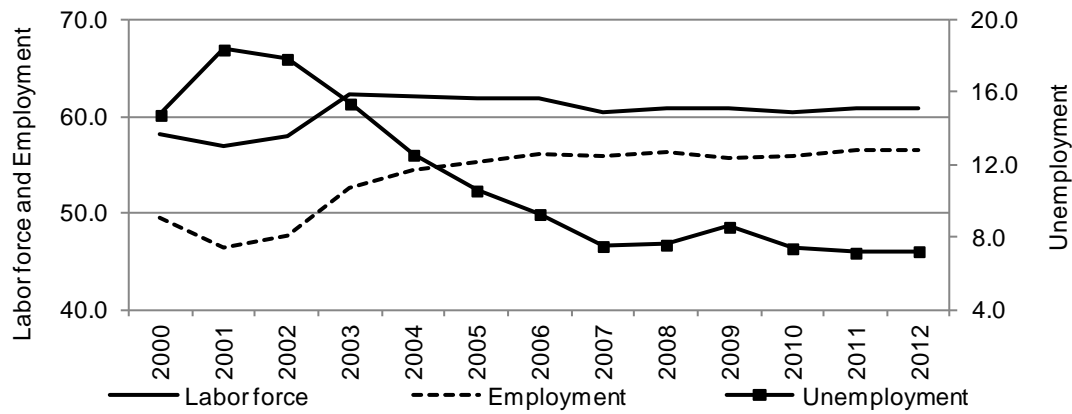
Figure 2: Annual growth of GDP per capita at PPP dollars of 2005, 2000–12



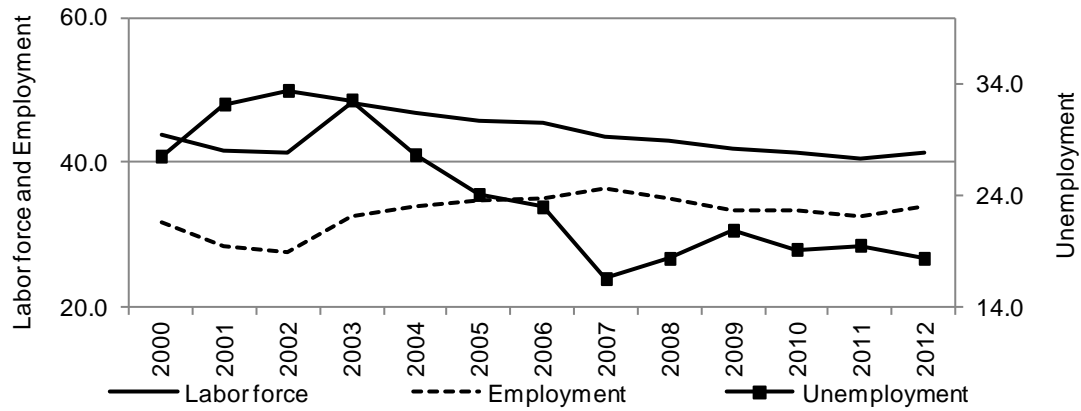
Source: World Development Indicators (the World Bank 2014b).

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

(a) All



(b) Youth (15 to 24 years old)



(c) Adults (25 to 64 years old)



(d) Men

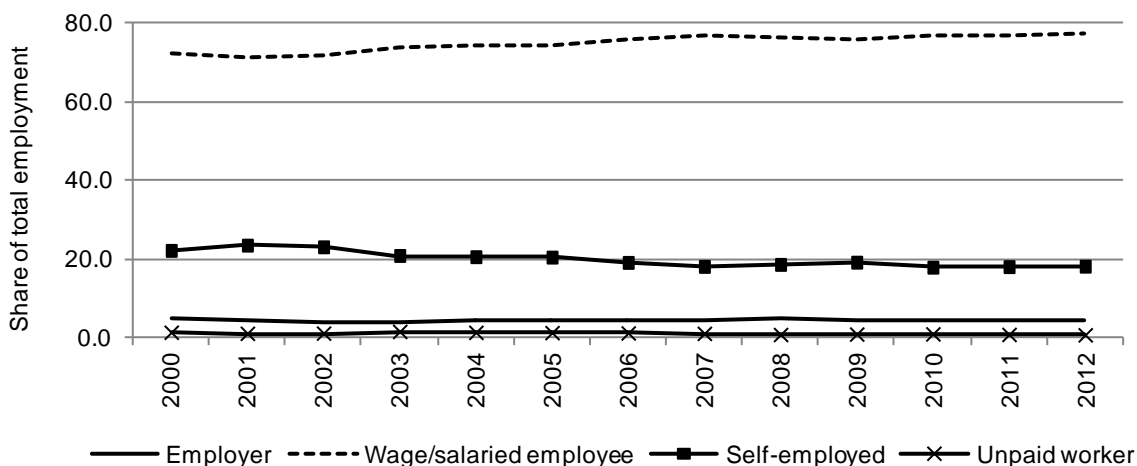


(e) Women



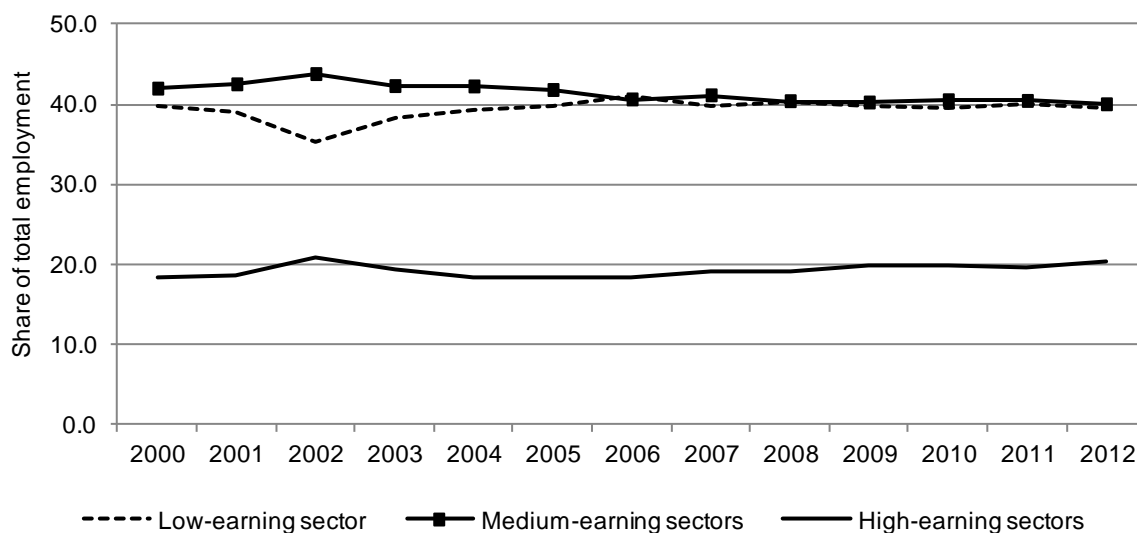
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

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



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

Figure 5: Share of employment by economic sector (categories grouped by earning levels): all employed workers, 15 years old or more, 2000–12

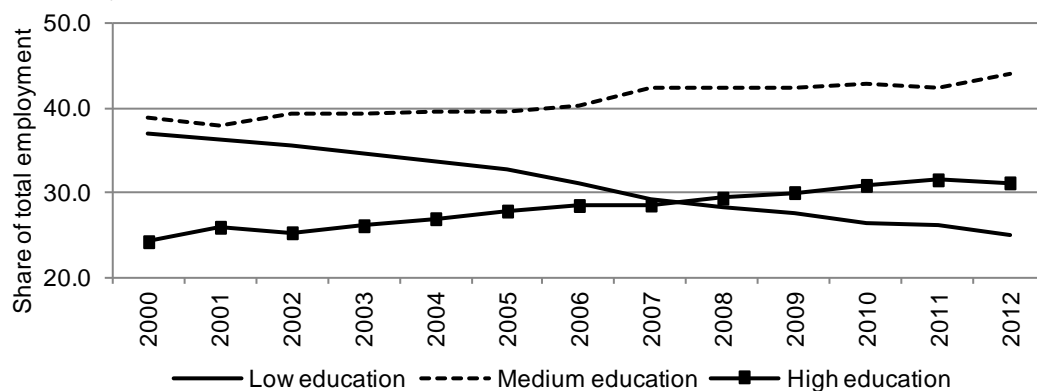


Note: Low-earning sectors: domestic workers, construction, commerce. Middle-earning sectors: low-tech industry, high-tech industry, utilities and transportation, education and health. High-earning sectors: skilled services, public administration, primary activities.

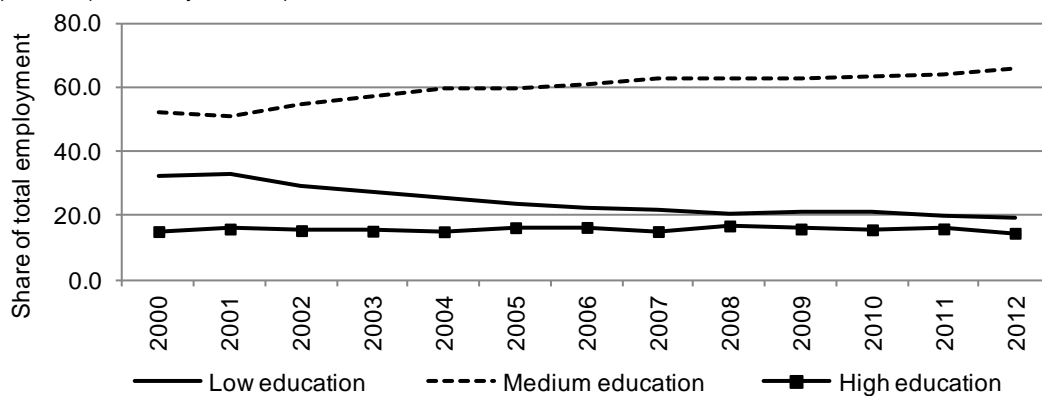
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 6: Share of employment by educational level: employed workers, 15 years old or more, 2000–12

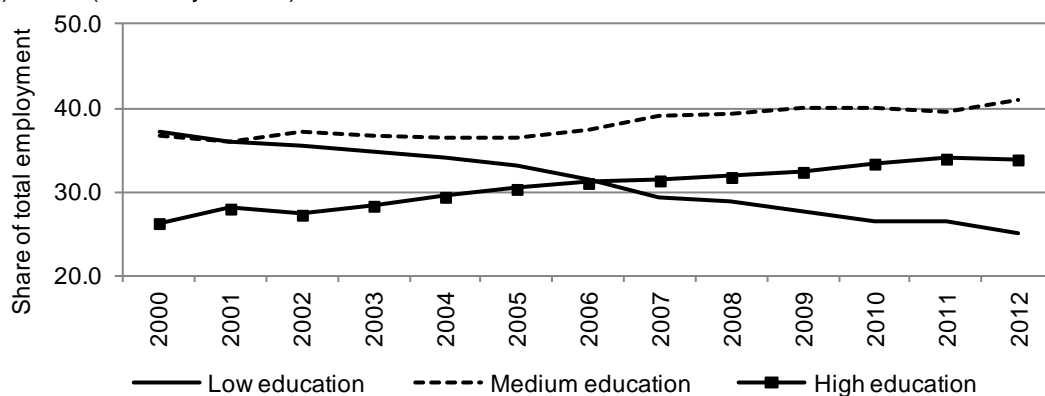
(a) All employed workers



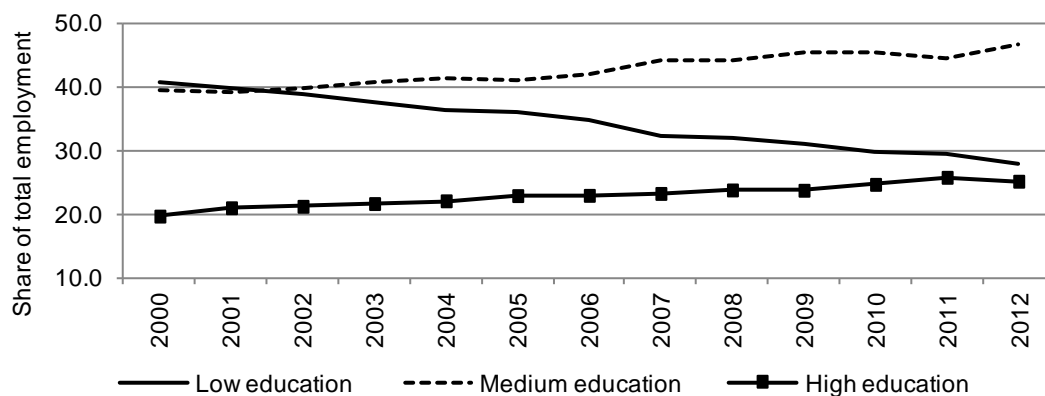
(b) Youth (15 to 24 years old)



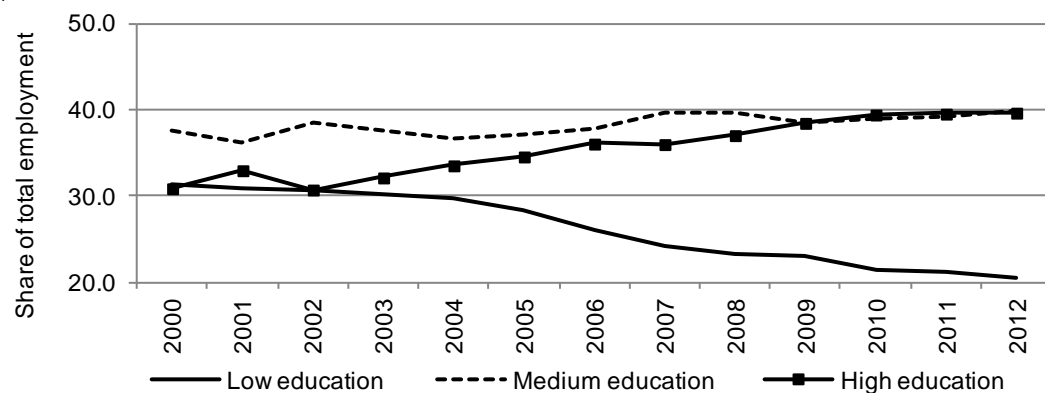
(c) Adults (25 to 64 years old)



(d) Men



(e) Women

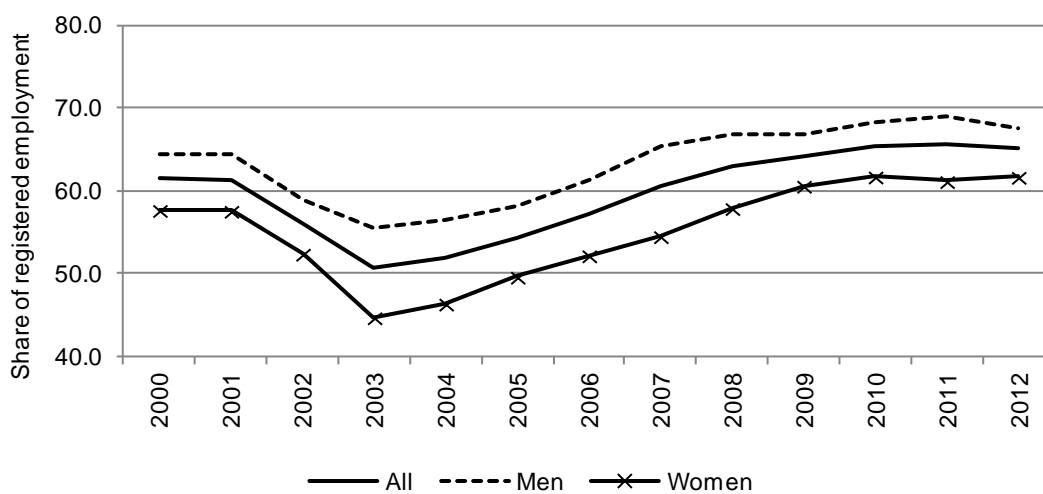


Note: Low: eight years of schooling or less. Medium: from nine to thirteen years of schooling. High: Over thirteen years of schooling.

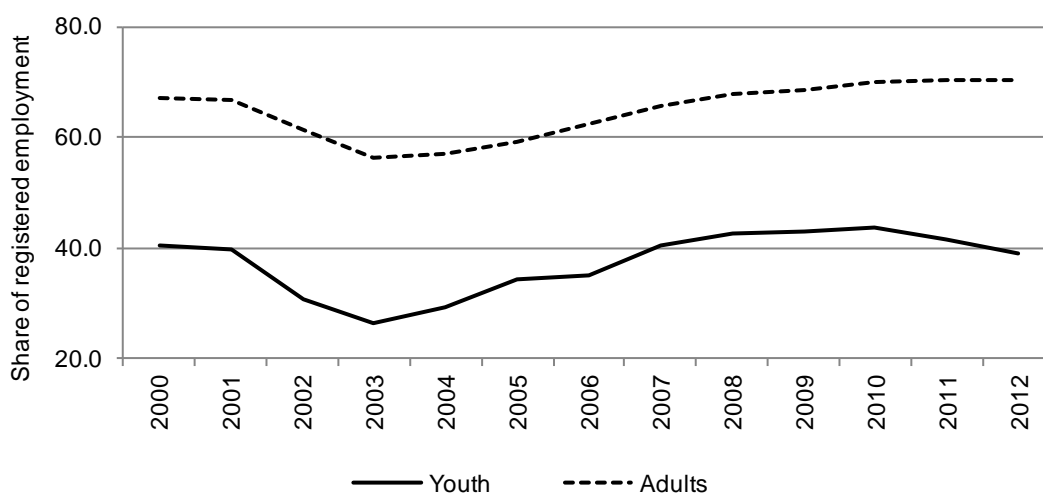
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 7: Share of employment registered with the national social security system: employed workers, 15 years old or more, 2000–12

(a) Overall and by gender



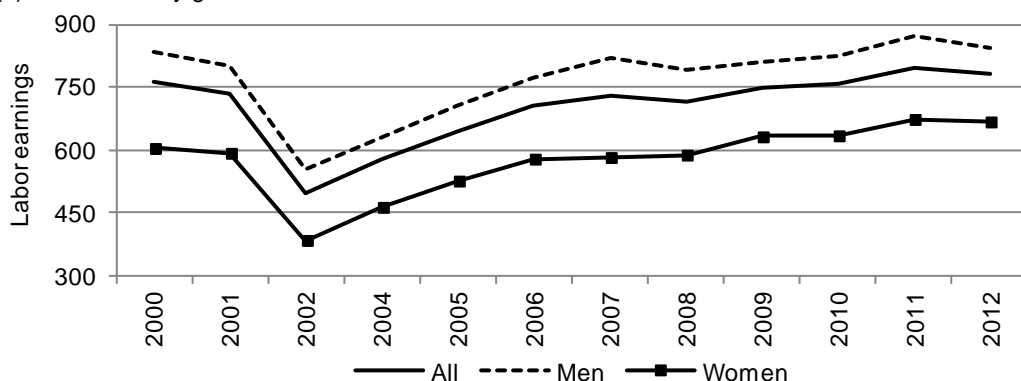
(b) By age groups



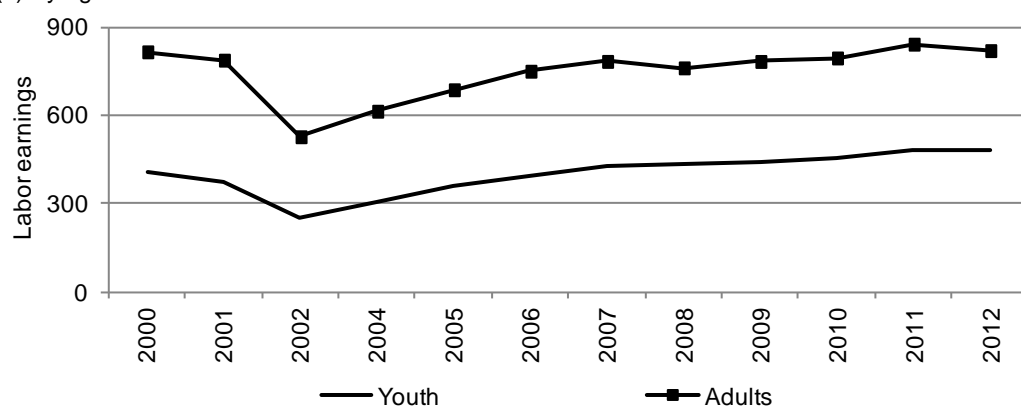
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 8: Monthly labour earnings at PPP dollars of 2005, 2000–12

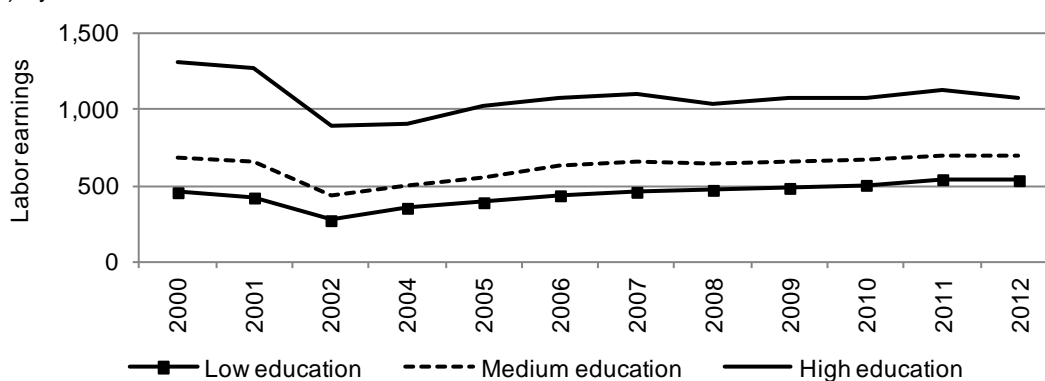
(a) Overall and by gender



(b) By age



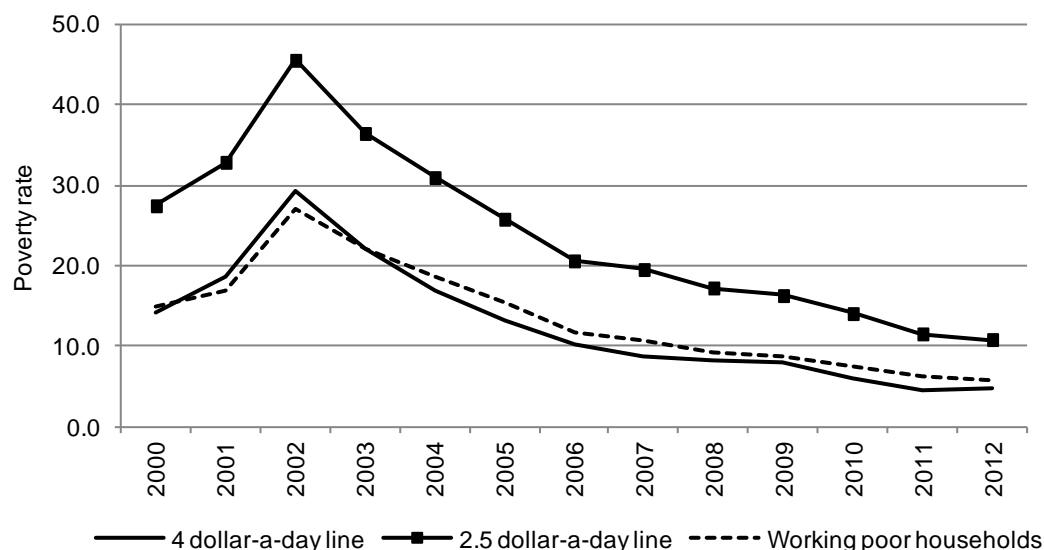
(c) By educational level



Note: There is no information about incomes from secondary occupations for the year 2003. Hence, that year was not taken into account for estimations of labour earnings.

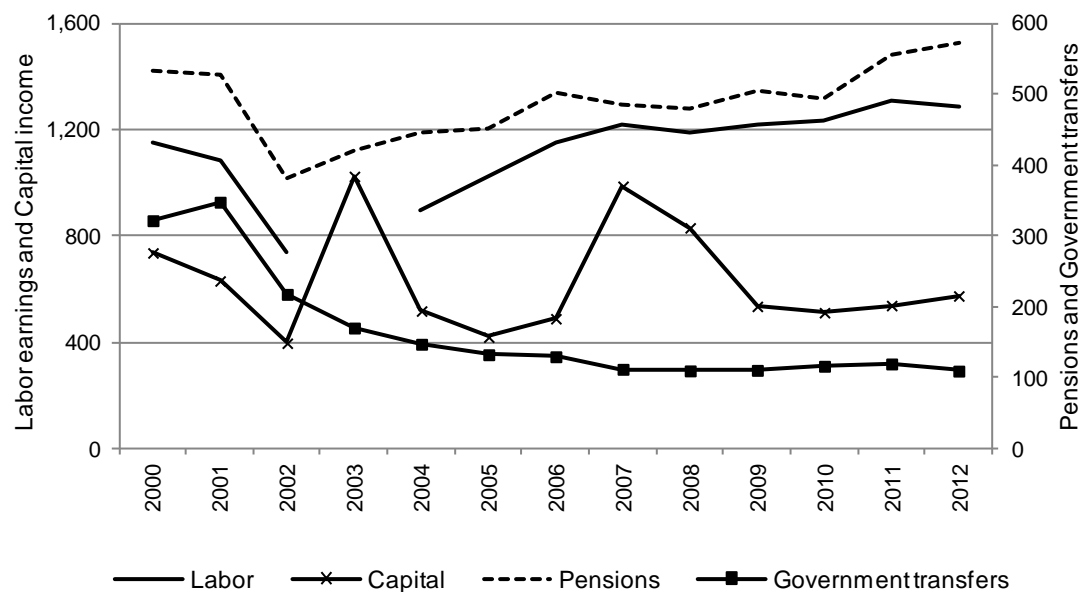
Source: Authors' calculations from SEDLAC (CEDLAS and the World Bank 2014).

Figure 9: Poverty rates and working poor households, 2000–12



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

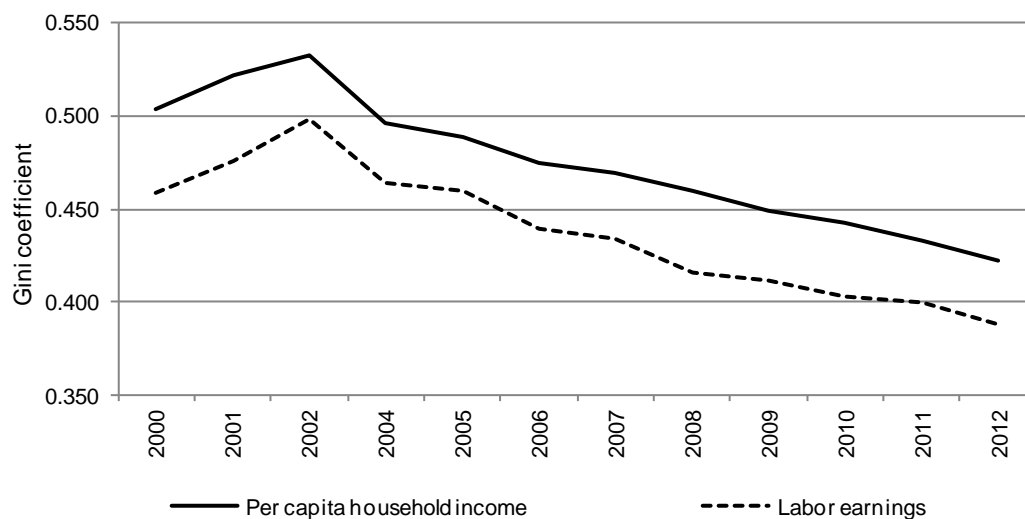
Figure 10: Sources of monthly household total income at PPP dollars of 2005, 2000–12



Note: There is no information about incomes from secondary occupations for the year 2003. Hence, that year was not taken into account for estimations of labour earnings.

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

Figure 11: Gini coefficient of household per capita income and labour earnings, 2000–12



Notes: There is no information about incomes from secondary occupations for the year 2003. Hence, that year was not taken into account for estimations of labour earnings.

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

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

Tables

Table 1: Household surveys' description

	Number of households	Number of persons
2000	22,763	83,399
2001	22,298	83,964
2002	21,148	77,733
2003	26,505	93,244
2004	27,303	94,772
2005	27,511	94,813
2006	37,521	129,410
2007	17,891	61,760
2008	36,543	124,222
2009	35,956	120,642
2010	35,857	118,833
2011	35,447	115,147
2012	34,356	110,850

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}	379737	362995	323448	352031	383818	419049	454526	493857	527235	531717	580427	631909	643912
GDP per capita ¹	10290	9739	8596	9271	10019	10843	11658	12556	13288	13285	14376	15515	15672
GDP per person employed ¹	36325	34173	34206	34711	34886	35301	36512	39110	39751	39117	41658	42467	42674
GDP growth	-0.79	-4.41	-10.89	8.84	9.03	9.18	8.47	8.65	6.76	0.85	9.16	8.87	1.90
GDP per capita growth	-1.83	-5.36	-11.73	7.85	8.07	8.22	7.52	7.71	5.83	-0.03	8.21	7.92	1.01
Exports of goods and services ^{1,2}	10.99	11.58	28.38	25.93	25.71	25.07	24.76	24.63	24.48	21.35	21.71	21.82	19.71
Agriculture, value added (% of GDP)	5.05	4.89	10.82	11.04	10.47	9.46	8.46	9.47	9.92	7.58	10.10	10.70	9.09
Industry, value added (% of GDP)	28.06	27.04	32.40	34.90	35.79	35.83	35.91	34.00	32.54	32.12	31.22	31.11	30.50
Services, value added (% of GDP)	66.88	68.07	56.78	54.06	53.74	54.71	55.63	56.53	57.54	60.29	58.68	58.19	60.41
Agriculture, value added ^{1,2}	13,819	13,964	13,645	14,583	14,360	15,956	16,373	17,978	17,522	14,775	18,915	18,500	16,450
Industry, value added ^{1,2}	52,006	48,623	41,907	48,818	55,345	60,437	66,512	71,487	74,371	73,483	79,211	86,520	86,217
Services, etc., value added ^{1,2}	87,750	84,226	76,509	79,717	85,159	92,284	99,740	106,551	115,153	118,991	128,246	139,538	144,773
Total population ²	36.90	37.27	37.63	37.97	38.31	38.65	38.99	39.33	39.68	40.02	40.37	40.73	41.09
Working age population (15-64) ²	22.93	23.25	23.57	23.89	24.20	24.52	24.83	25.14	25.45	25.75	26.04	26.33	26.61

1: US dollars at 2005 purchasing power parity.

2: In millions.

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

Table 3: Share of employment by occupational position: all employed workers, 15 years old or more, 2000–12

(a) All employed workers

	Employer	Wage/salaried employee	Self- employed	Unpaid worker
2000	4.60	72.13	22.07	1.19
2001	4.38	71.29	23.41	0.92
2002	3.98	72.07	22.98	0.98
2003	3.76	74.06	20.78	1.40
2004	4.13	74.24	20.46	1.17
2005	4.14	74.40	20.36	1.10
2006	4.19	75.79	19.01	1.02
2007	4.41	76.70	17.99	0.90
2008	4.60	76.28	18.50	0.62
2009	4.33	75.88	19.07	0.73
2010	4.46	76.97	17.79	0.78
2011	4.35	77.08	17.93	0.64
2012	4.17	77.25	18.04	0.54

(b) Youth (15 to 24 years old)

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2000	0.66	85.66	11.20	2.48
2001	0.56	83.80	13.64	1.99
2002	0.65	82.34	14.64	2.37
2003	0.95	82.30	13.19	3.56
2004	0.89	83.87	12.30	2.93
2005	0.74	85.35	10.59	3.31
2006	0.91	86.43	9.77	2.89
2007	1.08	87.81	9.17	1.95
2008	0.57	89.13	8.93	1.37
2009	0.91	87.03	9.62	2.45
2010	0.73	89.26	8.39	1.62
2011	0.98	89.35	8.05	1.62
2012	0.81	88.92	8.72	1.54

(c) Adults (25 to 64 years old)

	Employer	Wage/salaried employee	Self-employed	Unpaid worker
2000	5.11	70.73	23.25	0.90
2001	4.87	69.84	24.59	0.70
2002	4.43	71.15	23.82	0.60
2003	3.97	73.75	21.35	0.94
2004	4.58	73.76	20.86	0.80
2005	4.66	73.65	21.03	0.66
2006	4.57	75.31	19.53	0.59
2007	4.82	75.66	18.86	0.65
2008	5.14	75.11	19.29	0.46
2009	4.67	75.08	19.83	0.43
2010	4.77	76.16	18.49	0.58
2011	4.65	76.28	18.61	0.46
2012	4.42	76.59	18.63	0.36

(d) Men

	Employer	Wage/salaried employee	Self- employed	Unpaid worker
2000	5.79	69.14	24.28	0.79
2001	5.70	68.25	25.52	0.53
2002	5.18	66.82	27.32	0.68
2003	4.94	70.39	23.81	0.87
2004	5.39	70.94	23.09	0.58
2005	5.39	71.20	22.85	0.56
2006	5.39	72.62	21.42	0.58
2007	5.57	73.34	20.59	0.51
2008	5.75	73.19	20.76	0.30
2009	5.39	72.58	21.57	0.46
2010	5.69	74.27	19.57	0.48
2011	5.52	74.06	20.13	0.29
2012	5.08	74.27	20.31	0.34

(e) Women

	Employer	Wage/salaried employee	Self- employed	Unpaid worker
2000	2.82	76.58	18.79	1.80
2001	2.48	75.69	20.35	1.48
2002	2.32	79.26	17.03	1.38
2003	2.18	79.00	16.70	2.12
2004	2.38	78.81	16.83	1.98
2005	2.41	78.83	16.91	1.85
2006	2.53	80.17	15.68	1.62
2007	2.74	81.50	14.29	1.47
2008	3.00	80.58	15.35	1.07
2009	2.89	80.37	15.65	1.08
2010	2.75	80.74	15.30	1.20
2011	2.70	81.34	14.83	1.13
2012	2.86	81.50	14.81	0.83

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

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

(a) All employed workers

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	0.83	5.74	8.25	7.86	24.00	8.69	9.66	7.83	19.28	7.87
2001	1.06	5.42	8.35	7.21	23.91	8.50	8.99	8.45	20.22	7.90
2002	1.37	5.52	7.31	6.73	21.78	7.64	9.10	10.34	23.30	6.91
2003	2.10	7.26	6.19	7.30	23.35	7.29	9.22	8.15	21.53	7.61
2004	1.71	7.69	6.48	7.79	23.88	7.52	9.08	7.64	20.54	7.67
2005	1.63	7.47	6.72	8.48	23.56	7.36	9.65	7.21	20.24	7.69
2006	1.37	7.17	7.06	8.94	23.91	6.94	9.83	7.21	19.44	8.12
2007	1.28	7.20	7.54	9.14	22.89	7.49	10.65	7.11	18.89	7.81
2008	1.67	7.10	7.31	9.11	23.68	7.42	9.89	7.66	18.56	7.60
2009	1.75	6.44	7.07	9.05	23.09	7.37	10.45	7.72	19.34	7.73
2010	1.56	6.73	7.17	8.73	23.18	7.61	10.78	7.56	18.99	7.69
2011	1.60	7.14	6.97	9.40	22.79	7.55	10.10	7.93	18.76	7.76
2012	1.56	6.74	6.64	9.03	22.96	7.79	10.25	8.65	18.82	7.56

(b) Youth (15 to 24 years old)

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	0.74	6.50	7.89	9.59	34.72	7.46	8.05	4.40	13.00	7.65
2001	0.92	6.11	8.56	7.90	33.86	6.31	7.97	4.70	15.38	8.29
2002	1.65	6.82	6.85	7.48	31.28	5.33	8.89	6.90	16.73	8.06
2003	2.43	8.93	6.22	7.76	35.33	4.65	8.12	5.52	13.69	7.34
2004	1.80	10.00	6.56	8.83	33.33	5.82	8.14	4.39	13.59	7.54
2005	1.91	9.44	7.19	10.14	32.42	6.53	9.12	4.00	12.99	6.25
2006	1.46	7.95	8.01	10.53	33.28	5.48	9.67	4.22	11.73	7.67
2007	1.00	8.05	7.70	11.36	32.14	5.84	11.43	3.31	12.39	6.77
2008	2.57	8.86	7.52	10.55	33.34	6.07	9.43	3.83	10.73	7.10
2009	2.34	8.47	6.73	11.51	32.11	6.42	10.83	3.93	10.96	6.70
2010	1.65	8.45	7.03	10.59	33.27	5.80	11.26	3.93	10.94	7.08
2011	1.67	8.03	6.93	13.49	32.20	5.08	9.51	4.95	11.34	6.81
2012	1.74	8.29	6.76	13.08	32.67	5.38	9.55	4.87	11.55	6.11

(c) Adults (25 to 64 years old)

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	0.83	5.61	8.33	7.46	21.76	9.04	10.02	8.71	20.48	7.76
2001	1.06	5.32	8.25	7.16	21.87	9.03	9.19	9.34	21.05	7.73
2002	1.27	5.34	7.40	6.65	19.95	8.12	9.12	11.10	24.52	6.53
2003	2.02	6.86	6.19	7.19	20.92	7.90	9.48	8.80	23.09	7.54
2004	1.70	7.22	6.43	7.63	21.89	7.94	9.27	8.41	21.89	7.61
2005	1.59	7.18	6.64	8.15	21.71	7.66	9.72	7.93	21.66	7.76
2006	1.33	7.05	6.89	8.69	21.89	7.35	9.87	7.95	20.90	8.09
2007	1.32	7.08	7.53	8.61	21.13	7.87	10.52	8.01	20.05	7.87
2008	1.47	6.75	7.26	8.84	21.84	7.75	10.00	8.49	19.92	7.69
2009	1.62	6.07	7.12	8.73	21.64	7.57	10.38	8.45	20.63	7.79
2010	1.56	6.48	7.28	8.38	21.44	7.94	10.77	8.23	20.21	7.71
2011	1.56	7.07	7.03	8.75	21.15	7.94	10.19	8.47	19.99	7.85
2012	1.51	6.53	6.63	8.48	21.31	8.19	10.32	9.34	19.96	7.74

(d) Men

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	1.21	6.04	11.14	12.74	25.16	12.53	10.29	7.94	12.02	0.91
2001	1.61	5.71	11.14	12.00	25.08	12.71	9.19	8.75	12.79	1.02
2002	1.81	5.84	9.93	11.39	24.00	11.49	9.55	9.93	14.72	1.35
2003	2.72	7.25	8.83	12.37	25.82	10.82	10.53	8.70	12.25	0.70
2004	2.20	7.89	9.10	13.12	25.31	11.10	10.09	8.19	12.08	0.93
2005	2.16	7.73	9.49	14.26	25.00	10.82	10.17	7.50	11.92	0.95
2006	2.03	7.41	10.16	14.91	25.46	10.39	10.39	7.33	11.54	0.38
2007	1.88	7.61	10.73	15.01	23.58	10.95	11.14	7.18	11.52	0.41
2008	2.55	7.63	10.22	15.30	24.22	10.87	10.03	8.18	10.83	0.16
2009	2.63	6.84	9.82	15.28	24.11	10.92	10.35	8.13	11.56	0.36
2010	2.29	7.62	10.03	14.54	24.14	11.24	10.71	7.83	11.36	0.24
2011	2.43	7.71	9.51	15.64	23.13	11.24	10.72	7.75	11.47	0.40
2012	2.33	7.36	9.18	14.97	24.01	11.60	10.39	8.62	11.18	0.36

(e) Women

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	0.26	5.29	3.94	0.59	22.27	2.96	8.71	7.66	30.09	18.24
2001	0.26	4.98	4.31	0.28	22.21	2.42	8.70	8.00	30.97	17.87
2002	0.77	5.08	3.72	0.35	18.74	2.36	8.48	10.91	35.06	14.53
2003	1.27	7.29	2.63	0.47	20.01	2.53	7.45	7.40	34.03	16.92
2004	1.04	7.41	2.84	0.39	21.90	2.56	7.69	6.88	32.28	17.02
2005	0.90	7.12	2.87	0.46	21.55	2.56	8.92	6.80	31.77	17.04
2006	0.47	6.85	2.76	0.71	21.78	2.17	9.06	7.05	30.34	18.82
2007	0.43	6.61	2.99	0.74	21.91	2.52	9.93	7.02	29.44	18.41
2008	0.44	6.35	3.23	0.46	22.94	2.59	9.70	6.94	29.36	17.98
2009	0.54	5.89	3.33	0.53	21.68	2.51	10.58	7.16	29.96	17.81
2010	0.53	5.49	3.16	0.58	21.84	2.52	10.89	7.19	29.69	18.12
2011	0.43	6.33	3.37	0.56	22.31	2.32	9.23	8.20	29.08	18.18
2012	0.46	5.86	3.02	0.55	21.46	2.36	10.05	8.69	29.72	17.82

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

Table 5: Monthly labour earnings at PPP dollars of 2005, 2000–02, 2004–2012

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

	All	Gender		Age		Occupational position			Educational level		
		Men	Women	Youth	Adults	Employer	Wage/salarie d employee	Self- employed	Low	Medium	High
2000	761.7	837.0	605.2	405.9	815.9	1746.9	748.6	636.4	455.7	684.7	1313.4
2001	736.0	800.6	593.8	369.8	787.7	1740.8	733.3	573.5	420.9	657.3	1270.9
2002	497.8	556.0	385.5	253.7	527.3	1459.5	485.5	394.2	271.8	433.4	896.1
2004	578.4	632.4	464.6	305.2	614.1	1162.0	571.5	485.0	353.2	502.6	909.3
2005	646.1	707.3	527.4	361.4	687.0	1529.7	631.3	517.3	389.7	555.8	1024.8
2006	705.8	774.6	579.8	390.8	750.1	1409.4	704.1	556.7	435.5	625.1	1071.5
2007	732.6	821.2	583.6	430.5	783.5	1506.1	716.8	607.9	458.5	651.6	1103.8
2008	718.5	792.8	589.5	436.5	761.4	1222.0	726.8	559.6	471.3	644.4	1036.8
2009	747.4	809.1	633.1	442.4	783.2	1354.0	758.7	567.2	484.2	659.1	1079.8
2010	756.8	826.4	635.5	453.8	795.0	1248.5	769.7	577.1	504.4	665.1	1072.2
2011	799.0	872.2	674.6	483.0	841.9	1192.2	826.4	587.2	541.6	695.3	1127.6
2012	781.0	843.7	668.7	480.9	820.0	1068.1	806.9	604.7	535.1	693.3	1074.4

(b) By economic sector

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	860.6	630.6	891.8	516.1	587.4	794.7	1252.5	1015.8	815.2	300.8
2001	1123.5	617.9	826.4	463.2	556.7	791.8	1252.6	963.9	795.6	277.9
2002	633.5	519.7	581.1	293.8	375.3	557.4	923.1	484.6	508.4	181.5
2004	781.2	495.0	734.8	409.4	461.4	667.0	840.9	777.9	654.8	213.6
2005	1326.1	525.1	780.2	440.4	529.0	724.9	932.5	943.5	702.9	212.8
2006	1106.1	579.3	873.5	522.8	581.7	814.5	986.8	962.4	811.2	234.4
2007	1328.1	604.4	826.8	587.0	612.3	837.6	1005.4	935.1	843.7	227.8
2008	804.6	623.8	858.1	572.3	588.9	869.1	932.8	971.1	833.2	249.2
2009	824.0	641.1	858.0	587.8	621.7	838.7	989.4	1040.2	853.2	263.2
2010	971.5	665.9	933.8	584.1	615.1	875.9	978.7	996.9	863.7	270.8
2011	938.1	697.7	988.9	606.7	656.8	957.9	1022.3	1056.4	922.5	287.0
2012	907.5	682.5	921.1	612.0	663.6	924.3	979.7	1043.6	887.7	279.1

Note: There is no information about incomes from secondary occupations for the year 2003. Hence, that year was not taken into account for estimations of labour earnings.

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

Table 6: Hourly wage in main occupation at PPP dollars of 2005, 2000–02, 2004–12

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

	All	Gender		Age		Occupational position			Educational level		
		Men	Women	Youth	Adults	Employer	Wage/salaried employee	Self-employed	Low	Medium	High
2000	4.83	4.86	4.77	2.98	5.18	8.57	4.66	4.75	3.18	4.28	8.30
2001	4.82	4.86	4.76	3.01	5.15	9.45	4.69	4.46	3.12	4.26	8.18
2002	3.40	3.57	3.18	2.06	3.63	8.20	3.25	3.19	2.19	2.90	6.02
2004	3.81	3.84	3.77	2.42	4.00	6.09	3.67	3.82	2.51	3.33	6.00
2005	4.22	4.18	4.28	2.61	4.42	9.41	4.01	3.86	2.73	3.46	6.90
2006	4.52	4.53	4.50	2.88	4.74	7.77	4.46	4.02	2.92	3.89	7.10
2007	4.69	4.83	4.49	3.09	4.97	8.17	4.53	4.48	3.08	3.98	7.36
2008	4.73	4.78	4.65	3.20	4.97	6.67	4.73	4.24	3.17	4.21	7.02
2009	4.91	4.93	4.88	3.31	5.12	7.29	4.93	4.28	3.33	4.24	7.33
2010	4.97	4.96	4.99	3.46	5.16	7.22	4.95	4.49	3.37	4.26	7.31
2011	5.30	5.31	5.29	3.94	5.47	6.80	5.38	4.59	3.66	4.51	7.69
2012	5.21	5.17	5.26	3.71	5.40	6.00	5.27	4.78	3.68	4.61	7.26

(b) By employment sector

	Primary activities	Low-tech industry	High-tech industry	Construction	Commerce	Utilities & transportation	Skilled services	Public administration	Education & Health	Domestic workers
2000	4.20	3.54	5.25	3.61	3.45	4.15	7.33	6.42	6.19	3.50
2001	6.11	3.65	5.01	3.78	3.33	4.53	7.49	6.06	6.07	3.52
2002	3.19	3.09	3.36	2.68	2.25	3.32	5.65	3.44	4.19	2.51
2004	4.30	3.25	4.35	2.83	2.65	3.74	5.37	4.82	5.09	2.62
2005	12.47	3.11	4.45	3.01	3.00	3.81	6.03	5.68	5.36	2.54
2006	5.72	3.36	5.04	3.22	3.30	4.43	6.28	6.22	6.18	2.65
2007	6.91	3.25	4.88	3.44	3.50	4.61	6.54	5.78	6.49	2.62
2008	5.28	3.84	4.98	3.55	3.48	4.82	6.64	6.12	6.39	2.61
2009	5.05	3.89	5.07	3.75	3.63	4.74	6.24	6.77	6.64	2.87
2010	5.73	4.08	5.37	3.80	3.61	4.89	6.25	6.49	6.77	2.85
2011	6.06	4.18	6.11	3.86	3.89	5.12	6.67	7.12	7.20	3.13
2012	5.24	4.11	5.34	4.07	4.02	5.23	6.43	6.60	7.00	3.30

Note: There is no information about incomes from secondary occupations for the year 2003. Hence, that year was not taken into account for estimations of hourly wages.

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

Table 7: Share of persons in the labour force by educational levels:
population 15 years old or more, 2000–12

	Low	Medium	High
2000	38.36	39.34	22.30
2001	37.59	38.91	23.49
2002	36.02	40.43	23.55
2003	30.72	40.30	28.97
2004	33.73	40.77	25.50
2005	32.82	40.74	26.45
2006	31.19	41.47	27.33
2007	29.22	43.04	27.74
2008	28.69	42.98	28.34
2009	27.99	43.05	28.95
2010	26.42	43.60	29.98
2011	26.03	43.35	30.61
2012	24.84	45.01	30.15

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

Table 8: Unemployment rate by educational levels:
population 15 years old or more, 2000–12

	Low	Medium	High
2000	17.73	16.01	7.59
2001	21.49	20.44	10.08
2002	19.05	20.28	12.03
2003	16.06	17.81	11.38
2004	12.94	15.29	7.80
2005	10.77	13.44	6.02
2006	9.34	11.73	5.57
2007	7.93	8.92	4.92
2008	8.65	9.05	4.39
2009	9.94	9.89	5.34
2010	7.55	9.14	4.77
2011	6.79	9.24	4.50
2012	6.92	9.44	4.23

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