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Macroeconomic policy for full and productive employment and decent work for all:

An analysis of the Argentine experience

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Preface

The primary goal of the ILO is to contribute, with member States, to achieve full and productive employment and decent work for all, including women and young people, a goal embedded in the ILO Declaration 2008 on *Social Justice for a Fair Globalization, and*[1] which has now been widely adopted by the international community.

In order to support member States and the social partners to reach the goal, the ILO pursues a Decent Work Agenda which comprises four interrelated areas: Respect for fundamental worker's rights and international labour standards, employment promotion, social protection and social dialogue. Explanations of this integrated approach and related challenges are contained in a number of key documents: in those explaining and elaborating the concept of decent work[2], in the Employment Policy Convention, 1964 (No. 122), and in the Global Employment Agenda.

The Global Employment Agenda was developed by the ILO through tripartite consensus of its Governing Body's Employment and Social Policy Committee. Since its adoption in 2003 it has been further articulated and made more operational and today it constitutes the basic framework through which the ILO pursues the objective of placing employment at the centre of economic and social policies.[3]

The Employment Sector is fully engaged in the implementation of the Global Employment Agenda, and is doing so through a large range of technical support and capacity building activities, advisory services and policy research. As part of its research and publications programme, the Employment Sector promotes knowledge-generation around key policy issues and topics conforming to the core elements of the Global Employment Agenda and the Decent Work Agenda. The Sector's publications consist of books, monographs, working papers, employment reports and policy briefs.[4]

The *Employment Working Papers* series is designed to disseminate the main findings of research initiatives undertaken by the various departments and programmes of the Sector. The working papers are intended to encourage exchange of ideas and to stimulate debate. The views expressed are the responsibility of the author(s) and do not necessarily represent those of the ILO.

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Executive Director
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[1] See http://www.ilo.org/public/english/bureau/dgo/download/dg_announce_en.pdf

[2] See the successive Reports of the Director-General to the International Labour Conference: *Decent work* (1999); *Reducing the decent work deficit: A global challenge* (2001); *Working out of poverty* (2003).

[3] See http://www.ilo.org/gea. And in particular: *Implementing the Global Employment Agenda: Employment strategies in support of decent work, "Vision" document*, ILO, 2006.

[4] See http://www.ilo.org/employment.

Foreword

At the 99th session of the International Labour Conference, constituents endorsed the need to promote a 'pro-employment' macroeconomic framework. It was felt that the current framework, while making an important contribution to the goal of macroeconomic stability, paid insufficient attention to the way in which macroeconomic policy instruments either helped or hindered employment creation and poverty reduction. In the standard framework that has evolved since the days of the structural adjustment programmes of the 1980s and 1990s, and that has remained intact during the 2000s, the emphasis is on attaining key nominal targets pertaining to debts, deficits and inflation. The rationale is that attaining such targets in the medium to long run will engender a predictable macroeconomic environment that is crucial for supporting growth and hence employment creation. It now appears that macroeconomic stability is necessary, but by no means sufficient to engender inclusive, job-rich growth.

The ILO/Korea partnership programme has been supporting the Employment Policy Department's endeavour to identify existing constraints in the macroeconomic policy instruments that may hinder generation of full and productive employment, and to suggest a way forward for job-rich growth. A series of country case studies has been conducted, and the current case study of Argentina represents one result. The country case study analyzes recent macroeconomic performance, shows their relationship with employment outcomes or lack thereof, reviews the existing programmes on employment and social safety nets, and reflects the views of the ILO constituency and other key national stakeholders that were collected through interviews and consultations.

In the last two decades, the Argentine experience shows that the macroeconomic regime is crucial in determining the overall performance of the labour market and has a direct impact on the level and distribution of welfare. Argentina experienced two distinct macroeconomic policy frameworks marked by the 2001-2002 crisis. The first one was the so called "Convertibility Plan" between 1991 and 2001, characterized by a pro market approach that involved fixing of the nominal exchange rate to the US dollar in order to stabilize prices. This was also accompanied by international trade liberalization measures that eliminated most non-tariff barriers and abruptly reduced tariffs, as well as complete liberalization of the capital accounts. The combination of measures implemented led to firms in the tradable sectors adapt to the competitive environment by using more imported inputs and replacing workers by imported machinery, resulting in negative growth of employment. While non-tradable sectors generated much of the new jobs during this period, the 1995 recession triggered by the Tequila crisis led to a stagnation of employment growth in the non-tradable sectors as well. Since 1995, this was accompanied by a declining trend in real average income of workers, rising wage income inequality, and increases in poverty. Following the 2001-2001 crisis, the macroeconomic policy was radically altered to focus on the preservation of a stable and competitive real exchange rate (SCRER), between 2002 and 2006. It led to very fast growth of employment led by generation of new formal jobs, as well as a recovery of real wages and improved income distribution. The win surpluses that SCRER generated showed itself as a powerful mechanism to promote economic growth and improve social conditions. Together with such macroeconomic setting, labour market policies and institutions as well as interventions that improve the quality of jobs and reinforce real wage recovery are crucial. Furthermore, in order to significantly reduce poverty incidence, such labour market policies shall be complemented by income and social protection policies focused on the vulnerable groups.

The paper was presented and discussed at the Employment Policy Department Knowledge Sharing Workshop on Pro-employment macroeconomic frameworks, sectoral

strategies for employment creation and the informal economy that took place between the 20th and 23rd of September at the ILO premises in Geneva**.**

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1. Introduction

The Argentine experience in the last two decades offers rich evidence about the linkages between macroeconomic policies and the generation of employment and wages. Thus, its analysis may contribute to a better understanding of some central issues involved in the current debates regarding macroeconomic policy design and targets. Specifically, it is an illustrative case to assess to what extent macro policies may either help or hinder the goal of attaining full and productive employment in an emerging market economy.

This experience makes it possible to compare two macroeconomic policy frameworks that were implemented for relatively extended time spans and were particularly dissimilar in conception and design as well as in their targets, instruments and institutional environment. Their outcomes in terms of economic growth, inflation, employment generation, wages and income distribution were also markedly different.

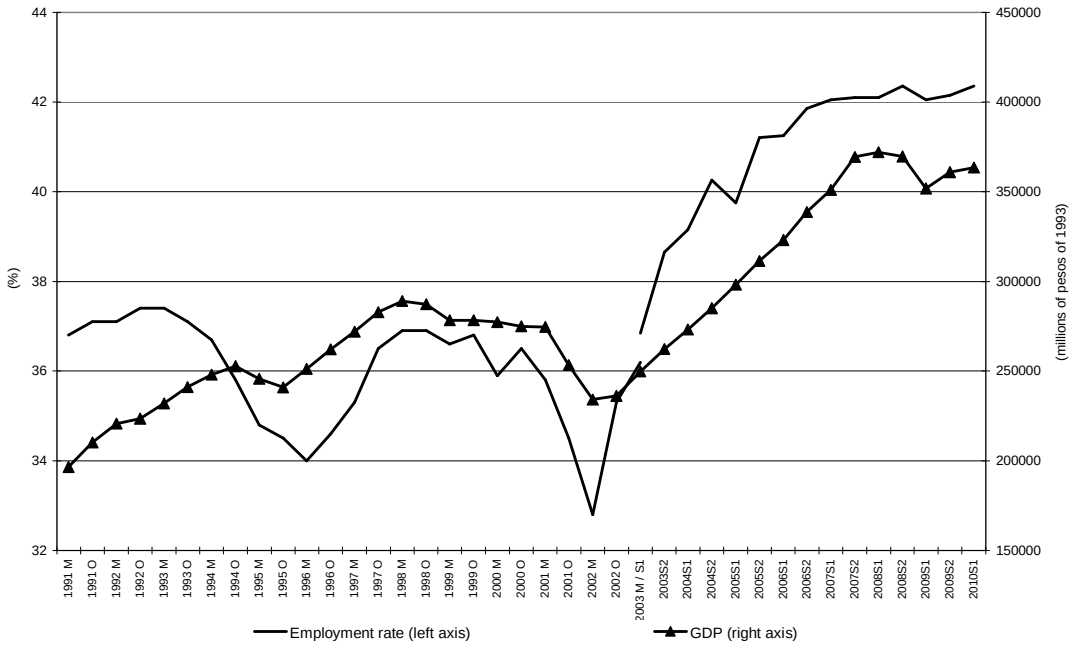
The first of these programs was the so-called "Convertibility Plan" between 1991 and 2001. The main pillar of this macroeconomic policy framework, inspired in a decidedly market-friendly approach to macro policy, was the legal fixation of the *nominal* exchange rate, employed as an anchor to stabilize prices. Two elements of this macro policy setting were particularly negative regarding labor market and social performances: the strong real appreciation associated with the utilization of a fixed exchange rate as the main anti-inflationary instrument, on the one hand, and the radical opening to imports, on the other. The combination of both factors caused an intense loss of workplaces in tradable sectors, particularly in manufacturing. Figure 1.1 shows that the aggregate employment rate started to fall in 1992, while GDP kept growing fast until 1995, when the economy was hit by the Tequila effect. The period 1992-94 is actually the only one in the figure in which GDP and employment show a clearly negative correlation. Later on, the recession of 1995 brought aggregate unemployment and underemployment to unprecedented historical highs, and the recovery of employment in 1996-98 reduced unemployment rates but not enough as to recover pre-recession levels, as we will discuss in detail below.

The second macroeconomic policy setting ruled between 2002 and 2006 and, in contrast with the nineties, it was centrally characterized by the preservation of a stable and competitive *real* exchange rate (SCRER).

These two policy periods are separated by the deep crisis of the Convertibility regime in 2001-2002, in which macroeconomic, labor market and social indicators suffered an additional and abrupt worsening, as illustrated by the steep fall in the employment rate in Figure 1.1. The post crisis period witnessed an extended reversion of what had been observed in the nineties: employment recovered at a fast pace, unemployment and underemployment were reduced substantially and income distribution tended to improve considerably.

However, from late 2006, a new phase emerged in which the SCRER setting tended to fade away. Internal causes were predominant in the progressive weakening of the coherence of the SCRER policy setting. The main domestic factor was a process of increasing inflation. The recent global crisis had also a negative but relatively limited impact: it brought the economy to a short-lived recession, but the strong disruptive financial mechanisms that had characterized past recessions in Argentina have not been present this time. Furthermore, some effective policy measures were taken to cushion the impact of the recession on the labor market, like a program to subsidize employment in critical sectors, as we discuss below. Be that as it may, from early 2007 to 2010, the performance of labor market variables, income distribution and social indicators lost dynamism, thus interrupting the very favorable trends that had been observed after the convertibility crisis. The behavior of the employment rate (see graph 2.1) is an example of this.

Graph 2.1 Seasonally-adjusted real GDP (in millions of pesos of 1993) and employment rate



Source: Authors' elaboration based on Ministry of Economy and OFJ (Orlando J. Ferreres Asociados SA).

The contents of the paper are the following. In Chapter 2, we discuss the labor market evolution in the decade of the nineties, focusing on the connections between labor market and macroeconomic variables. We understand that the main channels from macroeconomic policies to labor market performance go through aggregate demand behavior and consequently through the level of economic activity (that is closely correlated to employment generation), and also through aggregate relative prices, like the real exchange rate, real wages and wages measured in foreign currency, particularly because these prices affect labor utilization. We focus on the design of the Convertibility Plan and on its performance, including its effects on the labor market, as well as on income distribution, poverty and extreme poverty.

Then, in Chapter 3, we analyze the macroeconomic and labor market evolution in the 2000's. In the first section of the chapter we offer a short description of the crisis of the Convertibility regime and then we present the stylized facts of the design and performance of the SCRER policy model. In the second section, we focus on the subsequent phase, characterized by the disarticulation of the SCRER model from late 2006 on. Here, we also present a brief analysis of the impact of the recent global crisis on the Argentine economy. Then, given macroeconomic policies and events, we examine the evolution of employment, wages and income distribution in the 2000's.

A number of boxes accompany the development of the main text, presenting additional information, like descriptions of specific social programs.

Finally, in Chapter 4 we present some policy conclusions based on the Argentine experience.

2. The Convertibility Program and the labor market

Argentina embraced a radical experiment of market-oriented macro policies in the nineties. Being a reaction against a story of accentuated macroeconomic instability, the central aspect of the Convertibility program was its anti-inflationary character. The "hard pegging" of the peso to the US dollar was the main instrument. The program also involved the elimination of most non-tariff barriers to international trade and an abrupt tariff reduction, among other reforms.

It had a sudden and strong anti-inflationary impact, but some of the domestic collateral effects were problematic, particularly regarding employment generation. The tradable sectors, the industrial sector in particular, had to face strong competitive pressures from imported goods, in a context of major real exchange-rate appreciation.

To adapt to this very competitive environment, productive firms resorted to a number of strategies: they increased the use of imported inputs, they also became importers of part of the products that were produced domestically before the trade opening, and replaced workers by imported machinery, among other measures aimed at reducing costs and increasing productivity. Taking the behavior of aggregate demand as given, all these adaptive reactions of firms negatively affected employment generation. In turn, this would cause an increase in unemployment, thus affecting average real wages, as a negative correlation can be found between these two variables.

The program also involved a complete opening to capital flows. At first, the size of capital inflows was very important in comparison with domestic financial aggregates. They fed aggregate demand and the economy started to growth fast. Therefore, GDP growth made possible the creation of new jobs, more intensely in non-tradable sectors, thus compensating the already mentioned negative effects of the exchange rate appreciation and the trade opening on employment creation. But from late 1992 onwards, and particularly after the 1995 recession triggered by the Tequila effect, a slower employment creation in non-tradable sectors added up to the negative trends observed in manufacturing, so that employment creation did not have the dynamism that would have been required for unemployment rates to return to pre-Tequila levels.

As already stated, the two main guidelines in the conception of the Convertibility program were a strong emphasis in nominal stability, as the main macro policy target on one side, and total reliance on market mechanisms on the other.

Launched in March 1991, The Convertibility program implied that monetary policy was given away almost completely. This was a result of the fixation of the exchange rate under a full opening of the economy to capital movements. The Convertibility Law also stipulated that the Central Bank had to back 100 percent of the monetary base with foreign currency reserves, and validated domestic contracts in foreign currencies. Moreover, to prevent fiscal dominance, strict limits were established to the credit of the Central Bank to the government. A new Chart of the Central Bank made it autonomous of the Executive in 1992, and also set narrow margins to its possibilities of purchasing public bonds and lending to commercial banks. Thus, monetary management was essentially confined to preserve nominal stability through the pegging of the nominal exchange rate. The stabilization program was jointly applied with a deep and extensive process of market-friendly reforms. Most state-owned firms were privatized and many market regulations were removed.

In practice, the Convertibility Law transformed the Central Bank into a currency board. This feature was essential in the new macroeconomic regime. In effect, the legal constraints on the Central Bank's ability to autonomously manage the monetary base left

domestic liquidity and credit almost fully dependent on the balance of payments results. The Central Bank's reserve accumulation led to endogenous expansions of the monetary base and bank credit and fostered domestic demand. On the other hand, international reserves contractions automatically resulted in reductions of the monetary base and domestic credit, inducing a recession.

In the spirit of the program, the evolution of real variables as the real exchange rate, interest rates, economic growth and aggregate employment were to be determined by market forces. The pro market policy environment and the attenuation of the economic uncertainty of the private sector under the new rules of the game would favor, it was expected, investment, productivity gains and growth. Furthermore, fiscal policy was not explicitly oriented to promote growth or employment. Particularly after the Asian crises of 1997, fiscal measures were also confined to preserve macroeconomic stability or, more precisely, to issue austerity "signals" aiming to reduce uncertainty among market participants.

In other words, employment, along with real investment, economic growth and other real variables were not explicit targets of macro policy. Neither monetary, nor fiscal, nor exchange rate policy were devoted to those real targets, but to stabilize prices and create an environment supposedly favorable for private agents' decisions in free markets. It was expected that these decisions would in turn result in an improved performance of all those variables. Moreover, with regard to employment, it is interesting to remark that, from 1994 onwards, when the economy started to show a disappointing performance, the main policy reaction was in the direction of "more market", that is, less regulation: successive reforms were promoted trying to remove legal constraints to private labor contracts, thus pointing to a "more flexible" labor market [5] (see Box 1).

The extreme rigidity of the Convertibility policy setting did not follow exclusively from the legal rules but also from the actual behavior of markets. For instance, the flexibility of the real exchange rate *vis-à-vis* negative external shocks would have required a significant downward flexibility of domestic non-tradable goods prices. Actually, no significant nominal deflation took place either in the 1995 recession or in the depression that followed the impact of the Asian crises, in spite of the observed significant flexibility of low-skilled wages and the measures taken to promote flexible contracts in the labor market.

[5] These measures had also the intention of contributing to make possible a nominal deflation of wages and prices when it became evident, particularly through the second half of the decade, that the peso was strongly appreciated and the exchange rate peg made impossible the correction of the problem through a nominal devaluation.

Box 1

The evolution of the legal environment for labor contracts

The structural reforms faced in Argentina during the nineties included changes in labor legislation. A new employment law was approved in 1991. Facing historically high unemployment rates, deeper reforms were introduced in 1995, 1998 and 2000. Following Maurizio et al. (2009), the most important changes in these norms during the nineties were the following:

- Inflation adjustment was not allowed, wages included;
- Social security contributions of employers were reduced; the process began in 1995 and implied a 40% average reduction of previous rates, with the purpose of partially compensate the negative effect of the exchange rate appreciation on firms' profitability;
- Collective bargaining agreements regarding the working day regulation were authorized, as a mechanism to flexibilize the allocation of working time by firms, thus cutting average costs (by reducing extra hours of work);
- Part-time contracts were authorized, with lower firing and social security contributions costs in comparison with regular contracts (they were established in 1991 and their scope was widened with the normative changes sanctioned in 1995);
- In 1995 the test period was extended, under which there is no need to warn before laying off someone and social security charges for the employer are suppressed. The test period lasted for three months and could be extended to six months in small and medium size companies whether the clause was included in collective bargaining agreements. In 1998, the period was reduced to 30 days; still without social security contributions and the layoff costs could be cut by 50% whether the period extended to six months. In 2000, the duration went back to three months.
- Severance payments were reduced. The decision weighted more on those workers with less than two years in the companies. Before that, the seniority severance pay amounted to one month salary per working year or higher fraction of three months, using as a base the best monthly and regular wage. The amount couldn't be less than two months wage. From 1998, the seniority severance pay equaled the twelfth part of the best wage for each working month or fraction above ten days. The minimum was 2/12 of that remuneration.

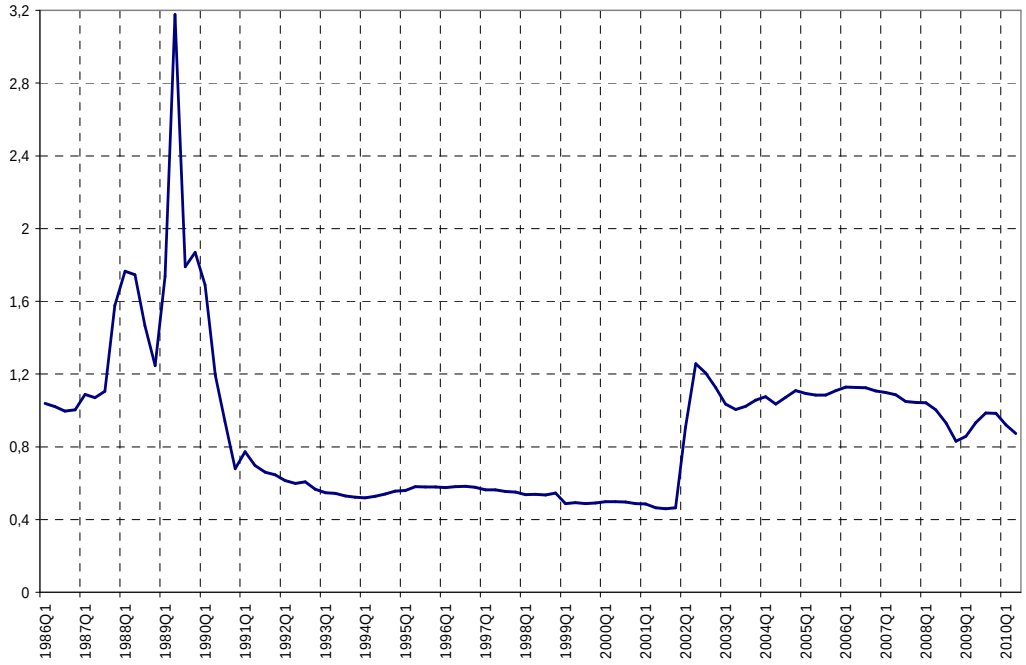
Changes after the crisis of the convertibility regime

After the 2001-2002 crisis, some of these changes were reversed. In the beginning of 2002, when unemployment skyrocketed surpassing 21% of the active population, the National Economic Emergency Law suspended unjustified layoffs for 180 days and doubled the severance pay. Later on, in 2007, when unemployment went back to one digit rates, the severance pay returned to its previous level. In the 2000s a new legal framework for collective and individual labour relations was sanctioned; collective bargaining was promoted, actions were taken to recover the capacity of the state to the inspection of work conditions as well as its ability to mediate in labour conflicts. In 2004, a new labour law determined, among other changes:

- The maximum test period was reduced from six to three months; the employer was forced to warn 15 days in advance; and any extension of the test period was forbidden;
- The layoff severance pay reduction was abolished for those workers with less than two years in the workplace, except for learning contracts.
- The social security contributions made by companies with less than 80 workers received a special treatment, though only to those which increased the labour force;
- The system to register new workers was unified and simplified to reduce its complexity;
- Regarding the duration of collective agreements, which had been shortened by previous reforms, the principle of validity of the collective agreement until a new one replaced it was established. Moreover, higher level agreements (by sector of activity) prevail over lower level ones (at company level).

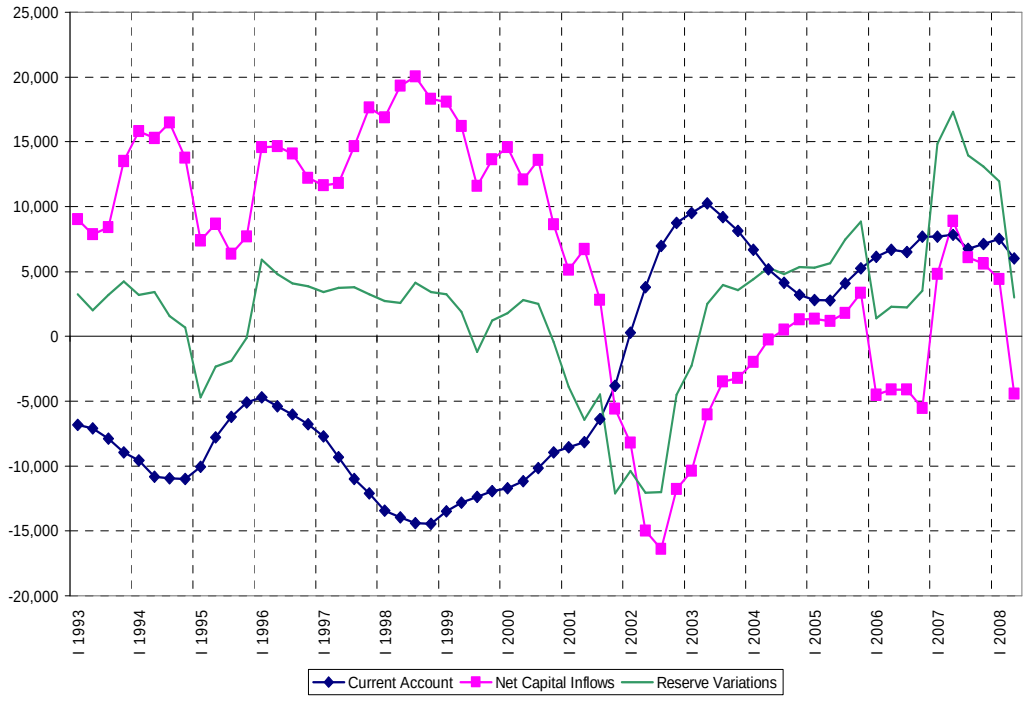
The real exchange rate was already significantly appreciated when the nominal exchange rate was pegged to the dollar, and this appreciated level would last throughout the nineties (*see* graph 2.2 and table 2.1).

Graph 2.2 Multilateral real exchange rate (second semester 1986 = 1)



Source: Authors' elaboration based on Central Bank and ECLAC.

Graph 2.3 Balance of payments (four quarters m.a. in millions of dollars)



Source: Authors' elaboration based on Ministry of Economy.

Table 2.1 Multilateral real exchange rate, average per period (2nd semester of 1986 = 1)

Period	Real exchange rate index
1986-1998	1,26
1986-1990	1,41
1990:4 – 1991:1 (*)	0,73
1991:2 – 1994:4 (*)	0,58
1995 – 2001	0,53
2002	1,12
2003 – 2006	1,08
2007	1,07
2008	0,95
2009	0,94
2010 (**)	0,90

Source: Authors' elaboration based on Central Bank and ECLAC.
(*) Quarters
(**) Average of the period January – August of the year.

Up to a certain point, the currency board mechanism played its intended role as an automatic stabilizer of the external accounts. A balance of payments deficit would cause a contraction in foreign reserves and domestic liquidity, thus causing a demand contraction, a fall in imports and a reduction of external deficit. However, under the Convertibility regime, even the deepest recessions left the current account with a substantial deficit. These features weighed on the negative side of international investors' perceptions and hence, the Argentine version of the currency board was far from dissipating the risk of default.

Additionally, the volatility of the international financial conditions confronted by the country was mechanically transmitted to both domestic activity and employment levels. The correlation between national performance and the behavior of international capital markets is a common characteristic of emerging market economies, but in the Argentine case, the correlation was accentuated since the macroeconomic regime lacked any significant monetary and nominal flexibility to compensate for external impulses.

The Argentine economy experienced two macroeconomic cycles of quite similar mechanics in the nineties. The stylized features of the cycle, as a general pattern, can be described synthetically as follows[6]: The cycle begins with an expansionary phase caused by capital inflows typically attracted by high interest rate differentials between local and foreign assets in contexts of credible fixed exchange rates. Foreign reserves accumulate (*see* graph 2.3), and domestic credit and aggregate demand expansions follow. Real exchange rate appreciation may emerge as a consequence of inflation generated by demand pressures and residual price increments (as a consequence of some lasting indexation

[6] Cycles of this kind have been experienced in several countries at different moments, in the period of financial globalization, under fixed exchange rates. A formal model of the cycle, inspired by the Argentine and Chilean experience in the late seventies and early eighties can be found in Frenkel (1983). English versions are presented in Taylor (1991 and 2004) and Williamson (1983). Asian and Latin American crises in the nineties are discussed and analyzed in this vein by Taylor (1998) and Frenkel (2003a).

mechanisms, for instance). The current account worsens as a result of the increasing net imports flow caused by both the exchange rate appreciation and the demand expansion. The external financial needs rise and lead to debt accumulation. Consequently, the external vulnerability of the economy progressively increases. As the perceived risk rises, capital inflows tend to slow down and interest rates climb, pushed by the increases in both the country risk and the exchange risk premium. Reserves accumulation stops and a contraction begins. Higher interest rates and capital outflows give place to an illiquid financial scenario "à la Minsky" (1975). Moreover, the rise in the real interest rate, an endogenous consequence of increasing external fragility, sharpens the contraction of the economic activity, creating additional sources of financial distress. Finally, the exchange rate regime may collapse simultaneously with a financial crisis.

The main stylized facts of this cyclical pattern were observed twice during the decade in Argentina.[7] The first cycle was between 1990 and 1995 (the year in which the economy was stalled by the spillover effects of the Mexican crisis), while the second one was between 1996 and 2001 (*see* the cycles of GDP in figure 1.1, and the cycles of the current account result and foreign reserves accumulation in graph 2.3). The first of these cycles would not end in an exchange-rate crisis, but it would lead to a recession and a financial crisis in 1995.

It may be noted that the stabilization program was very effective in checking inflation. In the case of internationally tradable goods, for which the wholesale price index is a good approximate indicator, the inflation rate went down immediately to levels of the order of 1 percent per month (from about 6% on average in the second semester of 1990) and continued to go down later.[8] The consumer price index (CPI), in contrast, rose by 58.5% between the launching of the plan and December 1994. Although in this case, there was a sharp fall in the rate of inflation too, the residual inflation build-up in the first three years of the program was still very substantial. This is explained by the greater weight of non-tradable goods and services (less affected by the pegging of the exchange rate) in the calculation of the CPI, and therefore reflects the change in relative prices over the period. The divergence between the variations of these two price indexes disappeared towards the end of 1994, however. From that time, and up to the final crisis of the macroeconomic regime in December 2001, monthly inflation rates always tended to be very close to zero, with a predominance of small negative figures.

It is important to note that the real exchange rate, which had reached extraordinarily high levels during the stampede in the foreign exchange market, which set off the crises of hyperinflation in 1989 and 1990, dropped almost vertically in the course of the latter year. That is to say, before the launching of the convertibility plan (see graph 2.2 and table 2.1). As may be seen in the table, already in the period immediately before the launching of the stabilization plan, the multilateral real parity was almost 58 percent of its average level in 1986-1988 (that is, without considering the peaks of 1989-90). Since then, a long phase followed in which the variations in the real parity were comparatively minor, until the monetary regime broke down in December 2001.

[7] For an extensive treatment of this macroeconomic dynamic and the Convertibility crisis see Damill and Frenkel (2003).

[8] This index registered a total variation of 12.5% from the beginning of the plan up to December 1994, which is slightly over 3 percent in annualized terms, in line with international inflation in the same period as measured, for example, by the United States CPI.

The growth led by capital inflows in the early nineties continued up to late 1994. In that year, however, there was a rise in international interest rates (following the FED's decision to increase its discount rates as from February). This began to affect the inflow of funds negatively and, because of the growing current account deficit, the foreign exchange reserves stopped growing.

The rise in international interest rates in 1994 and its consequences for the inflow of capital and the inherent mechanics of the Convertibility regime could have by themselves led to an economic contraction. At the end of that year, however, Mexico suffered a run on the peso that ended in heavy depreciation. The effects immediately spread to Argentina. Consequently, instead of the country registering an endogenous adjustment in line with the typical workings of a currency board regime, the negative external shock led to a massive and rapid outflow of funds early in 1995, with a parallel and very marked rise in domestic interest rates. The stock of foreign exchange reserves went down abruptly and there was a corresponding contraction in liquidity. Aggregate demand behaved similarly bringing the economy to a recession. In this phase, the unemployment rate rose substantially and from then on it would remain at historically very high levels for more than a decade.

Nevertheless, the recession in the middle of the decade was a short-lived one. A powerful set of external and domestic financial support measures, arranged with the collaboration of the International Monetary Fund (IMF), made it possible to change the negative tenor of expectations quickly. In addition, by various means, and in spite of the limitations imposed by the Convertibility rule (that were however respected), the government carried out intensive monetary activity designed to shore up the banks and thus stop the financial crisis from deepening.

Thanks to the favorable effects of the financial support from abroad, it was possible to bring the monetary regime into being and towards the end of 1995; a new spell of expansion was beginning. The monetary mechanism behind this recovery was the same one observed in the early years of the 1990s: the access to external funds was gradually recovered; the inflow of capital began to exceed the current account deficit (which had gone down as a result of the recession), and the foreign exchange reserves recovered once again (*see* graph 2.3), as did the supplies of money and credit. The elements of the cyclical dynamic were again in motion.

Whether this new expansionary phase had similar features to the previous one, it was shorter-lived. The country risk premium went up in mid-1997, after the Thai devaluation, and growth slackened. The Russian crisis in 1998 finally brought the period of expansion to an end. Private inflows of funds declined from then on, the accumulation of reserves slowed and became negative somewhat later. As a result, a new phase of contraction of GDP began in mid-1998 (see graph 2.1), culminating in the collapse of 2001-2002, in which, among many other events, there was a steep depreciation of the peso and the government defaulted on a large part of its external and domestic financial commitments.

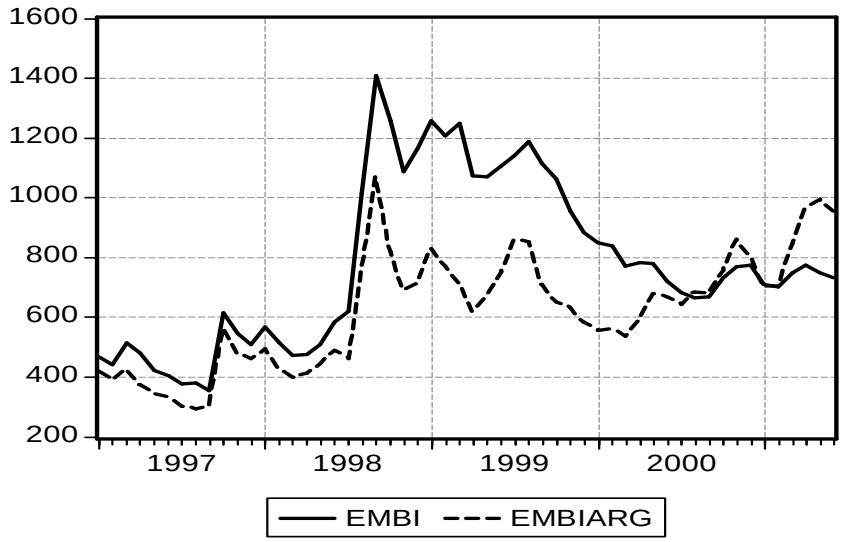
Fiscal policy under the Convertibility setting

The figures represented in graphs 2.5 and 2.6 help to concisely describe the aggregate fiscal performance in the nineties.

During the first years of the Convertibility regime the public sector went through a significant adjustment in comparison with the historical performance of the country, reaching an almost balanced result around 1993. The primary surplus showed historical peaks in 1992-93, above 2% of GDP. Then, the recession triggered by the Tequila effect, combined with a negative fiscal effect of a pro-market reform of the pension system, led to a decline in the primary surplus and to a small aggregate deficit from 1994 on. But a more significant change would be observed as from the Asian crises of 1997. The unfavorable

turn in the external financial situation after the Southeast Asian and Russian crises found Argentina with a high and growing current account deficit, an over-appreciated currency and an evident shortage of policy instruments for dealing with this set of problems, because of the rigidity of the macroeconomic policy framework adopted. Not surprisingly, in these conditions the country's risk premium rose sharply (see graph 2.4) and remained high, while access to external funds became more and more problematical.

Graph 2.4 Average country-risk premium for emerging market economies and for Argentina (1997:01 – 2001:06)



Source: Ministry of the Economy, Argentina, from Bloomberg.

Note: EMBI: Emerging Markets Bonds Index. From December 1997 on the series includes "External currency denominated Brady Bonds, Loans and Eurobonds, US dollar local market instruments", that is, corresponds to the so called "EMBI+". Figures before that data only include the first of the above mentioned component, thus corresponding to the EMBI. EMBIARG: Emerging Markets Bond Index-Argentina.

The rise in the country risk premium pushed interest rates strongly upwards. This had a negative impact on all debtors, including the public sector, in the form of an increased debt services' burden. As can be seen in graph 2.6, the fiscal deficit tended to increase from 1997 on. A superficial consideration of these figures seems to support the view that an expansionary fiscal policy was a main factor leading to the crisis of 2001-2002 [9], but a more careful look at the evidence shows that it was not. On the contrary, the fiscal stance became contractionary after the Asian crises, inasmuch as macro policy started to be dominated by the intention of the authorities to give "the right signals" of austerity to the private sector, as a way of favoring a decline in the country-risk premium and interest rates, severely affected by the contagion of the crises abroad.

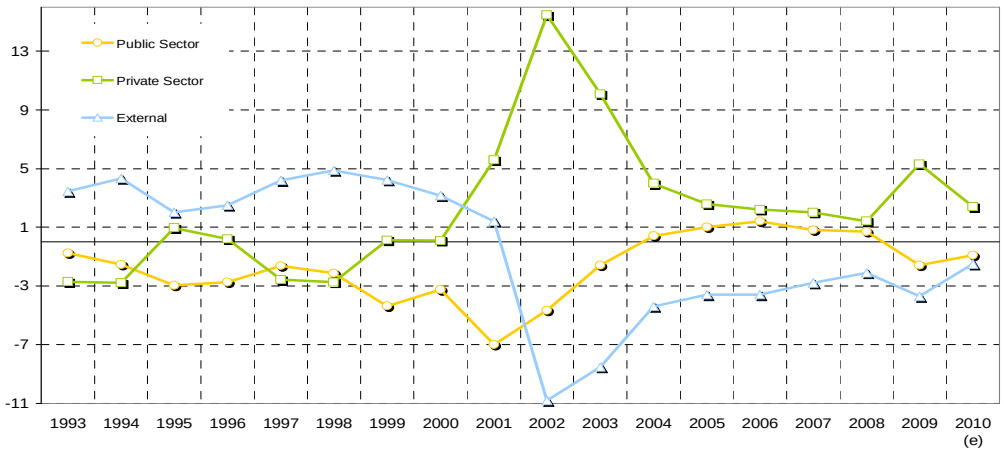
[9] The questionable view that the macroeconomic unbalances that brought about the crisis had originated in fiscal mismanagement acquired wide acceptance, particularly among IMF officials. We analyzed and questioned this view in depth in several previous works. See for instance Damill and Frenkel (2003) and Damill, Frenkel and Rapetti (2005).

The fact that fiscal policy became actually contractionary in the late nineties can be seen in the recovery of the primary surplus after 1996 (see graph 2.5). [10] Evidently, it is in the behavior of the interest services on the outstanding debt that the main explanation of the rising fiscal deficit has to be found.

Graph 2.5 Primary result of the national public sector (% of GDP)

Source: Ministry of Economy.

Graph 2.6 Aggregate financial surpluses by sector (% of GDP)



Source: Authors' elaboration based on Ministry of Economy.

[10] Successive Argentine governments assumed that fiscal austerity measures would restore confidence, damaged by contagion of crises abroad, thus allowing for a decline in interest rates and a recovery of private investment and private expenditure in general. Moreover, this was the course of action emphatically recommended to the country by the multilateral organizations in Washington. It was expected that fiscal discipline would entail stronger confidence, and consequently the risk premium would fall bringing interest rates down. Therefore, a recovery of domestic expenditure would push the economic out of the recession making also possible a recuperation of employment and a reduction in unemployment. Lower interest rates and an increased GDP would, in turn, reestablish a balanced budget, thus closing a virtuous circle.

The ‘confidence shock’ expected to revert those negative trends did not materialize in spite of the fiscal adjustment efforts. Moreover, the rounds of contractionary fiscal policies only reinforced the deflationary dynamics and the pessimistic expectations. Additionally, given that the improvement in the primary balance of the public sector accounts was not enough to compensate for an increased interest burden, the public deficit tended to grow, as we have already mentioned and can be seen in graph 2.6. Thus, public liabilities kept growing very fast.

The way to the crisis

In addition to the deterioration of the foreign financial environment, Argentina suffered a series of real external shocks since 1997, including a strong fall in the average price of exports, a contraction in foreign demand for locally produced goods and an additional real appreciation caused for the strengthening of the US dollar and the strong Brazilian devaluation of 1999. These negative shocks added to the rise in the country’s risk premium, thus paving the way for a crisis.

Under an increasingly difficult context and beyond deciding tax increases and expenditure cuts, the government also took some initiatives on the financial front, oriented to dissipate the expectations of a debt default. Since taking office in December 1999, De la Rúa’s government achieved three financial agreements with the IMF (see Box 2). It also launched two important ‘voluntary’ debt swaps in the second half of 2001. Notwithstanding that, the critical processes finally went on (i.e. the massive withdrawal of bank deposits and the contraction of international reserves). Furthermore, in December 2001 the government established hard restrictions on capital movements and on withdrawals of cash from banks (the so-called “corralito”). These measures aimed to avoid either the generalized bankruptcy of the banks or the violation of the currency board monetary rule, but their main objectives were to preserve the stock of reserves and avoid the devaluation (i.e. the formal abandonment of the convertibility regime). This was also the last drastic move attempting to prevent the default. Yet, these decisions did actually represent the end of the regime.

The December 2001 measures contributed to deepen the already strong social and political tensions. After a few days of social unrest and political commotion, the country witnessed the resignation of the government followed by a series of ephemeral presidents. One of them announced to the Congress the decision of defaulting on a portion of the public debt, and resigned a few days later. In the first days of 2002, with a new president, Argentina officially abandoned the currency board regime and the one-to-one parity of the peso to the US dollar.

Box 2

Argentina and the IMF in the nineties

It is at first sight striking that the 2001-2002 crisis and the massive default in the last days of the Convertibility regime took place in a country that for a long time had been considered an outstanding example of the Washington Consensus success. Almost until the end of the nineties, the IMF and most financial market's analysts considered the Argentinean experience as one of the most successful stories of macroeconomic policy and structural reforms in the financial globalization era.

The clearly disappointing performance of the macroeconomic regime of the nineties regarding employment generation, unemployment and income distribution was, as usual, an almost completely missing issue in those evaluations.

The default in Argentina took place one year after the IMF gave considerable support to sustain the Convertibility program in crisis. In August 2001, four months before the default, the IMF expanded by 8 billion dollars a current standby program and made a further disbursement. At that moment the development of the crisis was reaching its peak. The devaluation and the default were openly discussed (particularly in financial and academic circles in the United States) and there was a widespread opinion that the debt and the Convertibility regime were not sustainable. Assistance to Argentina was the last rescue package approved by the IMF during the period of the Clinton administration in the United States. For the critics of the IMF, all of the circumstances converged to make it an exemplary case. Actually, the support program openly showed weak flanks susceptible to criticism from its very conception. It did not involve any substantial change in the macroeconomic policy setting. In particular, the exchange rate regime was preserved. Besides the undeniable complexity and the difficulties that a regime change would have implicated, there was a complete lack of willingness to modify it among the authorities. Furthermore, from the IMF's perspective, the preservation of the Convertibility setting was consistent with the systematic support of the exchange rate regime that the organization had provided throughout the nineties.

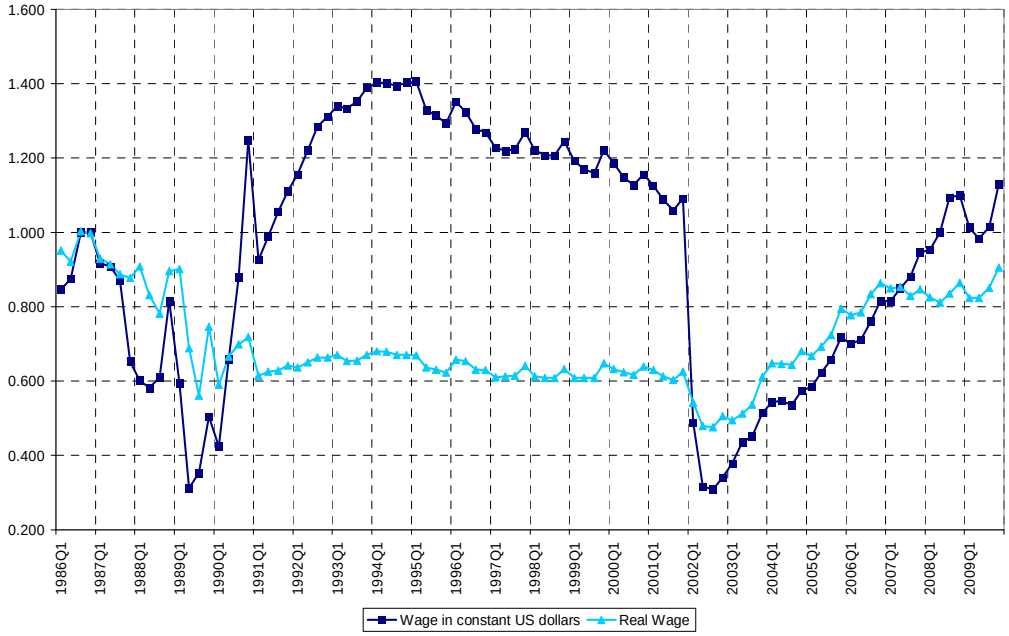
The labor market in the nineties

With lower inflation rates and higher levels of economic activity, the initial achievements of the Convertibility program, had positive effects in the labor market in 1991-92. On the one hand, greater economic activity meant greater demand for labor. On the other, the decline in inflation reduced the negative impact of the "inflation tax".

Privatization and fiscal adjustment measures had, however, a negative punctual impact on employment. Furthermore, the joint impacts of trade openness and exchange rate appreciation have lasting adverse consequences for employment in the production of tradable goods, especially in the manufactures.

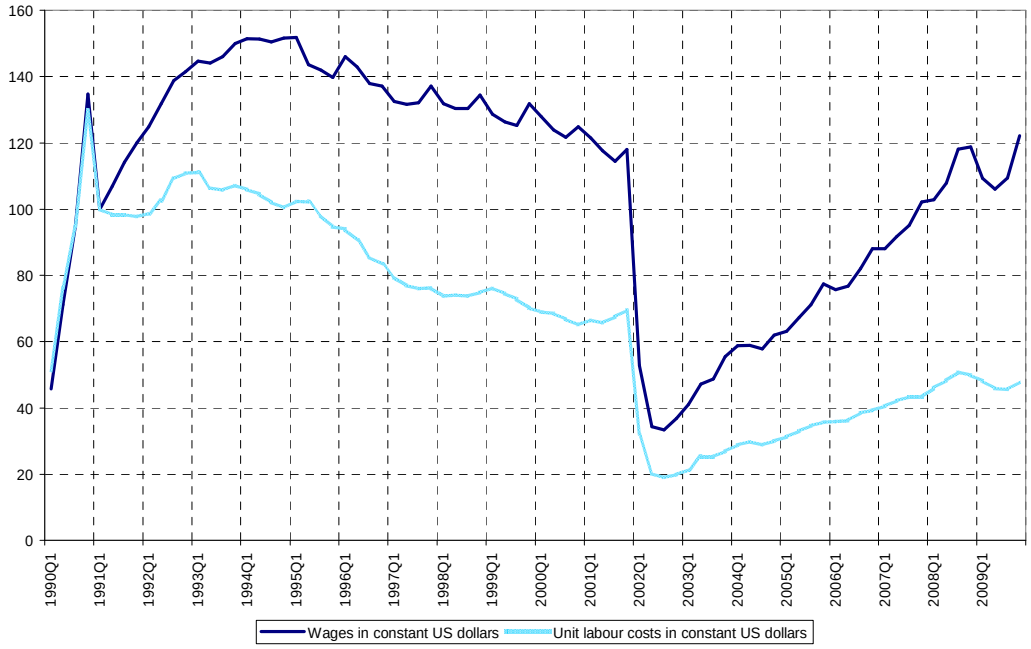
We have already showed the intense initial exchange rate appreciation (graph 2.2). This is also reflected in the evolution of wages. The graph 2.7 shows different measures of average wages in the manufactures. In the case of wages measured in US dollars, the drastic increase at the beginning of the period must be noticed. Like it happened with the real exchange rate, the subsequent variations in the decade may be considered of second order of magnitude.

Graph 2.7 Average real wages in the manufacture (deflated by CPI) and average wage in constant US dollars (second semester 1986 = 1)



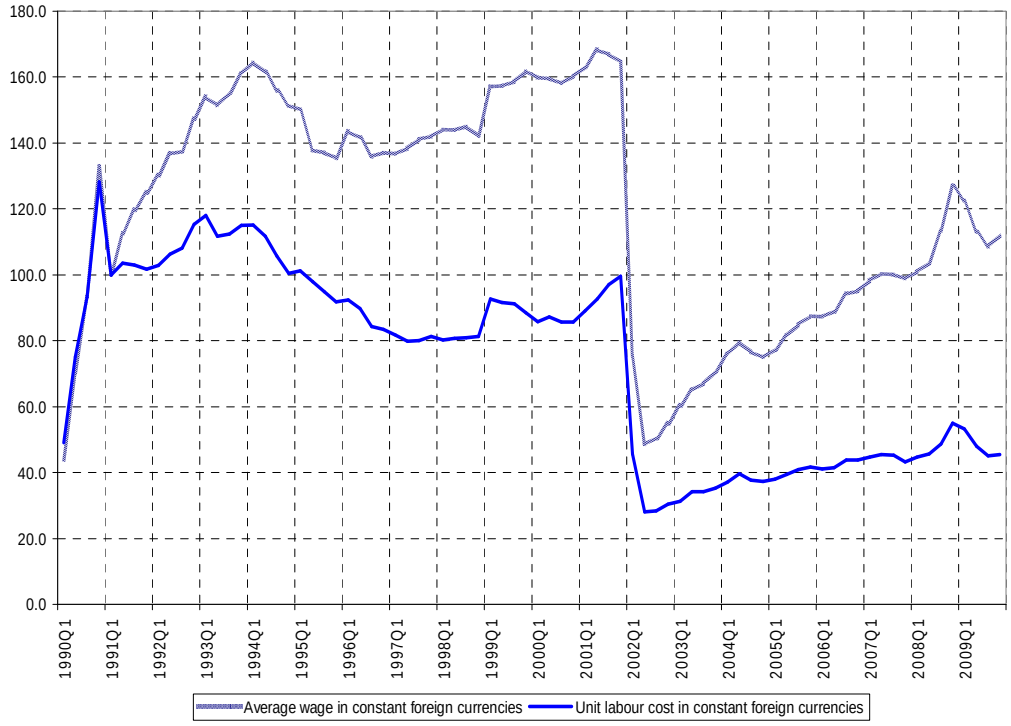
Source: Authors' elaboration based on INDEC and Central Bank.

Graph 2.8 Average wage in constant US dollars and unit labor costs in constant US dollars (first quarter of 1986=100)



Source: Authors' elaboration based on INDEC and Central Bank.

Graph 2.9 Average wage and unit labor costs, measured in constant foreign currencies (first quarter of 1986=100)*



Source: Authors' elaboration based on INDEC and Central Bank.

(*) The series have been expressed in terms of the value of the basket currency employed by the Central Bank to calculate the multilateral exchange rate.

Real wages in the manufactures, however, behaved very differently, which also reflected the process of exchange-rate appreciation. As the nominal prices of non-tradable goods and services rose considerably, and these goods and services weigh heavily in the CPI, wages deflated by this price index showed some initial decline and then a quite stable level during the decade.

The adaptive reaction of firms to both the trade opening and the sudden and significant increase in wages measured in US dollars is reflected by a very important increment in labor productivity in the manufacturing sector, particularly in the first half of the decade. This can be clearly seen by comparison of the series included in graphs 2.8 or 2.9. The average wage in the manufacturing sector measured in US dollars (graph 2.8), increased very fast until mid 1995. However, the other series in the graph shows that the unit labor cost measured in the same currency remained almost constant between early 1991 and mid 1995. The divergence between the two series reflects a very strong increase in labor productivity. From then on, until the abrupt end of the Convertibility regime, both series in graph 2.8 follow a softly declining trend that mainly reflects the fact that the local inflation remained below US inflation. However, this late period looks very differently in graph 2.9, where wages are not measured in US dollars but in the "basket currency" employed by the Central Bank to estimate the multilateral exchange rate. Wages measured in the basket currency followed a rising trend from 1997 on as a result of the US dollar appreciation and, later on, of the Brazilian devaluation of 1999 (among other devaluations in trade partner countries). These changes surpassed the effect of inflation differentials.

In the last days of Convertibility, wages measured in the basket currency were 65% higher than at its beginning in 1991. However, the unit labor costs in the industrial sector were almost the same that they had been at the start of the regime.

We will now focus on the behavior of employment and unemployment in the nineties. The series analyzed below refer to the urban population and are taken from the Permanent Household Survey (PHS)[11], which the National Institute of Statistics and Censuses (INDEC) carried out twice a year, in May and October[12]. Unless otherwise indicated, the series are defined as percentages of the total urban population. They are: participation rate, full-time employment rate[13], employment rate, involuntary underemployment rate, and unemployment rate. Graph 2.10 shows the evolution of these variables since the early 1980s.

It may be observed, to begin with, that the full-time employment rate shows a marked downward trend, dropping from 35-36% in the early eighties to 32% in the first half of 1990 and to 27.6% in the second half of 2001.[14]

In addition to this negative trend, this variable also displays a clear correlation with the macroeconomic cycle. As in the case of the gross domestic product (GDP), it displays two clear cycles in the 1990s. It goes up as from 1990, and then registers a pronounced fall, reaching its lowest point in 1996. It rises once again with the second period of expansion in the decade, but subsequently falls once more as from 1998.

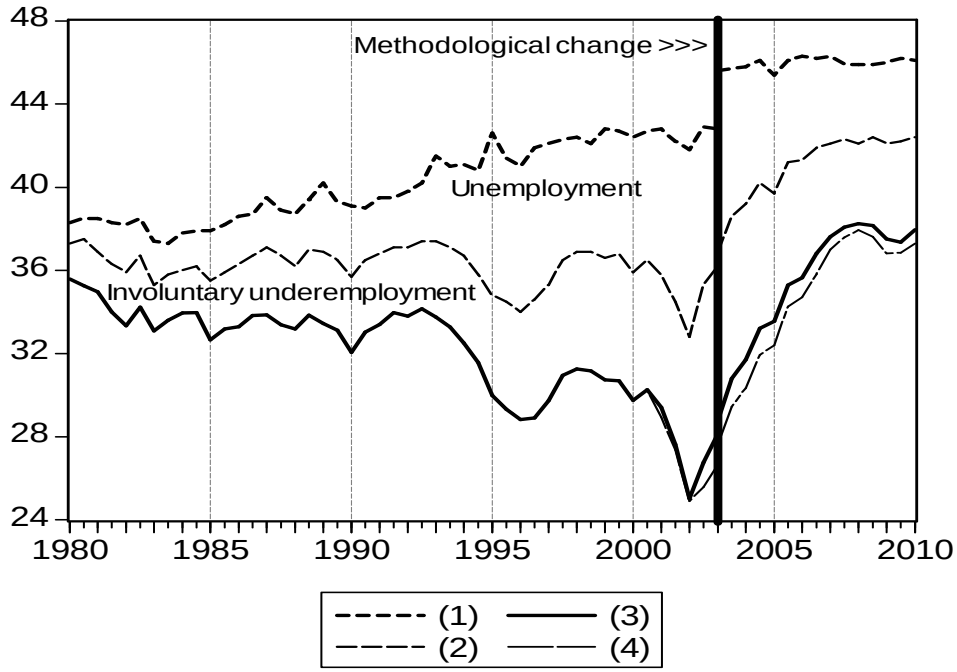
[11] The PHS collects information on the labour market situation in the country's urban centers. The data available for the nineties corresponds to the Greater Buenos Aires (GBA) while only since 1995 the PHS collects comparable information for 28 urban centers. The GBA is the largest Metropolitan Area in Argentina with a population of more than 12 million, representing about 37% of the total urban population and 33% of the total population. Urban population represents around 90% of the total population in the country, thus, rural employment is a very small fraction of total employment.

[12] The methodology and frequency of the PHS have recently been changed, as we will describe below.

[13] In the survey, an individual is considered to be employed full time if he works at least 35 hours per week. This group also includes those who, although they worked less than 35 hours per week, do not wish to work more hours (i.e., this variable includes “voluntary underemployment”).

[14] As in graph 2.10, in this section we have used half-year periods. Thus, the first half of the year corresponds to the survey carried out in May, while the second half corresponds to that carried out in October, so that 2000:1, for example, stands for the first half of 2000. Furthermore, in most cases in this section the % sign stands for “percentage points of the population”. However, whenever there may be any ambiguity, we use the expression “percentage points of the population” in full to refer to measurements of this nature.

Graph 2.10 Labor market indicators: Participation rate, employment rate, employment rate excluding PJJHD, full employment rate excluding PJJHD (as % of total urban population)



Source: Authors' elaboration based on INDEC.

(1) Participation rate; (2) Total employment rate; (3) Full-time employment rate; and (4) Full-time employment rate excluding PJJHD ("Plan Jefas y Jefes de Hogar Desocupados").

The peak of the full-time employment rate in the period of expansion in the early 1990s was registered in the second half of 1992, well before the turning point in GDP observed at the end of 1994, after the Mexican crisis. It is actually a remarkable fact that in 1993 and 1994, when the economy was still expanding at a significant rate, the ratio between full-time jobs and the total population was already going down.

Between the high point of 34.1% and the minimum observed in the second half of 1996, this rate fell by approximately 5.2%. It then recovered by about 2.4%, reaching a new peak in the first semester of 1998. It should be noted, however, that the latter value was well below the maximum attained in the previous period of expansion.

The subsequent decline went along with the recessionary trend started in mid 1998, both in the period of moderate contraction, up to mid-2001, and in the sharp fall in activity that occurred in the second half of 2001. At that moment, close to the end of the regime, this rate was 6% below the level it had reached in the first half of 1991.

The ratio between total employment and the population also showed a downward trend in the early 1990s, but this was considerably less pronounced than in the case of the full-time jobs, indicating that the rate of involuntary underemployment tended to rise in that same period. This increase became more marked in 1999-2000.

Furthermore, the evolution of the involuntary underemployment rate was counter-cyclical: it tended to rise when the full-time employment rate fell, and to fall when the latter rose. As a consequence of this behavior of underemployment, a component of total employment, the evolution of the latter is less closely linked with the economic cycle than full-time employment.

Finally, the labor force participation rate showed a markedly positive trend, not correlated with the macroeconomic cycle. Starting from around 38% in 1980, it went up to 39% in 1990 and then rose sharply still further, reaching 42.8% in the first half of 2001. Throughout the convertibility period, its trend corresponded to an increase of approximately one percentage point of the urban population every three years. The main reason for this behavior was a sustained increase in female participation in the labor force, an indicator that is still low in Argentina, by international standards.

As a result of the positive trend of the participation rate and the relative stagnation of the total employment rate, the unemployment rate rose sharply in the 1990s, with a marked upward jump in the period 1992-1995. As we will see in more detail later, the impact of the 2001-2002 crisis caused a further unfavorable jump in these indicators. The urban open unemployment rate rose to a peak of 21.5% in May 2002, but began to go down thereafter. Underemployment reached a peak of 19.9% of the economically active population in October 2002, but also went down afterwards when the economic recovery began to take hold after the crisis of Convertibility.

A simple labor market model [15]

In order to examine the relation between variations in the full-time employment rate and economic growth we worked out an estimated econometrically a simple model, included in Annex 1. We present a synthetic description here.

The model states that the variations in the full-time employment rate are primarily explained by a short-term effect of the level of activity (represented by GDP growth). The estimated income elasticity of employment is about 1.9, meaning that a ten percent increase in GDP causes an increase of 1.9 percentage points in the full-time employment rate to total population.

We also found a significant additional tendency, which may be conceived as the slow adjustment of firms (and, hence, of the full-time employment rate) to the surrounding conditions (mainly defined, at the beginning of the 1990s, by exchange-rate appreciation and trade openness). [16] This second factor is negative and significant for the period 1991-1996 and its magnitude is quite considerable: it explains a sustained decline of the full-time employment rate of 1.4 percentage points per year in this period. In other words, between 1991 and 1996 this trend of labor productivity would have explained, considered in isolation, an outstanding decline of about 7 percentage points in the full-time employment rate, thus revealing the remarkably high cost of the program in terms of employment creation. Notwithstanding, the observed decline in the full-time employment rate was lower than 7 percentage points because GDP growth in the period made possible an increase in labor demand that partially compensated for this negative trend.

Let us now focus on the evolution of involuntary underemployment. As already noted, this variable displays a counter-cyclical behavior, so that it is negatively correlated with full-time employment. Our estimates using data from the 1990s indicate that the

[15] This section partially draws on Damill, Frenkel and Maurizio (2007).

[16] The important effects of openness with exchange-rate appreciation in the labour market in Argentina in the nineties are examined for instance in Damill, Frenkel and Maurizio (2002) and Damill and Frenkel (2006).

involuntary underemployment rate tends to fall (or rise) by 0.2 percentage points for each percentage point of increase (or decline) in the full-time employment rate.

Industrial sector employment

As we already noted, trade openness and exchange-rate appreciation contributed to the contraction in employment in the 1990s, particularly through their negative impact on the industrial activities. The other two sectors with a substantial share in the number of full-time jobs (commerce and other services) also show negative figures, albeit much smaller. More precisely, in the period up to the first half of 2001, the contraction of full-time employment in industrial activities accounted of itself for a reduction in the number of full-time jobs almost equivalent to the total contraction in full-time employment, as can be seen in Table 2.2.

The collapse in economic activity in the second half of 2001, however, caused an employment contraction, which was more uniformly distributed among the various sectors, thus tending to reduce to some extent the share of manufacturing in the total fall in full-time employment between the beginning and end of the period.

Furthermore, if we examine the evolution of full-time employment by different groups of workers, we see that the job losses were particularly marked among male workers and heads of household, who traditionally predominate in the manufacturing sector.

Table 2.2 Rate of full employment per productive sector (in percentage of total population of GBA; selected semesters)

	1990:1	1990:2	1996:2	1998:1	2000:2	2001:1	2001:2	Change 2001:2– 2001:1	Change 2001:2– 1990:1
Manufactures	8,54	8,76	6,33	6,69	5,55	5,20	4,66	-0,54	-3,88
Construction	1,91	2,30	1,81	2,17	1,89	1,60	1,22	-0,37	-0,69
Commerce	6,60	7,17	6,22	6,15	6,55	6,00	5,79	-0,20	-0,81
Transport & communication	2,75	2,43	2,93	3,00	3,05	3,01	2,72	-0,29	-0,03
Financial services	2,38	2,59	3,33	3,66	3,74	3,26	2,93	-0,33	0,55
Other services	7,95	7,70	6,56	7,62	7,49	7,32	6,94	-0,38	-1,01
Total	30,13	30,95	27,18	29,29	28,27	26,38	24,27	-2,11	-5,86

Source: Authors' calculation based on INDEC.

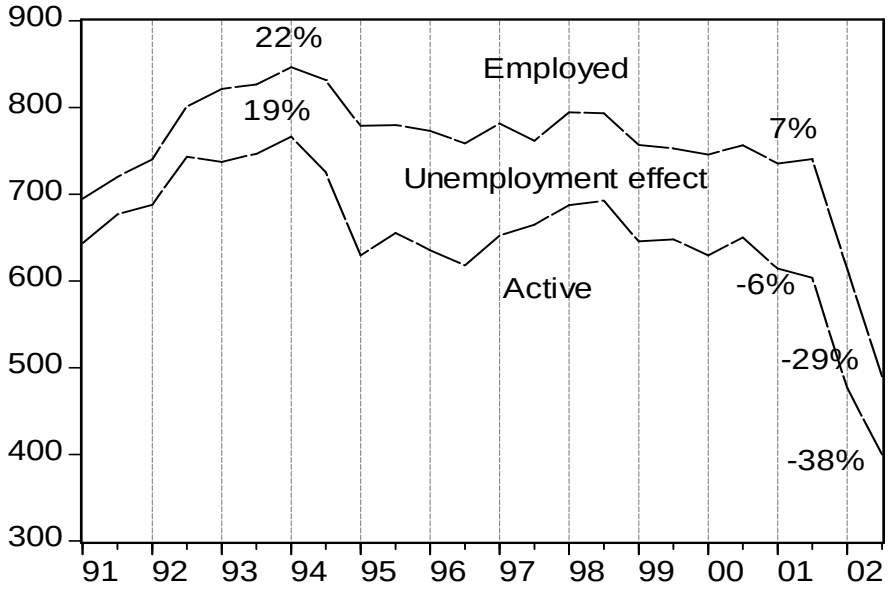
Evolution of average income and distribution in the 1990s

In this section we will deal initially with the evolution of the average income of the population in the 1990s to then consider the distribution of that income. [17]

[17] The income figures given in this sub-section, as well as the tables on its distribution given below, correspond to data from the Permanent Household Survey for the Greater Buenos Aires (GBA).

Graph 2.11 shows the evolution of real average total income (labor and non-labor income) per employed worker and per member of the active population, as from the first half of 1991. Both series follow pro-cyclical paths associated with the macroeconomic cycle. In the period of expansion at the beginning of the decade, the average income of workers grew by 22%, reaching a peak in the first half of 1994, while that of the active population grew by 19%. From then on, both series showed downward trends, reaching local minimum levels in the second half of 1996. A second cycle then began, whose expansionary phase lasted until the second half of 1998, although none of the series recovered their previous peak levels. Subsequently, the incomes of both employed workers and active population as a whole went down persistently until the end of the period. In October 2001, the income level of employed persons was only 7% higher than at the beginning of the series, while in the case of the active population it was 6% lower, with both levels clearly below the peaks registered in the first half of 1994. This shows that only at the beginning of the 1990s there was a significant increase in real income, due basically to the price stability and economic growth registered in those years.

Graph 2.11 Real average income of workers and active individuals (in pesos of 1998)

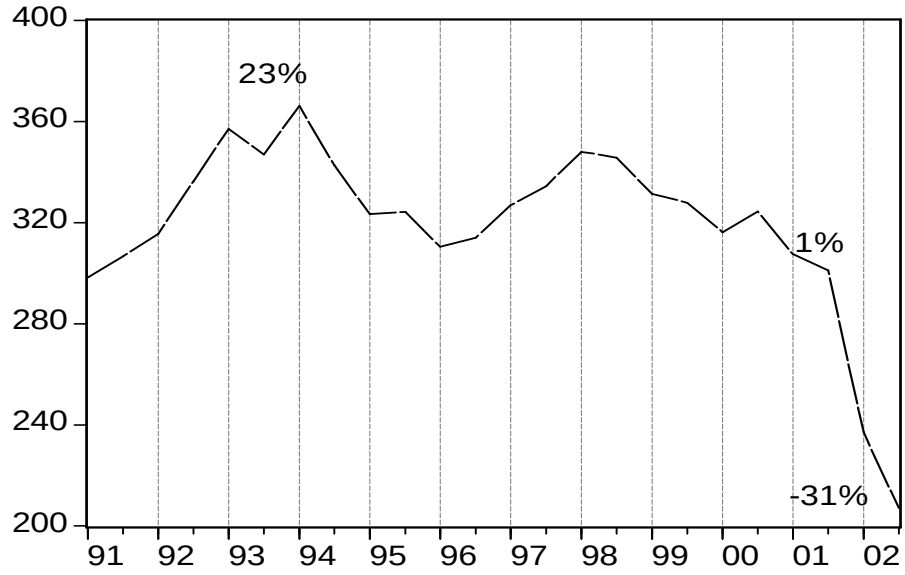


Source: Authors' elaboration based on INDEC.

Between the end points of the series, the average income went down by 30% in the case of employed persons and by 38% for the active ones. The growing gap between the two series reflects the impact of the rise in the unemployment rate in Greater Buenos Aires from 1993 on, especially since the second half of 1995. At that point, the average income of the active population suffered a sharp contraction. The reduction in unemployment between the end of 1996 and 1998 helped to reduce the gap, but this trend was reversed in the subsequent phase, when there was a sustained increase in unemployment. While at the beginning of the 1990s, the average income of active persons was equivalent to 93% of that obtained by employed workers as a whole, towards the end of the period that proportion had gone down to 82%.

These facts are particularly important when trying to explain the trend of household incomes. Graph 2.12 shows the dynamics of per capita family income, a more appropriate variable than the total family income to measure household's welfare.

Graph 2.12 Real per capita family income (in pesos of May 1998)



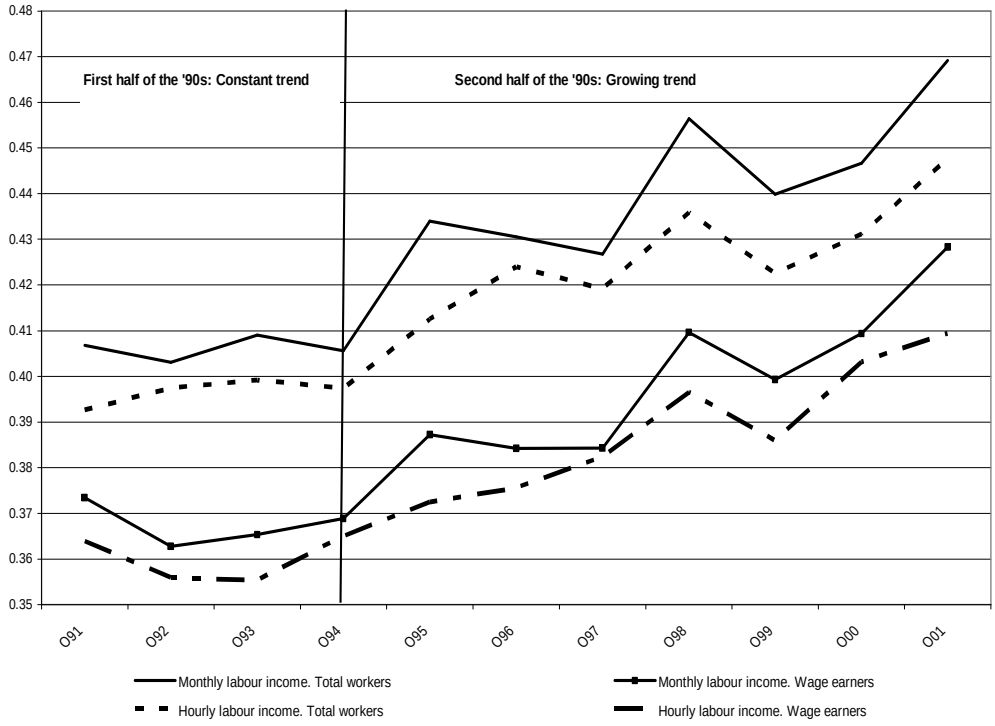
Source: Authors' elaboration based on INDEC.

The initial recovery in the remunerations did not result in a reduction in inequality. Between 1991 and 1994, income distribution among the employed population remained relatively constant, while the 1995-2001 period showed a process of strong concentration. Actually, a growing trend of the Gini coefficient was observed for both monthly and hourly labor incomes (for total workers and wage earners), but more intensely in the former than the latter, due to the unequal reduction in working hours, especially among total workers (graph 2.13). Furthermore, at the beginning of the decade, the ratio of the per capita family incomes [18] between the fifth and first quintile was 12 times; towards the end of the currency board regime it had risen to 20 times (graph 2.14).

The phases of growth and decline are similar to those referred to earlier. Per capita income grew by 23% up to the first half of 1994, but then fell sharply up to the first half of 1996. The subsequent partial recovery stopped in 1998. After that, following the tendency of labor income, the series went down sharply up to the end of the period. Whether it had increased in the early nineties, by the end of the currency board regime, the average income had gone back to its initial level. But then, the resurgence of inflation early in 2002 would cause a further loss of around 30%.

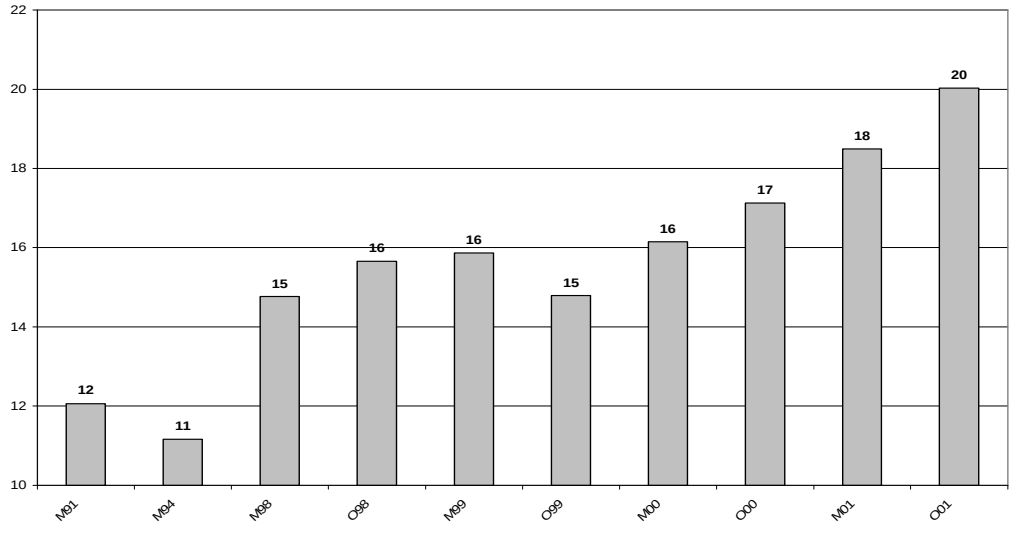
[18] Per capita family income is calculated as the total family income divided by the number of household members.

Graph 2.13 Gini Indexes of labor incomes, Greater Buenos Aires, May 1991- October 2001



Source: Author's elaboration based on INDEC.

Graph 2.14 Relationship of the per capita family income between the fifth and first quintile, Greater Buenos Aires, May 1991- October 2001



Source: Author's elaboration based on INDEC.

It may be concluded, then, that the unfavorable macroeconomic environment and the correlated sluggishness of the labor market – with low levels of demand for labor, rising levels of unemployment and also with predominance of precarious forms of employment – was reflected in a sharp drop in average wages from 1994 on, later aggravated by the price rises which followed the breakdown of the macroeconomic regime.

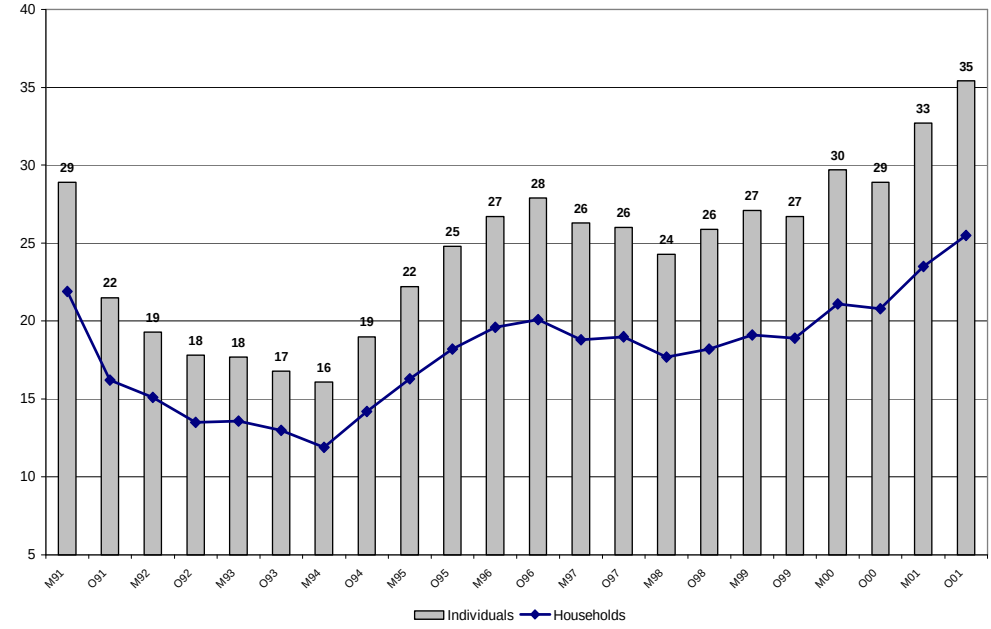
Special mention should be made of the effect of the rising levels of unemployment on the generation of household incomes. The severe fall in the average income of the active

population between the two end points of the period studied was due both to the behavior of the wages of employed persons and the evolution of the unemployment level. The latter factor has a direct impact on the generation of income from economic activities, since people who are unemployed probably do not have any income at all. The high levels of unemployment throughout the decade also had an indirect negative effect on the wages of the employed population, as reflected in a negative elasticity of remunerations to unemployment.

Poverty and extreme poverty

The performance of the labor market variables also had a direct impact on poverty levels. Between 1991 and 1994, poverty and extreme poverty decreased as a consequence of the increase in employment and real labor income. However, by 1996 this improvement in welfare had been completely lost. After a slight reduction between 1996 and 1998, these indicators experienced a strong growing trend. Towards October 2001, before the collapse of Convertibility, poverty levels reached 25% of the households and 35% of the population (graph 2.15).

Graph 2.15 Poverty rates, Greater Buenos Aires, May 1991- October 2001



Source: Author's elaboration based on INDEC.

3. Macroeconomic policies and the labor market in the 2000s

A radically new scenario

The main stylized facts in the labor market in the 2000's look like a complete reversion of the negative trends observed in the nineties. In fact, after a swift additional worsening of labor conditions as a consequence of the crisis of 2001-2002, employment started to growth very fast, led by full-time employment. The quality of new jobs tended to improve, as formal jobs grew faster than informal ones. Unemployment and underemployment fell in a sustained way, real wages recovered, income distribution improved, poverty and extreme poverty declined, and these new trends lasted for about 5 years.

These impressive changes were made possible by the configuration of a radically new macroeconomic scenario. Whether the crisis of the macroeconomic regime of the nineties implied very high economic and social costs, it is also undeniable that, after that crisis, the Argentine governments recovered policy instruments like exchange-rate and monetary policies, which had not been available in the nineties, thus benefiting from a considerably increased room for macro policy action. Later on, a more favorable international environment also contributed to an improved performance, at least until the recent global crisis.

The rise of the SCRER model

Three phases can be identified in the period after the crisis of the Convertibility regime. A short initial stage of transition to a new policy model extended from the crisis to mid 2003. A second phase of full working of the SCRER model followed until late 2006. And from then on, a period of weakening of the macroeconomic performance can be identified, also reflected in an impaired performance of labor market variables. This worsening originated mainly in domestic reasons and was later aggravated by some negative consequences of the recent global crisis.

The Convertibility regime was abandoned in the midst of a chaotic situation. The massive flight of external assets precipitated the collapse of the regime continued after the devaluation of the peso and the partial default on the service of the public debt. After a short period with a dual exchange rate regime and facing a strong pressure from the IMF (see Box 3), the government decided to unify the FX market and let the peso float. The parity then climbed abruptly reaching levels close to 4 pesos per US dollar, in an environment of strong uncertainty and expectations of further increases. [19]

However, these critical trends began to revert in July 2002. The turning point was the FX market stabilization. Controls on foreign exchange transactions had a crucial role. They had been introduced in November 2001, before the collapse of the Convertibility regime. Since early June 2002 controls were strengthened and the interventions in the exchange

[19] The nominal and real exchange rates would rise continuously along the first semester of 2002 (around 260% and 180%, respectively). The real exchange rate overshooting was so pronounced that in June 2002 its value was almost 50% weaker than the 1980/2001-period average value, and 68% weaker than the average of the convertibility decade.

market were reinforced, in order to conduct a systematic policy intended to stabilize the foreign exchange market. A decision that dollar export revenues surpassing US$ 1 million had to be sold directly to the Central Bank was especially important in this regard. This became the main source of foreign currency for the monetary authority, which permitted it to increase the volume of its interventions in the foreign exchange market. The measures included strict restrictions to capital account transactions, which also helped to stop the nominal exchange rate upswing. Limiting the peso outflow from the banks also acted to restrict the demand for foreign currency.[20]

Box 3

Argentina and the IMF in the crisis

After the changes in the head of the International Monetary Fund that followed the Republican take over of the US administration, the relationship of the IMF with Argentina was used as a significant example of the problems attributed to the previous management of the Fund and to the support programs of the nineties. The issue was important enough to carry out a special investigation of the role of the Fund in the Argentine case by the Independent Evaluation Office (IEO, 2004).

The relationship between the IMF and Argentina after the devaluation and the default was marked by that story in a curious way. Actually, the IMF's support happened to be completely absent precisely when it would have been more necessary: in the period after the devaluation, when efforts to stabilize the economy were at the center of the macroeconomic policy. With new authorities in both the institution and the country, at least a cooperative attitude by the organization might have been expected. The negotiations were centered on only one substantial matter: the Argentinean payments to the IMF.

Actually, the role the IMF played in the stabilization and the recovery of the economy in crisis was actually very negative. After the devaluation that put an end to the fixed parity of the nineties, for instance, the IMF's positions regarding the exchange rate policy were extremely rigid. The IMF insisted in the pure floating and, once implemented for a while in February 2002, the country got nothing in exchange for that "prior action."

The Fund's staff operated in that phase with the diagnosis that the exchange market could not be stabilized, that a hyperinflationary process was unavoidable and that it would be impossible to reestablish some degree of financial intermediation in domestic currency in the near future. The implementation of the measures promoted by the Fund would have transformed its implicit diagnosis in a self-fulfilling prophecy.

Once the authorities managed to stop the exchange rate bubble in July 2002, the public rapidly changed expectations and the FX market started to show an appreciation trend. Therefore, in the second half of 2002 a phase of monetary and financial normalization started. In fact, after reaching a peak of almost four pesos per dollar during the last days of June, the exchange rate began to experience a smooth nominal appreciation trend. Although the inflation rate was low and decelerating, the rise in domestic prices contributed to the real appreciation. In that context, local assets became increasingly attractive. Bank deposits began to grow for the first time after the financial crisis, as also did the demand for debt letters of the Central Bank (Lebacs), local shares and cash. This portfolio substitution in favor of local assets would result in a persistent drop in interest rates.

By mid 2003, the Central Bank started to act to stop the appreciation process, thus trying to preserve a competitive and stable real exchange rate. Therefore, this moment can

[20]Additionally, the local financial market behavior contributed to stop the exchange rate bubble. On the one hand, local interest rates skyrocketed. In July 2002, the average time deposits annual interest rate reached a 76% peak and the interest rate of the 14-day Lebacs (debt letters of the Central Bank) reached almost 115% a year. Thus local financial assets looked more attractive as substitutes for the US dollar. On the other hand, the real price of the dollar reached very high levels in historical terms (i.e. the prices in dollars of domestic assets, non-tradable goods and salaries were perceived as abnormally low).

be considered the end of the transition phase and the beginning of the SCRER model period.

A very important factor that helped to stabilize the exchange rate was the fact that inflation, after an initial rise in local prices, did not gain momentum. Several reasons contribute to explain the lower pass-through of the exchange rate rise to inflation. They include the government decision to freeze the prices of public utilities.[21] Another important buffer was the significant excess supply in the labor market, as well as in the goods market. On the one hand, the very high unemployment rate weakened any initial wage resistance to the impact of the devaluation and, on the other, producers of non-tradable goods and services to the domestic markets found it very difficult to pass the cost increases of intermediate goods caused by the devaluation to prices. Taxes imposed on exports also put a ceiling on the domestic prices of exportable goods, thus limiting the initial impact of the devaluation.

Contrary to what was expected, the negative balance sheet effect of the devaluation was small, mainly as a consequence of the official intervention. When the exchange rate was freed to float, the government decided to convert to pesos most of domestic debts contracted in dollars (bank credits, rents, etc.) at a one-to-one rate, thus neutralizing most of the effects of the devaluation on debtors' balance sheets.[22]

The dramatic fall in output and employment that anteceded the crisis continued in the period immediately following the end of the Convertibility regime (see graph 2.1). At the time, most of the analysts, including the IMF's staff, were expecting a hyperinflation process led by the exchange rate overshooting and the continuation of the economic contraction. However, those prognoses failed: the negative trend did not last for long. Actually, only one quarter after the devaluation and the default, the contraction came to a halt and a recovery was already at work. Since the second quarter of 2002 the real GDP started to grow, reaching rates between 8 and 9% a year. This impressive performance would last until 2008 at least. By mid-2005 the GDP had already surpassed the previous historical peak of 1998.

Several factors related to the labor markets had a bearing in consolidating the economic recovery. Among them it deserves mention the launching, in the second semester of 2002, of an unemployment subsidy program, the so-called "Plan Jefes y Jefas de Hogar Desocupados" (see Box 4).[23] Additionally, after an important downturn of around 25%,

[21] In fact, many of them were linked to the US dollar and some were also indexed to US inflation, as established in contracts signed in the nineties; thus, the government had to intervene to prevent the peso devaluation to have a full impact on these prices. Beyond helping to put a ceiling on price acceleration, these measures and the introduction of export taxes limited the fall in the purchasing power of wages.

[22] About 70% of domestic financial contracts were denominated in US dollars. Therefore, the impact of the devaluation on borrowers with incomes in pesos could have been devastating. Banks' deposits originally denominated in dollars were also 'pesoificated' but at 1.40 pesos per dollar (plus indexation to the evolution of CPI inflation). Later on, the banks were compensated by the government for the implied losses. Together with the 'pesoification', the authorities unilaterally decided to extend the maturity of all bank deposits. In exchange, private depositors received certificates for the reprogrammed deposits.

[23] The Argentine Ministry of Labor estimated that the effect of Jefes on growth was very positive. When the plan was being perceived by 1.8 million people, the multiplier effect on income was estimated in 2.57 (Tcherneva and Wray, 2005 a, 2005 b). The annual addition to GDP was calculated

real wages started to recover since the fourth quarter of 2002, as a consequence of both the deceleration of inflation and the rise in nominal wages.

After reaching a peak in April 2002, inflation started to slow down and since the end of that year the monthly inflation rate tended to be lower than 1% for the subsequent two years. The improvement in nominal wages was associated with a rapid fall in unemployment, and was also helped by an official policy consisting in several lump-sum rises in private sector wages determined by decree during 2002-04 (Frenkel, 2004a).

Box 4

A policy response under the 2002 crisis: the "Plan Jefes"

In the second semester of 2002 a limited job guarantee program called Plan Jefes y Jefas de Hogar Desocupados (Program for the Unemployed Male and Female Heads of Households, or simply Jefes) was launched as a way to deal with the skyrocketing unemployment and poverty rates. In the short run, the Jefes program provided income to about 2 million of beneficiaries, approximately 11% of the active population. The program provided a payment equivalent to 75% of the minimum wage in 2002 to a head of household which had to work for a minimum of 20 hours a week (if this wasn't accomplished, the person could be laid off, while the same would happen if the beneficiary found a full-time job in the formal sector). The participants had to work in community services and small construction or maintenance activities, or were directed to training programs (including finishing basic education).To receive the benefit the household had to contain children under the age of 18, persons with handicaps or a pregnant woman. The payments went directly to the beneficiaries via bank accounts. In large cities these payments were done with a debit card that allowed for certain additional benefits, such as discounts in transportation or refunds of the value-added tax. The management of the projects where the beneficiaries were placed was done by local governments, NGOs or grassroots organizations. In the early months of the program, women accounted for over 60% of program participants to increase their participation later on. It was suspected that many households had chosen to designate the woman as the head so that she could participate in the program while the husband attempted to find a private sector job, including work in the underground economy.

Between July 2003 and September 2009, more than 600.000 beneficiaries of the Plan Jefes found a job in the formal sector. Aside from job creation, a redesign of social programs in 2006 reduced significantly the number of people on the Plan Jefes. The beneficiaries could choose between two alternatives with a higher payment: Familias, plan which provided a payment between 150-275 pesos per month, and the Employment and Training Insurance that gave 225 pesos per month (against 150 pesos of the Jefes). After 2006, the decline of the program became deeper and in September 2009 it already covered less than 400.000 people. Finally, in the end of 2009, the Plan Jefes was replaced by the Asignación Universal por Hijo (Universal Allowance per Child).

Some people in the local business community were very much against the Plan Jefes from the beginning, since it defined a de facto minimum wage for the informal sector, especially in the rural and more backward areas. Added to this was the stability that the beneficiaries of the plan had in terms of continuity in the reception of the allowance, which could have made employees reluctant to leave the Jefes program for work in the formal or informal sector (Kostzer, 2008).

The SCRER model and monetary policy

The nominal and real appreciation process stopped around mid-2003, as a result of a deliberate policy decision. The preservation of a stable and competitive real exchange rate (SCRER) was gaining relevance in the official policy orientation. The government started

to be about 2.5% of GDP. Almost 5% of the total national budget was devoted to the plan in its first year of existence and this was more than 80% of the budget allocated specifically to employment actions (workfare programs and training). The program increased income of poor households, although it did not pull them above the poverty line. Notwithstanding, four months after the implementation of Jefes in April 2002, the extreme poverty rates among participating households had fallen by nearly 25% and among individuals by over 18%.

then to make explicit reference to the importance of preserving a SCRER in the official economic strategy. It was understood that a competitive real exchange rate was essential to foster growth and employment generation; thus, macroeconomic policy was oriented to favor "production", instead of "financial accumulation", as it had been the case, according to the official view, with the policy orientation of the nineties.

Although the announcements did not identify a specific policy target, the Central Bank and the Treasury operations in the FX market actually controlled the price of the dollar in a range between $ 2.8 and $ 3.10. Starting in 2003, and in spite of the sustained disagreement of the IMF with the interventions of the Central Bank in the foreign exchange market (see Box 5), this policy of managed floating was conducted together with a monetary policy based on quantitative monetary targets. Targets have been announced at the beginning of every year throughout the Central Bank monetary programs, in which the authorities commit themselves to maintain monetary aggregates within a certain range.

Box 5

Argentina and the IMF under the SCRER model period and to the present

From the beginning of the SCRER model period, the IMF maintained its opposition to the Central Bank interventions in the exchange market aimed to prevent the exchange rate appreciation. In September 2003 a three-year agreement was signed, intended to refinance the amortizations of the debt with the institution. By the time the IMF had to evaluate the fulfillment of the conditionality clauses of the agreement, the country was presenting the debt restructuring proposal and organizing the debt swap aiming to overcoming the debt default. Following a request from Argentina, to prevent negotiations with the IMF to interfere with the swap, the agreement was suspended until the beginning of 2005. After the debt swap, Argentina restarted the negotiations with the IMF with the advantage of a high proportion of acceptance (76.15%). The difficult negotiations that the country and the IMF maintained throughout the rest of 2005, after the debt swap, did not arrive to a new agreement. The government resolved to keep paying all the interests and the amortizations that could not technically be postponed during that year, to finally adopt the decision to pay back ahead of schedule all obligations to the institution, which was done at the beginning of 2006. After that, Argentina did not allow a new Article IV consultation nor asked for a new loan. Moreover, the government criticized the IMF for underestimating the economic growth in different World Economic Outlooks published every year.

In 2010, after a criticism in presidential public speeches to adjustment plans introduced in most of the IMF stand-by agreements for European countries, and a negative of the Argentinean Economic Ministry to authorize an Article IV consultation, the government turned to the Fund for technical assistance in the development of a national CPI. The media leaked a version where the government asked for technical support to avoid a negative review on Argentina's statistics which the IMF was ready to publish backed on Article VIII section 5, that establishes the responsibility of country members to furnish the Fund with "information in as detailed and accurate a manner as is practicable and, so far as possible, to avoid mere estimates".

The conjunction of an increasing money creation caused by the interventions in a FX market with excess supply of foreign currency and a controlled monetary base growth was made possible throughout several mechanisms of monetary sterilization. The sterilization operations implemented by the issuing of Central Bank letters (Lebac) and notes (Nobac) were especially relevant. The sterilization employing Central Bank's short-run debt instruments is costly, inasmuch as the interest rates on these instruments is higher than the interest rate obtained on the foreign exchange reserves, but the evolution and prospects of the Central Bank balance sheet did not show sustainability problems regarding the sterilization policy.

In order to soften the appreciation pressures in the FX market and thus alleviate the Central Bank's intervention needs, new controls on the capital account were introduced in June 2005. Basically, the new measures established that all capital inflows, excluding the issuing of new private and public debt, international trade financing and foreign direct investment, would be subject to a 30% unremunerated reserve requirement for at least 365 days. This strategy was inspired by measures applied in Chile in the 90's and attempted to reduce short-term capital inflows.

Although the preservation of a competitive real exchange rate was a central element of the government economic policy, the Central Bank did not make any reference to the existence of a real exchange rate target, neither in the short run nor in the long run. However, in the period we are considering here, the interventions in the exchange market maintained a more or less stable multilateral exchange rate. The Central Bank implemented a "de facto" managed floating policy, intended to maintain a competitive real exchange rate. Simultaneously, as we have already explained, the Central Bank preserved its control of the monetary variables by implementing different forms of sterilization.

On the other hand, the current account surplus and the robustness of the fiscal accounts, which we will discuss in more detail in the following section, did not question the sustainability of the exchange and monetary policies. Consequently, the financial investors, who normally give more importance to the implemented policies than to the formal announcements, "disconnected" their exchange rate expectations from the monetary policy. The financial investors believed that the Central Bank could control the exchange rate without losing control on the monetary variables.

External and fiscal adjustment

The expansionary process of the early 2000's presented significant differences with other economic growth episodes in Argentina's economic history. In contrast to the recurrent fiscal and external imbalances of the past, the macroeconomic configuration of this period stands out with the existence of external and fiscal surpluses. Of course, these "twin surpluses" talked in favor of the sustainability of the new macroeconomic setting.

The adjustment experienced by the Argentinean external sector had taken place to a great extent before the devaluation, as showed in graph 2.3, where the improvement in the current account since 1998 can be seen. Actually, imports plummeted during the abrupt economic contraction that characterized the end of the Convertibility regime, reversing the trade deficit and hence improving the current account result.

A strong adjustment in the public accounts took also place, whether a bit later, as showed in the graphs 2.5 and 2.6. The improvement in the Consolidated Public Sector global balance that took place between 2001 and 2005 was equivalent to 7.6 points of GDP. A global deficit of 5.6% of GDP in 2001 became a 1.9% of GDP surplus in 2005.[24] It has to be stressed that the public sector absorbed part of the effect of the devaluation on the profitability of the tradable goods sector, through taxes, and was also benefited by the high prices reached by some exportable goods such as soybean and oil.

Considering the fiscal adjustment in the early 2000's, the role of the interest payments on the public debt deserves special consideration. This flow passed from representing almost 4% of GDP in 2001 to 2.4% in 2005. However, the fiscal effects of both the

[24] About a third of the adjustment derived from an improvement in the provinces' balances, mostly as a consequence of the economic recovery and the subsequent increase in public income. Meanwhile, more than 70% of the five-percentage point adjustment in the national public sector's budget was explained by the improvement in the primary result (+3.6% of GDP). The contraction of interest payments, basically resulting from the default on the sovereign debt and the debt restructuring of 2005, accounted for the rest (-1.4% of GDP). The rise in the national primary surplus was mainly explained by an increase in tax revenues (+5.3% of GDP). The taxes on exports explain most of the rise in tax revenues (+2.3% of GDP). The exports of soybean and its derived products generated almost one half of the taxes on exports.

suspension of part of the debt services payments in the 2001-2004 period and the debt restructuring of 2005 were significantly higher than what is shown in the mentioned calculation. We have estimated that the amount of interests on the public debt in 2004, the year before the restructuring, valued at the 2004 exchange rate and without default, would have represented between 9 and 11 points of GDP. This is approximately equivalent to half of the total tax collection of the year. These payments would have been certainly incompatible with the economic recovery and with macroeconomic stability. In effect, a crucial aspect of the fiscal financial vulnerability in the nineties derived from the extremely high proportion of debt in foreign currency, with the consequent exposure to the impacts of the exchange rate variations. The 2002 substantial exchange rate depreciation would have had a harsh impact on the public sector's financial equilibrium. Taking this aspect into account, it can be said that the payments suspension and the following debt restructuring enabled a really considerable amount of fiscal savings -either measured in domestic currency or as a proportion of GDP. [25]

However, probably the most important effect of the default and the end of the convertibility regime was the recuperation of the effectiveness of the instruments of macroeconomic policy, which were of crucial importance to take the economy out of the abyss generated by the final collapse of the convertibility regime.

Macroeconomics after 2006: the SCRER framework disarticulation

The golden period of the SCRER model lasted to late 2006. From 2003 to that moment, the performance of GDP growth, employment, income distribution and poverty reduction can be considered really outstanding in magnitude, in comparison with other international experiences and with the previous records of the country. Notwithstanding that, at mid 2007, when the first outbursts of the international financial crisis were starting to be heard, Argentina was already going through a new phase in which some of the macroeconomic and social achievements of the period under the SCRER model were showing signals of weakening or were being lost for internal reasons. The most important among these negative signals was an increase in inflation rates.

[25]As extensively discussed in Damill, Frenkel and Rapetti (2005), the partial restructuring of the public debt was a pivotal step to fiscal consolidation after the crisis. It involved a significant haircut in the nominal amount of the public financial liabilities, as well as an important reduction in interest rates and a considerable extension of average maturity. The swap of the defaulted bonds for a new menu of debt instruments was carried on during the first months of 2005. On May 2005 the government announced that the acceptance rate had reached 76.15% of the debt in default. This meant that 62.3 billion dollars of the old bonds would be exchanged for about 35.3 billion dollars of new instruments plus attached GDP growth-linked coupons. The operation signified the reduction in the public debt stock by about 67.3 billion dollars and attenuated the exposure of the public finances to the exchange risk, since around 44% of the new bonds were denominated in local currency. At the end of the same year the government decided to pay back ahead of schedule the whole outstanding debt to the IMF by a payment close to 10 billion dollars (see Box 5).

Table 3.1 CPI annual rates of inflation

Year	(%)
2002	41.0
2003	3.7
2004	6.1
2005	12.3
2006	9.8
2007	26.6
2008	23.0
2009	14.8

Source: INDEC until 2006. From then on, CPI-7 published by CENDA.

The fast economic expansion that started in 2002 took place in a context of relatively low inflation. After an initial rise following the devaluation, price increases softened and inflation reached a bottom, with a 3.7% annual rate in 2003. However, the inflation rate as measured by the CPI almost doubled in 2004 and doubled again in 2005, surpassing 12% in this year. In 2006, the acceleration could be stopped by means of several control measures directed to specific markets or products, like milk, dairy products in general and meat in particular. In late 2006, the rhythm of increase of the CPI had been reduced to 10%, but unregulated prices were still increasing at a 13% rate.

Until late 2006 the authorities' target was to keep inflation rates in the one digit spectrum. The main instrument to this purpose, beyond the freezing of several public prices, was a policy of price controls, under the form of agreements with leading firms, but the persistence of inflationary pressures made this instrument less and less effective. However, this did not bring the authorities to engage in a comprehensive stabilization program. On the contrary, an expansionary bias of fiscal policy from 2005 onwards, added to the demand pressures coming from private expenditures and to some domestic impact of the rise in international prices.

A program able to preserve at least a one-digit annual inflation should have required getting control of the aggregate demand evolution through a redefinition of the macro policy setting. Taking into account the weakness of monetary policy –typical of the workings of the economy in the whole period[26] - an integral anti inflationary program had to be mainly based on a re-orientation of fiscal policy, which should have turned to be contractionary instead of expansionary. In a simpler way: aggregate public expenditure was rising faster than the income receipts of the public sector, and these relative velocities had to be inverted. This important reorientation of the macro policy setting, together with a coherent reformulation of monetary policy and some complementary measures, such as a redefinition of the incomes policy, should had to be announced to the public as the adoption of an integral anti inflationary policy, with an explicit target of a one-digit inflation rate, aiming at signaling future inflation and thus changing private expectations.

[26]Monetary policy effects are week as a consequence of the low degree of monetization and financial intermediation of the economy. In this context it is sensible to expect a small interest elasticity of the aggregate demand. Given the low ratio between domestic credit and GDP, the credit channel effects are also week.

Actually, the inflationary acceleration was a menace to the main pillar of the macroeconomic program, the SCRER, because in an inflationary environment it would become more and more difficult to preserve the competitive real exchange rate that had revealed itself as a very effective intermediate target to promote economic growth and employment.

However, the authorities did not adopt an integral anti-inflationary program or strengthen the price controls. The fact that 2007 was an election year had probably a bearing on this behavior. Instead of taking measures to effectively stop inflation, it seems that the authorities decided to keep the one-digit rate target only for the inflation figures published by the INDEC, thus controlling the indicator instead of the inflation itself. Therefore, in the midst of an increasing conflict that severely deteriorated the credibility of the official statistics, inflation figures were published that ranked well below alternative estimations like those provided by private sources but also by official provincial statistics institutes. The CPI was lost as a socially accepted reference in nominal wage negotiations and the calculation of real wages and other indicators, including those related to poverty and extreme poverty incidence were also affected.

The CPI manipulation started in January 2007. A short time later, INDEC closed the access of the public to the bases of the Permanent Households Survey that had been available to analysts to that date. Hence, it became impossible to make independent estimations of poverty and extreme poverty indicators and analyzing the evolution of income distribution. [27] The published data regarding poverty and extreme poverty were also subject to criticisms because the calculation of the cost of the different baskets employed in the estimations were affected by the distortions in the official information on prices. [28]

Financial isolation and capital flights

The alteration of CPI estimations had other negative effects on the economy. CPI figures are the basis for the calculation of a coefficient called CER ("Coeficiente de Estabilización de Referencia"), utilized for the inflation adjusting of peso-denominated debt. An important amount of this kind of debt instruments was issued in 2005, as part of the debt restructuring. As CPI underestimates inflation, the same happens with the CER and, as a consequence, the capital readjustment percentages fall short of the levels they should have in absence of the statistical manipulation.

This is certainly the main reason why the Argentine debt was punished in the markets from early 2007 on, as it is clearly reflected in the behavior of public bonds prices. Argentine bonds liquidation started in April 2007, precisely when it became clear that the underestimation of inflation rates had become a systematic and permanent behavior. Inflation underestimation and its incidence on the CER calculation affects the capital

[27] Later on the surveys started to be published again but with some methodological changes that make it difficult to compare with previous periods.

[28] Later on, in the second quarter of 2008, the statistical manipulation reached the estimators of economic activity, industrial activity and the National Accounts. The problems regarding these statistics seem to have become more acute since the fourth quarter of 2008. The comparison with the information from other sources suggests the existence of a systematic over estimation of GDP and activity levels from then on. For instance, the official GDP estimations show a growth deceleration but not a decline in 2009, while other sources estimate an annual fall of around 3 to 5%. These declines are more consistent with the observed behavior of related indicators like, for instance, full-time employment and total employment, that showed contractions in that year.

adjustment of peso-denominated bonds and hence has an impact in their value, but does not technically affect the valuation of bonds denominated in foreign currency. Notwithstanding, the liquidation involved all the public bonds, both denominated in national and international currency.

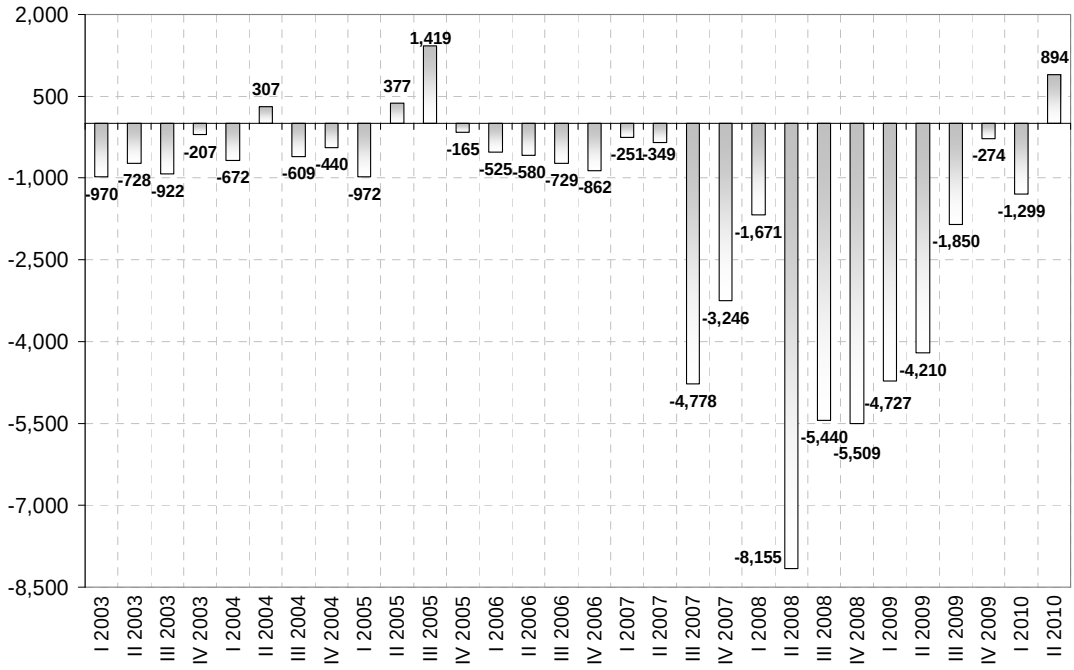
The evolution of bonds prices in foreign currency is reflected in inverse form in the country risk series. When the bonds prices fall, the country risk increases and *vice versa*. As can be seen in graph 3.1, at the beginning of 2007, the risk spread of the Argentine debt instruments had almost equaled the emerging market economies average and at some moments was below the Brazilian spread. In this period, the country-risk spreads of emerging market economies were reaching a historical minimum. But since April 2007 the Argentine premium clearly increases above the emerging markets average. The intervention in the statistical estimation of inflation was interpreted as a kind of haircut on the principal of the peso denominated debt, but immediately the lack of credibility also affected the prices of other debt instruments, including those not adjusted by CER, such as the bonds denominated in international currency. This made unviable the issuing of new bonds and generated a situation of isolation with respect to the international capital market. This fact is very noticeable, because it constituted an abrupt change in the situation of Argentina *vis-à-vis* the financial markets, not having other explanations than the one we have just suggested. It has to be stressed that shortly before that change, in 2006, there was a debate in Argentina about the best way to face capital inflows and the government was implementing some measures to stop those inflows.

Graph 3.1 Average country-risk premium for emerging market economies and for Argentina and Brazil (in basis points)

Source: Authors' elaboration based on Ministry of Economy

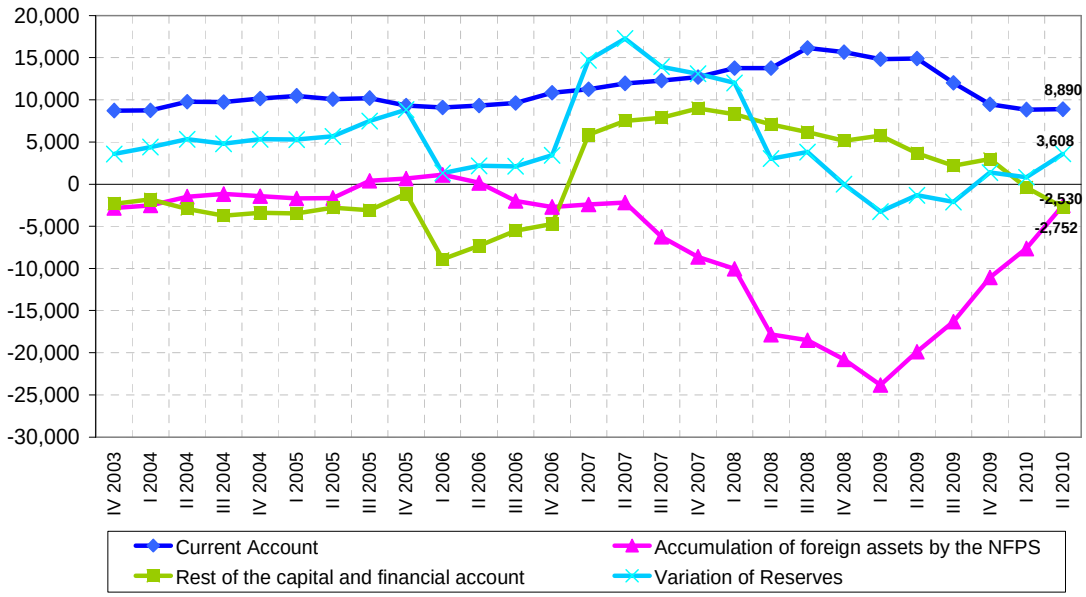
Then, capital flight started to be another effect related to the loss of credibility. The flow of "Foreign assets accumulation by the non financial private sector" according to the foreign exchange market data published by the Central Bank began to show significant negative results since the third quarter of 2007. The outflow registered in the second semester of that year amounted to US dollars 8.9 billion (see graphs 3.2 and 3.3). From then on, an important flow of capital flight became an almost permanent feature of the Argentine balance of payments, until the second quarter of 2010.

Graph 3.2 External asset accumulation of the non-financial private sector (millions of US dollars)



Source: Authors' elaboration based on Central Bank.

Graph 3.3 Foreign Exchange Balance (moving average of 4 quarters, in millions of US dollars)



Source: Authors' elaboration based on Central Bank.

The beginning of capital flights was coincidental with the outburst of the financial crisis in the USA, in August 2007. The eruption of the crisis probably had an influence, but to try an evaluation of the factors inducing the flight, it must be taken into account that one of the main initial effects of the sub-prime crisis was not negative. On the contrary, it took the form of a strong rise in commodity prices. Actually, the prices of commodities like

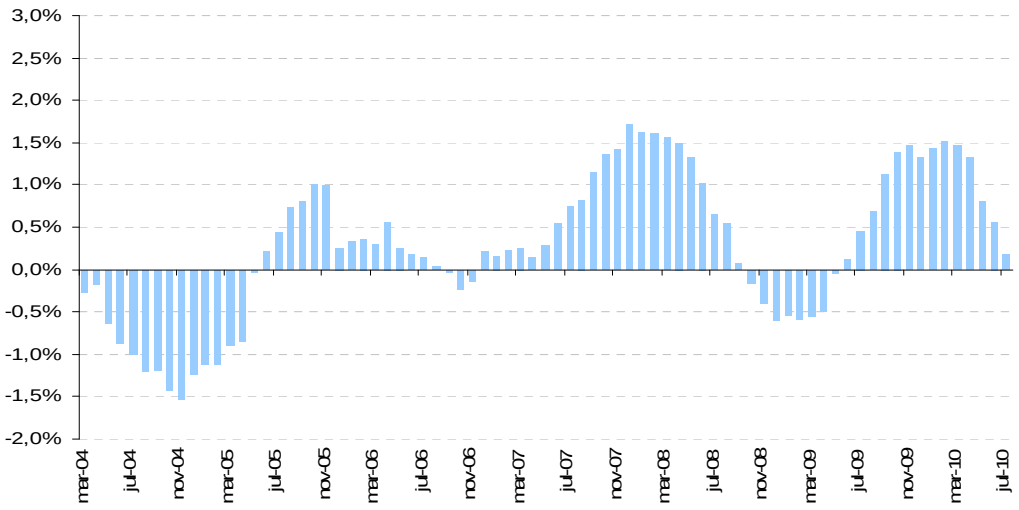
soybean, the Argentina's main export product, increased in the second semester of 2007, thus causing an important improvement in the already positive current account result.

Looking for an explanation of the capital flights and the financial isolation of the country, we have attributed a strong weight to the inflation acceleration without an adequate policy reaction and to the manipulation of the official statistics. This is so because there seems to be no other factors capable of explaining those negative changes after taking into consideration the good shape of the fundamental economic variables. In 2007, the economy was still growing at a fast pace, the stock of foreign currency reserves was high and there was a significant trade surplus. Besides, the fiscal accounts were still reaching an aggregate surplus in spite of the expansionary bias of fiscal policy.

The expansionary bias of fiscal policy

The fiscal policy assumed an expansionary bias in 2005 that was accentuated in 2007, before the outburst of the global crisis. Given away the idea of accumulating a fiscal anti-cyclical fund, supported until 2005, fiscal policy contributed from 2004 to 2008 with an additional positive impulse of about 1% of GDP per year to aggregate demand, as reflected by the reduction in the primary surplus. The importance of this change has to be emphasized. In 2005 the economy was growing at an annual rate slightly above 9%, and had been keeping that rhythm for three consecutive years. On the other hand, the inflation rate was accelerating, reaching 12.3% a year by the end of 2005. The inflationary pressures were evident, and it was also evident that some break on the speed of expansion of the aggregate demand had to be implemented. But the government took the opposite way, thus adding an expansionary fiscal impulse to the fast expansion of private expenditures.[29] The fiscal policy changes and their effects on demand can be seen in the graph 3.4. The bars represent the "fiscal impulse", that is, the additional contribution of the public sector to aggregate expenditures.

Graph 3.4 Fiscal impulse (% of GDP)



Source: Our own calculations based on data from the Ministry of Economy.

[29] The recent fiscal evolution as well as the public debt trends are examined in greater detail in Damill, Frenkel and Rapetti, 2010.

The graph shows monthly figures but the data reflect the variation of the contribution of the fiscal variables to aggregate expenditures observed in the 12-month period ended in every month. The main observed inflexion points after the 2002 crisis happened in 2005, 2008 and 2009. At these points, changes in orientation were observed. The first inflexion point took place shortly after the completion of the public debt restructuring in early 2005. The public sector had played a contractionary role since the crisis up to that moment, but passed then to feed aggregate demand increases in the period 2005-2008. [30] In late 2008, the fiscal variables turned out to have a negative impact on total expenditure for a certain period, but from mid 2009 on, a new expansionary change in the fiscal stance could be observed, of a magnitude similar to the previous one. [31]

In 2005 mid-term legislative elections took place. The increasingly expansionary behavior of fiscal policy had undoubtedly a "political cycle" component. It can be observed that the fiscal impulse declined shortly after the elections, which took place in October 2005 and October 2007 respectively.

As it was already explained, in September 2008 the global crisis hit the emerging economies with stronger violence. In the last months of that year, Argentina was also affected by a substantial fall in the prices of export commodities, and in turn this impacted on tax receipts on exports. Furthermore, the activity level started to fall as a consequence of exports and investment contraction, the latter as a result of both the unfavorable external environment and the increase in uncertainty caused by the bad news coming from abroad but also by domestic problems, as mentioned above. These negative changes forced the fiscal policy into a short contractionary stance, but by mid 2009, public expenditures were already growing at a faster pace than public receipts, and the expansionary bias of fiscal policy was then reestablished. As a consequence, the primary result of the national public sector would fall from 3.1% of GDP in 2008 to 1.5% of GDP in 2009. [32]

From late 2008 on, the Argentine government took several important decisions with strong fiscal impact. The most significant measure was the extraordinary operation of nationalization of the private pensions and retirement system, decided in late 2008. Through this action the government captured an amount of resources that allowed it to face in much better condition the negative effects coming from the global crisis. Whether it is quite clear that the operation of nationalization of the funds of the private pension system had a very negative effect on private expectations and on the credibility of the government, it is also true that it contributed to a decisive change in the fiscal scenario. On the one side, it allowed the public sector to count on a very important additional annual flow of resources coming from the contributions of the public to the pension system. On the other, it made

[30] The economic expansion started in 2002; the initial expansionary bias of fiscal policy only attenuated the strong increases in demand originated in a very dynamic behavior of private expenditures.

[31] The fiscal impulse reflects the variations in primary expenditure and public receipts, but adjusted to set aside changes of an endogenous nature (like the increases in tax receipts associated to the increase in domestic product), as well as those that, being exogenous, do not reflect discretionary variations in fiscal policy. For instance, an increase in the prices of exportable goods above trend generates additional fiscal receipts, but this increase in public receipts is not a signal of a contractionary policy and has to be set-aside in the estimation of the "fiscal impulse".

[32] It is worth mentioning that in spite of the fact that from 2005 on a phase of positive fiscal impulse started, the public accounts kept showing surpluses for the consolidated public sector at least until 2009. Therefore, the process of debt reduction continued, as reflected in a sustained trend to the decline of the public debt/GDP ratio.

possible for the government to employ financial resources, like time deposits in banks and foreign assets, which the system maintained against other agents. Another relevant consequence of this operation was that the public sector also captured a significant amount of public debt bonds that were part of the assets of the private pension system. Thus, a fraction of the public debt was internalized by the public sector, reducing the size of the remaining obligations with other creditors. As a result, about one third of the public debt is in the hand of state dependences, including the new public pension system and the Central Bank.[33] Thus, an important percentage of the service of interest and capital in 2010, for instance, corresponded to payments that had to be made inside the public sector, making easier the refinancing of these commitments through the issuing of new debt to these internal creditors.

Be that as it may, the problem of affording the remaining commitments has been far from disappearing. The Argentine public sector, in fact, has not been able to get access to private funding, particularly from foreign sources. This obliges to face the debt service with fiscal surpluses or, in the case of dollar denominated obligations, employing Central Bank's credit, implying the use of foreign reserves.

In spite of the aforementioned extraordinary actions, the continuation of a tendency of public expenditure to grow above current receipts, combined with the already mentioned financial isolation, put fiscal policy on a narrow trial. In that context, it seemed to be necessary to reestablish the credibility of the governmental action, negatively affected by several factors like the distortion of public statistics, in particular, and especially to redefine the macro policy scheme to regain the coherence that had been weakened in part, as a result of the effect of inflation acceleration. These actions seemed to be necessary to improve expectations and thus stop the strong capital flight, to make possible to sustain the way out of the recession.

However, the national government opted for a different way that would become, from its beginning, a source of political conflict. At the end of 2009, it decided, by means of a decree, to create a fund (the so called "Fondo del Bicentenario") with a bit more of six billion dollars, with foreign reserves of the Central Bank, with the purpose of employing these resources to service the public debt throughout 2010. In this way, other resources were in fact made available to be used in different items of current expenses, thus sustaining the expansionary trend of public expenditures.[34]

Whether it is true that some questions have remained open in the public discussion and in the Judiciary, the employment of foreign reserves to the public debt service was gaining support and loosing strength as a problem in the political scenario throughout 2010. In fact,

[33] In what respects to the public debt service, this operation in the pension funds sphere was complemented with other actions also aimed at reducing the size of short-run financial obligations. On the one hand, part of the debt (de so called "warranted credits", or "préstamos garantizados") was refinanced. On the other, the new pension system, the Central Bank and the Banco de la Nación bought public bonds in the market taking advantage of the "default prices" that these instruments had by then. In this way, the structure of the public debt tended to change in a significant and positive way.

[34] This measure caused several simultaneous conflicts. On the one side, between the Executive and the President of the Central Bank, who initially showed some resistance to approve the constitution of the Fund and whose resignation the government then asked, thus questioning in fact the Central Bank's autonomy. This conflict involved the Parliament and also the Judiciary, and its spreading was a source of additional uncertainty that caused, in turn, a new wave of capital flight.

the government will follow similar procedures in 2011, that is, to employ foreign reserves of the Central Bank to afford financial obligations with foreign creditors.

Nevertheless, as a consequence of the employment of extraordinary sources of fiscal funding (like the transfer of Central Bank's profits generated by the revaluation of foreign reserves to the Treasury, among others), the government could manage to maintain a fiscal policy characterized by a trend of increase in public expenditures above fiscal receipts.

Transmission of the global crisis: the financial channel

To the problems for macroeconomic management that had a domestic origin, it added, from 2007 on, the financial and trade impacts of the global crisis, which hit all developing economies. The Argentine economy was in a relatively strong position to face the impact of the crisis. In fact, as a consequence of the exchange rate and reserves' accumulation policies followed in the previous phase, the country arrived to the moment of international contagion with a substantial stock of international reserves, an important surplus in the current account and a financial surplus in the public accounts, as we have already mentioned. Furthermore, Argentine exports are concentrated in agricultural products whose prices suffered from a more moderate fall and maintained better prospects than other *commodities*. More precisely, the *commodity* prices actually increased in the initial phase of the crisis, in part as a consequence of the shifting of financial resources toward future markets of these goods. However, in spite of this position of relative strength, Argentina also showed two traits that, under a superficial sight, might seem to be extreme features of an economy strongly hit by the international crisis on the financial side, like the international financial isolation of the public sector we have already mentioned.

The global crisis was transmitted to national economies through two main channels: the financial channel, on the one hand, and international trade flows, on the other. Later on, in an indirect manner, these impacts hit other variables like the activity level and aggregate employment. Let us now focus on the financial transmission in greater detail. The changes in the global financial context reflected in one variable mainly: private capital outflows. The so-called "flight to quality" affected many developing economies, particularly in the last quarter of 2008. In the Argentine case, several internal sources of uncertainty added up to the external negative shocks. Four factors can be pointed out as the most important ones: the manipulation of official statistics of inflation (later on extended to other figures) from early 2007 on; a conflict between the national government and the agricultural sector around the exports tax regime; the nationalization of the private pension system in late 2008, and finally the conflict related to the utilization of Central Bank's foreign reserves to face the service of the public debt.

As can be seen in the graphs 3.2 and 3.3, private outflows as registered in the foreign exchange balance reached very high amounts since the second semester of 2007, slightly after the intervention of INDEC and simultaneously with the outburst of the sub-prime crisis in the U.S.A.

Taking into consideration their size, these outflows of funds can only be compared with the traumatic capital flights observed, in the history of the international financial integration of the country, under the exchange rate fixation called "la tablita" in 1978-81, as well as in two opportunities under the convertibility regime: during the Tequila effect in 1995, and in the final phase of the regime, particularly in 2000-2001. However, it is important to notice that the destabilizing effects of the recent episode were comparatively limited.

The international financial turbulence impacted in a relatively weak form through habitual channels like the restrained ability to access to international credit. This was in part a result of the fact that the economy went through a strong fiscal adjustment after the 2001-

2002 crises. Given that the public sector started to have positive financial balances, its requirements of funds got limited to the partial rollover of the maturing obligations. The current account of the balance of payments also registered systematic surpluses thanks to the generation of significant and sustained positive trade balances. Therefore, a process of debt reduction was observed, both in the fiscal sphere as in the case of the country as a whole, against the rest of the world.

If the recent period of capital flight is compared with others observed in the past, several significant differences stand out. It is very important to take notice of this, because the greater resilience of the economy to this negative phenomenon can be attributed in part to some strength inherited from the SCRER period that persisted in spite of the loss of coherence of the macro policy framework.

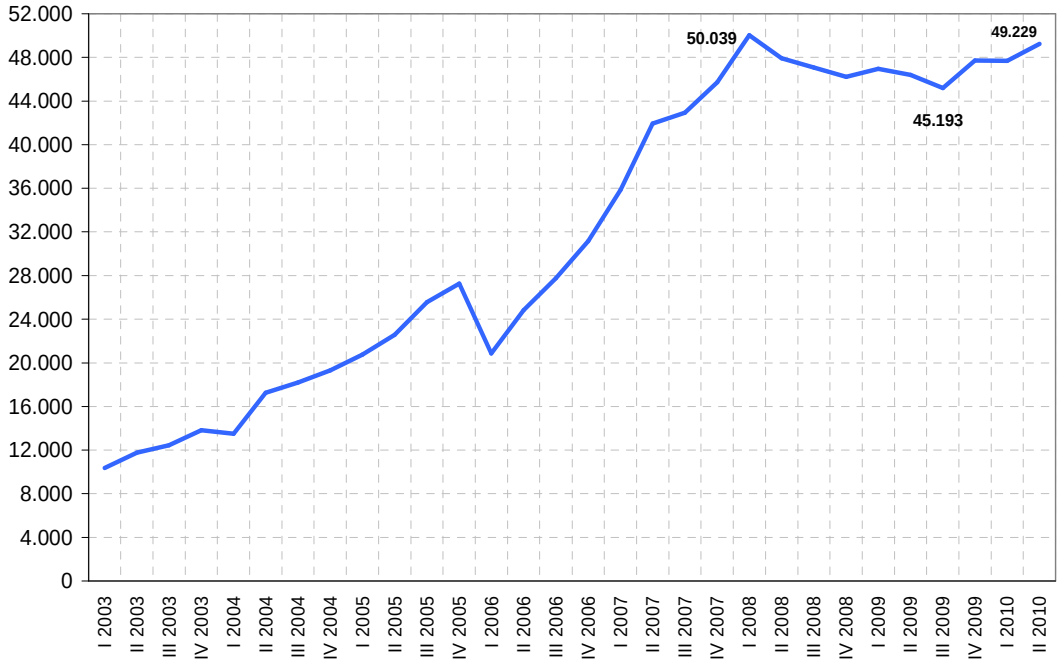
In other periods of intense capital flight, like under "la tablita" of the late seventies, as well as during the Tequila effect and in the final phase of the convertibility period, Argentina presented a higher external vulnerability, in the form of important and growing current account deficits, in contexts of strong exchange rate appreciation. Additionally, in all these cases, the financial system had gone through fast expansions (of deposits and credits) just before the outburst of capital flight; these credit expansions had precisely been led by strong capital inflows. Moreover, in the nineties the financial system was affected by exchange rate risk, for if deposits and credits in foreign currency were balanced, many debtors with dollar-denominated obligations perceived incomes in pesos, whose value measured in foreign currency was exposed to fall in case of devaluation, thus putting under risk its capacity to fulfill their financial commitments and by the same fact, increasing the fragility of the financial system. Beyond that, in all the above-mentioned episodes the public sector showed deficits in its financial balance.

All these circumstances have been different throughout the capital flights that started in 2007. Firstly, the economy has been reaching very significant surpluses in the trade balance with the rest of the world as well as in the current account, as we have already mentioned. Between mid 2007 and the second quarter of 2010, the trade account had an accumulated surplus of 54.526 billion dollars, according to the figures of the foreign exchange balance. This is equivalent to about 96% of the total accumulation of foreign assets in the hands of the non-financial private sector in the same time span. In the period, the current account, that showed a rising trend till mid 2009, registered an accumulated balance of 37.549 billion dollars, equivalent to 72% of the total accumulation of foreign assets in the hands of the non-financial private sector (see graph 3.3). Therefore, unlike the other episodes of capital flight above referred to, in this case a great part of the foreign exchange accumulated by the non financial private sector has been provided precisely for the trade surplus and not for the Central Bank's stock of reserves previously accumulated.

The evolution of Central Bank's reserves can be seen in graph 3.5. They declined until the third quarter of 2009, after having reached a peak in the first quarter of 2008. According to the figures of the foreign exchange balance, the concept "Variation of foreign reserves by transactions" fell by about 3.177 billion dollars (well below the amount of observed capital flight) between the first quarter of 2008 and the second quarter of 2010. [35]

[35] The fall in foreign reserves was attenuated in part for the persistence of a strong trade surplus as well as for the fact that the Central Bank obtained financial resources from the Bank of Basle. It also acted in the same way the increase of the foreign currency deposits of the banks in the Central Bank, as a reflection of some dollarization of bank deposits of the public.

Graph 3.5 Stock of foreign reserves of the Central Bank (billion dollars)



Source: Authors' elaboration based on Central Bank.

We have just pointed out above that, among the differences between the recent episode of capital flight and those observed in the past in the country, this time the financial system had not gone through a previous process of fast expansion induced by massive capital inflows, as it had been the case under "la tablita", as well as in 1995 and also during the final phase of the Convertibility regime. In all those past episodes, fast financial expansions induced by capital inflows tended to increase the financial vulnerability of the banks to negative shocks.

During the first years after the 2001-2002 collapse, the banking system went through a process of recovery from the consequences of the crisis, re-establishing its solvency and its liquidity position. Later on, deposits and credits started to grow at a good pace but departing from very low intermediation levels. In fact, the size of the domestic financial intermediation is still very small in any international comparison. As can be seen in table 3.2, in 2008, after several years of expansion, the amount of total credit in pesos to the local private sector only reached an equivalent to 10.5% of GDP, close to the level of the monetary base, while total credit was only about 12.5% of GDP.

Whether it is a weakness regarding the contribution of the financial system to fed investment growth and employment, a narrow domestic intermediation actually makes the banking system less vulnerable to a negative event like a run-on deposits, given that the involved amount would made viable an effective intervention of the Central Bank to support the banks facing liquidity problems.

Another aspect evidencing a smaller financial vulnerability of the banking system is the lower degree of domestic financial dollarization in comparison with the nineties, in part as a result of the regulations introduced by the Central Bank after the 2001-2002 crises. Domestic dollar-denominated credit from the banks is restricted to agents that generate foreign exchange resources as a result of their current economic activity, thus protecting the system against the systemic exchange rate risk.

Table 3.2 Monetary base and domestic credit to the private sector, as % of GDP

Year	Monetary base	Bank credit to the private sector	
		In pesos	Total
2002	9,3	9,7	11,2
2003	12,3	7,2	8,1
2004	11,7	7,6	8,6
2005	10,3	8,7	10,0
2006	12,2	9,6	11,4
2007	12,2	11,1	13,1
2008	10,5	10,5	12,5

Source: Econométrica.

In fact, in spite of the capital flight experienced from 2007 on, the banking system as a whole managed to keep a comfortable liquidity position and if it is true that it lost deposits in real terms and also in nominal terms, for a period, from September 2008 on, this decline has been minor in comparison with the contractions observed throughout the other episodes of massive capital flight we have mentioned above. The strength showed by the external sector of the economy that maintained a strong trade surplus and a current account surplus, and the financial features we have just mentioned, contribute to explain that the domestic impact of the recently experienced capital flight has been very limited in contrast with the magnitude of the outflows.

To summarize: quite paradoxically, some features of the economy that can be considered weaknesses, like the financial isolation from foreign capital markets and the very small domestic financial intermediation, resulted in the absence of some linkages in the transmission of negative impulses coming from abroad during the global crisis, thus cushioning the impact of those impulses on the domestic macroeconomic variables. We like to emphasize the factors that made the Argentine economy resilient to financial disturbances in recent years, because crisis prevention is one of the main roles of macroeconomic policies.

This is particularly important regarding employment, wages and distribution, because the crises usually have very negative impacts on these variables, as well as in social indicators like poverty incidence. Resulting from some structural developments but also from some strengths of the macroeconomic setting, particularly during the SCRER period, like reserves accumulation and the twin surpluses, a number of features of the Argentine economy made possible to go through a difficult period (also aggravated as a consequence of policy mistakes like an inappropriate way to lead with the problem of inflation) without a major disruption in social conditions and growth prospects.

The global crisis and the aggregate demand

The main “real” transmission channel of the global crisis on the national economy was the fall in exports, which plummeted by 21% in 2009, as a result of a price decline of 16% and a contraction of 5% in exported quantities. In the national accounts at current prices, exports added to 20% of global demand in 2008, and to about 24% of GDP. Thus, a decline of about 21% in this variable amounts to a significant negative macroeconomic shock, higher than 4 percentage points of the global demand and equivalent to 5% of the GDP at current prices.

This decline had a strong impact in some productive sectors, including particularly the spare parts industry, the production of automobiles and the agricultural sector. After the Lehman Brothers bankruptcy, tradable sectors started to show significant falls in activity level for the first time since the crisis of 2001-2002. Aggregate demand had been slowing its rhythm of increase since the second quarter of 2008, as a derivation of a conflict between the government and the agricultural sector. Investment growth slowed since the first quarter of 2008, to become negative after the third quarter of this year. In fact, the domestic sources of higher uncertainty added to the serious impairment in the international scenario in the last quarter of 2008. Aggregate investment fell in 2009 by about 11% in comparison with the previous year. This fall is equivalent to about 2% of GDP and explains great part of the GDP fall observed in 2009, of about 4 to 5%, that interrupted the long expansion started in 2002, one of the longest in Argentine history (see graph 2.1).

It deserves mention among the stylized facts relative to the behavior of expenditure variables in the period the abrupt fall in imports. An important part of the demand contraction in 2008-2009 was in fact absorbed by a reduction in the acquisition of foreign goods, a factor that attenuated the impact on domestic activity and, hence, on employment levels. In fact, the contraction of imports amounted to 32,5% measured at current prices, reflecting a fall of 22% in imported quantities, and a decline of 13% in average prices. Therefore, the observed strong decline in exports was more than compensated by this abrupt fall in imports, and the positive balance of the trade account not only did not contract, but also actually increased in 2009 in spite of the negative external shock, even reaching a new historical peak.

It can be inferred then, from the analysis of aggregate demand composition that net exports did not made a negative contribution. The main factor explaining GDP contraction in 2009 was the reduction in investment, while aggregate consumption experienced a small decrease.

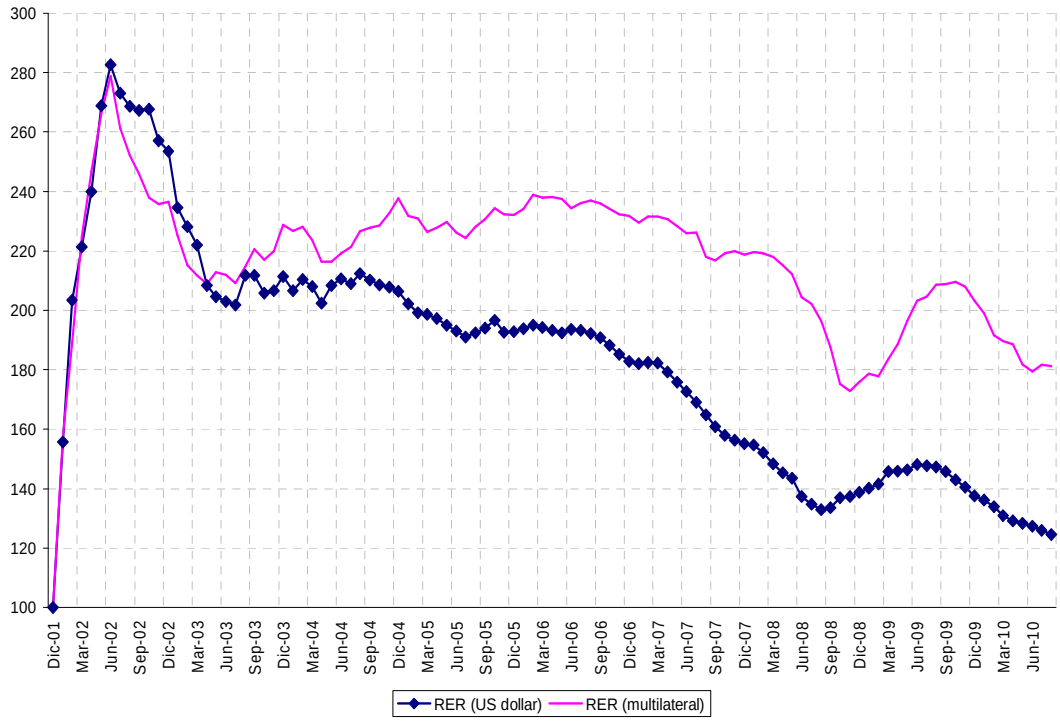
The contraction of GDP (particularly of the manufacturing sector) started to reverse since mid 2009, as can be seen in graph 2.1. From then on, some variables defining the context evolved in a positive way. For instance, a general improvement in the world economy began to be evident, the prices of soybean and other exported *commodities* rose. The Brazilian economy also started to show an important recovery. Better export prices and good weather conditions favored a significant recovery in the agricultural sector. Furthermore, as we have already mentioned, the fiscal policy turned again to be expansionary. Thus, in spite of the persistence of important domestic sources of uncertainty, the economic recovery gained momentum and GDP growth will probably surpass a 7% in 2010.

Real exchange rate appreciation

It has to be stressed that, as from early 2007, the orientation of the macroeconomic policy abandoned in practice the main pillar of the policy setting established in 2002-2003: the preservation of a competitive and stable real exchange rate. Inflation acceleration and the fact that the authorities did not recognize the acceleration were probably the main factors behind this change.

The recent evolution of two indicators of the real exchange rate can be seen in the graph 3.6: the multilateral real exchange rate (calculated with the weighted currencies basket estimated by the Central Bank) and the bilateral real exchange rate with the U.S.A.

Graph 3.6 Multilateral real exchange rate and real exchange rate with the US dollar (December 2001=100)



Source: Authors' elaboration based on Central Bank and US Bureau of the Census.

Between early 2003 and December 2006 the multilateral real exchange rate fluctuated around a stable trend, while the real parity with the US dollar experienced a sizeable appreciation, particularly during 2005-2006. Considering that between 2003 and 2006 the trend of the nominal exchange rate that resulted from the exchange rate policy was a 1.6% annual increase, and that local inflation surpassed the inflation in trade partner countries, the stability of the multilateral parity was a result of the appreciation trend of the currencies basket of those trade partners.

Since January 2007, simultaneously with the beginning of the underestimation of inflation rates by the INDEC, and until April 2008, the multilateral parity shows a continuous trend to appreciation. However, the multilateral real exchange rate series published by the Central Bank, calculated with the official CPI index, do not show appreciation but, on the contrary, follows a rising trend. The contrast between these series makes difficult to interpret the exchange rate policy of the Central Bank between January 2007 and April 2008. In the 2003–2006 period the stability of the real multilateral parity coincided with an almost stable trend of the nominal exchange rate determined by the Central Bank. The fact that the Central Bank controlled the price of the foreign currency and determined its trend is evident given its almost permanent buying intervention in a market with excess supply. The 2003–2006 data do not allow conclusions if the Central Bank followed an implicit target of stability of the nominal or real parity. Taking this into account, the orientation of the Central Bank between January 2007 and April 2008 supports different interpretations.

One hypothesis is that in the 2003–2006 period, the Central Bank did not have the preservation of the real multilateral exchange rate as a target or, if it had it, the Central Bank abandoned the target in 2007 to give priority to the stabilization of the nominal exchange rate. The targets of nominal and real stability were coincident till early 2007. Instead, from then on, with the acceleration of prices, the target of real multilateral exchange rate stability started to conflict with nominal stability and the hypothesis is that the Central Bank gave priority to the second target.

Another possibility is that the Central Bank may have formally preserved the real target but employing the information about inflation published by the INDEC to decide the adjustments in the nominal exchange rate through the managed floating. Of course the Central Bank does not ignore that INDEC underestimates actual inflation and that, consequently, the exchange rate policy was leading to an appreciation trend of the real multilateral parity. The appreciation trend happened to be more acute in relation with the US dollar, because the currencies basket employed to calculate the multilateral parity kept appreciating in this period. In its results, this hypothesis is similar to the first one.

However, the management of the exchange rate policy may have not followed such a systematic orientation as suggested by our previous hypotheses. A third plausible hypothesis is that the manipulation of price statistics may have weakened the coherence of the macro policy setting.

From early 2007 on, the exchange rate and monetary policies were affected by the underestimation of inflation and the negative consequences that this fact have on the financial markets. From mid 2007 on, the outburst of the international financial crisis and capital flight added to these negative factors. It can be conjectured that, in this problematic context, the Central Bank gave away long run considerations to concentrate its intervention on the stabilization of the foreign exchange market around a stable nominal exchange rate. Beyond the different interpretations, the fact is that the real multilateral parity appreciated by 7% between December 2006 and April 2008.

Later on, as from the second week of May 2008, an evident reorientation of the exchange rate policy took place. The Central Bank sold in the market 2.1 billon dollars from its reserves in a bit more than a month to make the nominal parity against the dollar to fall from 3.15 to 3 pesos. In this period of fall and stabilization of the nominal parity, the monthly inflation rates were reaching the higher marks since 2003. Between May and August, the inter-annual rates of increase in the consumer prices were about 29%, according to the CPI of 7 provinces. The fall and later stabilization of the nominal parity between May and August resulted in a strong appreciation of the real multilateral parity. Therefore, as a consequence of the gradual appreciation between January 2007 and April 2008 and of the change in the exchange rate policy orientation between May and August 2008, the country arrived to the moment of financial contagion of the international crisis on developing countries with a multilateral real exchange rate 15% more appreciated than the level that had been preserved almost stable between 2004 and December 2006.

A common reaction in many developing countries facing the impact of the crisis was currency devaluation. Given that, the currencies basket of the Argentine multilateral exchange rate significantly depreciated in September and October 2008. On the other hand, in October 2008, the exchange market was under a strong demand pressure reflecting capital flight. The authorities decided not to let the dollar price to rise swiftly, a decision that also implied not to follow the same exchange rate trend of trade partners, as would have been required to preserve a competitive real parity.

The nominal devaluation was accelerated since early October, but notwithstanding this the multilateral real parity in November 2008 happened to be the more appreciated since 2003. It was 25% below the December 2006 level. Later on, the Central Bank accentuated the devaluation rate for a period but the previous appreciation was reversed only partially. The exchange regime was not modified. The existence of an important stock of reserves has warranted the capacity of the Central Bank to determine the level and trend of the real parity through a managed floating policy. The rising trend of the nominal parity to mid 2009 has to be considered together with the inflationary rhythm to assess the evolution of competitiveness. The inflation rate fell in 2009 in comparison with the observed rates in mid 2008, but the economy was still experiencing a relatively high inflation (in April 2009 the inter-annual rate of the CPI-7 provinces was about 19%).

Whether the exchange regime was not formally modified, the orientation of the exchange rate policy was actually modified in 2007, and the changes became more acute in 2008 and 2009. The authorities seem to have imposed to themselves a limitation in the utilization of the instrument in the less appropriate moment to restrain it.

In effect, one of the relative advantages that the L.A. region presents is the flexibility of the exchange rates, as well as the flexibility of the exchange rate policies. This flexibility combined with significant stocks of foreign reserves, allows for a full and controlled use of the exchange rate to adjust the economies to the new conditions generated by the international crisis. Under more normal conditions, the Argentine economy should not have been an exception.

Two phases of monetary policy

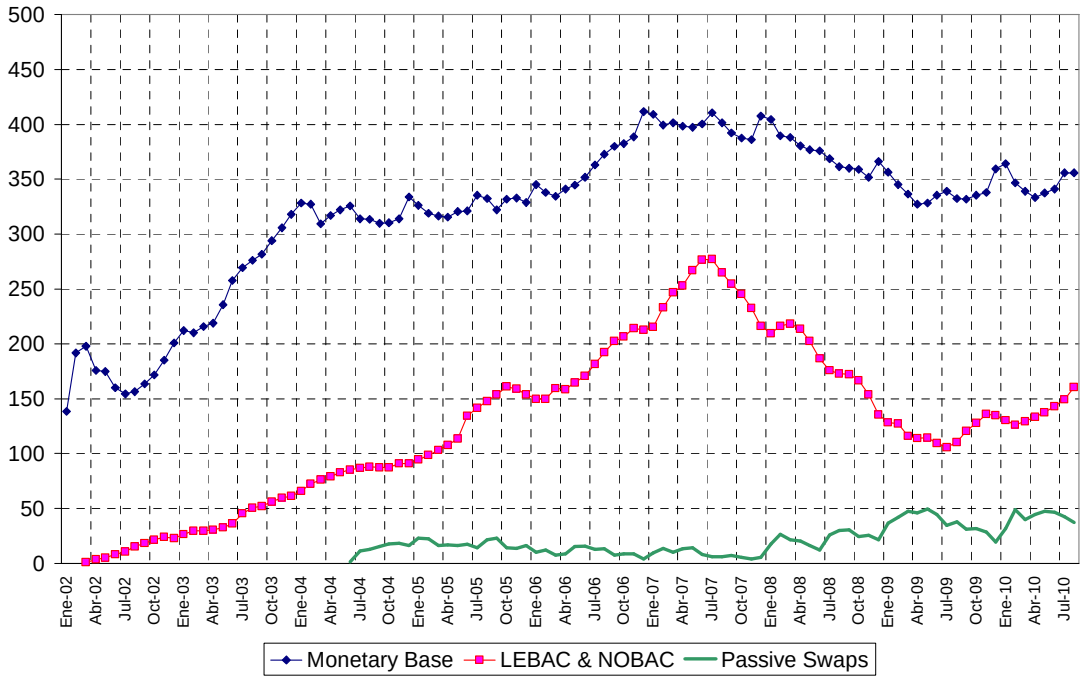
Notwithstanding the limited impact we have already pointed out, the monetary evolution observed from mid 2007 on, that is, from the beginning of the massive capital flight, evidenced a strong change.

As we showed above, from the second semester of 2002 to mid 2007 the Central Bank intervened in the foreign exchange market to limit the peso appreciation, in a market under a permanent excess supply. While this intervention caused a sustained accumulation of reserves, the Central Bank had to sell short-run financial instruments aiming at sterilizing the monetary effect of the foreign exchange market intervention. Graph 3.7 shows the monetary base rising trend until 2007, as well as the rising stock of sterilization instruments, whose increase became steeper in 2006 to mid 2007.

Things became very different from then on, particularly until mid 2009. Capital flight started to have a negative impact on domestic liquidity and the Central Bank inverted its sterilization policy: it started to buy its own debt instruments from the banks with the purpose of preserving liquidity levels. When the global crisis was aggravated, after the third quarter of 2008, the credit demand considerably weakened, though this phenomenon coincided with a cautious attitude of the banks, typical of a scenario that was perceived more risky. The banks started to show high liquidity indicators and this excess liquidity was absorbed by the Central Bank through passive swaps. Since mid 2009, the level of foreign reserves started to rise again, thanks to a moderation of private capital outflows, and the Central Bank accentuated again its sterilization operations to compensate the monetary impact of the accumulation of foreign assets.

Taking a look at the period that goes from mid 2007 to 2010 as a whole, it can be observed that the re-monetization process started in 2002 stopped. On the contrary, the degree of monetization tended to decrease in real terms (see graph 3.7).

Graph 3.7 Evolution of monetary aggregates in real terms



Source: Authors' elaboration based on Central Bank's data.

Note: Lebacs and Nobacs are financial instruments issued by the Central Bank.

Employment, unemployment, wages and income distribution in the 2000's [36]

Whether the depth of the economic and social crisis of 2001-2002 does not have parallel in the country's history, the recovery that followed was also of an unusual dynamism, in particular with respects to employment generation (see graph 2.1). For instance, the net generation of jobs –even excluding those originated in the "Plan Jefes y Jefas de Hogar Desocupados (PJJHD)"– was higher than could be predicted taking into account the GDP dynamics. [37]

In particular, the employment rate has experienced four clearly differentiated phases since the end of 2001 (graph 3.8). The first one covers the next immediate semester to the devaluation of the national currency between October 2001 and May 2002, which was characterized by a very important contraction of the total employment rate, reflecting the lagged effects of the collapse of convertibility. In the second one, between May 2002 and

[36] This chapter draws partially in the study "Situation of employment and social protection in Argentina", in progress, by Bertranou, F., R. Maurizio and E. Vezza. Other studies focusing on the labor market and income distribution after the collapse of the Convertibility Plan are Novick et al. (2007) and Beccaria et al. (2005).

[37] In 2003 there was a methodological change in the Permanent Household Survey (PHS). Since then, the semi-annual PHS (whose last wave was sampled in May 2003) was replaced by a continuous PHS (see www.indec.mecon.gov.ar). This causes a discontinuity in the series that the change in methodology does not allow to match.

October of the same year, the genuine employment [38] was able to restrain its fall, while the implementation and expansion of the PJJHD implied the generation of a very significant amount of new jobs.

The third phase began at the end of 2002 and lasted until mid 2007, a period in which a consolidation and accelerated recovery of the employment level took place. This process has been characterized by a high creation of new jobs by the private sector that more than compensated the reduction of beneficiaries of PJJHD verified since mid 2003. In October 2002, the employment rate (including employment programs) was already higher than the last observation of the convertibility period, one year before, while in the third quarter of 2003, it had already surpassed the level of 1998, the peak of the second half of the nineties. On the other hand, in the first semester of 2003 the employment level excluding these programs had completely recovered from the post-devaluation fall. Between the first semester of 2003 and the same period of 2007, the genuine employment rate grew by 7 pp, representing a total increase of around 21% of the initial rate and an annual average growth rate of 4.8%.

Finally, since the second half of 2007 there has been some stagnation in the employment rate, which lasted until the end of the following year, when the impacts of the crisis became more evident, resulting in the reduction in the percentage of employed people during the first two quarters of 2009. However, the negative effect of the crisis on labor demand seems to be relatively low in comparison to what happened in previous crises. Some measures taken by the national government to prevent layoffs and preserve jobs in the private sector, such as wage subsidies to firms, together with some increase in public employment contributed to this result (*see* Box 6).

Box 6

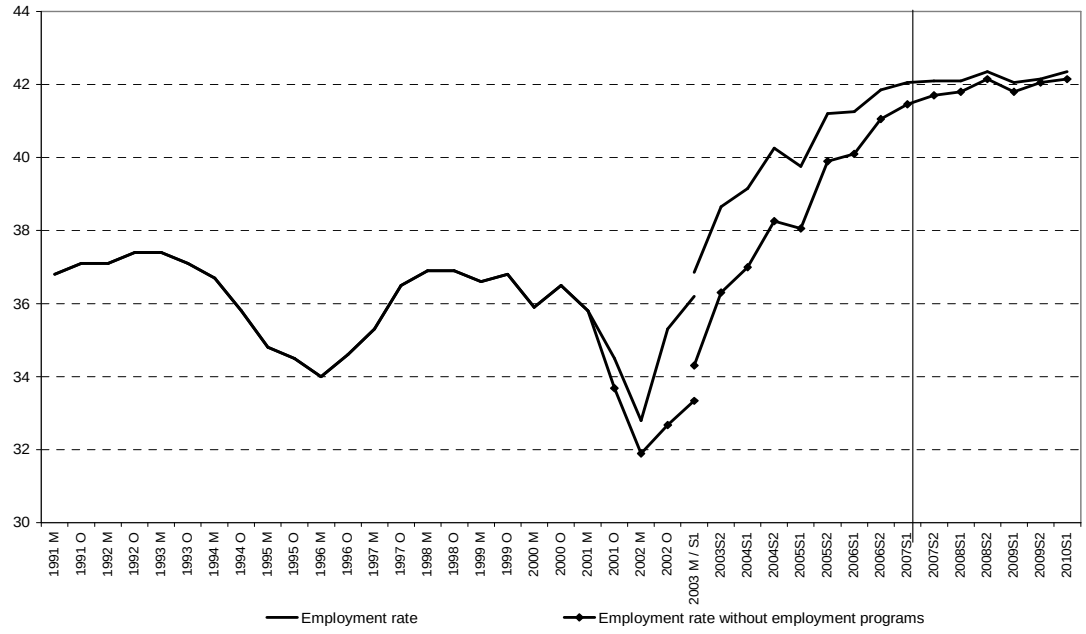
A program to preserve employment under the impact of the global crisis (the REPRO)

The Productive Recovery program (REPRO) was established as a subsidy to companies through which the government pays part of the private workers wages. The tool has existed since 2002, when an Employment Emergency law was sanctioned, but its coverage was widened from the last months of 2008 on and became one of the main policies to cushion the impact of the falling domestic economic activity over the formal labor market. In 2009, the program covered 143.000 workers belonging to 2750 companies, a number that is equivalent to one percentage point of the unemployment rate. In 2010, the number of workers in the program decreased by more than 50 per cent. To receive the benefit, firms have to prove to be in a critical situation and must have the trade unions' endorsement. The government pays a monthly sum equivalent to 150 dollars to every worker in the program, for a twelve months period, that could be extended. The employers benefit is higher because of the contributions on wages they don't have to pay. Between 2008 and 2009 the average duration in the program was 9 months. The Labor Ministry considered the Repro as the main tool to prevent massive layoffs and worker suspensions during the crisis. Small and medium firms -with one to 300 workers- assisted by the program represent 96,6 per cent of the total. Meanwhile, 94 big companies with more than 300 employees concentrated 36 per cent of workers covered and 40 per cent of the funds.

More acute appears the medium-term perspective, taking into account that the evidence shows that the employment generation dynamism began to weaken well before the negative effects of the international crisis took place. In fact, the employment rate of the first semester of 2007 (42.1%) was very similar to that of the same semester three years later (42.4%).

[38] That is, excluding beneficiaries of public employment programs such as "Plan Jefes".

Graph 3.8 Employment rate (with and without employment programs), total urban centers, May 1991-II semester 2010



Source: Authors' elaboration based on INDEC

With an overall look at both decades, two important points are apparent. The first one is the significant change in the employment trend after the collapse of the currency board regime, verified thought the higher intensity of job creation and a higher stability of this positive dynamic. The second one is the fact that about ten years were required to recover the peak of the employment rate (excluding employment programs) achieved during the Convertibility plan, at the beginning of 1993. This was a consequence of the worsening of labor demand through the second half of the nineties.

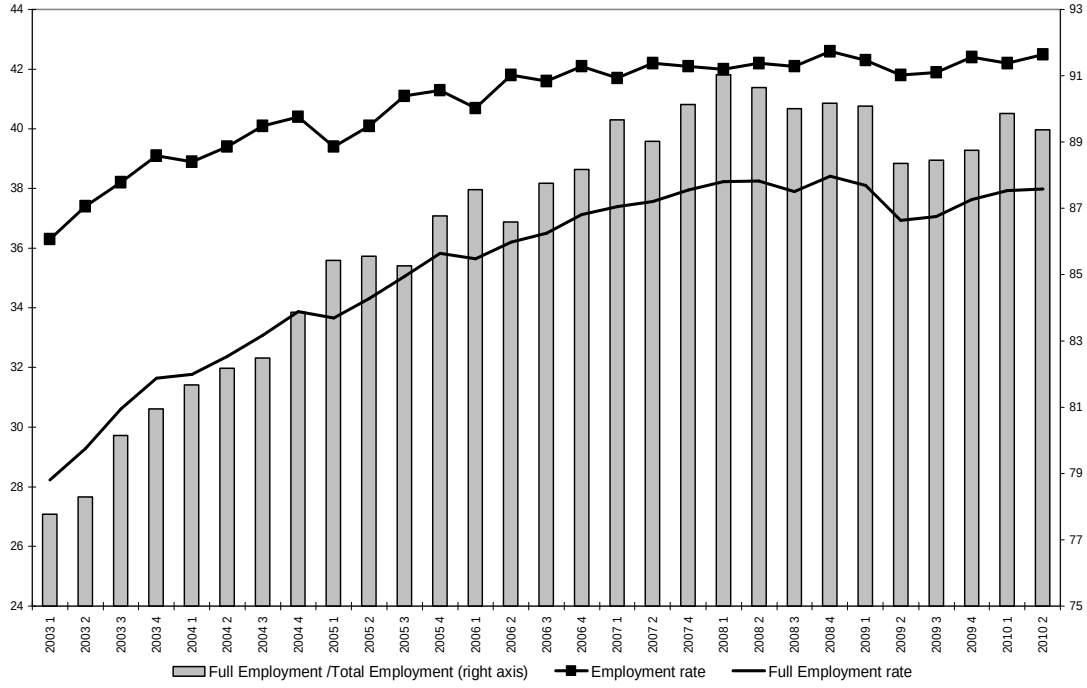
Additionally, during the whole post-convertibility period, the creation of new jobs was led, until 2008, by an increase in full-time employment, representing 78% of total employment in the first quarter of 2003 and 90% at the end of 2008. As explained when discussing the behavior of full-time employment in the nineties, this variable presents a close correlation with aggregate output, being a main channel of the macro impulses to the labor market. The simple model of the labor market that we used to analyze the nineties was also employed in this period. In particular, we estimated a full-time employment rate function including the data of the 2000's. The estimation is included in Annex 1.

Let us recall that we had found a negative trend in the nineties, until 1996, explaining a contraction of 1.4 percentage points per year in the full-time employment rate. We interpreted this factor as reflecting the slow adjustment of the firms, in the early nineties, to the conditions of real exchange rate appreciation and trade opening defined at the beginning of the decade. We can also think of an environment change at the beginning of the 2000's, defined basically by a considerably higher real exchange rate, established in 2002-2003 and quite stable from then on, for an extended period. Hence, we can also conceive a process of adaptation of productive firms to this new environment. Thus, the econometric estimation should allow for a measure of the magnitude of this effect. In fact, we found a significant trend of the full-time employment rate that independently of the behavior of aggregate GDP explains an increase of about 1,15 percentage points a year in this rate, as from the beginning of the recovery of the 2000's and extended to the end 2005, when this effect tended to vanish.

This effect is symmetrical to what had been observed in the early nineties. It implies an increase in labor utilization, related to different factors triggered mainly by a competitive and stable real exchange rate, like a new spur of import substitution and an increase in labor intensity in production.

However, the positive dynamics of the full-time employment rate weakened after 2005 and, as happened with total employment, also stopped before the international crisis. This indicator decreased as from the second quarter of 2008 until mid 2009. Therefore, the adjustment in the labor market as a result of the fall in aggregate demand during the crisis also seems to have operated through working hours, given that the reduction in full-time employment surpassed the fall in total employment (graph 3.9). In fact, while the latter fell by 0.7 percentage points between the fourth quarter of 2008 and third quarter of 2009, the full-time employment rate declined by 1.4 percentage points. Thus, in the second quarter of 2010, this indicator was below its level in the last quarter of 2008, despite that it had recovered faster than total employment. Therefore, as expected, in the downturn phase the working hours appear to adjust before dismissals, while they seem to be the first dimension to react at the beginning of an economic recovery, indicating a labor hoarding behavior.

Graph 3.9 Employment and Full-time Employment rates, total urban centers, I quarter 2003-II quarter 2010



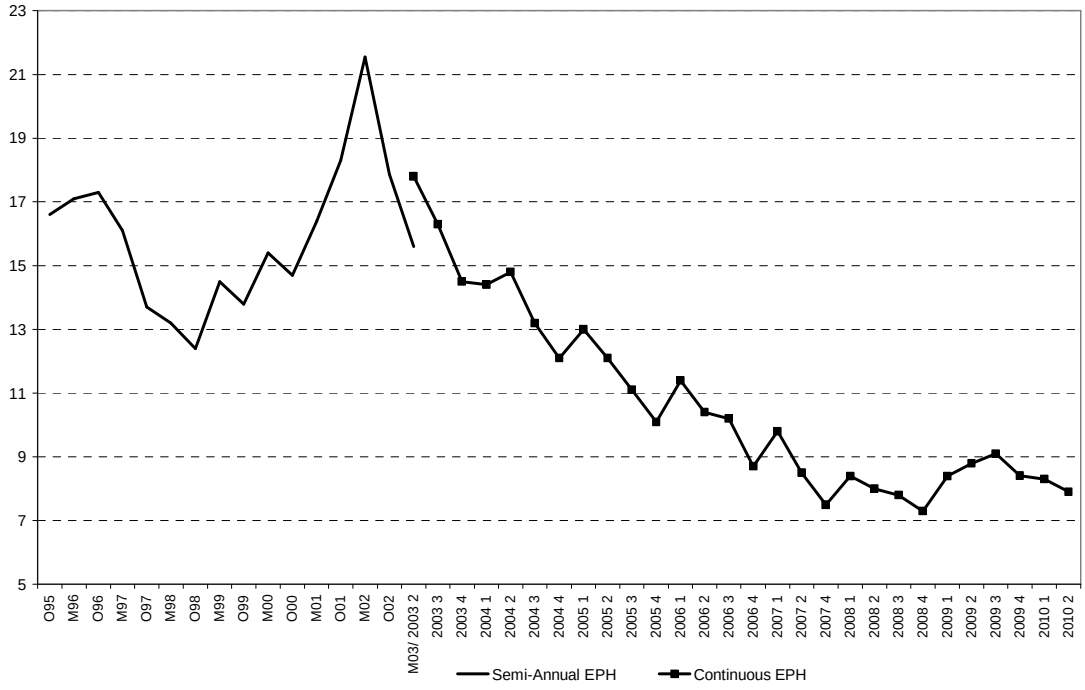
Source: Authors' elaboration based on INDEC

As a result of higher dynamism of labor demand under the new macroeconomic regime, the unemployment rate broke the growing trend exhibited during most of the nineties. After reaching a peak of almost 22% in May 2002, the unemployment rate followed a decreasing trend until the end of 2007, representing this year 7.5% of the active population (graph 3.10).

However, like it happened to employment, this indicator remained fairly constant during the subsequent year. Later on, the unemployment rate was affected by the impact of the crisis, increasing during the first three quarters of 2009. Then, as from the last quarter of this year, unemployment has been undergoing a new sustained reduction. Nevertheless, although in the recession phase, unemployment did not increase significantly, the record of

the second quarter of 2010 (7.9%) was still somewhat above its level in the last quarter of 2008, which was 7.3%.

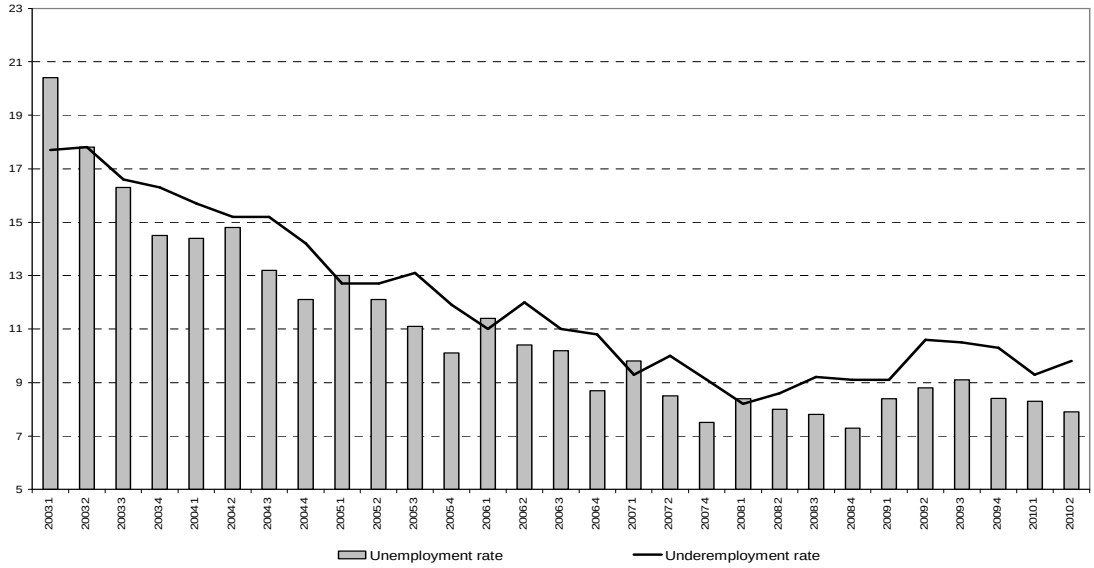
Graph 3.10 Unemployment rate, total urban centers, October 1995-II quarter 2010



Source: Authors' elaboration based on INDEC.

Furthermore, consistently with what has been mentioned before about the adjustment of working hours during the business cycle, the dynamics of underemployment has closely followed that of the unemployment rate, both clearly showing a countercyclical behavior (graph 3.11). The correlation coefficient between the two series from 2003 to 2010 is around to 0.95, suggesting that the dynamic of economic activity impacts not only through the creation of jobs but also, and in a more elastic way, through working hours.

Graph 3.11 Unemployment and underemployment rates, total urban centers, I quarter 2003-II quarter 2010



Source: Authors' elaboration based on INDEC.

One of the most important dimensions to characterize the evolution of the aggregate employment is the occupational category that allows classifying the workers into: wage earners registered in social security system (formal wage earners), non-registered wage earners (informal wage earners), non-wage earners (own-account workers and employers) and unpaid family workers. During the 2003-2010 period, the registered job positions increased by 53%, explaining 80% of the total new employment. The non-registered jobs rose by 10%, explaining 11% of employment creation. The own-account activities have shown a very low dynamism, increasing only 6% and representing a similar percentage in total employment generation. Finally, employers grew intensely, around 50%, but they accounted for a low proportion of only 7% of the new jobs (graph 3.12 and table 3.3).

Graph 3.12 Employment by occupational category and their trends*, total urban centers, III quarter 2003-II quarter 2010 (III quarter 2003=100)

Source: Authors' elaboration based on INDEC

* Trends are estimated by the Hodrick-Prescott Filter

The higher dynamism in the generation of formal jobs makes a clear difference with the nineties, when precariousness was, jointly with unemployment, one of the persistent characteristics of the labor market. In particular, from 2003 to 2008 the number of registered wage earners showed a sustained growth, raising their participation in total employment from 40% to 49%. Afterwards, their participation has remained relatively stable, in other words, the trend to an improvement in the quality of jobs weakened.

As a result, the percentage of non-registered wage earners (informal wage earners) in total wage earners experienced a significant reduction of 8 percentage points between 2003 and 2008, falling from 44% to 36% of the total. Then, this participation remained rather constant (graph 3.13). In the second quarter of 2010, informal jobs still represented around 40% of total wage earners.

Table 3.3 Evolution of employment by occupational category, total urban centers, III quarter 2003 – II quarter 2010

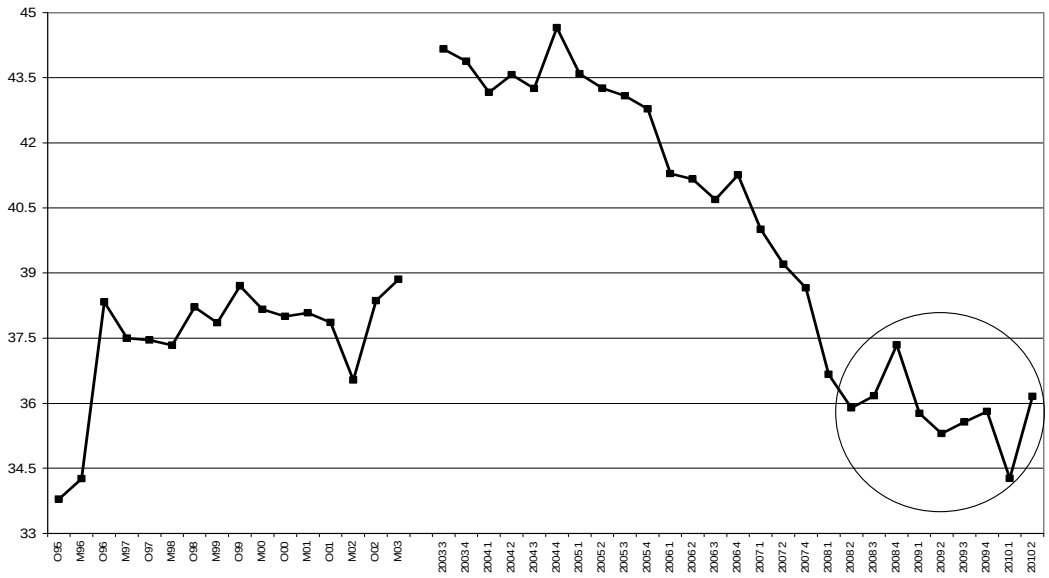
	2003 3	2004 2	2005 2	2006 2	2007 2	2008 2	2009 2	2010 2	Contribution to employment growth
Registered wage earners	39.9	41.1	41.7	43.9	46.1	48.6	48.8	48.3	81%
Non-registered wage earners	31.6	31.8	31.8	30.7	29.8	27.2	26.7	27.4	11%
Own account workers	22.4	21.5	21.5	20.0	18.6	18.6	19.3	18.8	5%
Employer	3.9	4.2	4.1	4.3	4.5	4.6	4.4	4.6	7%
Unpaid family workers	2.2	1.4	0.9	1.1	1.0	1.0	0.8	0.9	-4%
TOTAL	100	100	100	100	100	100	100	100	100%

Source: Authors' elaboration based on INDEC

Precariousness is one of the most important signs of the strong deterioration suffered by the labor market, especially during the second half of the decade of the nineties. After so many years of persistently unfavorable indicators, the generation of jobs has not completely allowed the solving of the problem of precariousness –the generation of wage earning jobs that is not registered in social security–. Given that informal workers obtain an hourly wage equivalent to 40% of registered workers, this factor is particularly important to explain inequality inside the workforce.

On the other hand, the systematic reduction in the participation of own-account workers during the years characterized by a strong employment generation of salaried positions, suggests a counter-cyclical behavior of this kind of occupation. On the contrary, employers seem to be more pro-cyclical, as expected, since the creation of firms accelerates in the expansion phases of the business cycle.

Graph 3.13 Percentage of non-registered wage earners in total wage earners, total urban centers, III quarter 2003-II quarter 2010

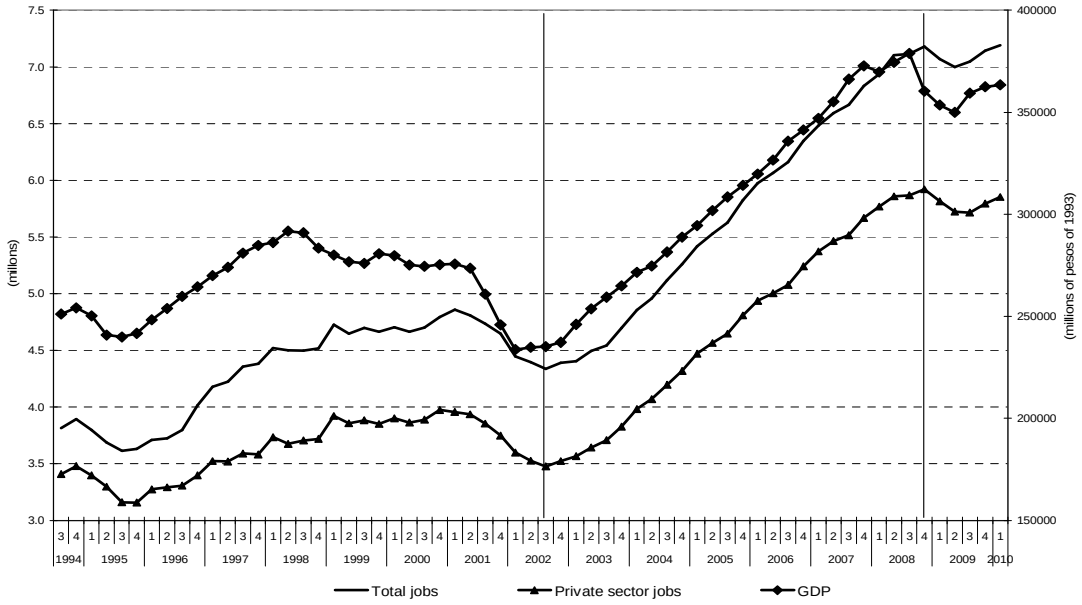


Source: Authors' elaboration based on INDEC

Focusing in more detail on the evolution of jobs registered in the social security system, we observe that between the fourth quarter of 2002 and the same period of 2008,

approximately 3 million formal jobs were created, representing around 66% of the initial level.[39] Of this total, 2.4 million were generated by the private sector, representing an increase of about 70% (graph 3.14).

Graph 3.14 Seasonally adjusted real GDP and jobs registered in the Social Security System, 1994-2010



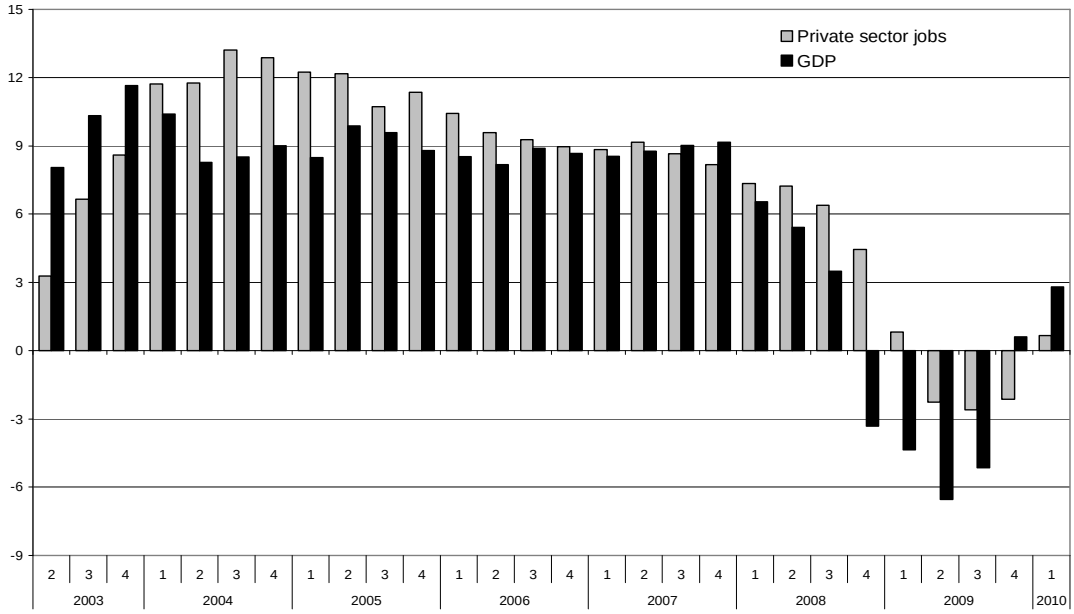
Source: Authors' elaboration based on Ministry of Economy

During the first years after the devaluation of the national currency the creation of formal jobs accelerated, surpassing, in fact, the GDP growth rates (graph 3.15). This high dynamism of the formal employment generation in the private sector started to slowly weaken since mid-2004, but the response of the formal employment to the growing trend of the domestic activity continued to be very elastic.

However, formal jobs suffered a reduction during the first two quarters of 2009, accompanying the contraction of GDP. In this period about 180 thousand formal jobs were lost (2.5% of the initial number). The impact was even stronger on the private sector, where the reduction of jobs lasted a bit longer and job losses amounted to 200 thousand. The difference in the behavior of both series is due to the evolution of public employment during the downturn, which was more dynamic than private sector employment, as a counter-cyclical mechanism aimed at cushioning the impact of the contraction in domestic product on labor demand.

[39] This information comes from the administrative records of the Social Security System and corresponds to the whole country, including urban and rural areas.

Graph 3.15 Inter-annual real GDP and private jobs registered in the Social Security System growth, 2003-2010 (%)



Source: Authors' elaboration based on Ministry of Economy.

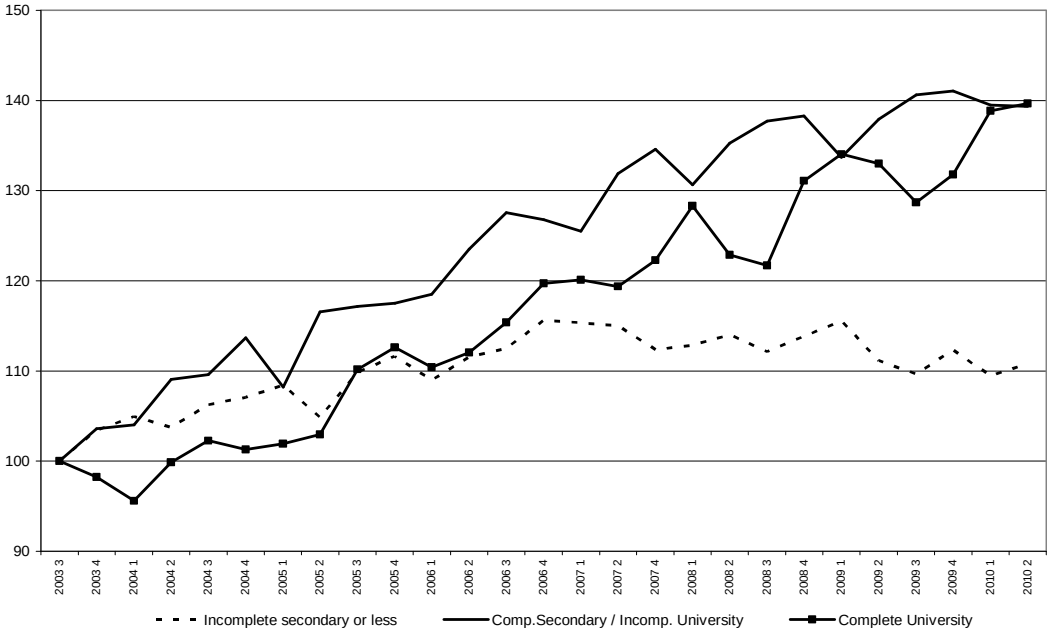
Once the economic recovery started, since mid-2009, a positive evolution in total net registered positions has been observed. This dynamic made possible to recover the values reached in the fourth quarter of 2008, before the impact of the crisis. This positive trend seems to be more intense in the private sector than in public sector. However, as the previous contraction in the former was stronger, it has not returned to pre-crisis values yet.

Anyway, as mentioned, the impact of the crisis appears to have been moderate compared to similar episodes, where one of the first dimensions negatively affected has been the formality of employment. The measures taken by the national government to avoid layoffs and preserve jobs in the private sector, such as wage subsidies and reduction of working hours, together with the increase in public employment, seem to have contributed to this result.

An important point deserves to be stressed: during this crisis, Argentina, like other countries in the L.A. region, avoided the implementation of reforms aimed at labor market *flexibilization,* as a way to cope with rising unemployment (see Box 1). The lesson learnt by this type of strategy, implemented in the nineties in the country and elsewhere in Latin America is that, when taken in the absence of a wide social protection system, they contribute to an increased vulnerability of workers and to the enlargement of social gaps. Moreover, these processes failed to deliver the promises of increases in employment-output elasticity, formalization of employment and higher economic efficiency.

The recovery of the employment rate extended to workers with different skills, although with dissimilar intensity (graph 3.16). In particular, during 2003-2005, workers with less than university degree experienced a more intense rise in the number of jobs than the most skilled workers. This employment evolution in terms of the educational level constitutes a novel fact given that previous experiences of employment recovery were biased almost exclusively towards the most skilled job positions. This dynamism could be explained, at least partly, by a dissimilar performance by productive sector, especially with respect to employment creation in construction activities that, in relative terms, demand lower skilled workforce.

Graph 3.16 Employment rate by educational level, total urban centers, III quarter 2003-II quarter 2010 (III quarter 2003=100)



Source: Authors' elaboration based on INDEC.

However, although all educational categories kept growing until the end of 2006, the intensity weakened in the case of less skilled workers. Moreover, since then, this group suffered from a stagnation and further reduction during the crisis, while the other categories were able to preserve their previous increasing trends. Throughout the whole period, the least educated workers have shown a reduction in their participation in total employment from 46.5% to 40.8%, but this group explains 19% of total employment creation. Those workers with intermediate educational level have shown the most intense growth path, explaining a half of the number of jobs generated in those years. Finally, workers with university degree explain 30% of employment creation (table 3.4).

Table 3.4 Evolution of employment by educational level, Total urban centers, III quarter 2003-II quarter 2010

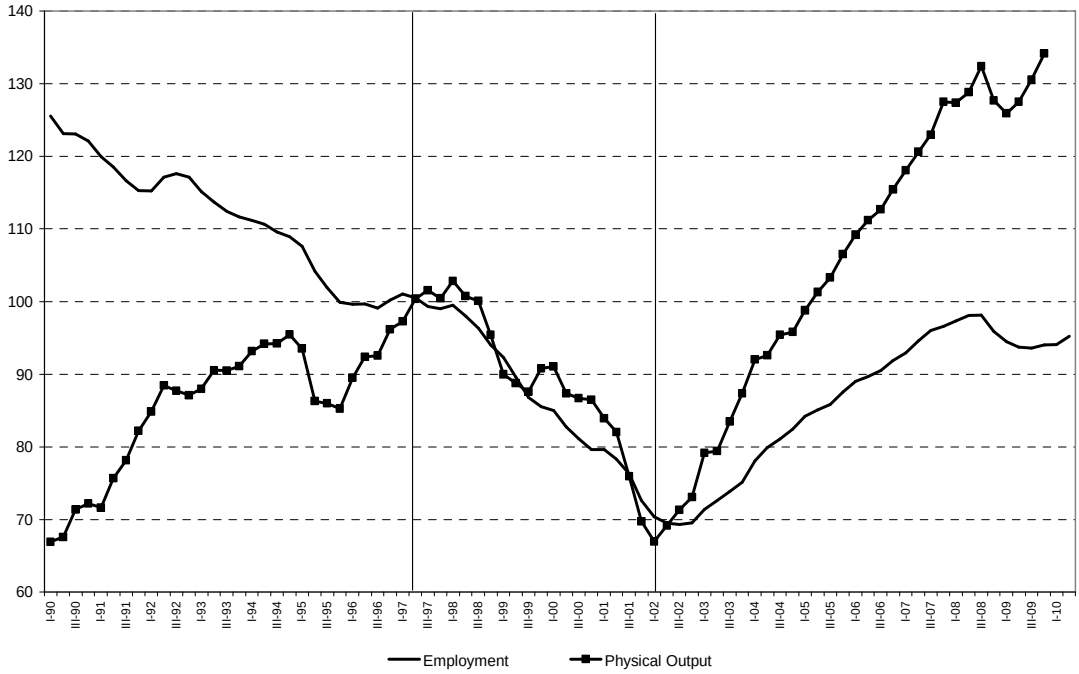
Educational level	2003 3	2004 2	2005 2	2006 2	2007 2	2008 2	2009 2	2010 2	Contribution to employment growth
Incomplete secondary or less	46.5	46.0	44.9	44.8	43.9	43.1	41.5	40.8	19%
Comp.Sec. / Incomp. University	43.0	35.4	36.5	36.3	36.9	36.9	37.7	37.6	51%
Comiplete university	19.5	18.6	18.6	18.6	19.2	19.2	20.9	21.6	30%
TOTAL	100	100	100	100	100	100	100	100	100%

Source: Authors' elaboration based on INDEC.

The dynamics of total employment has also been positive in the case of industrial activities. Since the fourth quarter of 2002 the manufacturing sector was able to break the downward trend in employment experienced throughout the nineties, even during the upward trend of the physical industrial output, when a very significant increase in the labor productivity was observed (graph 3.17). In particular, from 2002 to the third quarter of 2008, the employment in this sector grew approximately by 42%. However, given the sharp and steady contraction observed during the convertibility regime, the employment in

manufacturing activities was still 22% lower in 2008 than it had been at the beginning of the nineties. The international crisis also negatively affected aggregate employment in this sector. A reduction took place during four successive quarters, from the end of 2008 to the third quarter of the 2009.

Graph 3.17 Employment and physical output in manufacturing sector, I quarter 1990-II quarter 2010 (1997 = 100)



Source: Authors' elaboration based on Industrial Survey.

Although the performance of industrial employment has been positive, since 2003, the growth of employment has been generalized, as shown in table 3.5. From that year on, commerce and construction, together with industrial activities and financial services, have made the highest contribution to total employment generation. On the whole, they explain about 60% of the net new employment. Additionally, in the more recent period, job generation in the public sector, as mentioned before, has been showing an intense dynamism, as a counter-cyclical mechanism to preserve aggregate employment.

The employment structure by gender has remained relatively constant throughout the whole period, with a slight increase in the participation of men in total employment at the beginning of the new macroeconomic regime and a reduction from 2005 on. Men explain 57% of total employment creation during 2003-2010 (table 3.6).

Table 3.5 Evolution of employment by branch of activity, total urban centers, III quarter 2003-II quarter 2010

Branch of activity	2003 3	2004 2	2005 2	2006 2	2007 2	2008 2	2009 2	2010 2	Contribution to employment growth
Manufacture	14.3	14.9	14.6	14.8	14.6	13.8	12.7	13.2	9%
Construction	7.2	7.7	8.2	8.3	8.9	8.5	8.8	8.7	15%
Trade	21.0	21.8	20.8	21.2	20.3	20.6	20.1	20.6	19%
Transport	7.1	6.7	7.1	6.6	7.2	7.6	7.0	6.9	6%
Financial services	9.3	9.2	10.0	10.2	10.1	10.5	11.4	11.0	18%
Personal services	6.6	6.7	6.3	6.4	7.0	6.6	6.8	6.4	6%
Domestic services	8.1	7.8	7.9	7.7	7.9	7.6	7.9	7.8	6%
Public sector	14.9	13.8	14.1	14.2	13.8	13.7	14.5	14.4	12%
Other industries	11.2	11.2	10.8	10.5	10.0	10.5	10.5	10.6	8%
TOTAL	100	100	100	100	100	100	100	100	100%

Source: Authors' elaboration based on INDEC.

Table 3.6 Evolution of employment by gender, total urban centers, III quarter 2003-II quarter 2010

Gender	2003 3	2004 2	2005 2	2006 2	2007 2	2008 2	2009 2	2010 2	Contribution to employment growth
Men	58.6	59.3	59.7	59.0	58.9	58.5	57.8	58.3	57%
Women	41.4	40.7	40.3	41.0	41.1	41.5	42.2	41.7	43%
TOTAL	100	100	100	100	100	100	100	100	100%

Source: Authors' elaboration based on INDEC.

Finally, young people have been experiencing a decreasing trend in total employment during these years; an evolution that was compensated by the employment dynamic followed by workers between 25 and 45 years old. They accounted for two thirds of total employment creation (table 3.7).

Table 3.7 Evolution of employment by age, total urban centers, III quarter 2003-II quarter 2010

Age	2003 3	2004 2	2005 2	2006 2	2007 2	2008 2	2009 2	2010 2	Contribution to employment growth
Less than 25 years old	18.2	18.0	17.6	17.6	17.0	16.8	16.1	15.9	7%
25 – 45 years old	48.2	48.6	48.7	48.6	49.9	49.7	50.8	50.8	61%
More than 45 years old	33.7	33.4	33.6	33.7	33.0	33.5	33.1	33.3	32%
TOTAL	100	100	100	100	100	100	100	100	100%

Source: Authors' elaboration based on INDEC.

Labor incomes and their distribution [40]

Like in the case of employment, four phases can be identified in the evolution of real labor incomes since the end of the nineties. There was a first phase after the devaluation in which this indicator fell, followed by a second phase of stabilization. In particular, the increase in domestic prices after the devaluation had a direct negative effect on the purchasing power of labor incomes. Between October 2001 and October 2002, they fell around 30%, although more than two thirds of the fall took place in the semester that followed the nominal devaluation. After this strong reduction, nominal labor incomes started to grow at a similar pace than prices, hence the figure in May 2003 was similar to October 2002 (graph 3.18).

The third phase, of recovery and growth, started at the beginning of 2003 and lasted to the beginning of 2007. In particular, both a greater dynamism of the demand for labor and low inflation allowed for an increase in the real labor incomes after the long period of continuous fall. Throughout the whole period, the average real labor income increased in 34%. However, given the strong previous reduction, at the beginning of 2007, they still were, on average, approximately 3% below the level at the end of the convertibility period.

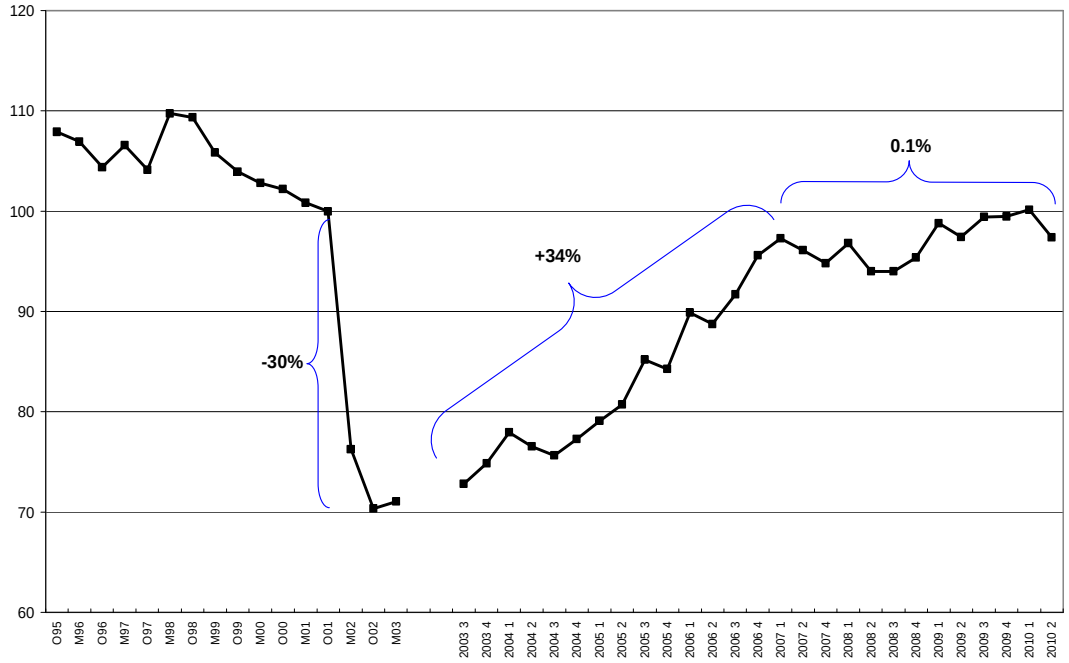
Finally, the acceleration of inflation observed from 2007 on put a brake on the recovery of the purchasing power of labor income. Between this year and 2010, the average real labor income remained almost constant. In turn, it is possible to differentiate two phases within this last sub-period: the first one, from the beginning of 2007 to the third quarter of 2008, when a reduction of 4% was verified; the second one, from then on, when real labor income started to recover again but at a rate significantly below the 2003-2007 performance. As a consequence, in the second quarter of 2010 the average labor earnings had just recovered the value of October 2001, still being 10% below its 1998 level.

These dynamics suggest an asymmetric behavior of labor income in the different phases of the business cycle. This is shown, for instance, *via* the fact that the percentage growth of real labor income in the seven years between 2003 and 2010 is similar in magnitude to the reduction verified during just one year (about 30% in 2002).

It is also clear that improvements in the labor market verified after the abandonment of convertibility were more intense through the generation of employment than through the recovery in remunerations. The significant precariousness and unemployment that still persist in the country are probably the factors associated with this weaker dynamism.

[40] This section refers to labor incomes from main occupation.

Graph 3.18 Real income from main occupation. Excludes employment programs. Total urban centers, October 1995- II quarter 2010 (Index October 2001=100, deflated by CPI and CPI-7)



Source: Authors' elaboration based on INDEC.

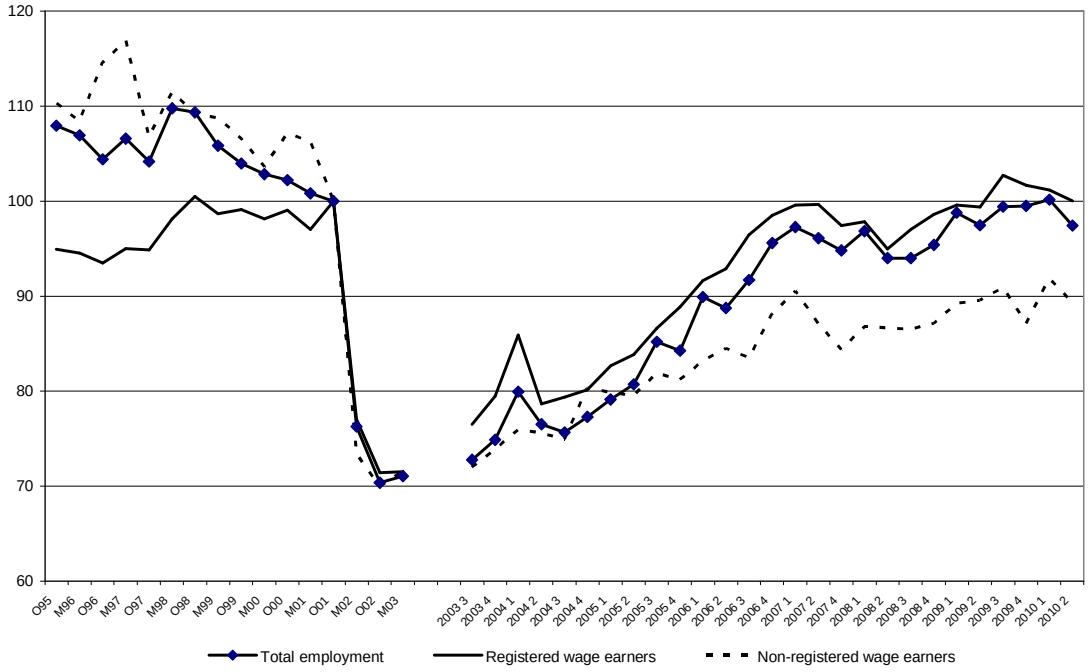
During the third phase, real labor incomes increased in all the groups of workers defined according to their occupational category, although with different intensities. In particular, between the third quarter of 2003 and the same quarter two years later, the increase in real wages was slightly higher for non-registered than for registered wage earners. However, from mid-2005 to mid-2007, the wages' recovery in the second group was stronger (graph 3.19). Furthermore, the reduction of real wages during 2007 seems to have been more intense among informal workers, while the subsequent recovery has been weaker for this group. Throughout the period 2003-2010, registered wage earners were able to increase their real wages in 31%, whereas non-registered wage earners did so by only 24%.

One of the factors that have contributed to the initial wage recovery has been the significant income policy implemented by the National Government through lump-sum rises. These measures usually have a greater impact on lower income groups.[41] Even though the non-registered wage earners are not covered by labor legislation, it is often

[41] In effect, initially the National Government established by decree a increase of $100 for the private sector in the second semester of 2002 (without contribution to the social security), and gradually rose it up to $200 at the end of 2003. As from July of that year, those amounts started to contribute to the social security system. In 2004, there were further increases but of smaller magnitude. At the same time, the minimum wage was increased successively from $200 –current until June 2003- to $450 in September 2004. In 2005, it was raised up to $630, and in 2006 a further increase allowed to raise the minimum wage to $800. For workers in the National Public Sector an increase of $100 (without contribution to the social security) was established since June 2004, for those workers who earned wages lower than $1000; and since January 2005, an increase of $100 was established for workers with wages lower than $1250. Further increases were established in 2005, 10% since June and 9% since August.

argued that the wages earned by those workers that are covered by social security have a certain impact on the wages paid to the former group of workers. If this is so, and given the lower average value of wages of non-registered workers, the non-proportional increases must have had a greater impact on them. Afterwards, the better performance of the wages of formal relative to informal workers is associated, at least in part, to the active policy of recovering the minimum wage and the collective bargaining mechanisms operated in the country after the change of macroeconomic regime.

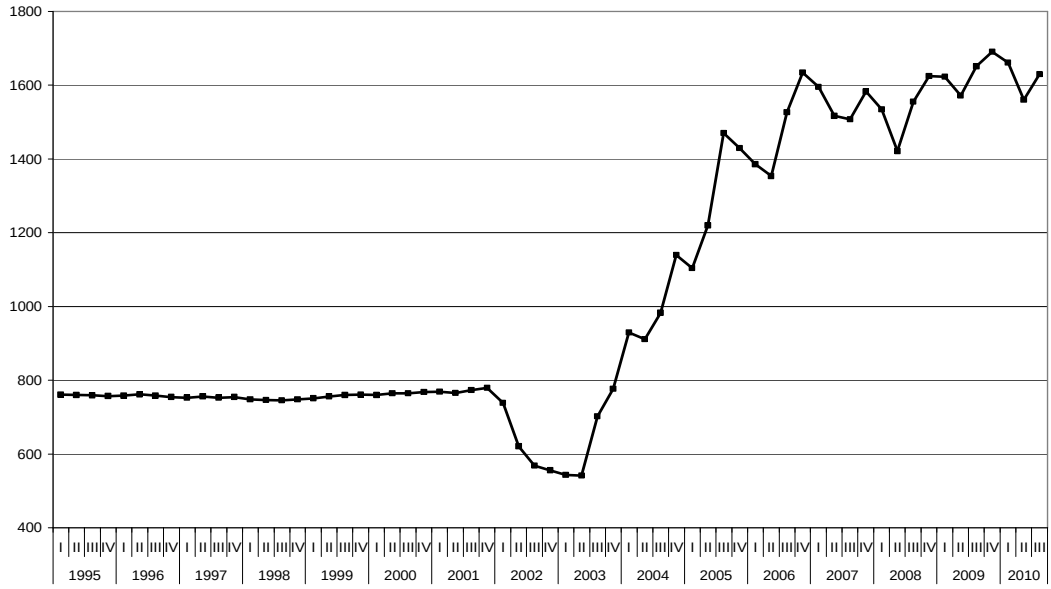
Graph 3.19 Real wages from main occupation of registered and non-registered wage earners. Excludes employment programs. Total urban centers, October 1995- II quarter 2010 (Index October 2001=100, deflated by CPI and CPI-7)



Source: Authors' elaboration based on INDEC.

In particular, in contrast to the weakening of the real minimum wage during the nineties, when it was not binding in wage determination, since 2003, this labor institution started to recover, and its real value has tripled from then to the present (graph 3.20). The reactivation of the National Council of Employment, Productivity and Wages since 2004, after 11 years of virtual inactivity, was a key factor associated to these improvements.

Graph 3.20 Real Minimum Wage, 1995-2010 (in pesos of August 2010, deflated by CPI and CPI-7)



Source: Authors' elaboration based on data from the Ministry of Economy.

The Council also played an active role during the crisis as it allowed the continuation of updating the nominal value of the minimum wage to avoid the erosion of their purchasing power, a usual adjustment behavior during downturn phases. In particular, during 2009, its value, which was initially at $1240, increased in two stages: to $1400 since August and to $1440 since October. Then, it reached $1500 from January 2010, $ 1740 since September, and $1840 in January 2011.

However, although this dynamic makes a clear contrast with the role that this institution has played during the nineties, it seems to have suffered some weakening in their recovery from 2007 onwards as a consequence of the acceleration of inflation. In fact, the real value in the third quarter of 2010 was almost equal to its level in the last quarter of 2006.

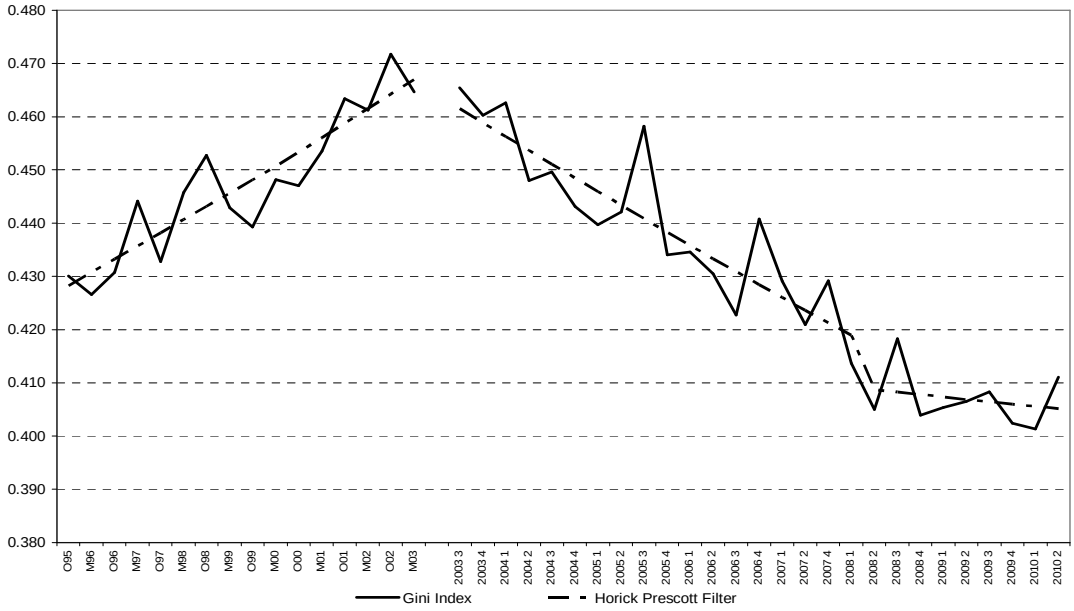
In parallel with these developments, tripartite dialogue through collective bargaining has been strengthened in recent years. In particular, the number of agreements, by firms or industry, has grown exponentially in the post-convertibility in relation to the nineties. For example, in 2006, 930 agreements were certified, 1027 in 2007, 1551 in 2008, 1654 in 2009 and 1578 in 2010. These numbers clearly contrast with the average of 190 annual negotiations during the nineties.

However, although these developments have contributed to improve labor conditions and to restore and strengthen labor market institutions, a very high proportion of non-registered wage earners still persist, as shown previously. Therefore, precariousness still is one of the most important issues in the Argentinean labor market, where about 40% of wage earners are not covered by social security system. This phenomenon not only impacts on working conditions and individual and family incomes, but also weakens the effectiveness and scope of labor market policies and regulations.

The recovery of the purchasing power of average labor income has been accompanied until early 2008 by a reduction in income inequality, as indicated by the evolution of the Gini Index during these years (graph 3.21). In particular, due to the generalized fall of real income along the semester that followed the devaluation, the Gini index remained practically unchanged. After a small increase in inequality between May and October 2002, the trend towards higher concentration of incomes started to reverse.

Indeed, the new trend towards less concentration verified between 2003 and 2008 contrasts with the process experienced throughout the nineties. The Gini index of income from main occupation fell 6 pp between the III quarter of 2003 and the II quarter of 2008, passing from 0.465 to 0.405. [42] Thereafter, in a context of slowdown in the process of labor improvements, the trend towards lower concentration of labor income seems to have stopped or at least weakened, before the impact of the global crisis. The Gini coefficient in the second quarter of 2010 was 0.411, slightly above its level in 2008.

Graph 3.21 Gini Index of income from main occupation. Excludes employment programs, total urban centers, October 1995- II quarter 2010



Source: Authors' elaboration based on INDEC.

It is possible to identify some factors that could be associated with the reduction in inequality. The recovery in labor demand that allowed both the growth in employment and the rise in wages across workers with different skills is likely to have been the base that made a reduction in the wages gap possible. However, another factor that has probably contributed to this process has been the incomes policy implemented by the National Government since mid-2002, just mentioned, through lump-sum rises and increments in the minimum wage, measures that have greater impact on lower income groups. Additionally, the process of formalization of non-registered wage earners must also have triggered the growth in wages in the bottom extreme of the distribution.

Despite the reversal in the trend towards greater inequality, the concentration of incomes from main occupations is still very high. In the second quarter of 2010, whereas the first quintile of employed workers received 4% of total labor income, the fifth quintile received approximately 44% (Table 3.8). Moreover, the average income of the latter group was 11 times the average income of the first quintile, while such ratio had been of 14 times in 2003.

[42] The reduction verified throughout this whole period is statistically significant with a 95% level of confidence.

Table 3.8 Quintile distribution of income from main occupation, total urban centers, III quarter 2003 – II quarter 2010

Quintile	2003 3	2004 2	2005 2	2006 2	2007 2	2008 2	2009 2	2010 2
1	3.7	4.0	4.1	4.1	4.2	4.6	4.2	4.2
2	9.3	9.8	9.9	10.4	10.5	11.1	11.2	11.2
3	14.6	15.1	15.5	15.6	15.9	16.5	16.4	16.7
4	21.5	22.0	22.0	22.3	22.8	22.9	23.0	24.3
5	50.8	49.1	48.5	47.6	46.7	45.0	45.2	43.6
TOTAL	100	100	100	100	100	100	100	100
Q5/Q1	13.8	12.4	12.0	11.7	11.2	9.9	10.7	11.2

Source: Authors' elaboration based on INDEC.

As can be deduced from Table 3.9, the occupational category appears as an important dimension through which the strong heterogeneity among workers become evident, and in particular, the condition of being registered or not among the wage earners. In effect, in the second quarter of 2010, those wage earners not covered by social security received, on average, incomes that represented 43% of the remunerations of registered wage earners.

Table 3.9 Real income for main occupation by occupational category, total urban centers, III quarter 2003 – II quarter 2010

	2003 3	2004 2	2005 2	2006 2	2007 2	2008 2	2009 2	2010 2
Registered wage earners	1,825	1,877	2,001	2,216	2,378	2,266	2,371	2,387
Non-registered wage earners	824	865	910	967	996	991	1,024	1,022
Own account workers	1,140	1,249	1,239	1,334	1,455	1,500	1,443	1,398
Employer	3,470	3,027	3,798	3,519	3,522	3,057	3,546	3,723
TOTAL	1,400	1,472	1,552	1,707	1,848	1,807	1,874	1,874

Source: Authors' elaboration based on INDEC.

However, wage differentials between both groups could be affected by a dissimilar composition of employment (in terms of personal and occupational characteristics) within each of these groups. In particular, this could be reflecting the fact that low-skilled wage earners and part-time workers represent a high proportion of non-registered workers. If this is so, the observed wage gap could not be exclusively attributable to the occupational category and to the condition of being registered or not.

In order to quantify the independent effect of this dimension, as well as the influence of other attributes, different income and working-hour equations were estimated for the second quarter of 2010 (*see* Table A.2.1, in Annex 2). It is verified that the occupational category is a very relevant dimension to explain the labor income gaps. In particular, registered wage earners receive higher monthly labor incomes than the rest of the employed workers both because they earn higher hourly wages and because they work more hours. Therefore, these results highlight the independent effect of the condition of being registered or not among the wage earners, suggesting the imperative of public policies aiming at increasing formality in labor market.

Furthermore, education levels also contribute in a significant way to the labor income differentials observed within the labor force. In particular, those workers with complete

university degree obtain incomes 50% higher than those with complete primary school. Finally, men receive higher labor income than women suggesting the presence of labor income discrimination (see Annex 2).

Family incomes and their distribution

The dynamics of employment and remunerations just analyzed has had a strong impact on the performance of family incomes. In effect, as a result of the favorable evolution of employment and the partial recovery of wages, family incomes started a process of growth in which the average per capita family income increased by approximately 50% in real terms between 2003 and 2010, after having declined by 30% between October 2001-october 2002 (graph 3.22). Unlike labor incomes, this process has allowed the full recovery of the purchasing power and even the achievement of higher levels than the late-2001 average levels.

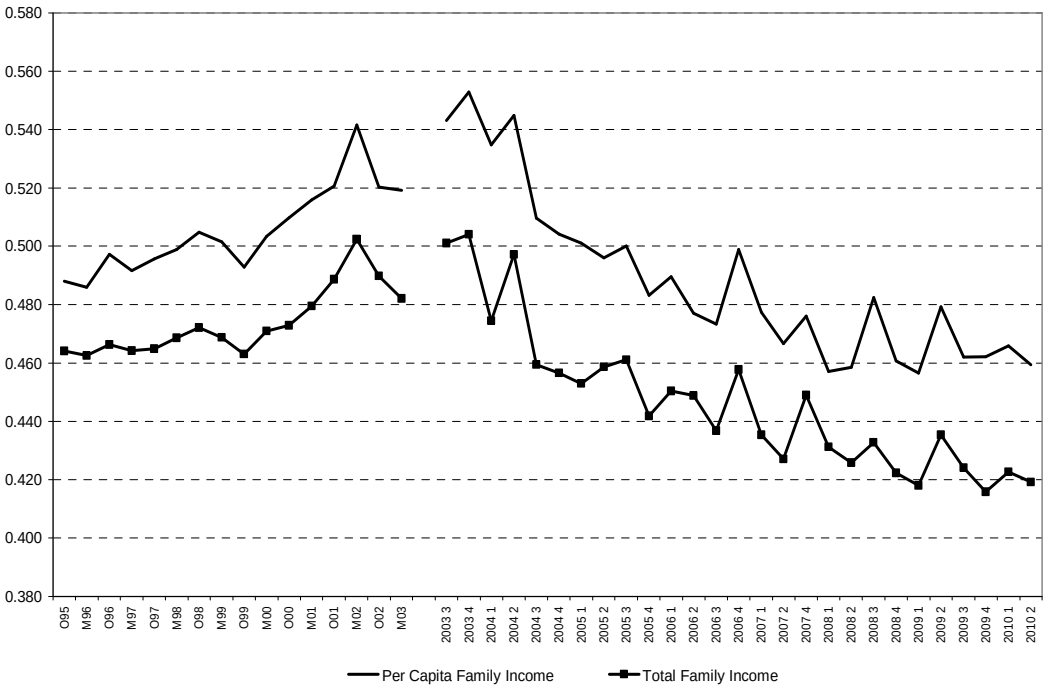
Contrary to what happened among workers, in the semester that followed the exit from the Convertibility regime, family incomes inequality rose, mainly as a consequence of the increase in unemployment. This is reflected in the deterioration of the Gini index of per capita family incomes, which passed from 0.521 to 0.542 between October 2001 and May 2002. After the highest concentration level reached in this month, the trend reversed. One of the factors that initially explained this turning point was the implementation of the PJJHD, since it gave employment and/or incomes to the poorest families. Its impact is reflected in the fall of the Gini index of total family income between May and October 2002, which in absence of this plan would have recorded 0.505 instead of 0.489.

Graph 3.22 Real Per Capita Family Income, total urban centers, October 1995- II quarter 2010 (Index October 2001=100, deflated by CPI and CPI-7)

Source: Authors' elaboration based on INDEC.

As from 2003, inequality among households showed a sustained decreasing trend until 2008, which allowed an 8 percentage points reduction in the Gini index, from 0.543 to 0.457 (graph 3.23). However, the downturn trend in family income inequality seems to have also stopped at the beginning of 2008.

Graph 3.23 Gini Index of Family Income, Total urban centers, October 1995- II quarter 2010



Source: Authors' elaboration based on INDEC.

Table 3.10 Average total family income by quintiles, total urban centers. Includes employment programs and annual complementary salary.

Quintile	2003 3	2004 2	2005 2	2006 2	2007 2	2008 2	2009 2	2010 2
1	3.1	2.4	4.1	4.2	4.6	4.7	4.5	4.7
2	8.2	8.5	9.2	9.3	9.8	9.9	9.7	10.1
3	13.3	14.3	14.2	14.4	15.1	15.1	14.8	15.3
4	21.3	21.9	22.0	22.6	22.8	23.0	22.4	24.1
5	54.1	52.9	50.6	49.5	47.7	47.4	48.5	45.8
TOTAL	100	100	100	100	100	100	100	100
Q5/Q1	17.8	22.4	12.3	11.7	10.3	10.2	10.8	10.1

Source: Authors' elaboration based on INDEC.

This greater equality among income households achieved during 2003-2008 is also revealed in the ratio between the first and the fifth quintiles of total family incomes. Whereas in the third quarter of 2003, the average income of the fifth quintile represented 18 times the corresponding to the first quintile, in the second quarter of 2010 the gap has decreased to 11 times (table 3.10). This responds to the fact that, although real incomes rose for every quintile, the increases were larger among the poorest households. Actually, throughout this period the households in the first quintile doubled the purchasing power of their incomes whereas the real incomes of the richest households increased in 25%. A similar outlook arises when comparing 2003 with 2010. This was mainly due to the significant reduction in open unemployment (which affects to a greater extent those households in the lower extreme of the distribution) and, to a less extent to the recovery of wages.

In spite of these dynamics, the concentration of family incomes is still high. In the second quarter of 2010, the 20% poorest households received only 5% of total income, whereas the fifth quintile captured 46% (representing 8 percentage points less than 2003).

Poverty and extreme poverty

Even before the end of the Convertibility regime, 38% of the population lived in households with incomes below the poverty line. Ten months after the devaluation of the national currency, this proportion had climbed to 57.5% of the urban population, and in the period between October 2001 and May 2002 the percentage of poor households increased in 13 pp (Graph 3.24), while the proportion of extreme poor families rose by 9 percentage points (graph 3.25). This deterioration of the living conditions can be also seen in the poverty gap. [43] In May 2002 poor households needed, on average, more than double their incomes in order to surpass the poverty line.

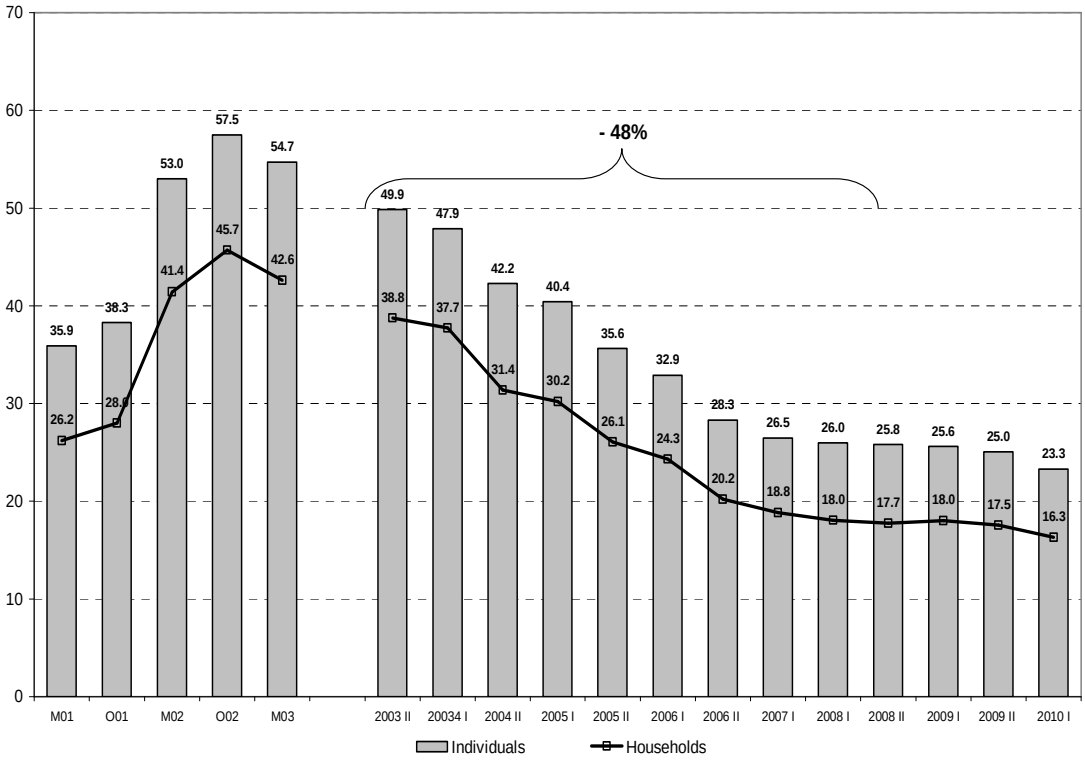
The extremely high level of poverty incidence after the crisis of the Convertibility regime is explained, on the one hand, by the magnitude of the shock, especially in terms of the fall of real wages and, on the other hand, by the severe situation prior to the collapse.

During the last year of convertibility, the fall in household total incomes explained most of the increase in poverty, even though the price deflation slightly attenuated the fall in real incomes, since it made the basic basket a little bit cheaper. On the other hand, the deterioration in income distribution also contributed to the increase in poverty. From that moment, the distribution effect lost relevance and the increases in poverty levels became mainly explained by the deterioration of real incomes due to the inflationary jump in the first semester of 2002. In particular, between May and October 2002, the increases in family incomes were not sufficient to compensate for the price increases. Therefore, poverty and extreme poverty continued to rise, although at a slower pace than in the previous semester. The increase in family incomes in this period is explained, to a great extent, by the rapid expansion of the PJJHD, from which poor and extreme poor households benefited. [44]

[43] The poverty gap measures the percentage difference between average incomes of poor households and the line of poverty.

[44] Even though the plan was correctly focused on the poorest population, the impact on the poverty incidence was small because the amount of the transfer was low in relation to the value of the basket.

Graph 3.24 Poverty in households and individuals, Total urban centers, May 2001-I semester 2010

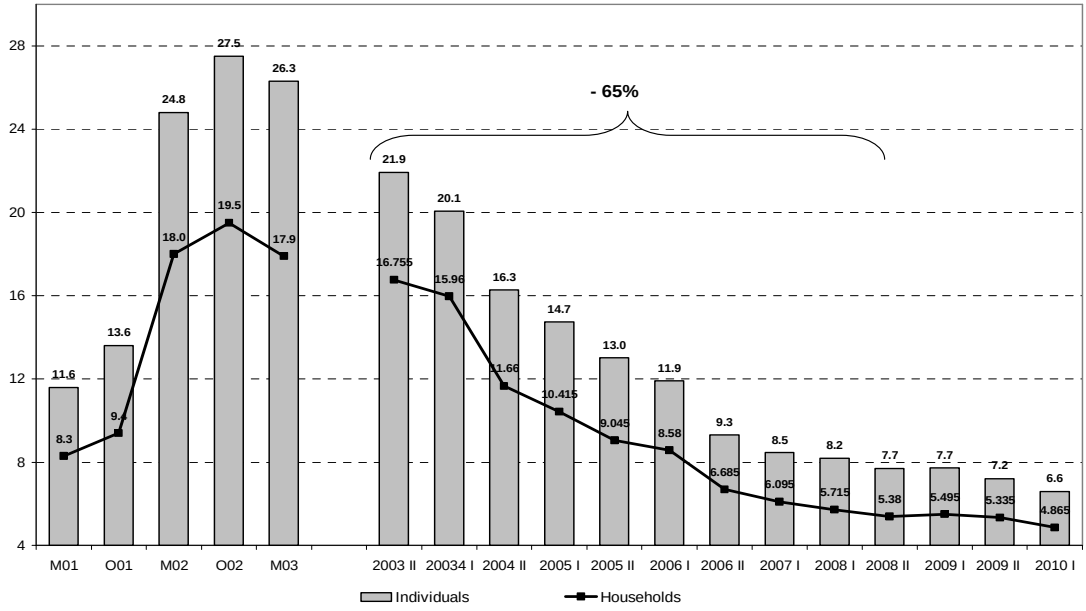


Source: Authors' elaboration based on INDEC.

The negative trend in the social situation reversed since 2003. The favorable performance of the labor market through a dynamic process of job creation, the partial recovery in real wages and a gradual improvement in their distribution made possible the decrease in the percentage of individuals in poor households to 27 percentage points –from 49.8% to 23.3%- (according to our own estimations based on CPI-7) between the second semester of 2003 and the first half of 2010, while in the case of extremely poor individuals the proportion fell about 15 pp, from 21.9% to 6.6%. This improvement in social conditions was also associated to the reactivation of minimum wages as well as the increase in the coverage of pensions and their real benefits.

However, after a poverty decrease of almost 50% (65% in the case of extreme poverty) between 2003 and 2008, from the beginning of this year, this positive dynamic slowed down as a consequence of the rise in inflation rates, as well as of the weakening in both employment generation and income distribution improvement. Indeed, the incidence of poverty among individuals has fallen by only 2.7 percentage points more between the first half of 2008 and the same period two years later (graph 3.24). Although it is highly positive that poverty and extreme poverty did not experience increases in a context of macroeconomic difficulties, there seems to be an evident medium-term weakening in the capacity of the economy to generate the means for poor households to overcome their situation while preventing other households from entering into poverty.

Graph 3.25 Extreme Poverty in households and individuals, total urban centers, May 2001-I semester 2010



Source: Authors' elaboration based on INDEC.

Finally, it is important to mention that, at the end of 2009, the National Government established a new conditional cash transfer program for children and adolescents ("Asignación Universal por Hijo", see Box 7), extending the contributory child allowances system to the families of the informal economy or unemployed.

Box 7

The Universal Allowance per Child

The Universal Allowance per Child ("Asignación Universal por Hijo") is a new conditioned monetary transference program for children and adolescents that extends the families' contributive system to informal and unemployed workers. Micro simulation exercises carried out by different researchers predict that this program will have a strong positive effect on extreme poverty (Bertranou, 2010). The program pays a monetary transference of 220 pesos per month to one of the adult members of the family for each child under 18 years, up to a maximum of 5 children (the age limit vanishes when the beneficiary is a handicapped person; in this case the monetary transference raises to 880 pesos per month). Eighty per cent of the transference is cashed in banks directly every month, the rest of the transference is deposited in a bank account. That money is withdrawn once a year. To do so the family has to show that the child went to school, registered in a plan of public health insurance for children from 0 to 18 years (the "Plan Nacer") and followed the established vaccination program for children between 0 and 4 years. Having an identification card and born certificate are also required to cash the allowance. The monetary transference started in 180 pesos in November 2009 and in July 2010 the government announced an increase to 220 pesos (and from 720 to 880 pesos per handicapped child). The program covers between 3.4 and 3.6 million children. The allowance represents 0.7 per cent of Argentina GDP.

One way of characterizing poverty consists of describing the family household head profile according to the type of household she or he belongs to. Table 3.11 presents this description for two different moments: the beginning of the poverty reduction in 2003 and the latest available information in 2010. The comparison allows the assessment of whether there have been significant changes in the profile of poor and non-poor household heads during this period, and to what extent.

In the second quarter of 2010, the percentage of employed household heads belonging to poor households was 18 pp lower than the percentage of employed household heads in non-poor households, while the incidence of unemployment for household heads in poor

households was four times the corresponding incidence in non-poor households -9% against 2.4%-. These gaps had been 13 pp and 2.8 pp, respectively in 2003.

Regarding employed household heads; there is also a wide discrepancy in terms of occupational category. Precarious employment has a significant incidence among poor households: approximately 40% of employed household heads in 2010 work in jobs not covered by social security, while the figure decreases to 18% for the rest of families. On the contrary, in the latter group, 59% of household heads work in jobs covered by social security, against 20% in poor households.

This evidence clearly indicates that poverty is not only associated to events of unemployment but also to the quality of the jobs, giving rise to the "working poor" phenomenon. Like it happened with the labor status, the gap between both types of household heads has widened during these years, in particular with respect of the incidence of registered jobs. This means that after the process of strong poverty reduction, the current composition of poor households in terms of labor insertion of their head is more precarious than in the past.

This situation is in part related to the different educational levels among household heads. In effect, when considering this dimension it can be seen that 20% of household heads in poor households have completed secondary school, while the percentage rises to 57% for the average of the rest of households. Moreover, only approximately 2.5% of the former group's household heads completed university studies, while this percentage jumps to 22% for the rest of households.

Lastly, the branch of activity to which the household head belongs is also distributed in a different way between these two groups of households. In particular, construction and domestic services present a larger concentration among poor households, whereas the contrary is verified regarding financial services, transport, personal services and public sector.

Table 3.11 Characteristics of household heads between 25 and 65 years old, total urban centers, 2003 and 2010

	2003		2010	
	Poor households	Non-poor households	Poor households	Non-poor households
Labor status				
Employed	74.0	86.8	68.7	86.6
Unemployed	12.8	4.6	9.9	2.4
Inactive	13.2	8.6	21.4	11.0
Occupational category				
Registered wage earner	23.1	58.9	19.7	59.1
Non-registered wage earner	51.0	18.5	44.2	17.8
Own-account	24.2	18.5	33.4	17.7
Employer	1.6	4.0	2.4	5.2
Unpaid family worker	0.1	0.2	0.4	0.2
Branch of activity				
Manufacture	14.7	15.0	14.2	13.8
Construction	15.9	5.3	21.5	9.2
Trade	14.3	15.7	19.1	17.5
Transport	7.6	9.0	6.3	9.6
Financial services	4.8	11.4	4.6	10.4
Personal services	3.3	6.1	1.3	4.7
Domestic services	7.8	4.4	12.5	4.8
Public sector	16.8	20.7	8.0	17.9
Other industries	15.0	12.4	12.5	12.0
Educational level				
Incomplete secondary or less	78.3	43.4	79.5	43.2
Complete sec. / Incomp. university	17.5	33.4	18.0	35.3
Complete university	4.2	23.2	2.5	21.5

Source: Authors' elaboration based on INDEC.

4. Conclusions

The Argentine experience analyzed so far adds a strong case to the increasing body of evidence showing that a stable and competitive real exchange rate may foster economic growth and employment generation and may also contribute to improve income distribution. The sharp contrast between the 2003-2006 period, under the SCRER setting, and the long phase of exchange rate appreciation of the nineties, that produced clearly opposite results in this regard, makes the conclusion quite persuasive. The nineties' macroeconomic policy framework, with its single focus on nominal stability and a complete reliance on market mechanisms to promote growth and employment ended as a clear failure.

The perspective adopted in this paper suggests, then, that the macroeconomic regime is crucial to determine the global performance of the labor market and it has, through this channel, a direct impact on the level and distribution of welfare. It is quite clear that the macroeconomic regime decisively matters in terms of distributional and living conditions outcomes. The Argentine experience also showed that it is possible to experience very high GDP growth rates together with high unemployment and a significant worsening in labor conditions.

During the nineties, the specific combination of very quick trade opening, real appreciation of the currency and structural market oriented reforms negatively affected job creation from the beginning of the regime, and employment generation began stagnating well before the first recession of the decade. The macroeconomic conditions established at the beginning of the nineties negatively affected the international competitiveness of the manufacturing industry as a whole, leading to a process of the destruction of jobs and firms. Additionally, the need to compete with imported industrial goods induced the acquisition of new technologies, a process that was favored by the change in relative prices, reflected in a reduction in the price of imported capital inputs in comparison with labor. Therefore, besides employment reduction, as a consequence of an increased weight of imports in the markets of final goods, those enterprises that managed to survive in the new environment carried out a process of substitution of labor with capital resulting in a considerable additional reduction in labor demand.

Under the Convertibility regime of the nineties, the reforms in favor of market oriented policies in the lines of the "Washington Consensus" also included intense labor market de-regulation. Labor difficulties and inequality exacerbated towards the end of the decade, when the currency board regime had clearly become unsustainable. The magnitude of the crisis in the months following the devaluation of the national currency, expressed through the significant contraction in the level of activity, employment and income, reflected the important disequilibria that had accumulated during the previous decade.

In clear contrast, the macroeconomic configuration after the devaluation has had positive effects on the dynamism of labor market and income generation. After the negative shock caused by the collapse of the previous regime, labor indicators broke the trend towards a systematic worsening, although with different intensities. The most dynamic labor indicator was employment generation: approximately 3 million of formal jobs were created between 2003 and 2010. This was associated not only with the very high GDP growth rate experienced by the country, but also to the elastic response of the labor demand to the favorable macroeconomic conditions defined under the SCRER setting. This positive evolution was accompanied by certain labor income recovery and reduction in income inequality. In turn, this improvement of global labor market conditions appears as a very important factor behind the strong poverty reduction observed in the country especially between 2003 and 2006.

Thus, the macroeconomic setting based on a SCRER and the twin -fiscal and balances of payments surpluses, showed itself as a powerful scheme to promote economic growth and the improvement in social conditions.

However, in the period under the SCRER model, several macroeconomic problems arose, increasing inflation being the crucial one. Precisely when these problems became visible, the quality of the macroeconomic management tended to deteriorate and the Argentine government did not attack the inflationary difficulties by adopting a coherent and integral approach. On the contrary, the SCRER model, which such good results had produced, fostering investment, growth, employment and improving income distribution, suffered from a gradual loss of coherence as from 2006.

As a decisive example of the dismantling of that macroeconomic framework, the real exchange rate, the central pillar of the SCRER model, has been appreciating very fast since 2009 as a result of the combination of a quite stable nominal parity with a domestic inflation above 20% yearly, according to the CPI-7 or to private sources. However, the weakening of the SCRER framework should not hide the fact that its performance regarding growth, employment generation, poverty reduction and income distribution was really outstanding between 2003 and 2006. Nevertheless, in spite of this reversal in the previous negative trends, precariousness, income inequality and poverty continued to be high.

Furthermore, even more acute appears the medium run perspective taking into account that the evidence suggests that the employment generation dynamism and the improvement in the rest of labor and social indicators began to weaken well before the economy was hit by the negative effects of the international crisis.

Therefore, together with a macroeconomic setting able to produce strong and sustainable job generation, a labor market policy oriented to improving the quality of jobs as well as to reinforcing the real wage recovery and strengthening labor institutions is required. However, this will be probably not enough to significantly reduce poverty incidence in the short and medium term. It would be necessary, then, to complement labor and income policies with social policies focused on more vulnerable groups—households with children, adults without pensions and unemployed people—in order to achieve more acceptable levels of social welfare.

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Appendix 1: Econometric estimation of a full-time employment function

In order to examine the relation between activity growth and variations in the full-time employment rate, we worked out the following model:

$$E(FTEMPL) = a\ DL(GDP) + b\ DUMINIC + d\ DUMRECU + c + \varepsilon$$

where *D*(*FTEMPL*) is the variation of the full-time employment rate and *DL*(*GDP*) stands for the GDP growth rate. The symbols *a*, *b*, *c* and *d* correspond to estimated parameters, and ε is a random variable. The model states that the half-yearly variations in the full-time employment rate are due to a short-term effect of the level of activity and an additional tendency, which may be conceived as the slow adjustment of the full-time employment rate to the surrounding conditions (mainly defined, at the beginning of the 1990s, by exchange rate appreciation and trade openness).

The above model was estimated on the basis of half-year series providing data for the period from the first half of 1991 to the second half of 2009. The results of the estimation by ordinary least squares (OLS) are shown in table A.1.1.

DUMINIC is a dummy variable, with a value of 1 between the first half of 1991 and the first half of 1996 and a value of 0 for the rest of the period, which was brought in to capture the magnitude and direction of the trend towards the contraction of full-time employment in the first five years of the convertibility regime.[45] DUMRECU is a dummy variable, with a value of 1 between the second half of 2002 and the second half of 2005 and a value of 0 for the rest of the period, which captures the additional trend in the recovery period at the beginning of the 2000's.

The coefficients are significant at the 3% level, and the constant is not significant. The coefficient of variation of GDP is 19, meaning that an increase of 10% in GDP gives 1.9 percentage points of increase in the full-time employment rate. In addition to the short-term effect of the variation in activity level, the coefficients of DUMINIC (-0.70) and DUMRECU (0.57) describe tendencies (of the full-time employment rate) additional to those established by the rate of variation of GDP.

This additional trend is negative in the first phase of convertibility. It is the autonomous tendency towards a decline in full-time employment, which may be interpreted as the result of slow adaptation to the relative prices context of the 1990s. In contrast, this additional trend is positive in the period of recovery in the early 2000's.[46] In this last-named

[45] See Damill, Frenkel and Maurizio (2002).

[46] In Damill, Frenkel and Maurizio (2002) we give econometric estimates of this model for the period from 1980 to the first half of 2001, some of which are briefly summarized in this note. The equations estimated there for the 1990s have the following form , where the dependent variable is not the rate of change of the number of full-time jobs but the rate of change of FTEMPL, which in turn is equal to the rate of change of the number of persons with full-time jobs (*d*log*N*) less the population growth rate (*d*log*POB*), which is expressed as follows: . The estimated coefficient β therefore reflects the joint negative effect on FTEMPL of the adjustment of employment to the new context, on the one hand, and population growth, on the other.

The variable *Dpost96* is a dummy variable designed to capture a change in labour demand after 1996. This variable has a value of zero up to the second half of 1996 and a value of 1 for all subsequent half-year periods.

period it corresponds to autonomous annual growth of the full-time employment rate of 1.14 percentage points of the total urban population.

Table A.1.1 Estimation of model on behavior

Dependent Variable: D(FTEMPL)

Method: Least Squares

Date: 11/16/10 Time: 20:02

Sample (adjusted): 1991S1 2009S2

Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DL(GDP)	19.12462	2.716719	7.039604	0.0000
DUMINIC	-0.708287	0.208430	-3.398192	0.0017
DUMRECU	0.574507	0.254821	2.254552	0.0307
C	-0.143870	0.120078	-1.198139	0.2391

R-squared	0.726068	Mean dependent var	0.075633
Adjusted R-squared	0.701897	S.D. dependent var	0.979530
S.E. of regression	0.534811	Akaike info criterion	1.685495
Sum squared resid	9.724784	Schwarz criterion	1.857872
Log likelihood	-28.02440	F-statistic	30.03944
Durbin-Watson stat	2.660069	Prob(F-statistic)	0.000000

Source: Prepared by the authors on the basis of data from the Permanent Household Survey of the National Institute of Statistics and Censuses (INDEC).

In the recovery period of the early 2000's, the half-yearly increase in the full-time employment rate is explained very well by the equation:

$$D(FTEMPL) = 19 * DL(GDP) * 100 + 0.574$$

The econometric estimates of these equations give the following results for the 1990s. First, the elasticity α is positive and significantly different from zero. The estimates gave a value of approximately 0.6. This elasticity means that the full-time employment rate tended to grow (or fall) by 1 percentage point for every 6% of GDP growth (or contraction). The GDP-elasticity of full-time employment in the 1990s was greater than that for the 1980s.

The estimated parameter β was also significantly different from zero and was negative. The quantitative estimates indicated a tendency of the full-time employment rate to contract by 1.44 percentage points per year in the 1991-1996 period, which may be interpreted as the autonomous downward tendency of full-time employment – for a constant level of GDP – resulting from the gradual adaptation to the relative prices context of the 1990s. Another important result is that for *Dpost96*. The estimated coefficient of this dummy variable was positive, with an absolute value very similar to that of the β estimator. This means that the autonomous tendency towards contraction β became zero in the period after 1996.

(bearing in mind that DUMINIC = 0 in this period). Thus, for example, if the product grows by 8% in a year, the variation in the full-time employment rate can be estimated as approximately 19*0.08 + 1.148 = 2.668 percentage points.

In order to complete the description of the labor utilization indicators, we must also take into account the evolution of involuntary underemployment. As already noted, this variable displays a counter-cyclical type of behavior, so that it is negatively correlated with full-time employment. Our estimates using data from the 1990s indicate that the involuntary underemployment rate tends to fall (or rise) by 0.2 percentage points for each percentage point of increase (or decline) in the full-time employment rate. Thus, the increase (fall) in total employment resulting from an increase (fall) in full-time employment is less than the latter, since the variations in total employment are the result of adding together the variations in full-time employment and involuntary underemployment.

Appendix 2: Income and hours equations

In order to quantify the independent effect of the personal attributes and of the characteristics of the jobs on the remunerations received by workers, income and working-hour equations were estimated for the second quarter of 2010. The first three regressions were estimated for all workers whereas the forth only considered those that work more than 35 hours per week. In addition, the dependent variable in regression I is the monthly income from the main occupation (in logarithms), in regression II is the hourly labor income, and in III is the logarithm of worked hours. Regression IV is the same as regression I but estimated only for full-time workers.[47]

In all the income equations (Mincer equations) it is verified that the occupational category is a very relevant dimension to explain the income gaps between workers. Given other characteristics of workers, non-registered wage earners working full time receive an income approximately 48% lower than registered full-time wage earners (regression IV). On the other hand, the gap between registered wage earners and non-wage earners is smaller but significant, of approximately 41%.

When considering all workers, the monthly income differentials according to this dimension are even wider. In effect, the non-registered workers receive a wage 67% lower than the registered ones. The gaps are narrower when estimated in terms of hourly incomes. These results would be reflecting that, other attributes being equal, registered wage earners receive higher monthly labor incomes than the rest of the employed workers both because they earn higher hourly wages and because they work more hours. This last fact is confirmed by regression III, which shows that non-registered workers work 24% less hours per week than registered wage earners. A similar gap is observed between the latter and the group of non-wage earners.

Returns from education also contribute in a significant way to the labor income differentials observed within the labor force. Monthly incomes of those workers that have not finished primary school are 20% lower than wages of those that have completed this level of education. In the other extreme, workers with complete university degree obtain incomes 50% higher than those with complete primary school. Unlike what happens with occupational category, these gaps are narrower than those verified in hourly wages due to the fact that the most skilled workers work fewer hours than the base group.

Furthermore, as it is usual in this type of equations, men receive higher labor incomes (monthly and hourly) than women. On the other hand, the age has a positive although non-linear effect on labor incomes.

[47] In all the estimations the control group comprises registered wage earners, women, non-household heads, with incomplete primary education that work in the manufacturing industry. All regressions are controlled by region. The estimations take into account the correction for selectivity bias using Heckman's methodology.

Table A.2.1 Income and hours equations, total urban centers, II quarter 2010

	Total workers			
	Regression I Monthly Income	Regression II Hourly Income	Regression III Hours	Regression IV Employed more than 35hs
Category				
Non-registered wage earners	-0.670***	-0.432***	-0.238***	-0.478***
	[0.0130]	[0.0123]	[0.0106]	[0.0147]
Non wage earners	-0.635***	-0.410***	-0.223***	-0.407***
	[0.0133]	[0.0126]	[0.0108]	[0.0140]
Man	0.233***	0.0498***	0.184***	0.229***
	[0.0140]	[0.0131]	[0.0112]	[0.0173]
Household head	0.0215	-0.00745	0.0277**	0.0435*
	[0.0156]	[0.0146]	[0.0124]	[0.0249]
Age	0.0425***	0.0248***	0.0181***	0.0322***
	[0.00229]	[0.00217]	[0.00188]	[0.00259]
Age2	-0.000403***	-0.000201***	-0.000206***	-0.000277***
	[2.69e-05]	[2.56e-05]	[2.21e-05]	[3.07e-05]
Education				
Incomplete primary or less	-0.187***	-0.117***	-0.0640***	-0.130***
	[0.0219]	[0.0207]	[0.0179]	[0.0255]
Incomplete secondary	0.0785***	0.0832***	-0.00514	0.0926***
	[0.0154]	[0.0146]	[0.0126]	[0.0172]
Complete secondary	0.215***	0.205***	0.00846	0.298***
	[0.0155]	[0.0146]	[0.0125]	[0.0208]
Incomplete university	0.233***	0.333***	-0.0981***	0.404***
	[0.0183]	[0.0173]	[0.0148]	[0.0244]
Complete university	0.480***	0.583***	-0.103***	0.741***
	[0.0201]	[0.0189]	[0.0161]	[0.0337]
Branch of activity				
Construction	0.0407**	0.0602***	-0.0181	-0.0244
	[0.0207]	[0.0195]	[0.0168]	[0.0207]
Trade	-0.0109	-0.0903***	0.0807***	-0.0476***
	[0.0173]	[0.0163]	[0.0140]	[0.0172]
Financial services	0.139***	0.154***	-0.0144	0.0787***
	[0.0219]	[0.0207]	[0.0178]	[0.0221]
Transport	0.198***	0.0337	0.163***	0.120***
	[0.0235]	[0.0223]	[0.0192]	[0.0228]
Personal services	-0.0600**	0.202***	-0.264***	-0.0129
	[0.0255]	[0.0241]	[0.0208]	[0.0304]
Domestic services	-0.481***	-0.0147	-0.465***	-0.376***
	[0.0237]	[0.0224]	[0.0194]	[0.0334]
Public sector	0.00846	0.258***	-0.250***	0.0637***
	[0.0189]	[0.0178]	[0.0153]	[0.0210]
Other industries	-0.0172	0.153***	-0.171***	0.102***
	[0.0216]	[0.0204]	[0.0176]	[0.0230]
Constant	6.680***	1.864***	3.345***	6.862***
	[0.0654]	[0.0619]	[0.0533]	[0.0698]
Observations	43501	43091	43091	14079

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Source: Authors' elaboration based on INDEC.

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