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## **Globalisation and Inequality. The Case of Argentina**

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# Globalisation and Inequality The Case of Argentina \*

## 1. Introduction

Between the 1930s and the 1970s the integration of Argentina to the world economy was rather limited. In the 1990s, after some transitory and weak attempts at opening in the seventies and eighties, the authorities pursued a number of policy measures which, along with changes in the international environment, greatly increased the degree of trade and financial integration. In a few years, Argentina, formerly a typical closed economy, became a member of the global economy.

Externally oriented reforms were complemented and often reinforced by a number of domestic measures. Most markets were deregulated and many state-owned firms were privatised. Perhaps the most important complement to external opening was macroeconomic stabilisation. Inflation was controlled after decades of instability and a brief period of hyperinflation.

The combination of macroeconomic stability, drastic reduction of the state interference in the economy and integration to the global economy resulted in a GDP growth of around 50% during the decade. In contrast to these favourable results, the nineties were also characterised by two worrying economic phenomena: the explosive growth of inequality and unemployment. The Gini coefficient increased from 44.2 in 1992 to 50.1 in 1998, while the unemployment rate augmented almost 10 points in only a few years. Never before the Argentine economy enjoyed such a high income level as in the nineties, but at the same time, it has not experimented such high inequality and unemployment levels, either. Even though the structural transformation and increased globalisation of the economy seem to have created the basis for long-term growth, it is possible that they have impacted in a negative way over many sectors of the population.

The central objective of this paper is to study the links between changes in Argentina's integration to the world economy and the growth of income inequality and poverty. To that aim, both phenomena are described and the links relating them are analysed. The article does not deepen into the analysis of some particular cause, and it does not provide concluding evidence of alternative hypothesis. Its contribution consists in presenting in a systematic way different explanations of the development of inequality in Argentina and in evaluating their relative importance in the light of the economic theory and the available empirical evidence.

The paper concludes that the increasing integration to the global economy was very likely a significant determinant of the inequality jump in the nineties. Two are the main channels that link globalisation to inequality. The first one operates through sector reallocations. Being Argentina a country relatively abundant in natural resources and skilled labour, trade liberalisation implied

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a shift towards production and employment in sectors that use those factors more intensively, and in turn an increase in the relative return to natural resources and a widening of the wage gap between the skilled and the unskilled workers. The available evidence shows however that this story explains only a small part of the observed change in the income distribution. Globalisation can affect inequality through a second channel. The fall in the price of capital and the introduction of new skilled labour intensive technologies, both likely consequences of the greater integration of Argentina to the world markets, implied an increase in the intensity of use of skilled labour in all the productive sectors, and hence an increase in the skill premium. This effect seems to be a more significant source of increasing income disparities.

Globalisation is not the only factor behind the increase in inequality in the nineties. The decrease of labour unions power, a social environment more permeable to accept wage differentials, the fall in the minimum wage, the increase in unemployment, the increase of the relative size of the poorest families, and the increase in the dispersion of pensions payments also contributed to increasing income inequality in Argentina to unprecedented levels. Fortunately, not all factors played an inequality-increasing role. The severe macroeconomic crises and the hyperinflation that dramatically affected income distribution in the late-eighties were not present in the nineties. Fiscal and social policies did not have a very active role in alleviating the effects of increasing poverty and inequality. Actually, inequality and poverty trends are basically unchanged when government transfers (cash and in-kind) are included in family income.

Although there seems to be links between globalisation and inequality, opposing to integration and new technology incorporation is not a reasonable policy option, since economic growth is related to the capability of inserting the country in the global economy and of increasing the productivity through the absorption of new technologies. The Argentine successful growth story in most of the nineties is itself an example of this assertion. Two policy options remain: in the short-run the extension of the social safety net seems inevitable. This calls for more resources but also, and perhaps especially, for a more efficient use of public funds. In the medium and long run a sizeable increase in the supply of skilled labour through formal education and training can help to reduce the wage gap between the skilled and the unskilled.

The rest of the work is ordered in the following way. In section 2 the main transformations occurred in the Argentine economy during the last three decades are reviewed, with particular accent in the changes related to globalisation: the opening of trade of goods and services, the reception of direct foreign investment and the absorption of technology. Section 3 presents the evolution of inequality, poverty, and aggregate welfare in Argentina. Part of the literature on labour inequality is concentrated on the analysis of the wage gap between skilled and unskilled workers. Section 3 also gives evidence about this gap for the Argentinean case. Section 4 constitutes the core of the work. It presents alternative explanations for the growth in inequality, with particular emphasis in the ones related to globalisation. Section 5 concludes with an evaluation of the main results and some policy lessons.

## **2. The process of international integration of the Argentine economy**

This section summarises the main changes that took place in the Argentine economy during the last three decades, particularly in the last 10 years, characterised by deep structural internal changes as well as changes in the degree of integration with the rest of the world. Table 2.1, at the end of the paper, reproduces the main economic variables for the 1970-1999 period. The objective of this review is to present the economic scene for the distributive changes outlined in the Introduction and documented in the following section.

The first part describes the Argentine economic experience since the 70s and the economic and institutional factors that led to the ongoing integration process with the rest of the world. In the second part, the causes and challenges posed by this process beginning in the 90s are described. The third and last part tackle in a greater detail the quantitative and qualitative effects over the endowment and accumulation of productive factors, the goods markets, the services markets, the transfer of technology, and the migration flows.

### ***2.1. An overview of the Argentine economy, 1970-1999***

Several stages in the Argentine economic development can be distinguished:

- (i) Between 1945 and 1975 the country was involved in an import substitution process, conceived for promoting industrialisation based in national production. The government took over the provision of public utilities and the production in industries that were considered strategic, as iron, oil, and petrochemical products. At the same time, it established strong regulations and an intricate scheme of taxes and subsidies over the private activity. Some control over the application of public and private banks' deposits and the imposition of trade barriers were part of the widespread state intervention during this period.
- (ii) The failure of this development strategy determined a radical change between 1976 and 1982 towards a policy of commercial and financial openness, although the state did not give up the economic activities under its direct management.
- (iii) After the 1980 financial crisis and the 1982 external debt crisis, between 1983 and 1990 the government withdrew the previous reforms and there was a failed attempt at promoting industrial activity through fiscal instruments. The budget deterioration and the inflationary spiral, which started in 1975, led to the hyperinflationary episodes of 1989 and 1990.
- (iv) The social consensus around the need of eliminating inflation and returning to the growth path after the stagnation of the two previous decades was crystallised in 1991 with some structural reforms that included a renewed fiscal and monetary order, massive privatisations, commercial and financial opening, and deregulation of the private activity. The inflation rate fell to international levels and the per capita income raised by more than 50% over the decade. On the other hand, social problems worsened because of the growth of unemployment and inequality.

Towards the mid 70s, the Argentine economy was trapped in a spiral of economic, political and social instability, in the context of a marked state intervention in the economy that

privileged the redistribution towards wage earners and generated strong pressures over the fiscal accounts. The military government instrumented since 1976 a program intended to reduce the inflation rate through a quick commercial liberalisation and a scheme of small and decreasing devaluations. The deregulation of the financial system and the removal of capital controls encouraged the external indebtedness of the private and public sectors. The combination of internal factors (insolvency of local producers of exportable goods, deficient supervision and regulation of the financial system) and external ones (rise in the international interest rate since the late 70s) produced a financial collapse that led the government to assume a great part of the private external debt and to finance the banking system rescue through the inflationary tax. As in other developing countries, the adverse internal and external shocks generated serious difficulties to make the debt services, which caused the exclusion of the country of the voluntary international credit market until 1991.

The economic situation continued to be disappointing after the democratic restoration in 1983. Despite reversing the external opening and deregulation measures of the previous administration, prices continued their rising path, together with the fiscal deficit (that averaged an annual 5.5% in 1983-1989). A heterodox anti-inflationary plan, the Austral Plan, enjoyed a temporary success between 1985 and 1987, but it did not prevent inflation from returning with unusual virulence in 1988. Several incentive programs for capital intensive industries and for sectors with chronic problems (sugar, tobacco) - financed through tax benefits, subsidised public utilities prices, and preferential credit rates - were carried out. While the annual estimated cost of these subsidies was high (between 1% and 2% of the GDP), the results were not successful at all, as a consequence of the deficient design and supervision of the beneficiaries.<sup>1</sup> Trade protectionism amplified the distortions generated by the governmental intervention. Being inflation the policymakers' top priority, the conformation of a coherent development plan was not a crucial goal at the time. According to a well-known Argentine economist, Argentina was "socialism without a plan and capitalism without a market".

Since the 90s Argentina experienced remarkable changes in its macro and microeconomic structure. Towards 1989 the country was immersed in a deep crisis characterised by galloping inflation and productive recession, together with a distorting state intervention in the financial system, the public utilities, and other various activity branches. The climate of uncertainty and recession gave birth to a solid social consensus concerning the need of putting an end to inflation as a precondition for any subsequent development strategy. After some failed attempts, the peronist administration initiated in 1989 managed to stop the inflationary process in 1991, through the pegging of the exchange rate and a program of fiscal austerity. The first measure was directed at stopping the price inertia, because prices used to be adjusted according to the rate of devaluation.<sup>2</sup> Budget discipline was aimed at controlling the monetary emission that financed the fiscal deficit - the main cause of the inflationary race. Obviously, both instruments were intimately related: the credible fixing of the exchange parity required a

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<sup>1</sup> See Porto (1991).

<sup>2</sup> This hedge was used both for the prices of tradables - an expected relation due to the law of one price - and nontradable goods. The familiarity with the American dollar gave birth to a gradual but persistent substitution of the dollar for the peso, that is still in course.

severe budget management, otherwise the monetary financing would have eroded Central Bank reserves that were necessary to achieve the exchange target. The ambitious Convertibility Plan, launched at the beginning of 1991, imposed by law the prohibition to finance the government and banking system through the expansion of the monetary base. Any increase in the monetary base should be backed up by an increase in the international reserves of the Central Bank.

The confidence induced by the plan, both inside and outside the country, favoured a marked productive reactivation. The remonetisation of residents and the inflow of foreign capitals contributed to the revitalisation of the financial system and the expansion of the aggregate expenditure via banking credit. The control of tax evasion and the increase of the tax base, together with the privatisations, made possible the increase of public resources and the achievement of fiscal equilibrium, in spite of the increase of public expenditure. The massive capital inflows more than compensated the trade and current account deficits, contributing to the sustainability of the fixed exchange rate of one peso for one dollar.

Summing up, the plan enjoyed immediate success not only regarding inflation, but also with respect to growth. The annual rate of inflation, that had reached a maximum of 5000% in 1989, decreased to 3.8% in 1994, while the average GDP growth rate jumped to 8.2% in 1991-1994 from - 1.1% in 1980-1989. The favourable expectations and the decrease of the interest rate stimulated credit and expenditure, without generating inflationary pressures due to the high idle installed capacity and the increase in labour productivity. The fast growth of 1991-1994 was possible without a considerable increase in investment and employment.

As a complement to the macroeconomic stabilisation, the government launched a series of structural reforms. Privatisations had the double purpose of raising funds for the state and of increasing the efficiency in the provision of public utilities, of disastrous functioning under the state monopoly. The decrease of utilities rates encouraged lower domestic prices, and the removal of trade barriers promoted efficiency improvements in productive units, reducing at the same time the cost of imported inputs. Another important point was the creation in March 1991 of the Mercosur, a customs union with Brazil, Uruguay and Paraguay. Concerning the financial system, the supervision and regulation of private institutions was strengthened, with high reserve and capital requirements so as to reinforce financial stability. The full opening to the international credit markets and the reform of the pensions system contributed to the deepening of capital markets, translated into a higher volume of banking credit to the private sector and new issues of stock and debt in the market (see Bebczuk (2000)). Finally, the state itself adhered to the new economic frame reducing its payroll, simplifying administrative procedures and eliminating subsidies and different regulations that represented a burden for the private sector.

However, some drawbacks appeared shortly after, as by-products of the very stabilisation plan. In December 1994, the Mexican devaluation exploded, and the consequent “Tequila Effect” affected Argentina and other developing countries. Although the country exhibited in general solid macroeconomic fundamentals, domestic and foreign investors revised adversely

their expectations, generating an important capital outflow and a significant reduction of deposits in the financial system. The trade and current account deficits since 1991, the apparent exchange rate overvaluation, the deterioration of the public accounts since the beginning of 1994 and the increase of unemployment, also since 1991, were some of the negative signals arising from the new economic scene. But it must be kept in mind that Argentina was at the time enjoying a rapid GDP growth with low inflation, and that the external and fiscal unbalances were not particularly pronounced compared to most emerging economies.

The causes of these complications are not clearly elucidated yet, but some hypotheses do offer convincing explanations. The negative trade balance was a consequence of the demand recovery, that was partially translated into greater imports: while exports grew 65% between 1991 and 1994, imports increased 413%, generating a trade deficit of US\$ 4,100 millions in 1994 (it is noteworthy that in 1990, when GDP decreased 2.9%, commercial surplus reached a historical maximum of US\$ 8,100 millions). The current account deficit reached US\$ 11,000 millions (4.3% of the GDP) in 1994, from a level of US\$ 647 millions (0.4% of GDP) in 1991. The appreciation of the peso (the real exchange rate fell 42% between 1990 and 1994) is the joint result of the fixed exchange rate regime and the price inflation of non-tradable goods as a consequence of a stronger domestic demand. The fiscal deficit observed since 1994 (an average of 1.4% of GDP in 1994-1999) was due to the growth in public expenditure, while the tax and other public receipts reached a plateau, in a partial reversion of the fiscal austerity maintained over 1991-1993. Finally, the reduction of the payrolls of the private sector, motivated by the need of productivity increases in a competitive environment), the legal rigidities of the labour market, the greater activity rate and the firings in the public sector appear to be the most evident causes of the growth in unemployment.

After the Mexican crisis, both the activity level and the financial system were rapidly recomposed since the second half of 1995, without needing to abandon the convertibility and the fixed exchange rate, strengthening this way the macroeconomic credibility of the country. Nevertheless, some previously cited weaknesses still persist: external deficit, unemployment, fiscal deficit, and wide activity level fluctuations. Being a small economy, open to commercial and financial flows and with a high and increasing external debt, the world economic conditions exacerbate, via the interest rate and the terms of trade, the macroeconomic volatility.<sup>3,4</sup> The lack of any independent monetary policy because of the Convertibility Law and the restrictions to fiscal policy due to the need of reaching budget equilibrium has inhibited any counter-cyclical policy measures.

Table 2.1.b displays some qualitative indicators that reflect the main changes in Argentina's economic situation since 1970:

Table 2.1.b

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<sup>3</sup> Avila et al. (1997) present evidence for Argentina that changes in the country risk premium affect foreign capital inflows, and that these inflows have a positive effect on industrial activity.

<sup>4</sup> The lack of capital controls may increase the external vulnerability, but there is no robust evidence on this issue. For example, Edwards (1999) points out that in the Chilean case, these controls contributed to increase the ratio of long- over short-term inflows, but they did not prevent domestic interest rates to display high volatility over the nineties.

| Some Qualitative Indicators for Argentina, 1970-1999 |          |                     |            |                 |           |                 |   |              |            |
|--|----------|---------------------|------------|-----------------|-----------|-----------------|---|--------------|------------|
| Period   | GDP      | Inflation           | External   | Trade           | Financial | State           | Development                               | Trend in     | Trend in   |
|  | Growth   |                     | Debt       | Openness        | Openness  | Intervention in | Strategy                                  | Unemployment | Inequality |
|  |          |                     |            |                 |           | Economic        |   |              |            |
|  |          |                     |            |                 |           | Activity        |   |              |            |
| 1970-75  | Moderate | High and increasing | Stable     | Low             | Low       | High            | Import Substitution                       | Medium       | Stable     |
| 1976-82  | Moderate | High and increasing | Increasing | Low             | High      | High            | Free trade                                | Medium       | Increasing |
| 1983-89  | Low      | High and increasing | Increasing | Low             | High      | High            | Subsidisation of some domestic Industries | Medium       | Increasing |
| 1990-99  | High     | Low                 | Increasing | Relatively High | High      | Low             | Free trade and markets                    | High         | Increasing |

## *2.2. The process of international integration of the Argentine economy in the nineties*

At the time of evaluating the degree of integration of Argentina to the world economy, a difference must be highlighted in terms of trade and financial openness. At the trade level, as tariff and non-tariff protection obstructed the flow of goods, Argentina clearly was a closed economy until 1990. But regarding financial policy, there were no major legislative changes in recent years for attracting international credit: in 1976 and 1977 most legal constraints on capital movements had already been removed, and the financial system had been liberalised. As a matter of fact, it was the agitated credit history of the country in the 80s and the macroeconomic and institutional instability that isolated Argentina from the international credit circuit between 1982 and 1990. The perception by foreign investors of a greater economic stability and of a greater rule of law, more than a new legal frame, stimulated capital inflows since 1991. The decrease of the country risk premium (the difference between the Argentine bond return in dollars and the U.S. Treasury bond return for the same maturity) reflects this phenomena: after reaching an average of 25 percentage points (2500 basic points) in 1988-1990, it fell to an average of 4 percentage points (400 basic points) in 1991-1994.

It is necessary to make clear that the decision to open the economy in the 90s was not the result of a deliberate development strategy, but a by-product of a plan whose almost exclusive target was the elimination of inflation. The hyperinflationary environment in which the Argentine economy was living during the late 80s and the early 90s relegated to a second place any other



policy goal, generating an unprecedented consensus around the lowering of inflation at any cost. The same society that had opposed to the previous attempts of reducing the fiscal deficit and selling public enterprises was now favourably disposed to these changes.

Along with the previously described fiscal and monetary measures, the government initiated in the early 90s a program of deregulation, privatisation and trade opening. The authorities had not planned any development strategy at the moment of executing these changes. Deregulation and integration, both financial and commercial, were rapidly carried out, under the urgency of the circumstances, and there was not any gradual schedule to allow the private sector adjustment to the new circumstances. Anyway, it was thought that an economy free of distortions would be able to allocate efficiently its resources and to exploit its static and dynamic comparative advantages; the plain failure of the import substitution strategy and the promotion of domestic industries up to the early 80s, supported, by opposition, this new paradigm.<sup>5</sup> With very few exceptions, there has not been in the 90s any subsidies for the productive sector. In retrospect, these policies and the lack of any supporting social policies in the context of an abrupt change from a protected and regulated economy, set the ground for an increase of inequality and unemployment.

Certainly, the international financial conditions, particularly the decrease of the interest rate in the U.S., contributed to the success of the Convertibility Plan through the inflow of foreign capitals and the return of domestic capitals which had left the country in the past. Since 1991 different factors contributed to the financial reintegration of the country to the world economy. These factors, shared with other emerging economies, can be classified in *pull factors* (domestic changes that made the country more attractive) and *push factors* (changes in developed countries that made investment in other countries attractive). Among the pull factors it can be mentioned: (i) the control of inflation, (ii) the reduction of the fiscal deficit, (iii) the privatisations and deregulations, (iv) the regularisation of the external debt through the Brady Plan of 1992, (v) the pegging of a credible exchange rate, (vi) the trade opening, (vii) the solvency and liquidity of the financial system under an adequate state regulation and supervision, and (viii) the complete absence of legal, tax and bureaucratic constraints to foreign capital movements. The main push factors include: (i) the decrease in the international interest rate at the beginning of the decade, (ii) the growing importance of institutional investors and their associated need to diversify their portfolios, and (iii) the expanded use of new communication technologies.

The access to external credit had for Argentina various positive aspects:

- (i) It constituted an expansive factor of the aggregate demand in the short run. The reactivation of 1991-1994 is partially explained by foreign capital inflows.
- (ii) It allowed the country to increase fixed investment without sacrificing current consumption.

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<sup>5</sup> Besides these domestic factors, the ideological change favouring liberalism at an international level in the last decades can not be ignored.

However, these benefits have several actual and potential costs associated:

(i) The foreign investors' expectations are volatile and not always based on the economic fundamentals of the recipient economy. The contagion among emergent economies and herding behaviour on the part of international investors constitute frequent phenomena.<sup>6</sup> The notorious oscillations of capital flows and the country risk premium in short periods clearly supports this assertion:

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<sup>6</sup> See Nogués and Grandes (2000) for evidence on the Argentine case.

*Table 2.2*  
*Country risk premium of the Argentine government (\*)*  
*1993-1999*

| Statistic   | Basic Points |        |  |  |
|---|--------------|--------|--|--|
| Median  | 673          |        |  |  |
| Mean  | 705          |        |  |  |
| Maximum   | 1761         | Mar-95 |  |  |
| Minimum   | 263          | Aug-97 |  |  |
| Standard Deviation                                      | 303          |        |  |  |
| (*) Spread Floating Rate Bond over U.S. Treasury Bonds. |              |        |  |  |

(ii) The activity level in small open economies is particularly sensitive to capital inflows and outflows, generating very steep cycles.<sup>7</sup>

(iii) The increase of the external debt intensifies the financial vulnerability in the presence of external shocks to the interest rate. In the Argentine case, the total external debt has augmented from 29.9% to 51.7% of the GDP between 1991 and 1999.

(iv) The higher degree of openness amplifies the effect of variations in the terms of trade, that have shown an erratic evolution in the last decade:

*Table 2.3*  
*Terms of Trade for Argentina, 1991-1999*  
*Index 1993=100*

| Year | Exports<br>Price<br>Index | Imports<br>Price<br>Index | Terms<br>of Trade |
|------|---------------------------|---------------------------|-------------------|
| 1991 | 95.9                      | 105.2                     | 91.2              |
| 1992 | 99.7                      | 102.5                     | 97.3              |
| 1993 | 100.0                     | 100.0                     | 100.0             |
| 1994 | 102.7                     | 101.5                     | 101.1             |
| 1995 | 108.4                     | 107.0                     | 101.3             |
| 1996 | 115.5                     | 105.9                     | 109.0             |
| 1997 | 112.0                     | 103.4                     | 108.3             |
| 1998 | 100.2                     | 98.1                      | 102.2             |
| 1999 | 89.0                      | 92.5                      | 96.3              |

Source: INDEC.

(v) In order to satisfy the expectations of international investors and consolidate the country's external credibility the use monetary and fiscal instruments to smooth the business cycle is severely constrained.

(vi) The debt financing of fiscal unbalances elevates the external debt stock without improving the ability to repay it.

<sup>7</sup> For an econometric estimation for Argentina, see Avila et al (1997).

It is hard to draw any definite conclusion about the net benefit of the process for Argentina. In the first place, a longer experience is required in order to make a sounder evaluation of pros and cons. Secondly, beyond the theoretical advantages of opening the economy, the final outcome depends both on domestic policies and exogenous shocks. For example, the instability associated to capital flows can be created either by the lack of a consistent fiscal policy or by international contagion unrelated to the country's fundamental. Concerning commercial opening, the preliminary evaluation is also controversial: against its well-known long-run benefits, the reallocation of factors between sectors is likely to have some adverse effects in the short- and medium-term.

### ***2.3. Effects of the integration of the Argentine economy to the world economy***

#### *2.3.1. Changes in factor endowments and the sources of growth*

As many other developing economies, Argentina was a closed economy until the first part of the 70s. Keeping in mind that the initial conditions could have limited the economic and institutional performance of the country during the present globalisation process, this section briefly describes the main structural characteristics in the 1965-1975 decade and then reports the changes that took place in the subsequent 25 years.

In Table 2.4 it can be observed that in 1965-1975 Argentina was a country with medium-high per capita income. The growth rate was significantly lower and the inflation rate higher than the world average, a trend reinforced in the following 15 years. To evaluate factor endowments, some measures of physical capital (capital-labour ratio, an infrastructure index and the investment rate), human capital (years of secondary schooling) natural resources (area, population density and share of agriculture in the product), and a rough estimation of the aggregate level of technology were constructed. Based on these indicators, Argentina appeared to be abundant in human and physical capital relative to natural resources, when compared to developing countries, but not to OECD countries.

*Table 2.4*  
*Some structural economic indicators. Average 1965-1975.*  
*Mean values for different regions and Argentina.*

| Variable  | World<br>Mean | OCDE  | South East<br>Asia | South<br>Africa | Latin<br>America | Argentina |
|---|---------------|-------|--------------------|-----------------|------------------|-----------|
| Per capita GDP (1985 U\$S)                            | 2,679         | 7,079 | 1,546              | 917             | 2,601            | 5,018     |
| Real growth rate of GDP                               | 2.8%          | 3.4%  | 4.7%               | 1.9%            | 2.3%             | 1.9%      |
| Annual inflation rate                                 | 10.0%         | 6.0%  | 23.0%              | 6.0%            | 15.0%            | 31.0%     |
| Capital/labor ratio (relative to OCDE)                | 0.33          | 1.00  | 0.07               | 0.05            | 0.15             | 0.26      |
| Investment rate                                       | 0.16          | 0.29  | 0.18               | 0.10            | 0.16             | 0.17      |
| Infrastructure index (*)                              | 1.43          | 3.62  | 0.80               | -0.50           | 1.51             | 2.59      |
| Secondary schooling (in years)                        | 0.57          | 1.29  | 0.61               | 0.15            | 0.51             | 0.66      |
| Technology level (relative to OCDE) (**)              | 0.68          | 1.00  | 0.54               | 0.44            | 0.67             | 0.87      |
| Exports/GDP   | 0.28          | 0.27  | 0.39               | 0.28            | 0.26             | 0.07      |
| Imports/GDP   | 0.30          | 0.28  | 0.44               | 0.32            | 0.28             | 0.06      |
| Primary exports/GDP                                   | 0.74          | 0.40  | 0.80               | 0.88            | 0.81             | 0.76      |
| Contribution of agriculture to GDP                    | 0.25          | 0.08  | 0.31               | 0.37            | 0.19             | 0.10      |
| Population density (inhabitants per km <sup>2</sup> ) | 3.11          | 1.99  | 7.39               | 1.09            | 1.43             | 0.81      |
| Area (in mill. Km <sup>2</sup> )                      |               |       |                    |                 |                  | 2.77      |
| Population (millions)                                 |               |       |                    |                 |                  | 22.3      |

(\*) Simple average of the logarithm of the number of telephone lines per worker, kilometers of paved roads per worker and energy production per worker. (\*\*) [per capita GDP(region)/per capita GDP(OECD)]<sup>-0.4</sup>. See Romer (1994).

Source: Author's calculations based on data from the World Bank.

While the proportion of primary exports with respect to total exports is consistent with the relative endowments of physical and human capital (higher than the OECD average and lower than other developing countries), the country presents export and import ratios to GDP considerably lower than the other regions, a point that would be analysed later.<sup>8</sup>

The county's performance in terms of growth and its sources is displayed in the following table:

*Table 2.5*  
*Sources of Argentine growth.*  
*As percentage*

| Period    | Average annual growth rate of GDP | Inputs without adjusting by quality<br>Labor | Capital | TFP   |
|-----------|-----------------------------------|--|---------|-------|
| 1940-1980 | 3.60                              | 0.95   | 1.55    | 1.10  |
| 1980-1989 | -1.06                             | 0.70   | 0.04    | -1.80 |
| 1990-1997 | 6.09                              | 0.74   | 1.42    | 3.94  |

Source: Elías (1992) and Meloni (1999).

Several sharp differences call the attention:

- (i) The growth rate in the 90s was considerably higher than in the previous decade –when it was negative - and also higher than the growth rate in 1940-1980;

<sup>8</sup> Concerning this point, it is interesting to note that after ranking a group of 107 countries by their export ratios to GDP, Argentina was in the 102<sup>nd</sup> place in 1965-1975 as well as in 1985-1995.

(ii) Total factor productivity was the main cause of the contraction of the 80s and the expansion of the 90s. Changes in the degree of government intervention in the economic system, trade openness, and productive technology and efficiency are behind this different growth scenarios over time;

(iii) The weight of physical capital (relative to labour) was higher in the 90s than in the 80s. As expected, capital intensity moved inversely with its relative price: the capital/labour ratio increased 32% between 1991 and 1998, while its relative price decreased 40% in the same period.<sup>9</sup>

### 2.3.2. Goods market

The low import and export levels, although suggestive, can not be taken as a definitive proof of the export weakness or of the presence of distortions and trade barriers. In the long run, a country's export performance is determined by its import needs, on the demand side, and by its export competitiveness, on the supply side.

A regression of the ratio of exports to GDP against a series of variables susceptible of capturing these effects is likely to uncover the level of *theoretical exports*, a prediction of the equilibrium value based on the structural characteristics of the country.<sup>10</sup> The estimated coefficient allows to predict the theoretical exports and to confront them with the observed ones in the period 1965-1995: in 1965-1995 the export level was on average a 7.7% of the GDP, but the country should had exported a 17.2% according to its structural determinants. In the 90s, the export coefficient jumped from 7.7% in 1990-1994 to 10.2% in 1995-1999, revealing a higher degree of openness, but still far from the theoretical level. Comparing the 80s and the 90s, an increase of exports from 6.3% to 8.9% of GDP and a significant growth of imports from 4.4% to 10.4% is observed.<sup>11</sup>

The same methodology has been used to predict the theoretical level of *primary exports as a proportion of total exports* (the rest corresponds to manufacturing exports) for the same sample of countries.<sup>12</sup> Argentina's primary exports in 1965-1995 (76.7% of the total) are similar to the theoretical ones (75.2%). In spite of the widely spread belief that Argentina is excessively biased towards its primary exports, the econometric analysis shows that the actual export structure responds to the comparative advantage of the country in this sector.

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<sup>9</sup> See Bour and Susmel (1999).

<sup>10</sup> The estimation (not reported but available on request) ratifies the stated hypothesis and presents a good adjustment. The included variables were population, area and latitude (negative sign) and per capita product, investment rate and infrastructure (positive sign).

<sup>11</sup> As it will be shown below, the production of tradable goods (agriculture and industry) fell in relation to non-tradable ones (services). This process is common to most economies as they develop, though.

<sup>12</sup> It is to be expected that the comparative advantage in primary goods increase with the availability of natural resources, a warm or hot climate and the importance of agriculture as a productive activity, and decrease with the technological and industrial level of development of the country. The closeness to the tropics, the share of agriculture in total aggregate value, the total area, and (the inverse of) the capital/labour ratio are indicators of the relative endowment of productive factors. The productive infrastructure, the per capita GDP and the average years of secondary schooling capture the complexity of the productive system that makes possible the export of more elaborated goods. Results were highly supportive of these hypotheses.

Although a good part of the explanation relies on structural determinants, the trade policy has deepened this relative isolation. Table 2.6 shows the average export and import taxes between 1967 and 1996. This period has been split into four sub-periods according to the prevailing external orientation: up to 1975, the import substitution policy had a clear bias towards trade autarchy; the military administration of 1976-1982 gave priority to outward orientation, situation that was reverted in the first stage of the democratic period (1983-1990); finally, since 1991 a renewed tendency towards openness can be identified.

*Table 2.6*  
*Import and export taxes*  
*Argentina, 1967-1996.*

| Period    | Average Export<br>Tax | Average Import<br>Tax |
|-----------|-----------------------|-----------------------|
| 1967-1975 | 0.09                  | 0.14                  |
| 1976-1982 | 0.05                  | 0.14                  |
| 1983-1990 | 0.11                  | 0.15                  |
| 1991-1996 | -0.04                 | 0.12                  |

*Source:* Calculations based on Gay A. (1998).

The average import tariff has been high over the whole period, with a slight decrease in the 90s. Export taxes – an instrument used to extract rents from the agricultural sector- were particularly high in 1967-1975 and in 1983-1990, becoming negative in the last sub-period. Evidently, tariffs do not seem to reflect the changes in trade orientation.<sup>13</sup>

This impression is different when quantitative restrictions and exchange controls are taken into account (see Rodríguez (1997)). Between 1983 and 1988, more than 50% of the tariff positions. Since then, and with particular strength since 1991, these restrictions were removed, surviving nowadays only a few exceptions. Regarding exchange controls, a means to offer a differential treatment to exports and imports, they were intensively used only in the early 70s and in 1983-1990.

Another structural change in the trade front was the creation of the Mercosur regional trade agreement, together with Brazil, Uruguay and Paraguay in 1991 after some partial agreements initiated in 1986. The Mercosur is a customs union, with free trade between its members and a common external tariff. The treaty is still in process of consolidation after its rather prompt implementation. Economic and diplomatic tensions have emerged recurrently, as a consequence of the loss of competitiveness of specific sectors and the persistence of some national subsidies (especially in Brazil). However, the results are, in general terms, auspicious. More than the 90% of the tariff positions have been liberalised for intra-regional trade and a similar fraction is subject to the common external tariff. The association, to which Bolivia and

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<sup>13</sup> However, the change is clearer when comparing this situation with the one at the end of 1989: in November of that year, the average tariff was of 29%, with a maximum level of 40% and a minimum of 0%. In November, 1992 the average was of 10.2%, the maximum was 20% and the minimum was still 0% (this last one for capital goods not produced in the country).

Chile had partially adhered in recent years, has increased intra-regional trade. In the case of Argentina, the exports to Mercosur went from 7.9% of total exports in 1985 to 35.1% in 1998, while imports increased from 18.3% to 25.7%.<sup>14</sup> Anyway, the Argentine trade exhibits a high degree of international geographic diversification:

*Table 2.7*  
*Export destination and import origins for Argentina in 1998*  
*Percentage of total*

|         | MERCOSUR | NAFTA | European Union | Rest | Total |
|---------|----------|-------|----------------|------|-------|
| Exports | 35.1     | 9.8   | 17.4           | 37.7 | 100   |
| Imports | 25.7     | 22.8  | 27.4           | 24.1 | 100   |

Source: Informe Económico del Ministerio de Economía y Servicios Públicos.

The changes in the structure of exports and imports are presented in the following table:

*Table 2.8*  
*Import and export structure in 1989 and 1997*

| Exports                             | 1989 | 1997 |
|-------------------------------------|------|------|
| Primary Products                    | 21.2 | 21.6 |
| Agriculture and cattle manufactures | 41.6 | 34.4 |
| Industrial manufactures             | 33   | 31.5 |
| Combustibles and energy             | 4.3  | 12.4 |
| Total                               | 100  | 100  |
| <hr/>                               |      |      |
| Imports                             |      |      |
| Capital goods                       | 17.6 | 25.3 |
| Intermediate goods                  | 51.1 | 33.2 |
| Combustibles                        | 9.2  | 3.2  |
| Parts for capital goods             | 16.5 | 18.2 |
| Consumption goods                   | 5.2  | 14.9 |
| Passenger vehicles                  | 0.2  | 5.1  |
| Rest                                | 0.3  | 0.1  |
| Total                               | 100  | 100  |

Source: Informe Económico del Ministerio de Economía y Servicios Públicos.

It is not easy to find, at first glance, a substantial modification in terms of specialisation in primary and industrial products from the comparison of the structure before and after the opening process. An increase in oil and energy at the expense of agricultural goods at the export level, and the growth of capital and consumption imports in detriment of intermediate goods appear as the main trends.

<sup>14</sup> There is no conclusive evidence concerning the primacy of trade creation or deviation for the Mercosur (see Connolly and Gunther (1999)). Anyway, the Mercosur could be beneficial as a transition step between autarchy and unrestricted free trade.



As the country has a comparative advantage in primary goods, it is expected that capital and intermediate goods imports constitute a significant portion of total investment. The evolution of investment and its components over time is presented in the following table:

*Table 2.9*  
*Composition of fixed gross internal investment, 1970-1997.*  
*As percentage of total.*

| Period    | Gross Domestic Investment | Construction | Durable equipment for production |          |         |
|-----------|---------------------------|--------------|----------------------------------|----------|---------|
|           |                           |              | Total                            | Domestic | Foreign |
| 1970-1975 | 100                       | 60.7         | 39.3                             | 29.1     | 10.2    |
| 1976-1982 | 100                       | 62.4         | 37.6                             | 24.6     | 13.0    |
| 1983-1990 | 100                       | 65.8         | 34.2                             | 26.2     | 8.0     |
| 1991-1997 | 100                       | 53.2         | 46.8                             | 16.8     | 30.0    |

Source: Martínez *et al* (1998).

The proportion of imported goods reached its highest levels in 1976-1982 and particularly in 1991-1997, which is coherent with the preceding observations.

### 2.3.3. Services markets

Up to 1990 there was virtually no international competition in the services sector. Public utilities were in hands of the state, preventing any external or domestic competition. The only sector where foreign participation was relevant was the financial sector. In May 1977, on the eve of the financial reform of June of that year, 17 of the 119 banks established in the country were of foreign origin; by the end of 1981, foreign banks ascended to 32 out of 199. While the expansion in the number of domestic banks was followed by an important contraction along the 80s, foreign-owned banks had a more permanent character, as 31 of the 181 institutions functioning in 1987 were of foreign capital.

The last decade has been witness of a marked change in the services market. The state has sold public enterprises and franchised a number of public services to the private sector since 1990. By doing this, public investment displayed a drastic fall that continued the tendency registered since 1970:

*Table 2.10*  
*Public and private investment in Argentina, 1970-1999.*  
*As percentage of GDP.*

| Period    | Total Gross Investment | Private Investment | Public Investment | Public/Total (%) | Private/Total (%) |
|-----------|------------------------|--------------------|-------------------|------------------|-------------------|
| 1970-1975 | 21.7                   | 13.8               | 7.9               | 36.6             | 63.4              |
| 1976-1982 | 24.2                   | 15.5               | 8.7               | 35.8             | 64.2              |
| 1983-1990 | 17.1                   | 12.0               | 5.0               | 29.4             | 70.6              |
| 1991-1999 | 19.1                   | 17.6               | 1.5               | 7.6              | 92.4              |

Source: Martínez *et al* (1998) and Ministerio de Economía y Servicios Públicos.

Almost 60% of the revenues generated by the privatisations in 1990-1998 (US\$ 18,173 millions) came from foreign investors. At the same time, of the total direct foreign investment in 1992-1996, 47% was directed to the service sectors.

*Table 2.11*  
*Sector destination of foreign direct investment, 1992-1996.*

| Sector                     | Millions of U\$S | % of total |
|----------------------------|------------------|------------|
| Extractive activities      | 3169             | 16.2       |
| Manufacturing industry     | 6033             | 30.9       |
| Services                   | 9140             | 46.8       |
| Electricity, gas and water | 4959             | 25.4       |
| Communications             | 1059             | 5.4        |
| Trade                      | 1149             | 5.9        |
| Banking                    | 1973             | 10.1       |
| Others                     | 1176             | 6.0        |
| <b>TOTAL</b>               | <b>19518</b>     | <b>100</b> |

Source: Kulfas and Hecker (1998).

#### *2.3.4. Capital markets and foreign capital participation*

Another relevant measure of the integration to the world economy is the contribution of foreign saving (the current account of the balance of payments) in the financing of domestic investment. Though this variable is influenced by domestic factors that are independent of the degree of financial integration<sup>15</sup>, Argentina is, a priori, a foreign saving recipient. Not until the 90s the country went through a extended process of external indebtedness:

*Table 2.12*  
*Saving, investment and current account in Argentina, 1970-1999.*  
*As percentage of GDP.*

| Period        | Gross Investment | Gross Saving | Current Account | Foreign Direct Investment |
|---------------|------------------|--------------|-----------------|---------------------------|
| 1970-1975     | 21.7             | 20.5         | -1.2            | 0.3                       |
| 1976-1982     | 24.2             | 24.4         | 0.2             | 0.5                       |
| 1983-1990     | 17.1             | 15.8         | -1.3            | 0.4                       |
| 1991-1999 (*) | 19.1             | 15.9         | -3.2            | 1.6                       |

(\*) Foreign direct investment corresponds to the period 1992-1997

Source: Martínez et al (1998), Urbiztondo (1998) and Kulfas and Hecker (1998).

From a global inspection of the balance of payments and its components (not reported) it can be concluded that over the period 1992-1999: a) in spite of the fact that the country had accumulated an external deficit of 74.7 thousand million dollars, the Central Bank increased its international reserves in 19.9 thousand million, indicating that capital inflows more than compensated the financing needs; b) exports and imports, measured in current dollars, grew 88% and 75 % respectively, between 1992 and 1999; c) financial and real services explain an

<sup>15</sup> For example, net capital outflows were registered between 1989 and 1991 because of the macroeconomic instability and the retraction of aggregate demand.

important part of the deficit compared to the trade balance; d) regarding the capital account, it can be observed that the non-financial private sector was the main international borrower up to 1994, with the government taking over that place since then, in a macroeconomic situation of lower growth and higher fiscal deficit.

The direct foreign investment has moved in a similar fashion. Between 1912 and 1970, direct foreign investment represented annually only the 0.5% of the GDP, going down to 0.3% in 1971-1976, to return to 0.4% in the following fifteen years. Although Argentina absorbed only 1% of the world's direct foreign investment in 1991-1996, its volume in terms of the product has increased fourfold with respect to the 80s, reaching 1.6% of the GDP.<sup>16</sup> The principal sources of these flows had been the United States (33%), Chile (10.7%), France (5.9%) and Spain (5.5%). The following table shows the different foreign investment modalities between 1992 and 1997:

*Table 2.13*  
*Modalities of foreign direct investment in Argentina.*  
*In million dollars and as percentage of the total.*

| <b>Modalit</b>        | <b>1992</b>  | <b>1993</b> | <b>1994</b>  | <b>1995</b>  | <b>1996</b>  | <b>1997</b>  |
|-----------------------|--------------|-------------|--------------|--------------|--------------|--------------|
| Profits<br>reinvestme | 813<br>20.3  | 870<br>34.6 | 839<br>26.9  | 609<br>12.7  | 565<br>11.1  | 805<br>12.1  |
| Capital<br>Injections | 474<br>11.8  | 628<br>25.0 | 1287<br>41.3 | 1649<br>34.5 | 1671<br>32.8 | 2120<br>31.9 |
| Acquisitions          | 384<br>9.6   | 101<br>4.0  | 868<br>27.9  | 1453<br>30.4 | 2418<br>47.5 | 2970<br>44.7 |
| Privatisations        | 2343<br>58.4 | 916<br>36.4 | 122<br>3.9   | 1072<br>22.4 | 436<br>8.6   | 752<br>11.3  |
| Total                 | 4014<br>100  | 2515<br>100 | 3116<br>100  | 4783<br>100  | 5090<br>100  | 6647<br>100  |
| % of GDP              | 1.8          | 1.0         | 1.1          | 1.7          | 1.7          | 2.1          |

Note: first file in million dollars; second file as percentage of the total.  
Source: Kulfas M. and H. Hecker (1998).

No legal restrictions explain the relatively low (yet increasing) participation of foreign capital. On the contrary, since 1976 it has been offered equal treatment to domestic and foreign capital. Besides, since 1989, foreign investment is not subject to pre-approval and its inscription in the Registro de Inversiones Extranjeras is optional; on the other hand, there are no restrictions to profit remittances and capital repatriation. Surely, the still high country risk and the numerous alternatives of international diversification explain the limited interest of foreign investors, even after the macroeconomic ordering in the 90s.

<sup>16</sup> It should not be noted that Argentine direct investment to the rest of the world in the 90s reached 7000 million dollars, being the main destinations Brazil (31.3%), Venezuela (17.7%), Bolivia (14.1%) and the United States (9.7%).

The stock of foreign investment in Argentina reached in 1999 63 billion dollars (23% of the GDP). Considering the 160 highest-selling manufacturing firms, the 96 multinational companies in this group generated in 1997 62.5% of the sales (36% in 1990) (see Kulfas and Hecker (1998)).

Financial integration is also low in terms of the loan interest rate available to domestic borrowers in the financial system. While the deposit rate is reasonably arbitrated, the loan rate is considerably higher than the one the international markets, with the only exception being the segment of bigger firms (see Buera and Nicolini (1998)).

### *2.3.5. Technological transfer*

Against the expectations of its creators, the import substitution policy instrumented between 1940 and 1980 produced frustrating results in terms of technological progress. The combination of a perverse incentive scheme and scarce international competition led to an industrialisation process characterised by a strong productive inefficiency. The brief deregulatory and opening experience of 1976-1982, far from improving the situation, deteriorated the solvency of domestic firms in the presence of increased imports and domestic currency overvaluation.

The reforms of the 90s have promoted a substantial and sustainable change in productivity and technological advance. Both the absence of state intervention in the economy and the removal of barriers to international trade induced the private firms to seek the productivity gains necessary to stay in business.

Particularly, the renewed export and import dynamism allowed domestic firms to gain access to the state-of-the-art technologies from developed countries. Personal interaction and the possibility of copying and adopting these processes tends to stimulate technological advance in developing countries entering the phase of trade liberalisation.<sup>17</sup> Katz (1999) presents some reflections about the technological innovation process in Argentina and other Latin American countries in the 90s, pointing out the predominant role of the private sector over the state and of the adoption of foreign technologies over domestic research and development as central features.

It can not be ignored here the role played by direct foreign investment. Besides promoting improvements in the management and international marketing of domestic firms, it tends to favour the access to foreign technologies: by keeping the control over the use and benefits by the owner, direct foreign investment eliminates the usual resistance to technological transfer towards economies with a weak protection of property rights. Likewise, through the contact with providers and clients, the firms receiving foreign investment - for example, the local subsidiaries of multinational firms- generate knowledge spillovers over other domestic firms.<sup>18</sup>

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<sup>17</sup> See Pissarides (1997) for a theoretical analysis.

<sup>18</sup> See IFC (1997) and Blomstrom and Kokko (1996).

Even if, by its own nature, it is difficult to obtain quantitative information about technological transfer, we show some indicators to back up the previous hypotheses. Provided that the technology is frequently incorporated in new capital goods<sup>19</sup>, the noticeable increase of private investment as a proportion of GDP (44% between 1983-1990 and 1991-1999, see Table 2.10) and the decrease of the average age of the capital stock, (from 8.8 years in 1989 to 5.9 years in 1996) seem to ratify what was previously stated. Imported capital goods are an important vehicle for technology transfer. As it can be observed in Table 2.9, these goods represented a 30% of total investment in 1999 from a level of 8% in 1983-1990. The intermediate and capital goods imports as proportion of total imports grew from 36% in the 80s to 45% in 1997. The favourable tariff treatment for capital imports, the real exchange rate appreciation, and the lower interest rate stimulated the acquisition of foreign equipment and inputs. Finally, a prediction consistent with the importance of trade in the technology transfer is that the productivity gap between tradable and non-tradable goods has to grow, as the following table shows:<sup>20</sup>

*Table 2.14*  
*Production and relative productivity of tradable goods.*

| Period    | Tradable<br>Production/<br>Total | Relative<br>Productivity<br>Tradables/<br>Non tradables |
|-----------|----------------------------------|---|
| 1967-1975 | 0.34                             | 91.9  |
| 1976-1982 | 0.32                             | 95.4  |
| 1983-1990 | 0.30                             | 117.4   |
| 1991-1996 | 0.29                             | 164.3   |

Source: Calculations based on Gay (1998).

### *2.3.6. Migrations*

The Argentine workforce has been relatively immobile at an international level, both in periods of openness and isolation. Nevertheless, Argentina has received migrants from neighbouring countries such as Bolivia, Paraguay, Uruguay and Chile, especially during the cycles of domestic reactivation. Although the economic integration started in 1986 with the Mercosur, labour movements to and from Brazil had been scarce.

The only source of reliable information is the Household Permanent Survey. Arruñada and others (1999) analyse the migratory structure shown by this survey in October 1997, finding that internal migrants represent 24% of total population, while foreign migrants represent around the 8%. In particular, recent international immigrants do not reach a 1%; the majority of domestic and foreign immigrants have more than five years of residence in the country,

<sup>19</sup> See Grossman and Helpman (1994).

<sup>20</sup> It is well known that tradable goods tend to display greater productivity increases than nontradable ones, even if there is not any technological transfer as happened in the first three sub-periods. However, the jump of 1991-1996 remarkably exceeds the previous trend.

indicating that the economic recovery of the 90s has not have a great impact over the migratory decisions, surely because of the simultaneous rise of the unemployment rate. The average instruction level of the immigrants, who are mainly employed in low-skilled jobs, is lower than that of the natives: the 20% of the immigrants has low education against 7% in the case of the natives.

### 3. Inequality trends in Argentina

Inequality and poverty had been consistently measured since 1974, date in which the first Household Permanent Survey (EPH) was taken in the Greater Buenos Aires.<sup>21</sup> However, it was only in the nineties when the survey was extended to cover all the urban population of the country. The EPH has the usual deficiencies of most household surveys in the world: non-negligible non-response, income underreporting and difficulties for capturing some income sources (e.g. capital income). In addition it only asks incomes, not expenditures or consumption, and it does not cover rural areas. Various authors have made several corrections for dealing with these problems.<sup>22</sup> It is systematically found that the inequality and poverty trends are not modified when these adjustments are made.

Table 3.1 summarises the main statistics of inequality for the Greater Buenos Aires from 1974 to 1999.<sup>23,24</sup> The equivalent household income of all the individuals with complete and consistent responses is taken as argument of the inequality indexes.<sup>25</sup> Figure 3.1 shows the Gini coefficient.

*Table 3.1*  
*Inequality measures. Equivalent household income distribution.*  
*Greater Buenos Aires, 1974-1999*

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<sup>21</sup> The Greater Buenos Aires is an urban area of 12 millions inhabitants, around one third of the Argentine population.

<sup>22</sup> Llach and Montoya (1999) and Gasparini and Sosa Escudero (2000) correct by income underreporting and non-response. Using data from the Household Expenditure Survey (ENGH) Sosa Escudero and Gasparini (2000) impute income from own-housing and Navajas (1999) calculates consumption inequality.

<sup>23</sup> The survey covers around 11,000 individuals in that urban area.

<sup>24</sup> As it was mentioned, the geographic covering of the EPH was extended in the nineties. The evolution of inequality for the total of the urban areas in that decade does not significantly differ from that of Greater Buenos Aires.

<sup>25</sup> Following Buhmann et al. (1988) the equivalent income of an individual arises from dividing the income of that individual's household by the sum of equivalent adults of the family, raised to a parameter that reflects moderate scale economies internal to the household (.8). Modifying that parameter does not alter the main results.

|      | Gini | Theil | d10/d1 |
|------|------|-------|--------|
| 1974 | 34.5 | 0.185 | 8.0    |
| 1980 | 39.0 | 0.241 | 10.9   |
| 1981 | 42.7 | 0.308 | 14.1   |
| 1982 | 42.0 | 0.298 | 13.2   |
| 1984 | 42.0 | 0.347 | 14.3   |
| 1985 | 40.9 | 0.262 | 12.4   |
| 1986 | 41.7 | 0.289 | 13.0   |
| 1987 | 44.4 | 0.329 | 15.9   |
| 1988 | 44.9 | 0.333 | 17.3   |
| 1989 | 51.5 | 0.478 | 23.9   |
| 1990 | 46.1 | 0.370 | 16.1   |
| 1991 | 46.1 | 0.390 | 16.0   |
| 1992 | 44.2 | 0.311 | 14.7   |
| 1993 | 44.3 | 0.316 | 17.0   |
| 1994 | 45.7 | 0.346 | 16.4   |
| 1995 | 48.4 | 0.395 | 21.2   |
| 1996 | 48.4 | 0.388 | 20.5   |
| 1997 | 48.0 | 0.384 | 21.3   |
| 1998 | 50.1 | 0.415 | 24.3   |
| 1999 | 48.8 | 0.388 | 22.6   |

Source: Author's calculations based on the EPH. October waves. Note: d10/d1 is the ratio of the mean household equivalent income of the top decile over that mean for the bottom decile.

*Figure 3.1*  
*Gini coefficient. Equivalent household income distribution*  
*Greater Buenos Aires, 1974-1999*



Source: Author's calculations based on the EPH. October waves.

Inequality has been increasing for the last 25 years in Argentina.<sup>26</sup> The periods of greater acceleration are the second half of the seventies, the last three years of the eighties, and the middle and last part of the nineties.

<sup>26</sup> Actually, according to the EPH and fragmented evidence of the sixties and early seventies, income

Inequality strongly increased during the second half of the seventies and the first part of the eighties, coinciding with a period of more international trade openness, suppression of civil liberties, restrictions to the action of the labour unions, and by the end of the period, macroeconomic crisis. The first part of the democratic government, started in 1983, shows relative stability in the inequality indicators. In contrast, towards the last part of the eighties income distribution worsens drastically, in association with the hyperinflationary process. The stability achieved since the implementation of the Convertibility Plan generates a reduction of inequality to levels a little higher than those of the previous period of macroeconomic stability.<sup>27</sup> Since 1992/93 the Argentine economy returns to a pattern of growing inequality to the point of reaching levels only comparable to the ones experimented during the hyperinflationary peak.

Frequently the discussion over the determinants of inequality is carried out in terms of the wage gap between skilled and unskilled workers. Table 3.2 presents the real and relative wage of various socio-demographic groups in four years of relative macroeconomic stability: 1980, 1986, 1992 and 1998. The average real wage decreased strongly between 1980 and 1986, descended moderately towards 1992 and recovered in the nineties, reaching a similar level to that in 1986, but significantly lower than in 1980.

The most interesting phenomenon of the table is the different evolution of the hourly wage income between educational groups. Between 1980 and 1992 wages fell in greater magnitude for college graduates, reducing the income gap. In contrast, between 1992 and 1998 while real hourly wages did not significantly change for workers with a high school degree or less, they substantially increased for the group of college graduates. The relative wage of college graduates, that has fallen from 2.20 to 1.85 in the eighties, recovered by the ends of the nineties reaching a level of 2.32.

*Table 3.2*  
*Real and relative wages by sociodemographic groups*  
*Greater Buenos Aires, 1980, 1986, 1992 y 1998*

|                              | Hourly wages (\$ 1998) |       |       |       | Relative hourly wages |      |      |      |
|------------------------------|------------------------|-------|-------|-------|-----------------------|------|------|------|
|                              | 1980                   | 1986  | 1992  | 1998  | 1980                  | 1986 | 1992 | 1998 |
| Total                        | 15.16                  | 9.80  | 8.25  | 9.75  |                       |      |      |      |
| Gender                       |                        |       |       |       |                       |      |      |      |
| Males                        | 15.82                  | 10.39 | 8.42  | 9.99  | 1.04                  | 1.05 | 1.02 | 1.02 |
| Females                      | 13.93                  | 8.86  | 7.97  | 9.39  | 0.92                  | 0.90 | 0.96 | 0.96 |
| Education                    |                        |       |       |       |                       |      |      |      |
| Without a high school degree | 12.03                  | 7.79  | 6.39  | 6.57  | 0.74                  | 0.77 | 0.80 | 0.75 |
| High School graduates        | 20.25                  | 11.93 | 9.55  | 10.12 | 1.24                  | 1.19 | 1.20 | 1.16 |
| College graduates            | 35.97                  | 20.97 | 14.77 | 20.26 | 2.20                  | 2.08 | 1.85 | 2.32 |
| Age                          |                        |       |       |       |                       |      |      |      |
| 18 to 30                     | 12.82                  | 8.10  | 7.02  | 7.40  | 0.84                  | 0.82 | 0.85 | 0.76 |
| 31 to 50                     | 16.33                  | 11.08 | 9.13  | 10.69 | 1.07                  | 1.13 | 1.11 | 1.10 |
| 51 to 65                     | 16.76                  | 9.70  | 8.25  | 11.66 | 1.10                  | 0.99 | 1.00 | 1.19 |

inequality started to increase in the mid-seventies (Altimir, 1986 and Gasparini, 1999a).

<sup>27</sup> The drastic increment of inequality during the hyperinflation of 1988-1990 is in part spurious, provided the EPH captures current incomes (see Neri (2000) for the Brazilian case). Consequently, the statistics also overestimate the equalising effect of the price stabilisation of 1991.



Source: Author's calculations based on the EPH. October waves. Wages deflated by the CPI. The relative wage of a given group is obtained by dividing the real wage of that group by a weighted average of all real wages, where the weights are the mean of the labour shares of the group over the four years considered.

Broadly, poverty has evolved similarly to inequality. Table 3.3 shows the evolution of the headcount ratio for Greater Buenos Aires and all the urban areas covered by the EPH. Considering other poverty indexes does not modify the main conclusions.<sup>28</sup> Poverty increased strongly in the eighties, particularly during the hyperinflationary peak. The macroeconomic stabilisation implied a decrease to levels comparable to those of the previous stability period.<sup>29</sup> From 1993 to 1996 poverty increased significantly, and then it has descended slightly. Poverty is now situated in a level only exceeded during the hyperinflationary crises.

*Table 3.3*  
*Poverty headcount ratio*  
*Argentina, 1980-1998*

|      | GBA  | All urban<br>areas |
|------|------|--------------------|
| 1980 | 8.0  |                    |
| 1985 | 16.0 |                    |
| 1988 | 35.4 |                    |
| 1989 | 46.8 |                    |
| 1990 | 41.0 | 39.4               |
| 1991 | 22.7 | 27.1               |
| 1992 | 17.6 | 23.3               |
| 1993 | 16.8 | 21.7               |
| 1994 | 18.5 | 22.8               |
| 1995 | 23.7 | 28.4               |
| 1996 | 26.0 | 30.7               |
| 1997 | 24.7 | 29.0               |
| 1998 | 25.6 | 29.9               |

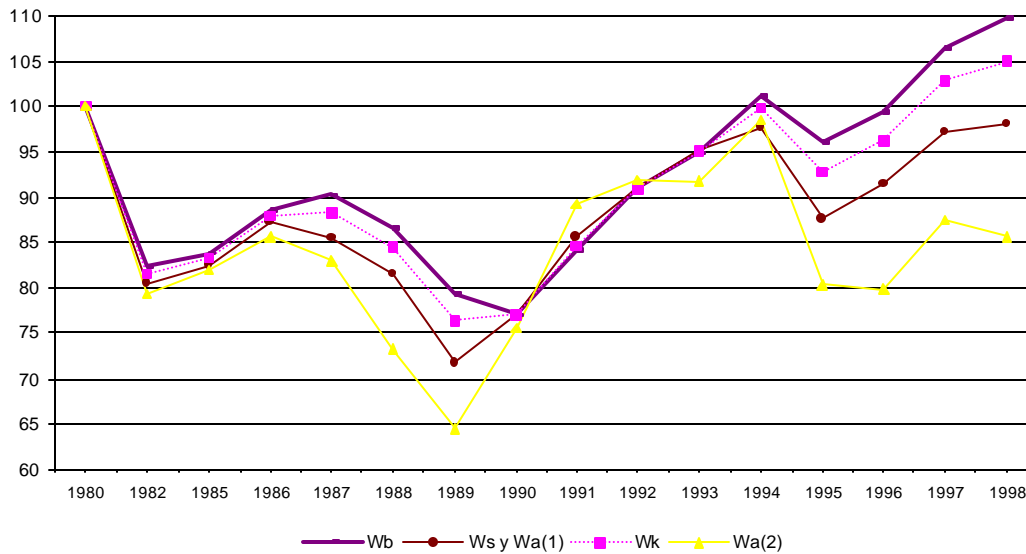
Source: World Bank (2000)

An economy's performance should be evaluated in terms of both its average income and the dispersion in the distribution. The aggregate welfare functions allow this joint evaluation. Figure 3.2 presents the evolution of various aggregate welfare indicators that capture alternative value judgements. After deep fluctuations, the evaluation that all the considered functions make in 1994 is similar to the one of 1980. In contrast, the dispersion of opinions is magnified in the following years. While for some functions 1998 was a better year than 1994, the evaluation is the opposite for others. This disparity in the evaluations has no precedents in the recent Argentine economic history and responds to the combined phenomenon of a mild economic growth and a substantial increase in inequality in the second half of the nineties.

<sup>28</sup> See the official statistics of the INDEC, World Bank (2000) and Llach and Montoya (1999).

<sup>29</sup> The previous comment about the spurious effects of inflation over inequality can be applied to the case of poverty. It is possible that both the strong increase during hyperinflation and the huge decrease of poverty during the stabilisation shown by Table 3.3 are overstated.

*Figure 3.2*  
*Welfare indicators*  
*Argentina, 1980-1998*



Note: Abbreviated welfare functions:  $W_b$ =Bentham,  $W_s$ =Sen,  
 $W_k$ =Kakwani and  $W_a(\epsilon)$ =Atkinson  
Source: Gasparini and Sosa Escudero (2000).

#### 4. Explaining inequality

Explaining inequality changes is not an easy task since most economic factors affect income distribution. Take for instance the substantial increase in inequality in the nineties. There are multiple hypotheses concerning the determinants of that increase, mainly as a result of the temporal coincidence with the numerous economic transformations detailed in section 2. During the last decade the economy experimented a strong trade liberalisation process, globalisation promoted technological changes, almost all the state-owned firms were privatised, most markets were deregulated, the pension system and the labour laws were reformed, new macroeconomic policies helped to control inflation, unemployment grew to unprecedented rates, the labour unions lost power, the population's average educational level increased substantially, the proportion of young people and women in the labour market increased, the tax system and the size and structure of public expenditure were modified, the political scene changed and possibly, many social norms and behaviours were altered. All these factors, many of them surely related, could have affected income inequality in the nineties.

Naturally, it is difficult to extract conclusive evidence in favour of any of the multiple possible hypotheses in relatively short periods of time where so many variables change at the same time. For this reason, this section simply tries to explicit some hypotheses and to present preliminary empirical evidence that allows making a first assessment of their relevance for the Argentine case.

#### 4.1. A characterisation of inequality changes

A first step in the study of the causes of inequality changes is to quantify the effect of various direct determinants, through a decomposition analysis. The literature has identified various potentially relevant factors: changes in the returns to education, to experience and unobservable factors, changes in the wage gap between genders, changes in the occupational choices of individuals and transformation in the age and educational structure of the population. Gasparini, Marchionni and Sosa Escudero (2000) present evidence about the importance of most of these factors. Table 4.1 reproduces the results for the equivalent household labour income distribution in Greater Buenos Aires.<sup>30</sup>

*Table 4.1*  
*Microeconomic decomposition of changes in the Gini coefficient*  
*Equivalent household labour income distribution*  
*Greater Buenos Aires, 1986, 1992, 1998*

|                          | 86-92 | 92-98 | 86-98 |
|--------------------------|-------|-------|-------|
| <i>Observed</i>          | 0.7   | 8.5   | 9.2   |
| <i>Effects</i>           |       |       |       |
| 1. Returns to education  | -0.9  | 2.8   | 1.8   |
| 2. Gender wage gap       | 0.1   | -0.1  | 0.0   |
| 3. Returns to experience | -0.5  | 0.7   | 0.3   |
| 4. Unobservables         | 0.4   | 1.7   | 2.1   |
| 5. Hours of work         | 1.0   | 1.8   | 3.0   |
| 6. Participation         | -0.1  | 0.1   | -0.1  |
| 7. Education             | 0.2   | 0.5   | 0.9   |
| 8. Rest                  | -0.3  | 1.5   | 1.1   |

Source: Gasparini, Marchionni and Sosa Escudero (2000).

The figures in the table should be read in the following way. Between 1992 and 1998 the Gini coefficient of the distribution of equivalent household labour income increased 8.5 points. The value 2.8 in the second column for the returns to education implies, roughly, that the change in the Gini would have been 2.8 points if only the returns to education had changed between 1992 and 1998. Given that 2.8 is a positive and large number compared to the rest of the column, we conclude that changes in the returns to education explain a very significant part of the increase in income inequality in period 1992-1998. Changes in the returns to unobservable factors and in hours of work have also a significant role.<sup>31</sup> The former effect probably captures an increase in the return to unobservable skills, while the latter reflects the dramatic reduction in the hours worked by unskilled individuals.

It is interesting to notice the minor relevance of other factors. For instance, although the wage gap between men and women has been substantially reduced, the gender effect on household income inequality is negligible, basically due to the fact that working women are evenly distributed along the household income distribution.

<sup>30</sup> Gasparini (1999b), González Rozada and Menéndez (1999) and Altimir et al. (2000) study the changes in inequality through different types of decompositions, reaching similar conclusions.

<sup>31</sup> The effect of unobservables arises from computing the standard error of the residuals of a wage regression. See Juhn et al. (1993) and Bourguignon et al. (1999).

One of the most notorious economic facts in the nineties was the drastic increase in the unemployment rate. This rate climbed from 6% at the beginning of the decade to nearly 14% at the end of 1999, reaching a peak of 18.4% in May, 1995.<sup>32</sup> This significant rise was in great part accompanied by a decrease in the inactivity rate of roughly the same magnitude, implying that the sum of unemployed and inactive individuals did not vary very much in the period.<sup>33</sup> Consequently, in spite of the explosive increase in the unemployment rate, the proportion of people with zero income remained relatively constant during the period, implying a small labour participation effect over inequality (see row 6 in Table 4.1).

The following story seems to have characterised the labour market in the nineties. The rationalisation of the public administration, the privatisation of firms, the technological changes, and the adjustment in some sectors due to trade liberalisation implied a loss of numerous jobs. However, at the same time the Argentine economy grew at high rates, creating employment. An additional phenomenon shows up in the labour story of the nineties. A very significant number of individuals, particularly women and young people, entered the labour market. This substantial fall in the inactivity rate had an essential role in explaining the increase in unemployment.

Which factors operated with particular force in the nineties so as to increase the returns to formal education, experience and unobservable skills, and reduce the hours worked by the unskilled? The following four subsections are aimed to discuss these points based on a simple supply and demand model of the labour market, incorporating two potentially relevant institutional factors: the labour unions and the minimum wage.

#### ***4.2. Labour supply***

The two phenomena that have characterised labour supply over the last decades all over the world - the increase in the participation of women and skilled workers - had also taken place in Argentina. Women represented the 32.5% of the economically active population of Greater Buenos Aires in 1980. This value grew to 40.5% in 1998. Table 4.2 shows the shares of three educational groups in total labour and in employment. In less than two decades college graduates increased their participation in almost 7 points in total labour and 16 points in employment. The increase was particularly strong during the 1992-1998 period. The share of unskilled individuals has substantially shrunk in total labour supply and employment.<sup>34</sup> These changes are the result of both individual decisions as a response of persistent high returns to education and government efforts to expand education.<sup>35</sup>

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<sup>32</sup> These values correspond to all urban areas covered by the EPH.

<sup>33</sup> This aggregate behaviour is repeated, in general, for all the educational groups.

<sup>34</sup> The available evidence shows that neither the foreign nor the domestic migrations seemed to have altered the labour supply in a significant way during this period in the Greater Buenos Aires. See Arruñada, Basch and Escanes (1999).

<sup>35</sup> In the nineties the compulsory years of education were increased from 7 to 10 and a larger system of scholarships was implemented. The new educational system in Argentina is divided into four levels: pre-primary school (from 3 to 5 years old - only the last one is compulsory), primary school (from 6 to 14 - compulsory), secondary school (from 15 to 17 or 18) and college level (universities and technical colleges).

*Table 4.2*  
*Share of total labour and employment by educational group*

| Educational group            | Share |      |      |      | Change in share |       |       |       |
|------------------------------|-------|------|------|------|-----------------|-------|-------|-------|
|                              | 1980  | 1986 | 1992 | 1998 | 80-86           | 86-92 | 92-98 | 80-98 |
| <i>Total labour</i>          |       |      |      |      |                 |       |       |       |
| Without a high school degree | 71.4  | 66.7 | 61.5 | 56.1 | -4.7            | -5.2  | -5.4  | -15.3 |
| High School graduates        | 21.5  | 23.7 | 27.5 | 30.0 | 2.2             | 3.7   | 2.5   | 8.5   |
| College graduates            | 7.1   | 9.6  | 11.0 | 13.9 | 2.4             | 1.5   | 2.9   | 6.8   |
| <i>Employment</i>            |       |      |      |      |                 |       |       |       |
| Without a high school degree | 63.0  | 55.2 | 45.8 | 38.2 | -7.8            | -9.4  | -7.6  | -24.8 |
| High School graduates        | 25.2  | 29.9 | 32.6 | 34.1 | 4.7             | 2.7   | 1.5   | 8.8   |
| College graduates            | 11.8  | 14.9 | 21.6 | 27.8 | 3.1             | 6.7   | 6.2   | 16.0  |

Source: Author's calculations based on the EPH. October waves.

Assuming stable labour demand, the labour supply shifts displayed in the previous table would imply a fall in the relative wage of the more educated workers. Table 3.2 shows wage movements between 1980 and 1992 that are consistent with this story. In contrast, between 1992 and 1998 the relative wage of the more educated significantly increased to unprecedented levels. In a model of demand and supply equilibrium, the explanation to this phenomenon requires dramatic changes in the relative demand of skilled workers in the nineties, both with respect to labour supply changes in the nineties and with respect to labour demand changes in the eighties.

### **4.3. Labour demand**

There are several reasons that can account for the increase in the relative demand of skilled work. The most usual ones in the literature are: (i) increases in the relative demand of skilled labour intensive goods, (ii) the opening to the international trade with countries that are relatively abundant in unskilled labour, (iii) technological change biased towards skilled labour, and (iv) reduction in the price of capital, usually considered as  $p$ -complement of the skilled labour. The first two factors work through changes in the sector composition of employment (between-sector shifts). The remaining two imply a relative increase in the use of skilled labour within each sector (within-sector shifts). There is evidence that both between and within sector shifts had taken place in Argentina.

#### **4.3.1. Between-sector shifts**

Table 4.3 shows important reallocations of employment among sectors, particularly during the last 12 years. The most significant changes are the decrease in the industry share and the

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Public education is free of charge in all levels and there is free access, even at the college level. Private institutions have flourished as a consequence of increasing social segregation and increasing demand for a better education than the one offered at public schools. School attendance is close to 100% at the primary level. Attendance rates fall at the secondary level where inequities in the access to education show up: while 48% of youths between 15 and 17 in the poorest quintile attend secondary school, that proportion in the richest quintile is 96%. The corresponding attendance rates in the tertiary level are 13.9 and 74.2 (Gasparini *et al.* (2000)).

strong increase in the skilled labour intensive services: professional and business services, public administration, education and welfare. It is worth noting that while publicly provided services substantially increased their share in employment between 1986 and 1992, private services (professional and business services, communications, transport and utilities) were the ones that had that role during the nineties.

*Table 4.3*  
*Share of total employment by sector of activity*

| Sector of activity                           | Share in total employment |       |       |       | Change in share of total employment |       |       |       |
|--|---------------------------|-------|-------|-------|-------------------------------------|-------|-------|-------|
|  | 80                        | 86    | 92    | 98    | 80-86                               | 86-92 | 92-98 | 80-98 |
| Low tech manufacturing                       | 10.9                      | 10.6  | 9.0   | 5.5   | -0.4                                | -1.5  | -3.6  | -5.5  |
| Basic and high tech manufacturing            | 20.3                      | 18.1  | 14.7  | 11.7  | -2.2                                | -3.4  | -3.0  | -8.6  |
| Construction                                 | 9.4                       | 6.1   | 4.5   | 5.6   | -3.3                                | -1.6  | 1.1   | -3.8  |
| Wholesale and retail trade                   | 17.3                      | 19.1  | 18.9  | 18.9  | 1.7                                 | -0.2  | 0.0   | 1.6   |
| Communications, transport and utilities      | 8.1                       | 7.1   | 8.7   | 11.1  | -1.0                                | 1.7   | 2.3   | 2.9   |
| Professional and business services           | 9.0                       | 11.0  | 10.7  | 15.0  | 2.1                                 | -0.3  | 4.3   | 6.0   |
| Public administration, education and welfare | 16.5                      | 15.8  | 24.8  | 26.0  | -0.7                                | 9.0   | 1.2   | 9.5   |
| Other services                               | 8.5                       | 12.4  | 8.7   | 6.4   | 3.8                                 | -3.7  | -2.4  | -2.2  |
| Total  | 100.0                     | 100.0 | 100.0 | 100.0 |                                     |       |       |       |

Source: Author's calculations based on the EPH. October waves.

Changes in employment are essentially the consequence of productive reallocations. Between 1991 and 1997 the aggregate value of the (unskilled labour intensive) textile sector did not grow while the food, beverage and tobacco sector grew a 4.3% annually. In contrast, in the same period the annual growth was 13.1% in banks and insurance, 9.4% in the recently privatised sectors and 8.8% in professional and business services (Altimir and Beccaria, 1999).

Table 4.4 shows the shares of employment of an educational group in each sector. Professional services, business and public services are intensive in skilled labour. On the other hand, construction, personal services, commerce and low technology industries are more intensive in unskilled labour.

*Table 4.4*  
*Share of employment of an educational group in a sector*

| Sector of activity                           | Without a hs degree |    |    |    | High school graduates |    |    |    | College graduates |    |    |    |
|--|---------------------|----|----|----|-----------------------|----|----|----|-------------------|----|----|----|
|  | 80                  | 86 | 92 | 98 | 80                    | 86 | 92 | 98 | 80                | 86 | 92 | 98 |
| Low tech manufacturing                       | 72                  | 73 | 67 | 67 | 22                    | 23 | 27 | 30 | 6                 | 5  | 6  | 4  |
| Basic and high tech manufacturing            | 66                  | 58 | 55 | 41 | 27                    | 31 | 32 | 42 | 7                 | 11 | 14 | 17 |
| Construction                                 | 80                  | 79 | 71 | 72 | 13                    | 12 | 23 | 22 | 7                 | 8  | 6  | 6  |
| Wholesale and retail trade                   | 72                  | 60 | 50 | 48 | 26                    | 34 | 41 | 40 | 2                 | 6  | 10 | 13 |
| Communications, transport and utilities      | 79                  | 62 | 55 | 44 | 17                    | 31 | 33 | 40 | 4                 | 7  | 12 | 16 |
| Professional and business services           | 18                  | 16 | 15 | 16 | 44                    | 48 | 46 | 40 | 38                | 36 | 38 | 44 |
| Public administration, education and welfare | 37                  | 31 | 23 | 20 | 34                    | 32 | 30 | 25 | 29                | 37 | 47 | 54 |
| Other services                               | 91                  | 79 | 79 | 67 | 8                     | 17 | 18 | 28 | 1                 | 4  | 2  | 5  |

Source: Author's calculations based on the EPH. October waves.

Summing up, there is evidence of sector changes that have favoured skilled labour, especially in the 1986-1998 period. The source of the increment in the demand of college graduates has varied over time: while the role of government was crucial in the eighties, in the nineties several private services took that role. The fall of industry during the whole period seems to be the main determinant of the collapse of the demand for individuals with high school degree or less.

Table 4.5 confirms the unequalising effect of sector changes showing the results of a decomposition of the change in the share of each educational group in total employment. The table presents the results of dividing this change into two effects: the change in the share of each sector in total employment (between-effect) and the changes in the factor intensity in each sector (within-effect).

*Table 4.5*  
*Decomposition of changes in the share of a given group in total employment*

| Educational group     | Between |       |       |       | Within |       |       |       | Overall |       |       |       |
|-----------------------|---------|-------|-------|-------|--------|-------|-------|-------|---------|-------|-------|-------|
|                       | 80-86   | 86-92 | 92-98 | 80-98 | 80-86  | 86-92 | 92-98 | 80-98 | 80-86   | 86-92 | 92-98 | 80-98 |
| Without a hs degree   | -0.5    | -3.8  | -2.7  | -6.5  | -7.3   | -5.6  | -4.9  | -18.3 | -7.8    | -9.4  | -7.6  | -24.8 |
| High school graduates | 0.3     | 0.7   | 0.6   | 1.3   | 4.3    | 2.0   | 0.8   | 7.6   | 4.7     | 2.7   | 1.5   | 8.8   |
| College graduates     | 0.2     | 3.1   | 2.1   | 5.3   | 3.0    | 3.6   | 4.1   | 10.7  | 3.1     | 6.7   | 6.2   | 16.0  |

Source: Author's calculations based on the EPH. October waves.

Note: Between-effect for group  $i$  is the sum over all sectors of changes in sector shares in total employment weighted by the group  $i$  share in total sector employment. Within effect is the sum over all sectors of changes in group  $i$  share in total sector employment weighted by sector shares in total employment. Figures in table are the averages of changing the base periods to calculate the weights.

Two interesting phenomena arise from the first four columns of table 4.5. (i) The between effects are increasing in the educational level. In fact, they are negative for the less educated, positive but small for high school graduates and strong for college graduates. This suggests that changes in the productive and employment structure have clearly favoured skilled workers during the period under analysis. (ii) The between effect is mild between 1980 and 1986 and larger in the remaining part of the period. Surprisingly, the effect in the period of greatest structural changes (92-98) is not larger than the effect in the previous period (86-92).

The sector changes seemed to have affected the wage gap between workers with different skills. Which has been the role of globalisation in these changes? As it was mentioned, Argentina experienced a short-lived integration process to the world economy at the end of the seventies and a more deep and lasting process in the nineties. For a country abundant in natural resources and in skilled work (Cristini, 1999),<sup>36</sup> the Heckscher-Ohlin model predicts that the opening to international trade would bear a fall in the relative price of the unskilled labour intensive goods, a productive and employment reallocation against these goods and a decrease in the price of the factor used intensively in these sectors.

The evidence about trade and relative prices of section 2, as the one about employment and wages of this section is consistent with this story. The trade liberalisation process in Argentina contributed to the change in relative prices against the industry and in favour of services, particularly those more intensive in skilled labour. These price changes were accompanied by

<sup>36</sup> Argentina is certainly a country rich in natural resources. Regarding labour, although compared to the rest of the world the result is not clear, compared to its partners in Mercosur Argentina is relatively abundant in skilled labour.

reallocations in production and employment and by a fall in the relative price of unskilled labour. The scarce works on this subject for Argentina share these results. García Swartz (1998) and Galiani and Sanguinetti (2000) show that trade flows, production, employment and goods and factors relative prices moved in the last two decades according to what the Heckscher-Ohlin and Stolper-Samuelson theorems would predict for an economy with the relative endowment of Argentina.

The between-sector story faces an important caveat. As skilled labour relative wage increases as a consequence of between-sector shifts one would expect a reduction in the relative use of that factor in all sectors. However, as it is shown in the next section this has not happened in Argentina. We now turn to within-sector shifts to examine this and other related points.

#### *4.3.2. Within-sector shifts*

The two last decades have been the scenario of an increase in the relative use of skilled labour in almost all sectors (see table 4.4). It is interesting to note that these changes have been relatively uniform along the period considered. The results of the decomposition shown in Table 4.5 confirm the presumption of a negative within-effect for those individuals without a high school degree, positive for the rest, and particularly relevant for college graduates. The effect in the nineties has been of a greater magnitude for this group and somewhat lower for the rest, compared to the previous decade.

Two factors related to globalisation could be behind these within-effects: factor non-neutral technological changes and changes in the relative price of non-labour inputs.<sup>37</sup> The periods of trade liberalisation in Argentina had been characterised by a decrease in the price of capital goods and by a strong increase in the imports of these goods. These factors probably harmed unskilled labour, given that capital is generally  $p$ -complement with skilled labour and that the incorporation of new capital bring technological advances, predominantly biased against less educated individuals.

Which is the relative importance of the studied factors over the inequality changes? Is, for instance, the between-sector effect, generated by trade liberalisation, important with respect to the rest of the factors? This is a much-debated question in the literature and we do not attempt to give a rigorous answer here.<sup>38</sup> Instead, we try to shed some light on the Argentine case by presenting the simple decomposition of Table 4.5. For all the years and educational groups considered the within-effect is of greater magnitude than the between-effect, implying that changes in the productive and employment structure of the economy might have had only a minor effect over inequality. Galiani and Sanguinetti (2000) present evidence for Greater Buenos Aires that shows that the relative wage of skilled workers increased more in those sectors in which the import penetration grew more. Nevertheless, they conclude that this effect can only account for a minor part of the increase in wage inequality. García Swartz (1998) also concludes that within-effects had a preponderant role in the wage gap changes among

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<sup>37</sup> Naturally, changes in the factor intensity could simply be a movement along a stable demand curve.

<sup>38</sup> See Bound and Johnson (1992) and Feenstra and Hanson (1999) among others.



educational groups. Using a production function approach Porto (2000) finds a somewhat higher trade effect on relative wages.

#### ***4.4. Changes in labour institutions***

Labour institutions, typically labour unions and minimum wages, can damp the impact of market forces on real and relative wages. Although the empirical evidence is scarce in Argentina, the generalised perception is that the unions power has varied sensitively in the last decades. The military government of 1976-1983 had outlaw labour unions and collective bargaining. The labour unions recovered their power at the beginning of the democratic regime and retained it during the eighties, when the prevailing wage negotiations were through centralised collective bargaining. In the nineties the bargaining power of the labour unions decreased sensitively, because of various phenomena. The traumatic experience of hyperinflation and the social perception of the need of drastic measures plus a new government allied with the unions leaders introduced a long period of contention of social protests. The economic opening and the deregulation called for decentralised wage negotiations linking wages to productivity. Finally, the new scenario of high unemployment limited the traditional pressure of the labour unions for wage increases, at the expense of lower levels of employment. This loss of power coincided with a fall in industrial employment, where unions are traditionally stronger.

The theory and the international empirical evidence generally point out an unequalising effect of the decreasing in the unions power.<sup>39</sup> There are no works for Argentina that analyse deeply this relation. At least, the timing of the phenomena does not seem to contradict this hypothesis. Inequality rose strongly at the end of the seventies and the nineties, two periods of diminution of the labour unions power.

The fall of the minimum wage has also been pointed out as a determinant of the increase in wage inequality. The minimum wage, created in Argentina in 1964, was used as an indexing mechanism and brought pressure over the relative wages along the decades. The ratio between minimum and average wage, that was 37% in 1983, reached its lowest value in 1990 (13%) and was stabilised since 1993 around 25%. Its use as an instrument for modifying the relative wage structure has been lost since 1989.<sup>40</sup>

#### ***4.5. Interpreting the evidence***

During the 1980-1986 period the relative wages changed slightly in favour of the unskilled. This fact seems to be the consequence of a relative rise in the skilled labour supply, plus non-significant movements of the labour demand. This stability of the demand could be the consequence of a closed economy with minor sector reallocations and little technological change. This was a period of increase in labour unions power, which favoured the unskilled workers.

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39 See DiNardo, Fortin and Lemieux (1996) and Gustafsson y Johansson (1999).

40 See Bour and Susmel (1999).

The two following sub-periods (1986-1992 and 1992-1998) have various characteristics in common. The skilled labour supply continued rising, sector changes were strong and in favour of a greater skilled labour demand and the intensity of use of educated labour substantially increased in the majority of the sectors. In spite of these similarities, the results in terms of relative wages were totally different. While between 1986 and 1992 the skilled wage premium fell, between 1992 and 1998 it strongly increased. What differences explain this different wage behaviour? Since there are no systematic studies on the subject, we present some conjectures.

1. Although the between-effect of Table 4.5 is of similar magnitude in both periods, the nature of the sector shifts is very different. The increase in skilled labour demand between 1986 and 1992 was led by public sector employment and between 1992 and 1998 by the professional and business service sector. It is likely that workers of high education in both sectors present different characteristics and that wage practices in both sectors differ. In fact, the average wage of a college graduate in the public sector was only 62% of its wage in the private professional sector in 1998. Given these differences, it is possible that an expansion in public sector employment does not impact in the same way than an expansion in the professional and business sector over the wages of college graduates taken as a whole. In fact, between 1986 and 1992 the expansion of employment in the public sector was accompanied by a very slight increase in the relative wage of college graduates in that sector while the relative wage of the professionals in the private sector decreased slightly. In contrast, between 1992 and 1998, the expansion of private services was followed by a notable increase in the wages of the college graduates in that sector, and a very small increase in the wages of the college graduates working in the public sector.

2. The empirical evidence of section 2 suggests that the technological change was small between 1986-1992 and that it accelerated significantly in the nineties, due to trade liberalisation, deregulations and foreign direct investment. Additionally, the capital goods price also fell in the nineties. Although the within-effects of Table 4.5 are similar in both periods, their sources seem to have been different. Between 1986 and 1992 the skilled labour supply prevailed over a minor demand effect, which implied a decrease in the skilled relative wage and in turn a natural increase in this factor intensity of use in all sectors. In period 1992-1998, the biased technological change and the fall in the price of capital, in addition to sector changes, generated a strong increase in the demand for skilled workers, that surpassed the supply shift and made the college graduates relative wage rise. Skilled-labor intensity of use increased in most of the sectors in spite of the rise in its relative price, due to the technological change.

3. The institutional factors contributed to the differences between both periods. In particular, the decrease of the labour unions power has possibly contributed to limit the wage of the unskilled in the nineties, compared to the previous decade.

#### ***4.6. Other income sources***

The available evidence shows that the share of capital in total disposable income has increased in Argentina in the nineties, as it is expected in a framework of privatisation, deregulation and investment growth. The statistics from EPH show an increase in the share of capital along the decade. Other rough estimations based on Meloni (1999) indicate that capital income increased 32.9% and labour income 19.1%. An increase in the share of capital in total income tend to rise household income inequality, due to a greater concentration of that income source in the richer segments of the population.

It is also highly probable that the entrepreneurial gains also grew in the nineties, in part as a product of a drastic withdrawal of the public sector from the economy. Nevertheless, because of diverse deficiencies, neither the EPH nor the National Accounts help us to evaluate properly this hypothesis. There is no information about the evolution of the return to natural resources either. Being Argentina a country rich in natural resources, the trade liberalisation implies an increase in the relative price, exports and production of goods that are intensive in this factor. There is evidence on the movement of exports and production in the expected way, and there is coincidence among analysts on a substantial increase in the return to land and other natural resources, but, once again, there is no firm empirical evidence on this point.

Pensions constitute the third income source by order of importance, after labour and capital. In the nineties the share of this income source grew, implying an equalising effect over global inequality given that the average (and median) pension payment is lower than mean income. On the other hand, the pension system reforms of the nineties implied a very significant increase in inequality within pension recipients.<sup>41</sup>

Summing up, although the analysis of other income sources lacks of the empirical evidence available for labour income, it is possible to conjecture that the changes of the nineties were mostly unequalising. The increase in the share of capital, entrepreneurial benefits and natural resources and the increase in the dispersion in pensions contributed to rise the income inequality level in Argentina.

#### ***4.7. From the individual to the family***

The available estimations show that the relative size of the poorer families has increased with respect to the richer families. Gasparini (1999b) reports that the number of equivalent adults of an average family in the first decile exceeded in 0.88 the value corresponding to a typical family of the tenth decile in 1992. That difference was widened to 1.38 in 1997. These changes would have a non-trivial effect over household income inequality among individuals.

#### ***4.8. From nominal to real income***

Income comparisons among individuals and over time should be made in real terms. Ideally, a household income should be divided by the price index of the specific bundle consumed. However, the usual practice in Argentina is to divide incomes by the average CPI of the month

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<sup>41</sup> See Gasparini (1999b).

in which incomes are reported. This practice introduces two problems. The first one, already mentioned, implies the overestimation of the income variability in periods of high inflation. The second one implies biasing the results if changes in prices differ among goods and services and if the consumption bundles differ among income groups.

The deregulations of many markets, the privatisations, the trade opening and the exchange rate appreciation have generated important relative price changes in Argentina. In particular, the price of tradable goods decreased in relation to the price of non-tradable goods. Between 1988 and 1998 the prices of non-durable consumption goods fell 25%, clothing 50%, and durable consumption goods 15%, while the prices of housing, education and health increased (26%, 153% and 53%, respectively). In spite of being essentially non-tradable, the price of public utilities decreased 20% after the privatisations.<sup>42</sup> Given that poor people consume a larger fraction of their budget in tradable consumption goods, an equalising effect from price changes is expected. Navajas (1999) points out that this positive impact was relevant between 1988 and 1994, when the economy was stabilised, the external trade liberalised, and the privatisations were carried out. In contrast, since the middle of the nineties, the evolution of the prices have played an unequalising role, in part because of the strong increase in prices of privatised public utilities. Considering the whole decade, Gasparini (1999a) finds that the differential evolution of consumer prices has implied only a mild equalising effect on household income inequality.

#### **4.9. Public policies**

The available estimations suggest that the fiscal policy has become more pro-poor in the nineties.<sup>43</sup> The social public expenditure benefits concentration index (excluding social security payments) was -0.140 in 1991 and -0.145 in 1997, indicating a greater concentration of social expenditures on poor households (Gasparini, 1999c). The tax system concentration index increased from 0.351 to 0.355 in the same period, implying a larger burden on richer households. These changes, that in principle would reveal a more active public sector role in counteracting the effects of the inequality rise during the decade, have three important qualifications.

1. Mostly, the progressivity increase has not been the consequence of a deliberate governmental action for decreasing inequality. The tax reforms - essentially the increase of the income tax share and the replacement of the inflationary tax by legislated taxes - had a pro-poor bias, but they arise from the need of increasing the economic efficiency and consolidating stability. Also, the main reason behind a greater targeting in public expenditures is a strong movement of richer families towards attending private schools and hospitals, possibly as a consequence of the deterioration in the quality of public services.
2. The increase in the pro-poor bias of the fiscal policy has been much smaller in comparison to the increase in pre-fiscal inequality. Gasparini (1999c) presents estimations of the

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42 Navajas (1999).

43 See Gasparini (1999c), Llach and Montoya (1999) and DNP GS (1999).

redistributive impact of taxes and expenditure in the period 1986-1997 and concludes that the trend in the pre-fiscal Gini coefficient does not significantly differ from the trend in the post-fiscal Gini. Considering the fiscal policy does not alter the pattern of evolution of inequality pointed out in Table 3.1.

3. Public spending in specific programs designed to fight poverty has not accompanied the evolution of the poverty indicators. The signs of the annual changes in poverty and the expenditure in social aid are frequently the opposite. It is particularly worrying the dynamic in periods of economic crises (1980/82, 1987/90 and 1995) when poverty rises, and the budget of poverty-reduction programs decreases, presumably due to fiscal reasons. World Bank (2000) reports public expenditure elasticities with respect to GDP. The one corresponding to the targeted social expenditures is 1.87, showing a strong pro-cyclical behaviour, even greater than in other areas of the public sector.

Summing up, government policies did not respond quickly to the increase in poverty and inequality. The social safety net was not significantly modified during the decade in which inequality grew to unprecedented levels. In contrast, the government had a faster reaction concerning the increase of unemployment. This asymmetry responds to the perception by the government and by a great part of society that unemployment is the most urging economic problem, and that the increase of poverty and inequality are direct consequences of it. In a few years the government has implemented an unemployment insurance, created various public employment programs, subsidised private employment and organised labour training programs. Given that these policies have only a few years of life, it is still premature to evaluate their consequences. Nevertheless, most analysts remain sceptical about the potential of these programs to generate new productive jobs.

## **5. A final assessment and policy lessons**

Inequality in Argentina has grown since mid-seventies. The second halves of every decade were periods of particular increase of income dispersion. The strong but transitory opening to foreign trade and the repression to labour unions by the military dictatorship seem to have contributed to inequality increase in the second half of the seventies. The scarce information about household surveys in that period makes it difficult to elaborate a deeper analysis. The increase of inequalities in the last part of the eighties seems to be related to macroeconomic instability and the hyperinflationary crises. When the crises were overcome, at the beginning of the nineties, inequality and poverty levels returned to the levels of the previous macroeconomic stability period.

Inequality grew strongly between 1992 and 1998. Several factors contribute to explain this increase. One of the most important factors is the dramatic increase in the relative wage of skilled workers. This increase took place in spite of a large rise in the relative supply of college graduates, suggesting a remarkable role for demand shifts. Sector reallocations, in great part due to trade liberalisation, explain a significant, although smaller, part of the wage gap widening. The increase in the intensity of use of skilled labour in all the productive sectors

seems to be a more important factor. It was probably induced by a fall in the price of capital and the introduction of new skilled labour intensive technologies, both likely consequences of the greater integration of Argentina to the world markets. The decrease of labour unions power in a framework of deindustrialization, growing unemployment, alliances of the labour unions leaders with the government and a social environment more permeable to accept wage differentials probably contributed to the increase in inequality.

Unemployment, sub-occupation, and informality are phenomena that exacerbated in the nineties and contributed to inequality growth. The increasing foreign competition, the stronger tax pressure, and the recurrent macroeconomic crises generated the need of adjusting the nominal wages downwards. Some analysts sustain that informality, sub-employment and unemployment result from the combination of these factor with static prices (and even deflation in some years) and sticky nominal wages.

Several additional factors can be added to the list of unequalising effects in the nineties: the increase of the relative size of the poorest families, the increase of the capital income share, presumably the increase of the entrepreneurial benefits and the return to natural resources, and the increase in the dispersion of pensions payments.

The fiscal policy had a passive role. The specific programs against poverty did not significantly changed in the period under analysis. However, the government has made visible efforts to fight unemployment, without clear favourable results.

Summing up, inequality has increased in Argentina in the last decades, particularly in the nineties. The increasing integration to the global economy possibly played an important role in the inequality increase. The opening to the goods, service and factor markets has implied productive reallocations and absorption of technological changes that harmed the relative position of poor unskilled individuals. However, these policies possibly contributed in a significant way to getting out of the stagnation in which the Argentine economy was stuck.

The policy lessons that arise from this analysis are not obvious. Opposing to integration and new technology incorporation does not seem to be a reasonable option, because economic growth is related to the capability of inserting the country in the global economy and of increasing the productivity through the absorption of new technologies. In this sense, the increase of inequality seems to be an inevitable phenomenon.

Given that one of the main reasons of the increase in skilled labour demand - globalisation - does not seem to be modifiable, the remaining options should be aimed at increasing the supply of that factor and mitigating the effects of the increase in income disparities. In both alternatives the role of the public sector could be very important.

The increase in the supply of skilled labour can be promoted by the government through education and labour training policies. However, the nature of these policies is not obvious. For example, an increase in public expenditure in education does not necessarily lead to an

increase in educational quality. Also, labour training public programs had been repeatedly put in doubt. Additionally, educational programs take some time in generating results, they can have a unequalising effect if their scope is limited to small groups, and demand a large amount of resources for having sizeable effects on inequality. In spite of these problems governments have had some success in promoting the educational upgrading of the population. However, more efforts are needed in keeping youths from low-income households at the secondary school and helping them to attend college. Although public universities are free of charge, individuals from poor families do not have the means to pay the opportunity costs of attending school. Given that they do not have access to capital markets either, they are excluded from higher education levels, even when they are aware of the skill premium. Finding ways of effectively promoting education is surely one of the big challenges of public policy.

The only alternatives to generate positive results in the short run are the increase in the redistributive character of fiscal policy and the extension of the social safety net. There is some margin in the Argentine case for advancing in both directions. The tax system in Argentina is similar to other Latin-American countries, but more regressive than the OECD countries. A tax reform that increases the share of income taxes at the expense of labour and consumption taxes would have positive redistributive effects. In addition, a policy aimed at reducing tax evasion would alleviate horizontal as well as vertical inequities, generating resources that would allow the increase of social expenditures or the reduction of regressive taxes.<sup>44</sup>

There is some margin to improve the focalisation of public expenditures, although most part of the gains would probably come from the improvement of the public programs administrative management. Nevertheless, it seems inevitable to increase the budget of these programs to cover reasonably all the poor population.<sup>45</sup> Additionally, social aid should be counter-cyclical, growing in the periods of crises and increase of social exclusion. Despite these apparent needs and the current political and social will of satiating them, the possibilities of significantly improving the safety net in periods of fiscal constraints as the ones Argentina is going through are uncertain.

Finally, some comments over other public economic policies. Policies that tend to a less restricted functioning of the labour market would possibly generate decreases in the unemployment and informality rates, although their final effect over inequality is not clear, as they probably imply a reduction in the wage of unskilled workers. Sound macroeconomic policies do not warrant a reduction of inequality, but they prevent hyperinflationary crises and recessions that greatly impact over the poor population. Policies aimed at attracting foreign productive investments do not assure a more equitable economy, either, but they promote growth, that eventually move the economy to a Pareto-superior situation.

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44 Di Gresia (2000) estimates that the evasion of the income tax is 50%. The evasion rate would be 30% for the value added tax (Libonatti, 2000).

45 See Harriague and Gasparini (1999).

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*Table 2.1*  
*Macroeconomic indicators for Argentina, 1970-1999*

| Year      | Growth rate of GDP | Annual rate of Inflation CPI | Real Exchange Rate | Urban Unemployment Annual Average | Real Wage Industry | M1       | Fiscal Surplus | Per Capita GDP |
|-----------|--------------------|------------------------------|--------------------|-----------------------------------|--------------------|----------|----------------|----------------|
|           | %                  | %                            | 1980=100           | %                                 | 1990=100           | % of GDP | % of GDP       | US\$           |
| 1970      | 5.4                | 13.6                         | 56.7               | 5.0                               | 329.9              | 14.8     | -2.0           | 1,238          |
| 1971      | 3.7                | 34.6                         | 49.7               | 5.9                               | 334.9              | 12.8     | -4.6           | 1,474          |
| 1972      | 1.8                | 58.5                         | 52.9               | 6.6                               | 309.7              | 9.9      | -6.1           | 2,191          |
| 1973      | 3.5                | 60.3                         | 58.6               | 5.5                               | 339.0              | 11.3     | -8.6           | 3,592          |
| 1974      | 5.7                | 24.2                         | 71.2               | 4.2                               | 355.6              | 15.1     | -8.5           | 4,710          |
| 1975      | -0.4               | 182.8                        | 36.9               | 3.6                               | 330.8              | 10.5     | -15.6          | 3,133          |
| 1976      | -0.5               | 444.0                        | 46.4               | 4.8                               | 200.2              | 7.1      | -10.6          | 1,445          |
| 1977      | 6.4                | 176.0                        | 50.7               | 3.3                               | 150.7              | 6.7      | -5.0           | 2,422          |
| 1978      | -3.4               | 175.5                        | 64.7               | 3.2                               | 96.8               | 6.7      | -6.7           | 3,195          |
| 1979      | 6.7                | 159.5                        | 83.4               | 2.5                               | 93.9               | 6.5      | -6.7           | 5,248          |
| 1980      | 0.7                | 100.8                        | 100.0              | 2.5                               | 112.6              | 7.9      | -8.6           | 7,410          |
| 1981      | -4.6               | 104.5                        | 89.0               | 4.8                               | 126.8              | 6.2      | -18.0          | 5,923          |
| 1982      | -4.5               | 164.8                        | 93.0               | 5.3                               | 130.5              | 5.0      | -18.9          | 3,440          |
| 1983      | 3.3                | 343.8                        | 92.0               | 4.7                               | 197.6              | 4.1      | -9.6           | 3,537          |
| 1984      | 1.8                | 626.7                        | 137.0              | 4.5                               | 203.6              | 3.8      | -7.0           | 3,924          |
| 1985      | -6.7               | 672.2                        | 145.0              | 6.1                               | 157.8              | 4.1      | -4.0           | 2,918          |
| 1986      | 7.1                | 90.1                         | 145.0              | 5.5                               | 155.4              | 5.8      | -3.1           | 3,440          |
| 1987      | 3                  | 131.3                        | 118.0              | 5.8                               | 147.4              | 6.7      | -5.0           | 3,479          |
| 1988      | -2.1               | 387.7                        | 125.0              | 6.3                               | 132.9              | 5.9      | -6.0           | 4,001          |
| 1989      | -6.9               | 4923.6                       | 122.0              | 7.6                               | 116.4              | 10.4     | -3.8           | 2,533          |
| 1990      | -2.3               | 1343.9                       | 67.0               | 7.4                               | 100.0              | 4.7      | -1.5           | 4,251          |
| 1991      | 11.8               | 84.0                         | 48.9               | 6.4                               | 101.4              | 4.9      | -0.5           | 5,687          |
| 1992      | 11                 | 17.3                         | 42.9               | 7.0                               | 102.7              | 5.8      | 0.6            | 6,830          |
| 1993      | 6.4                | 7.4                          | 40.2               | 9.6                               | 101.3              | 7.3      | 1.2            | 7,507          |
| 1994      | 5.8                | 3.8                          | 42.9               | 11.5                              | 102.0              | 7.4      | -0.1           | 8,165          |
| 1995      | -2.8               | 1.6                          | 47.6               | 17.4                              | 100.9              | 7.0      | -0.5           | 8,110          |
| 1996      | 5.5                | 0.1                          | 48.9               | 17.2                              | 100.6              | 8.0      | -1.9           | 8,527          |
| 1997      | 8.1                | 0.3                          | 47.6               | 14.9                              | 100.0              | 8.6      | -1.5           | 9,171          |
| 1998      | 3.9                | 0.7                          | 48.0               | 12.9                              | 100.2              | 8.6      | -1.4           | 9,355          |
| 1999      | -3.1               | -1.5                         | 48.0               | 14.3                              | 100.4              | 9.0      | -2.3           | 8,953          |
| Averages  |                    |                              |                    |                                   |                    |          |                |                |
| 1970-1975 | 3.3                | 62.3                         | 54.3               | 5.1                               | 333.3              | 12.4     | -7.6           | 2,723          |
| 1976-1982 | 0.1                | 189.3                        | 75.3               | 3.8                               | 130.2              | 6.6      | -10.6          | 4,155          |
| 1983-1990 | -0.4               | 1,064.9                      | 118.9              | 6.0                               | 151.4              | 5.7      | -5.0           | 3,510          |
| 1991-1999 | 5.2                | 12.6                         | 46.1               | 12.4                              | 101.1              | 7.4      | -0.7           | 8,034          |

*Table 2.1 (cont.)*  
*Macroeconomic Indicators for Argentina, 1970-1999*

| Year | Gross Domestic Fixed Investment | Domestic Savings | Current Account | External Debt | Trade balance | Exports of goods | Imports of goods |
|------|---------------------------------|------------------|-----------------|---------------|---------------|------------------|------------------|
|      | % of GDP                        | % of GDP         | % of GDP        | % of GDP      | % of GDP      | % of GDP         | % of GDP         |
| 1970 | 22.8                            | 22.7             | -0.8            | 16.7          | 0.4           | 8.9              | 8.5              |
| 1971 | 23.8                            | 23.8             | -1.8            | 18.2          | -0.6          | 8.1              | 8.6              |
| 1972 | 23.7                            | 24.2             | -1.0            | 21.8          | 0.2           | 8.7              | 8.5              |
| 1973 | 21.5                            | 23.4             | 2.7             | 20.0          | 3.9           | 12.2             | 8.4              |
| 1974 | 21.4                            | 21.8             | 0.4             | 20.4          | 0.9           | 12.4             | 11.4             |
| 1975 | 21.4                            | 19.5             | -3.5            | 18.6          | -2.7          | 8.1              | 10.8             |
| 1976 | 23.6                            | 24.7             | 1.7             | 18.6          | 0.0           | 12.5             | 12.5             |
| 1977 | 27.1                            | 28.9             | 3.0             | 19.2          | 4.8           | 14.3             | 9.5              |
| 1978 | 24.4                            | 25.6             | 4.0             | 23.9          | 3.8           | 11.5             | 7.7              |
| 1979 | 24.7                            | 23.7             | -1.0            | 30.2          | 0.7           | 9.1              | 8.4              |
| 1980 | 25.7                            | 23.4             | -2.3            | 37.3          | -2.3          | 4.9              | 7.2              |
| 1981 | 23.0                            | 20.3             | -2.8            | 48.1          | -1.5          | 5.4              | 6.9              |
| 1982 | 19.8                            | 19.5             | -0.3            | 60.3          | 1.7           | 5.9              | 4.2              |
| 1983 | 19.1                            | 16.8             | -2.3            | 59.5          | 2.1           | 5.8              | 3.8              |
| 1984 | 17.7                            | 14.6             | -3.2            | 60.5          | 1.7           | 5.6              | 3.9              |
| 1985 | 16.3                            | 16.2             | -0.1            | 64.3          | 3.3           | 6.9              | 3.6              |
| 1986 | 17.2                            | 14.6             | -2.6            | n.a.          | 1.8           | 5.8              | 4.0              |
| 1987 | 18.8                            | 15.0             | -3.8            | n.a.          | 1.1           | 5.4              | 4.3              |
| 1988 | 18.6                            | 17.3             | -1.2            | n.a.          | 2.6           | 6.6              | 4.0              |
| 1989 | 15.5                            | 15.4             | -0.2            | n.a.          | 4.0           | 7.6              | 3.6              |
| 1990 | 13.2                            | 16.4             | 3.2             | 38.7          | 5.6           | 9.2              | 3.6              |
| 1991 | 15.2                            | 14.9             | -0.3            | 29.9          | 2.1           | 7.9              | 5.8              |
| 1992 | 17.7                            | 15.3             | -2.4            | 25.9          | -1.6          | 7.1              | 8.6              |
| 1993 | 19.1                            | 15.7             | -3.4            | 29.8          | -2.4          | 7.0              | 9.3              |
| 1994 | 20.5                            | 16.1             | -4.4            | 31.2          | -3.1          | 7.6              | 10.7             |
| 1995 | 18.3                            | 16.3             | -2.0            | 36.4          | -0.3          | 9.5              | 9.9              |
| 1996 | 18.9                            | 16.4             | -2.5            | 38.6          | -1.2          | 9.7              | 11.0             |
| 1997 | 20.6                            | 16.3             | -4.3            | 42.1          | -2.8          | 10.1             | 12.9             |
| 1998 | 21.1                            | 16.0             | -5.1            | 46.7          | -2.7          | 10.7             | 13.4             |
| 1999 | 20.2                            | 16.0             | -4.1            | 51.7          | -1.4          | 10.9             | 12.3             |

| Averages  |      |      |      |      |      |     |      |
|-----------|------|------|------|------|------|-----|------|
| 1970-1975 | 22.4 | 22.6 | -0.7 | 19.3 | 0.3  | 9.7 | 9.4  |
| 1976-1982 | 24.0 | 23.7 | 0.3  | 33.9 | 1.0  | 9.1 | 8.1  |
| 1983-1990 | 17.1 | 15.8 | -1.3 | 55.8 | 2.8  | 6.6 | 3.8  |
| 1991-1999 | 19.1 | 15.9 | -3.2 | 36.9 | -1.5 | 8.9 | 10.4 |

Source: FIEL, Dornbusch and de Pablo (1988), CEPAL (1997), Manzetti (1991), America Financiera (various volumes) and Carta Económica.