



Inter-American Development Bank  
Banco Interamericano de Desarrollo  
Latin American Research Network  
Red de Centros de Investigación  
Office of the Chief Economist  
Working paper #R-379

**The Political Economy of Exchange Rate  
Policies in Argentina,  
1950-1998**

by

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Seventh Draft

April 1999

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Inter-American Development Bank  
1300 New York Avenue, N.W.  
Washington, D.C. 20577

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## I. INTRODUCTION

This paper examines the currency experience of Argentina over the last four decades. Our main focus is on the economic, coalitional, and institutional factors that have affected exchange rate policies. In the period considered, Argentina has utilized a variety of exchange rate regimes (from a floating to a fixed exchange rate in a dollar-standard currency board), and the evolution of both the nominal parity and the real exchange rate also differed significantly.<sup>1</sup> Those regimes have coexisted with different strategies of development (from fairly closed, import-substitution industrialization, to more open regimes), which included multiple combinations of monetary, fiscal, financial, labor, and sectoral policies, generating significant changes in the incentives for social coalition building. And on the political side, in turn, different exchange rate policies combined with diverse political and institutional settings, in democratic and authoritarian regimes as well.

The Argentine experience has thus produced a rich set of historical cases and observations for hypotheses testing. In addition to problems of economic consistency and credibility of exchange rate policies (see Kiguel 1994; Calvo and Végh, 1998; Corbo and de Melo, 1985; Drazen and Helpman, 1986 and Buitier, 1986, among others), we discuss the conditions under which *political* sustainability comes in to play, namely how distributive considerations retain great significance even in the presence of economy-wide policies (Diaz-Bonilla, 1989; Frieden, 1991; Perotti, 1992; Laban and Sturzenegger, 1994a and 1994b and Schamis, 1999). In fact, we examine why policies that may generate imbalances are implemented in the first place, and why, once disequilibrium arises, some policies are chosen instead of other alternatives that are equally available. In this sense, we expect to contribute to the literature on the political economy of exchange rates, a growing field of inquiry though one mainly limited to the industrialized world (for example, Odell, 1982; Gowa, 1983; Destler and Randall Henning, 1989; Frieden, 1994; Randall Henning, 1994 and Kirshner, 1995). A focus on a middle-size, developing economy, characterized by weak fiscal accounts, shallow capital markets, vulnerable banking systems, and feeble regulatory institutions in the context of inconsistent development strategies, may pose new questions to this research field.

Our analysis proceeds as follows. In the next section we introduce our main explanatory argument. We distinguish three main periods in line with the behavior of the nominal exchange rate: periodic adjustments in the peg until the mid-1970s, accelerated devaluations through the 1980s, and stability since the beginning of the 1990s. These periods coincide with different strategies of development in a broad sense, which have subjected exchange rate management to different macroeconomic constraints, changing incentives for coalition building, and volatile politico-institutional settings. On this basis, we analyze each of these periods with some historical detail in section three. In section four, we develop different tests of the hypotheses suggested by the narrative of the previous section. Section five presents the main conclusions.

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<sup>1</sup> In what follows, the nominal exchange rate is defined in domestic currency per unit of foreign currency (basically the US dollar). Therefore the terms devaluation, depreciation or weak currency (revaluation, appreciation or strong currency) mean an increase (decrease) in the amount of domestic money paid for one unit of foreign currency. The real exchange rate is defined as the ratio of the price of tradables to non tradables. Therefore the terms devaluation or depreciation of the RER (revaluation or appreciation) mean an increase (decrease) in that ratio.

## **II. EXCHANGE RATE POLICIES AND CRISES: AN INTERPRETATION**

The starting point is the dual role of the exchange rate, which includes both the nominal aspects related to the short-run management of aggregate demand and the real aspects affecting aggregate supply in the longer-run. This dual role is reflected in the two approaches that have been usually considered to define the proper exchange rate policy. One is the “real exchange rate” approach, which emphasizes the distinction between tradable and non-tradable goods, and the effect of the exchange rate on external competitiveness and the trade account (Balassa, 1977; 1985). The other is the “nominal anchor” approach, which highlights the role of the exchange rate in the inflationary process and its relationship with monetary aggregates, interest rates, capital flows, and the functioning of the financial system. This dual role is at the core of many problems of inconsistency in macroeconomic programs (see discussions in Corden, 1990; Williamson, 1991), but it also highlights the distributional consequences of different exchange rate policies.

For instance, producers of tradables generally prefer a devalued exchange rate (depending on the import content of their products), while producers of non-tradables may benefit from a strong currency. Debtors in domestic currency may be helped by devaluations that increase inflation and reduce the real cost of servicing their debt; a situation which reverses if, as in many Latin American countries in the recent past, their liabilities are in foreign currency. In terms of the exchange rate regime, financiers and foreign investors would favor exchange rate stability and credible nominal anchors. Producers and workers, in turn, may prefer a more flexible exchange rate if this allows the economy to absorb external shocks with less disruption of real activity.

The dual role of the exchange rate must be seen in the context of the “historical political economy” (for the term, see Maier, 1987) of Argentina in the postwar period. We start with Di Tella’s (1987) observation about the existence of a pattern in Argentina’s exchange rate policies: a cycle with two phases which he calls the “repressed stage,” during which some key prices are controlled to tame inflation, and a subsequent “loosening stage,” when those controls collapse and inflation jumps to new levels. The “repressed stages” are usually associated with fixed exchange rates or managed crawling pegs, which, because of inconsistencies with other macroeconomic policies and distortions in relative prices, generate disequilibria that are not sustainable. When that happens, the exchange rate regime changes abruptly (usually along with the minister of finance). The “loosening stage,” in turn, is a period of far higher inflation in which exchange rate regimes switch to different types of floating and, in several instances, multiple exchange rates (see Charts 1, 2 and 3, with the behavior of the (log of the) nominal exchange rate).

As useful Di Tella’s cycles are as a descriptive device for Argentina’s economic history, a thorough explanation of the factors that generated the cycles was not fully developed. Moreover, the dynamics of the cycles themselves were changing: by the 1980s, in fact, they had become shorter and more violent, and finally reached hyper-inflationary levels in 1989-1990. However, since 1991, when Congress passed the Convertibility Law, pegging the peso one-to-one to the dollar, the cycles seemed to have stopped. Argentina’s performance has been in line with exchange-rate-based stabilization programs: the initial increase in domestic absorption, the progressive decline in inflation, and the deterioration of the real exchange rate and external

accounts. The “loosening” stage, however, has not taken place.<sup>2</sup>

In trying to explain, first, why the cycles have become shorter and more violent and, second, why they have subsequently receded, we borrow the argument about cycles of repression and loosening. However, we modify and extend the analysis, considering the interaction of the exchange rate regime, the broader macroeconomic and development strategies, and the political and institutional settings. In contrast to Di Tella, we distinguish three types of cycles of repression-loosening (see Charts 1, 2 and 3). The first type of cycle corresponds to the politics of redistribution under classic import-substitution industrialization (ISI). This phase shows periodic, step-wise adjustments in the nominal exchange rate (Chart 2). Those discrete adjustments reflect the redistribution struggle around the agrarian surplus toward manufacture, with controls in the capital account. This period goes from the 1950’s to the mid-1970’s, and it ends with the military coup d’etat of March 1976.

The second phase opens with the 1976 military regime, but continues through the civilian government of the Union Civica Radical (1983-1989) with the Alfonsín Administration and also includes the first 18-20 months of the Menem administration, elected in 1989. This second period is characterized by increasingly large devaluations and accelerating inflation, until reaching hyperinflationary proportions in 1989-1990. The large jump in inflation reflects how the politics of redistribution began to be played at the level of a fiscally constrained public sector. Neither the military regimes (1976-1983) nor the Alfonsín Administration (1984-1989) were able or willing to control the distributive struggle that was affecting the public budget (and economic management of the civilian government was further affected by very negative international economic conditions). With the elimination of controls in the capital account, this setting led to exchange rate crises linked to persistent fiscal imbalances, along the lines described by Krugman (1979) and extended by Calvo (1996).

In the third period, since the early 1990s, the politics of redistribution turns into the politics of (hyper)inflation, in response of which a broad coalition favoring stability emerges. This political support allowed the implementation of an important institutional innovation: the currency board created by the Convertibility Plan of March 1991, during the Menem Administration, which established a fixed exchange rate for the peso (at a one-to-one parity with the dollar). This institutional innovation eliminated all discretionary power in the management of the exchange rate while substantially limiting the use of passive monetary policies to accommodate distributional conflicts. Those conflicts also appeared to have become more muted, in part because supporting international conditions and domestic growth created the conditions for side payments to some of the affected groups. As a result, and in contrast to the previous two periods, the third one is remarkably stable in exchange rate and price levels (see Charts 1, 3 and 5).

While the previous discussion was conducted in terms of the nominal exchange rate, Chart 4 shows the real exchange rate for exports (REREX),<sup>3</sup> along with the world real price of

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<sup>2</sup> The boom-bust nature of the exchange-rate-based stabilization programs is a documented fact: while they usually begin with a consumption boom, they normally end up with a recession. Therefore for countries suffering from high inflation it is a matter of “recession now or recession later” (see for instance, Kiguel and Liviatan, 1992; and Hoffmaister and Végh, 1996). A thorough revision of this literature can be found in Calvo and Végh, 1998.

<sup>3</sup> REREX is defined as  $PREX \cdot (1-TE)/PD$ ; i.e., the price deflator of exports (PREX) from national accounts, adjusted by export taxes (TE) divided by the price deflator of the domestic non-traded good (PD), calculated from national accounts. Similarly, RERIM (not shown in the Chart) is equal to  $PRIM \cdot (1+TM)/PD$ , where PRIM is the price deflator of imports from national accounts, adjusted by import taxes (TM). See Devarajan, Lewis, and

agricultural products, the main component of Argentina's total exports. In general, it appears that the behavior of the RER in Argentina, when not affected by world conditions, is the by-product of policies linked to the management of inflation, where the exchange rate is utilized usually as a monetary anchor. Thus, although the evolution of the real exchange rate is also discussed, we develop our argument below mainly in terms of behavior of the nominal exchange rate.

### **III. HISTORICAL PERSPECTIVE**

#### **III.1 THE POLITICS OF REDISTRIBUTION IN THE CLASSICAL PERIOD OF IMPORT SUBSTITUTION**

Despite great political instability, this period shows remarkable continuity in the application of the general policies associated with an ISI strategy. Three democratically-elected governments, three military regimes, and one civilian (but military-controlled) administration maintained closed trade regimes and controls on capital movements (see Tables 1 and 2). In a context of great instability, with alternating civilian and military governments, this phase also included periods of open, armed conflict between different factions of the military, such as in 1962 -63. The Peronist Party, ousted from office in 1955, was banned from participating in elections during the next two decades, introducing a high degree of instability in the political process.

The exchange rate moved in steps (see Chart 2 for an amplification of the period), with periods of more or less stability followed by upward adjustments. Table 2 shows the different exchange rate regimes and policies since the end of the 1950's. The step-wise adjustments in the nominal exchange rate were associated with the internal economic limits of the inward-oriented industrialization strategy and its built-in distributional conflict. The strategy was based on the redistribution of the agrarian surplus generated by the fertile Pampas, toward industrialization and an expanding State sector, which benefited workers and urban middle classes. Consequently, ISI's political support was based on the mostly urban alliance among industrialists, wage-earners, and public sector contractors and employees.

The exchange rate regime was usually one of fixed (but adjustable) rates to try to maintain lower levels of inflation and support the process of industrialization. The import-substitution strategy could be pursued, at least initially, with fixed exchange rates because of high trade protection shielded the domestic industry from external competition, even in the face of the usual appreciation of the real exchange rate. In addition, a fixed parity helped steady the price of imported inputs and capital goods not internally produced, needed for the ISI. Also, as noticed by Braun and Joy (1967) and Díaz-Alejandro (1965), given that Argentina's exports are mainly food products (or "wage goods" in Ricardian terminology) a devaluation would put pressure on industrial wages.<sup>4</sup> Therefore, for industrialists and urban workers, a fixed exchange rate was perceived as the preferred alternative. Furthermore, the private sector linked to the state as suppliers and public sector enterprises, were inward oriented as well, and did not need an

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Robinson, 1993 for a general discussion on this issue.

<sup>4</sup> This is a clear difference with other countries in Latin America. For instance, in Colombia and Brazil agricultural exports were not "wage goods" and therefore the trade off between keeping a competitive exchange rate and industrialization did not occur.

externally competitive RER for their operation.

The export-oriented agricultural sector, in contrast, preferred a competitive exchange rate. The periodic overvaluation of the real exchange rate caused by the fixed nominal parity and the general bias of economic policy toward the protection of industry acted as an important disincentive for agriculture (see Díaz-Alejandro, 1970; Little, I., Scitovsky, T. and Scott, M., 1970 and Balassa et al., 1971).<sup>5</sup>

The economic limits of the ISI strategy would recurrently emerge in full, leading to periodic balance of payment crises and sharp devaluations. The stop-go nature of ISI, and, therefore, the cycles of repression and loosening in the exchange rate regime, resulted in good measure from the endogenous limits of the economic model. The acceleration of the economy usually led to fewer exports (because a larger percentage of the wage goods were consumed internally due to growing incomes) and more imported inputs and capital goods (demanded by the expanding industry), generating balance of payment crises when official external reserves reached very low levels. At times, the limits inherent in the development strategy were tightened by external shocks, and then those crises occurred even though the economy was not expanding rapidly. In any case, given a context of capital controls, exchange rate crises during most of this period developed relatively slowly, following the decline in reserves caused by the gradual deterioration of the trade balance, and reinforced by the over-invoicing of imports and the under-invoicing of exports.

But there was also a political limit, set by the distributive dispute over domestic income between industrialists and workers. Usually during democratic, and particularly Peronist, governments, the influence of labor increased, leading to higher wages (see Charts 8 and 9). Frequently, this took place in the context of accommodating monetary policies, which fueled inflation and created the conditions for the recurrence of balance of payment crises. When the inherent limits of the development strategy converged with growing wage pressures from labor unions and expanded distributional conflict over economic resources, important sectors of the industrialists and part of the middle classes with private sector employments, tended to abandon the original ISI coalition, and sided with agrarian interests and the military in the coming coup against the civilian government. High levels of inflation, international reserves insufficient to sustain normal levels of imports and service the external debt, social unrest, and the need to “reestablish order” were the reasons generally utilized to try to justify the military coup against a civilian government accused of being too corrupt or too weak to control the economic and social crisis.

The return of Peronism to power in 1973 closed a political cycle of almost two decades since its proscription after the 1955 military coup. In economic terms the 1973 program represented the culmination of the ISI strategy of development. It established a fixed exchange rate, while at the same time instituted price controls, increased wages and salaries, and implemented different expansionary fiscal and monetary policies to foster industry, employment and growth.

By mid-1974 economic and political trends began to deteriorate. After the death of Juan Peron

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<sup>5</sup> Relatively high prices for cereals and beef during the fifties (as a result of the Korean War) and during the seventies (linked to worldwide expansionary Keynesian policies and the oil crisis), alleviated the impact of an overvalued currency (see Chart 4). It should also be noticed that there were different agricultural groups in Argentina during the sixties and seventies more oriented toward the domestic market (sugar, fruits and vegetables, some subtropical products like cotton, tobacco, "yerba mate," etc.), for whom the economic incentives were not that different from the urban-industrial complex.

in July 1974, his wife, Isabel Peron, as elected Vice-president, replaced her husband. The exchange rate peg continued during the third quarter of 1974. By 1975, however, the terms of trade had declined significantly and the economy entered in recession. The government tried to rekindle economic growth through stimulative fiscal and monetary policies, but this only fueled inflation, which made the real exchange rate decline even further. The deterioration of the external accounts forced sharp adjustments of the exchange rate in the last quarter of 1974, and, particularly, during the second quarter of 1975. This last episode, known as "el Rodrigazo" (after the then Minister of the Economy, Celestino Rodrigo), was the first of a series of maxi-devaluations which began to affect the behavior of economic agents.

Against a backdrop of deteriorating economic conditions, great political uncertainty and escalating violence among guerrilla groups, paramilitary operators, and the armed forces, Isabel Peron was toppled by a military coup, in March 1976. From then onwards there was a steady decline in the participation in industry in GDP, as well as a fall in real wages. The whole experience probably reinforced in the minds of workers and lower middle classes that the Peronist Party was associated with high salaries and a sense of political recognition, while the opposite occurred when that Party was ousted by the military. On the other hand, for agrarian and financial groups, and the business community in general, the perception was one of economic mismanagement and a clear decline in their share of national income. The military coup of 1976 reflected basically these concerns.



## III.2 INFLATION, INDEBTEDNESS AND THE SHIFTING DEVELOPMENT PARADIGM

### (a) The military regime, 1976-1983

- *The Initial Program*

After taking power in March 1976, the military regime followed economic policies broadly in line with previous governments of the armed forces: it was pro-agriculture, anti-labor and suspicious of industrialists who had been allied with the Peronists. However, once in government it was ruthless in repressing workers and political dissidents. It also dismantled part of the consumer-oriented industries, mainly because, for military leaders and their civilian allies, the origins of Argentina's crises had to be traced to the political distortions associated with the ISI strategy. It allowed inefficient domestic industrial firms to develop hand in hand with government-protected unions, leading to ever-increasing demands on national resources, and even to proposals, as in Chile, to establish complete state control of productive resources (Canitrot, 1979; Schamis, 1991).<sup>6</sup> Therefore, the economic policies of the 1976 military regime, castigated the manufacturing sector on three different fronts: open trade, currency appreciation, and high interest rates. The industrial sector as a whole lost about 10 points of participation in the GDP during 1976-1981, the urban-based coalition of the ISI was significantly weakened, and agrarian and financial groups recovered the centrality they had lost as a consequence of the 1930s crisis.

This thrust was clear since the initial economic package of April 1976, which included devaluation of the Peso, trade liberalization measures, elimination of the "nationalization of deposits" (a system of 100% reserves for the banking system and credit allocation and control by the Central Bank, instituted during the Peronist government), and elimination of price controls. Also, the military government abolished the existing system of negotiations between representatives of entrepreneurs and unions to determine wages and salaries, the unions were placed under the control of the Ministry of Labor and wages were set by the government. Increased prices for agricultural products and freer prices for other goods, on the one hand, and controlled wages, on the other, led to a decline of real wages, which in 1976-1977 stood at 60% the level reached in 1974-1975, while the ratio of agricultural to non-agricultural goods increased 20%.

The financial system, which had been under heavy control during the Peronist government's system of "nationalization of deposits," benefited as well from the new policies. In addition to the 1976 measures, by mid-1977 the government implemented a financial reform that deregulated the banking industry. Subsidized credit, central to the whole ISI experiment, came to an end. The financial system expanded substantially during those years, but this growth included an important number of fragile financial intermediaries that were unable to withstand the shocks that came in the next years. Also escalating uncertainty, associated with the

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<sup>6</sup> At the time, all three countries in the Southern Cone (Argentina, Chile and Uruguay) had military governments in office, an indication of the deep political crises these societies had experienced at the beginning of the seventies.

acceleration of inflation led to growing dollarization (Claassen and De la Cruz Martinez, 1994).

Although, as argued above, the economic environment generated by the military regime was very harsh on important sections of the inward oriented manufacturing sector, the armed forces, supported different heavy industries, linked in part to the military complex through a generous regime of tax incentives. Support to these industries was based, in part, on different hypotheses of conflict (with Chile and Brazil, and eventually the United Kingdom, over the Malvinas Islands), which required an industrial base for military purposes. Security reasons were also partially behind a program of fiscal incentives for industries in some poor and underpopulated provinces, reflecting the armed forces' concerns regarding the security of the frontiers in those areas. Besides the distorted development pattern, the system of industrial incentives represented a heavy burden on the national budget (World Bank, 1988).

Outlays linked directly or indirectly to military operations and programs contributed to fiscal imbalances (Chart 11), and those large fiscal deficits were behind levels of inflation for the whole period that remained well above the historical averages (only surpassed by the inflationary explosions of 1975-76) (Chart 5). In addition, because inflation remained high, the Olivera-Tanzi effect (i.e. the losses in revenues in non-indexed tax systems due to lags in collection when prices are increasing rapidly) worked against the possibility of placing fiscal accounts under control.

High inflation was a permanent cause of vexation for the economic team of the military government. Besides the economic inefficiencies and waste of resources generated by high inflation, it was also eroding whatever legitimacy the regime may have had in front of the public. After all, the need to control inflation had been one of the main reasons to justify the 1976 coup d'état, along with the chaotic political and social situation. Yet, by the end of 1978, inflation continued unabated at about 150% per year and the economy was in the midst of a recession. The failure to achieve the main objective of non-inflationary growth that the military government had set for itself, fueled the search for new approaches. This came in the form of the economic package of December 1978.

- *The 1978 Program*

The new program aimed at breaking inflationary expectations and reducing uncertainties through the pre-announcement of three main variables which were controlled by the government: the devaluation rate (the schedule indicating the rate of devaluation was known as the "tablita"), the prices of goods and services provided by public enterprises and minimum wages. Of those pre-announced variables, the exchange rate came to receive the greatest attention and had the strongest impact on the economy during the following years until the scheme was abandoned in 1981. The exchange rate was pre-established in advance for the next 8 months. When that period was about to expire, the rate for the subsequent period was established according to the desired goal of inflation for the next period. Domestic inflation was supposed to converge to international inflation adjusted by the preset ratio of devaluation.

Another component of the economic program was the modification of controls on international capital flows, which had been maintained by the financial reform of mid-1977 in an attempt to fend off destabilizing capital inflows. With the December 1978 program those controls were lifted, hoping that domestic interest rates, which were deemed too high, would come down to lower levels, defined by world interest rates adjusted by country risk and the rate of devaluation.

In addition to the expected economic benefits, the liberalization of capital accounts also opened more business opportunities for a growing financial system.

This important change can be seen in the totally different relationship between broad money and international reserves before and after 1978 (Chart 12). While with capital controls the governments could maintain ratios of 10-25 units of domestic money per unit of international reserves, after the opening up of the capital account, the markets appear to have forced a very specific ratio (about 3 to 1) between these two variables, generating exchange rate crises every time the ratio increased over that value.

Also, the December 1978 program included reductions of the financing of Provinces and public enterprises through the national budget, and the gap was covered by increased domestic and international borrowing on the part of the public sector at all levels. By 1981, total external debt had undergone an almost threefold increase since 1978, from 13.3 billion dollars to 35.7 billion dollars (see Chart 7). The liberalization of foreign borrowing created the temporary illusion of a fiscal bonanza. The military saw in it an opportunity to launch grand projects (nuclear plants, missiles) and modernize its equipment. Over time, defense expenditures grew disproportionately vis-a-vis other items, including public enterprises in the heavy industry sectors linked to the military complex.

The pre-announced rate of devaluation was set at levels below the rate of inflation, and the process of exchange rate appreciation -that was already under way-, accelerated substantially after 1978. In 1979 the current account turned negative after three years of positive figures (although the trade balance still showed a surplus). But, in 1980 and in 1981 the trade balance also shifted to a deficit.

The crisis of balance of payments was deep enough to cast doubts about the sustainability of the predetermined exchange rate. Additional private capital inflows almost came to a halt on expectations of future devaluations far above the predetermined "tablita." They were also due to higher interest rates in the US (from 15% in 1980 to almost 19% in 1981). In February 1981, the government devalued the peso by 10%, followed by devaluations in April and June of over 20% each, the last two under a new military regime.

These devaluations exacerbated the existing problems in the real economy and led to the collapse of several important banks and financial institutions. Attempts by the government at rescuing the banking sector led to a large quasi-fiscal deficit. Inflation, which had declined to close to 100% a year in 1979-1980, jumped back up to about 170% in 1981. Before and after those changes, the government borrowed in international markets to defend the value of the local currency, and when this was no longer possible, it absorbed, under pressure from the international banks and local groups, an important share of the private external debt. The public sector was thus saddled with a substantial debt burden (see Chart 7).

The Malvinas war in 1982 (which took place under a different military ruler, the third in this military regime), added to the fiscal problems and general uncertainty. Between 1981-1983 fiscal deficits ranged between 12% and almost 14% (figures not far from the record of almost 15% set in 1975 by the previous Peronist government, one of the arguments for the military coup of 1976). When the international markets dried up also for public borrowers after the "Mexican crisis" of August 1982, the economy sank into recession with high levels of inflation.

- *Conclusion*

From the point of view of economic analysis, the pattern of exchange rate crises is easily explained by the inconsistency between the exchange rate regime, utilized as nominal anchor to tame inflation, and the persistent fiscal deficit with a liberalized capital account.<sup>7</sup> But from a political economy perspective the main question is why such inconsistent policies were pursued, and the failures of previous attempts disregarded. We argue that they can be better understood as the result of conflicting forces and interests. First, there was the political need to control inflation, which, as argued before, had been, along with restoring order, one of the military regime's main justifications for intervention in 1976. Next, the Armed Forces wanted to maintain and develop an industrial base for defense, and it converged with the interests of industry and protected heavy industries. These actions added to fiscal deficits and economic inefficiencies. Finally, the financial community preferred an open capital account and stability in the exchange rate. The military regime's legacy includes weak fiscal accounts, mounting external debt, a distorted development pattern, and a fragile financial system, which created important constraints to the economic management (including exchange rate policies) for the next civilian governments.

### **(b) The Return to Democracy**

After defeating the Peronist candidate by a solid margin in a free election, the Alfonsín government took office in the midst of great expectations. Alfonsín was able to paint the Peronist Party as the continuation of the despised military and handed the Peronists their first electoral defeat ever. The Alfonsín Administration's initial economic policies appear to have been based on two premises. First, wages needed an upward correction. Second, his Administration was going to get better treatment from creditor countries on Argentina's external debt. It had been contracted by the military (in part to finance the armed crisis with Chile and the Malvinas war), and there seemed to be some doubts as to its real amount and even its legitimacy (particularly the private debt that had been absorbed by the public sector with Dagnino Pastore as Minister of the Economy and Domingo Cavallo as President of the Central Bank).

Wages, which had already recovered somewhat in 1983 under the military regime, were raised further by the Radical Administration in 1984, almost reaching the 1974 peak in real terms (Chart 8). Although the fiscal deficit was somewhat reduced, it still stood in double figures. Also the economic team tried to maintain a competitive exchange rate, an approach that some of them had applied with success in the previous Radical government during the 1960's, in a very different economic environment. These expansionary policies, led to an acceleration in inflation, which reached over 600% in 1984 and 1985. The Minister of the Economy was changed in early 1985.

In June 1985, the new economic authorities unveiled the Austral Plan, which included a fixed exchange rate, along with several fiscal and monetary adjustments to control inflation. The deficit was brought down from about 12% in 1984 to the 5-6% range the next 3 years (Chart 11). Inflation also declined to below 90% per year in 1986, the first time it declined to double digits

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<sup>7</sup> The question of "what went wrong" with the stabilization and liberalization programs of the Southern Cone is discussed in particular Edwards, 1984; Balassa 1985; Corbo and de Melo, 1987; and the special issues of World Development, 1985 edited by Corbo and de Melo and Economic Development and Cultural Change, 1986 edited by Edwards and Teitel.

since 1980 (Chart 5). Although the advances in fiscal and monetary discipline and inflation reduction were important, compared to previous years, they did not get far enough to get macroeconomic imbalances under control. Eventually, the exchange rate had to be readjusted after 3 quarters from the initial peg, and then it was changed periodically, until the Primavera Plan in August 1988, when there was a brief attempt to fix the exchange rate again.

At the beginning, the Austral Plan had an important political impact in the 1985 Congressional election. The traditional effect of stabilization plans which utilize the exchange rate as anchors, leading to a consumption boom and sharp declines in inflation (see Calvo and Végh, 1998), kicked in just in time. Improved economic conditions contributed significantly to the Radical Party's victory in 1985, consolidating their position in Congress. However, this economic and political effect proved short-lived. First, the exchange-rate-based stabilization plan moved from the "boom" to the "bust" phase (see footnote 2). Second, in 1986 there was an important collapse of commodity prices worldwide, which, linked to the fact that the Alfonsín Administration had not obtained the hoped-for relief from the external debt,<sup>8</sup> maintained the external accounts and the public budget under pressure. Third, under the influence of the electoral victory, the Alfonsín Administration began to flirt with the idea of creating a "Third Historical Movement,"<sup>9</sup> which would absorb part of the Peronist Party into a new and dominant political coalition.

The results of these attempts at capturing part of the Peronist Party's electoral base were, on the economic front, more difficulties to control the fiscal and monetary variables (to the extent that it made more difficult to adjust salaries or privatize public enterprises). On the political side, the Peronist Party stepped up their political opposition, particularly through the largely Peronist workers unions, which staged a record of 580 strikes in 1986.

By 1987, the economic conditions had deteriorated markedly. Congressional and Provincial elections in that year resulted in a big defeat for the Radical Party, and represented a turning point in their ability to govern. The Primavera Plan in August 1988, which also had an important political component related to the 1989 presidential elections (see Stein and Streb, 1998), was the last attempt to try to control macroeconomic variables. But the Alfonsín Government appeared unwilling (because of its view of what the adequate development strategy should be) or unable (given its political weakness after the defeat in the 1987 elections) to take a drastic approach at solving the tug-of-war over fiscal resources.

While in the past, the inability to solve the distributional conflict led the Peronist Party to print money, and the military regime to contract external debt, the Radical Administration, with reduced access to external borrowing and high inflation that constrained monetary creation, resorted to pile up short term domestic debt. The objective was to buy some time to keep the exchange rate and prices under control, until the presidential elections of 1989. Domestic debt jumped from around 7% of GDP in 1986 to about 15% in the first half of 1989 (IMF, Recent Economic Developments, November 1990). Because of the accumulation of the internal debt and higher international interest rates, public sector's interest payments in constant pesos more than doubled between 1984 and 1989 (IMF, Recent Economic Developments, 1998).

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<sup>8</sup> The possibility of reducing the burden of the external debt had to wait until the Brady Plan was launched in 1989 (with the Alfonsín Administration already nearing the end of its term).

<sup>9</sup> The first two being those led by Hipolito Yrigoyen (also a member of the Radical party) at the beginning of the century and Juan Peron since the late 1940's.

The Primavera Program collapsed, leading later to the mid-1989 hyperinflation, with the Alfonsín Administration already leaving the government and the candidate of the Radical Party defeated in the May 1989 Presidential election. The transition between the outgoing and the incoming administrations, the first between two civilian, democratically elected governments from different parties since the 1920's, was marred by great uncertainty. The accumulated imbalances of the Radical government, along with doubts about the economic policies of the new government, led to the 1989 hyperinflation,<sup>10</sup> street riots, and assaults to supermarkets. Chaotic social conditions forced President Alfonsín to transfer government well before the originally scheduled change of Administrations.

As in the case of the military regime, it is easy to pinpoint the problems of the economic strategy: the initial approach of targeting the real exchange rate and increasing salaries led inevitably to high inflation; later, trying to control inflation by fixing the exchange rate with persistent fiscal deficits and accumulation of short-term domestic debt created the conditions for explosive exchange rate crises and hyperinflation. Again, the key question is why those policies were followed at all. And the answer is probably that the Alfonsín Administration was never able to solve the dilemma between trying to strengthen the political position of the Radical Party (which required to capture part of the Peronist voters) and to implement the difficult economic decisions aimed at controlling fiscal accounts (which would have most certainly alienated some of those same groups). Only after the hyperinflationary experience, the foundations for a broad-based coalition in support of the needed economic changes emerged.

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<sup>10</sup> The quarterly rate of devaluation was 816% in the second quarter, with the Alfonsín Administration, and almost 370% in the third quarter, already with the Menem Administration.

### III.3 FROM HYPERINFLATION TO STABILITY

#### (a) Introduction

Although the initial economic programs implemented by the Menem Administration ended up in economic turbulence,<sup>11</sup> they established the foundations for the period of stability that began in 1991. The halting efforts at opening up the economy, controlling fiscal deficits, privatizing public enterprises and deregulating markets, that were initiated and abandoned since the second half of the seventies, began to be pursued more firmly since 1989, and those policies were finally implemented in full since 1991.

The cornerstone of the anti-inflationary program was the exchange rate policy, as defined in the “Convertibility Law” passed by Congress in March 1991. This plan pegged the peso to the dollar one-to-one, and transformed the monetary and exchange rate functions of the Central Bank into a currency board.<sup>12</sup> The Law directed the Central Bank to maintain liquid international reserves to cover (almost) 100% of the monetary base. As a consequence, the monetary authorities could not increase this aggregate except when international reserves expanded (through trade surplus or net capital inflows).<sup>13</sup>

Since then, the exchange rate has remained fixed for 30 quarters (as of when this paper was written, March 1999), by far the longest period of exchange rate stability in half a century.<sup>14</sup> The fixed exchange rate has survived the so called “tequila effect” in 1994-1995, a Presidential election in 1995, and it is still holding in spite of the financial crises in Asia, Russia and Brazil. Di Tella’s cycles of “repression” and “loosening” appear to have ended.

In what follows the economic and political reasons for the sustainability of the current exchange rate arrangement are discussed. The main considerations include the emergence of a broad-based coalition for stability, linked to the memories of hyperinflation, the legal/institutional framework of the Convertibility Law, and the way that distributive disputes over factor returns (capital and labor), sectoral incomes (agriculture versus industry), and/or fiscal resources (all of which were key elements behind major devaluations in the past) evolved. Additionally, higher economic growth, which was the product of better economic policies and more supportive international

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<sup>11</sup> The pattern of short-lived programs, which attempted to fix the exchange rate only to end in an inflationary explosion, continued during the first 18 months of the Menem Administration. In addition of the shared hyperinflation of 1989, the Argentine economy under President Menem had two other similar episodes, one of full hyperinflation in 1990 (quarterly inflation of 334% and devaluation of 267%) and another of very high inflation in the first quarter of 1991 (quarterly inflation of 39% and devaluation of 60%).

<sup>12</sup> The original promoter of the idea of a currency board appears to have been Juan Lluch, who accompanied Cavallo as Undersecretary of Economic Policy, and not Cavallo himself. Certainly, nothing in his previous writings suggested that Cavallo would opt for a policy of fixed exchange rates after having made his name in the profession, mainly writing about the problems of such regimes and of overvalued exchange rates in Argentine history (see Cavallo and Mundlak, 1982; and Cavallo and Domenech, 1988).

<sup>13</sup> The Convertibility Law did not establish special requirements concerning broader monetary aggregates and foreign reserves. The supply of liquidity beyond the monetary base depends on monetary instruments that the Central Bank still controls such as the possibility of changing the reserve requirements for the banking system and the use of short term swaps. This allowed some room of maneuver for monetary policy.

<sup>14</sup> The previous record of exchange rate stability went from 1940 to 1946.

conditions, reduced the salience of distributive conflicts, and allowed some compensations for the losers from a fixed exchange rate, at least initially.

## **(b) The politics of Argentina's fixed exchange rate regime**

- *Legal/Institutional Aspects*

The fixed parity was established in the Convertibility Law sanctioned by Congress in March 1991, which meant that changing the nominal value of the exchange rate required an act of the Legislature. At the same time, the Law mandated full convertibility between domestic and foreign currency. Therefore a Minister who wants to devalue must face two equally complicated options. One alternative is to ask Congress to sanction the new parity, but this risks the loss of reserves in seconds while the parliamentary debate takes place. The other option is to stop exchanging dollars for pesos (perhaps through a banking holiday while Congress is deliberating), but in this case the official responsible for the decision faces the possibility of legal challenges because the Convertibility Law indicates the obligation to exchange dollars and pesos at the established parity. As a consequence, this institutional device has made very difficult (or almost impossible) to devalue the currency.

But the pre-commitment features of the Convertibility Law went beyond the exchange rate, and drastically limited the credit that the Central Bank could freely create for the public and the private sectors. In fact, this strict monetary framework is perhaps much more important than the fixed parity itself for price stability, to the extent that it has not allowed, as it usually happened in the past, the monetization of sectoral disputes. However, a mere legal/institutional argument begs the question why this strong pre-commitment device was not used before. We try to answer this question in the next sections.

- *The Politics of (Hyper)inflation and Dollarization*

The coalition in favor of low inflation had, and still enjoys, broad support: stability of the exchange rate became increasingly associated with price stability in the minds of the population, and the desire to avoid another episode of hyperinflation (after having gone through two experiences) was widely shared by 1991.

The post-1991 anti-devaluation coalition also included specific groups that may have experienced important economic losses in case of depreciation of the exchange rate, such as those indebted in dollars. Table 4 shows the jump in dollar denominated debts. Credit in dollars in the banking system increased by 12.500 millions of pesos (with an almost equivalent value in dollars) between 1992 and 1995, and represented about 61% of all banking credit. The private sector issued bonds denominated in foreign currencies for almost 9.000 million dollars between 1991-1995, three quarters of which had maturities of 5 years or less. The public sector increased its foreign debt by some 25.800 million dollars in the same period. In addition, there were important flows of foreign direct investment and the participation of foreign investors in Argentina's stock exchange increased significantly

This debt expansion touched large sectors of the population. Middle and even lower-middle income families had access to consumption loans, many of them in dollar terms, generating a constituency that was grateful to the government for the expanding consumption possibilities and



which became very fearful of a devaluation. Equally concerned were firms in the private sector that accumulated debts in foreign currency, including the banking system, different domestic economic groups which, in association with foreign investors, bought State-owned enterprises, and construction companies. On the asset side, foreign direct and portfolio investors were also concerned about the stability of the exchange rate.

Finally, the government, as a big debtor in foreign currency would have been very negatively affected by a devaluation, which could have most certainly triggered a fiscal crisis through multiple mechanisms. First, the recession that has usually accompanied devaluations would have reduced tax receipts. Second, the increase in pesos of Argentina's payments of the external debt public would not have been compensated by income in dollars, such as the cases of Mexico with oil-linked public revenues or Chile with copper. Third, the deterioration of the fiscal situation would have put downward pressure on public bonds, affecting the privatized social security system and the banking system (which had those assets in their portfolios), and any attempt to alleviate the problems of the banking and social security system would have compounded the fiscal difficulties.

All in all, the dollarization of debts created a strong constituency for exchange rate stability. However, widespread dollarization at the beginning of the 1980's did not impede the devaluations and economic morass linked to the debt crisis during that decade. Clear differences between both episodes, in addition perhaps to the magnitude of dollar indebtedness, have been two aspects already discussed: the impact of hyperinflation over the economic behavior of Argentines and the institutional basis of Convertibility, with its strong precommitment through a legislative act. But other elements have also contributed to exchange rate stability during the 1990's.

Key elements behind major devaluations in the past had been the distributive disputes over factor returns (capital and labor), sectoral incomes (agriculture versus industry), and/or fiscal resources, which ended up monetized by passively adjusting monetary policies. The Convertibility Plan established a more disciplined monetary framework, which limited the possibility of monetization of those distributive struggles. But, perhaps more importantly, such distributive struggles also appeared to have become more circumscribed in the 1990's, in part helped by higher rates of economic growth. Fiscal adjustment advanced more than in the previous decade (although less than what would have been necessary to ensure a better performance when external capital flows dwindled in 1995) and the labor movement showed a relatively subdued response to weak wage and employment conditions.

- *Sectoral Policy Reform, Productivity and Growth*

Although fixing the exchange rate reflected the concerns of a broad spectrum of Argentina's society, the ensuing overvaluation of the real exchange rate negatively affected different productive sectors. But the economic program also included specific policies, which tended to moderate the impact of such overvaluation. The agricultural sector succeeded in eliminating export taxes (a long-standing request of rural groups), along with the liberalization of several markets for products, inputs, and auxiliary services that were previously regulated (which helped to improve the price/cost equation for the sector). In addition, the decline of the agricultural sector as percentage of the GDP weakened a group which, in general, requested or supported devaluations of the peso.

Industrial producers, although affected by the drastic reduction of import tariffs engineered since 1991, received some help from different selective policies, including reimbursement of indirect taxes to exporters, expedited antidumping procedures, and special promotion regimes limited to some industries, such as automobiles.

More generally, all productive sectors benefited, at least initially, from the consumption boom usually associated to the establishment of fixed exchange regimes. When consumption growth began to slow down, the implementation of MERCOSUR (once the 1994 Real Plan in Brazil changed the usual Argentine trade deficit with its neighbor into a trade surplus) was an important stimulant of economic activity and generated further gains in outward orientation and productivity. It can be argued that the increase in productivity due to additional investments, the decline in several components of the internal costs linked to deregulation and enhanced competition, and greater market opportunities in MERCOSUR were important supply-side reasons that contributed to high economic growth in 1991-1994, helped the economy through the difficult period of 1995-1996 and led to the significant rebound in 1997.

However, not all this acceleration in economic activity was based on sustainable supply-side measures (including inflows of long-term capital), but was rather aided in good measure by reversible capital inflows and over-stimulative monetary and fiscal policies. This generated the conditions for a downturn in 1995, when international conditions changed after the 1994 Mexican devaluation (IMF, 1995; Diaz Bonilla, 1996). In opposition to the policy prescription of trying to moderate the expansionary impact of capital flows with tighter monetary and fiscal policies (see for instance, Calvo et al, 1994, 1996; Schadler et al, 1993), Argentina's economic policies in fact multiplied their influence through a process of rapid credit creation and increased public expenditures, which fueled the consumption boom and the high economic growth of 1991-1994.<sup>15</sup>

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As already mentioned, the Convertibility Law only mandates backing of the monetary base with international reserves, but not broader definitions of money supply. Economic authorities were able to reduce reserve requirements for the banking system in 1992-1993 (IMF, 1995; Diaz Bonilla, 1996). Capital flows and reduced reserve requirements led to a rapid expansion of credit (IMF, 1995), which deteriorated the ratio of monetary aggregates to foreign currency reserves (except for the mandatory coverage of the monetary base). Argentina's financial system began to experience difficulties well before the Mexican devaluation (see for instance Corrigan, 1996). However, a forceful tackling of the problems was delayed (specially in the case of insolvent public banks owned by the Provincial States), probably influenced by the political requirements of changing the Constitution in 1994 to get the Presidential reelection approved. Those delays exacerbated the severity of the banking and economic crisis in 1995 (for a more detailed discussion, see Diaz Bonilla, 1996).

Overall, expansive monetary and fiscal policies weakened the banking system, made the country more vulnerable to the 1994-1995 external shocks, and, combined with a fixed exchange rate regime and trade liberalization, had a strong negative impact on different sectors producing tradable goods. This amplified the impact of the reduction of trade barriers and led to the bankruptcy of firms that would have been competitive under a different combination of macroeconomic policies.<sup>16</sup> More prudent monetary and fiscal policies during 1991-1994 could have avoided some of these problems, leaving the country stronger for the changing economic conditions in 1995.

The reasons to avoid tackling the issue of an overheated economy in 1993-1994 appeared to have been both economic and political. At the economic level some voices argued that interventions to sterilize capital flows would have been self-defeating because they would have increased interest rates, attracted even more capital, and weakened fiscal accounts. Usually this criticism was directed at monetary sterilization of money expansion through the issuing of government debt. In contrast, others (acknowledging the perils of sterilization -see Calvo, 1991) argued, correctly, that there were other interventions available, including fiscal tightening, increasing banking reserves and improving banking supervision (see Rodriguez, 1993; Calvo et al., 1996; Schadler, et al., 1993).

The political argument was that the expansion was needed to maintain the momentum for reforms.<sup>17</sup> The economic team, coming from outside the Peronist Party, did not initially enjoy widespread political support within the government, but its standing was strengthened by the expansion of consumption and overall positive economic conditions. In this period of economic buoyancy, it was easier to implement the drastic privatization of public sector enterprises, the reduction in trade protection, and other difficult measures. Also, the very good economic performance of the economy during those years produced handsome electoral returns for the Menem Administration, which won the Congressional midterm elections in 1991 and 1993 and the Presidential election in 1995.

- *Fiscal Adjustment*

Fiscal deficits of about 6% of GDP in 1988, were reduced to about 3.8% in 1989-1990, 1.6% in 1991, and declined to almost negligible levels in 1992-1993. Fiscal consolidation was helped by better tax administration and the Olivera-Tanzi effect working in reverse (once inflation declined dramatically). On the expenditure side different factors contributed to place public accounts under control: privatizations, the reduction of subsidies to domestic industrial groups, further adjustments in military expenditures, the decline in world interest rates and the international debt settlement of 1992, under the Brady Plan. Public accounts improved significantly compared to the situation in the 1980's and this proved enough to forestall the occurrence of an exchange rate crisis á la Krugman.

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<sup>16</sup> This discussion is related to two other issues. The first one is the sustainability of the exchange rate peg if the value selected is "too tight" (see for instance J. Williamson, 1994, on UK and the EMU). A second issue is that if an initial value that is "too tight" is combined with a drastic program of trade liberalization, the restructuring of the economy may also harm sectors that would not have been considered inefficient under more adequate levels of the initial peg (see the seminal works of Little, I., Scitovsky, T. and Scott, M. (1970) and Balassa et al. (1971), and a more recent discussion in Bruton, H., 1989).

<sup>17</sup> At least two high officials of the economic team at that time argued that much in conversations with one of the authors of this paper.

However, the government did not take advantage of the favorable initial economic conditions to place fiscal accounts on a more solid footing to diminish the impact of future external shocks to Argentina, and during the key political year of 1994 (when the Constitution was changed to allow the Presidential reelection in 1995) the fiscal accounts turned into deficit.<sup>18</sup> Additionally, important distributive issues affecting the public budget are still pending, as witnessed by recent debates in Argentina on tax, labor and education reforms: different social demands increasingly put forward by the electorate may well require additional expenditures. The form of the social coalition supporting the current exchange rate regime will be undoubtedly affected by how these fiscal redistribution issues develop in the future.

- *The Response of the Labor Movement*

The decline of labor unions in Argentina's economic and political arenas had several facets. One was, of course, the restructuring and downsizing of the industrial sector that began in the 1970's. At the political level, the progressive weakness of labor unions within the Peronist Party after so many years of predominance can be traced to the electoral defeat in the presidential election of 1983, the first time the Peronist Party had ever lost a general election. The rejection of the Peronist candidates was widely attributed to the dislike of the Argentine electorate for old-guard union bosses that were hegemonic within the Peronist Party, and which alienated voters with strong-arm tactics and violent slogans. After another electoral drubbing in the 1985 Congressional elections, a new current emerged within the Peronist Party at that time. This process generated an important renewal in its leadership, reducing significantly the political clout of unions and increasing the presence of middle-class urban leaders. Under the new leadership, the Peronist Party won the 1987 midterm elections, consolidating the presence of non-union cadres in its political structure.

In the presidential primaries within the Peronist Party for the 1989 general election, displaced union leaders supported Carlos Saul Menem helping defeat Antonio Cafiero, the leader of the 1987 renewal movement. But, once Menem prevailed in the presidential election, the new President brought a wholesale change in the political leadership of the Party, further weakening the influence of unions in the new Peronist government.

In the first main confrontation with unions in the case of the privatization of the Empresa Nacional de Telecomunicaciones (the public telephone company), the Menem Administration, supported by a strong current of public opinion against the notoriously bad service of the telephone company, first politically isolated and then fired striking employees. At the same time, it rewarded groups within the company that did not oppose the privatization process. This sent a clear signal to different public sector unions that the economic restructuring of the public sector was for real, and that there were tangible costs in opposing it. On the other hand, labor unions were allowed to participate (or to increase their previous participation) in several profitable activities related to health services, management of pension funds, and even privatizations, opening new economic opportunities for the most business-oriented unions (Murillo, 1997).

This pattern of selective rewards and punishments was utilized with success to carry on the substantial restructuring of Argentina's public sector. Particularly, the Menem Administration maintained open for a long time the possibility of wholesale reform of labor laws, including

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<sup>18</sup> IMF's estimates show a positive fiscal impulse of about 1.5% of the GDP in 1994 (IMF, 1998), which can be considered a manifestation in Argentina of the traditional political cycle linked to important elections.

reductions in the legal powers and functions of unions in Argentina as a bargaining tool in the ins and outs of the relationship between the government and the labor movement.

By 1996, levels of unemployment not experienced during the last half century, coexisted with real wages that, even in the upper estimates, were below the averages for the two decades between mid 1960's and mid 1980's (Chart 8).<sup>19, 20</sup> As a consequence, a soft labor market also contributed to mute the response of workers.<sup>21</sup>

In summary, the decline of industrial employment; the erosion of the political clout of unions within the Peronist Party after the 1983 and 1985 electoral defeats; public opposition to inefficient public firms; the cleavage between more entrepreneurial unions (trying to take advantage of the new business opportunities to provide different services to their affiliates) and those oriented to the traditional defense of workers' rights; and more difficult employment conditions post-1994 contributed to mute the response of the labor movement to the drastic economic changes implemented by the Menem Administration. The struggle over factor returns that played havoc with previous fixed exchange rate regimes did not achieve the same intensity this time.

- *International Conditions*

While in the past several instances of exchange rate instability were associated to external shocks, the Convertibility Plan in the 1990's coincided with improved international economic conditions. First, in 1989 the newly elected Bush Administration decided to change the approach followed until then, opening the possibility of debt reductions through the Brady Plan (which Argentina eventually obtained in 1992). Second, the slowing down of the US economy at the beginning of the 1990's led the Federal Reserve to adopt a more expansionary monetary policy, which contributed to lower interest rates in 1991-1992. This changed international environment, along with a better framework of macroeconomic policies in several Latin American countries, generated the return of capital to the region, just at the time the Convertibility Plan was being implemented.<sup>22</sup> Additionally, the terms of trade that had collapsed in 1986-1987, initiated a slow but firm recovery that accelerated towards mid-1990's, and lasted until 1998 (Chart 7).

The exchange rate regime was tested when sentiment in world capital markets changed after Mexico's devaluation in 1994. The fiscal, financial and growth imbalances accumulated during

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<sup>19</sup> There is some uncertainty regarding data on wages. Official figures were compiled until 1992 and then discontinued. For 1993 there is no official data. Then in mid-1994, the Ministry of the Economy began publishing the salary for the workers included in the Integrated System of Retirement and Pensions (about 29% of the work force in 1996), which can be considered a high upper bound for the average wage in the economy. Chart 8 includes the middle point of three alternative estimates by the authors based on data from the Fundación Mediterránea, Carta Económica and the 1994-1997 figures from the Integrated System.

<sup>20</sup> The comparison must be understood in relative terms. A lower real wage in the 1990's compared to the 1960's, for example, only means that nominal wages in the current decade are buying less of the standard basket of goods and services represented in the Consumer Price Index now, than nominal wages in the 1960's were buying of the standard basket then.

<sup>21</sup> The usual perception regarding wages in Argentina being very high rests on measures of the wages in US dollars (see Chart 9, for wages in real 1990 dollars). The combination of high salaries in dollars and low in pesos is still affecting the performance of the Argentine economy, an issue related to the definition of the adequate exchange rate in the context of the whole economic program

<sup>22</sup> See Calvo, Leiderman and Reinhart, 1992, 1993 for a discussion of the causes of capital inflows to Latin America.

1991-1994 left Argentina too weak to withstand the comparatively mild external shock and the economy entered in recession in 1995.<sup>23</sup>

However, international organizations and developed countries, particularly the US, were more willing to lend financial support to Argentina than in the past. This had at least two components.

First, Argentina was considered to be one of the examples in the implementation of policies of “hard money and free markets” (as the policies of the Washington Consensus were summarized), and could not be allowed to falter after the problems experienced by Mexico (another of the countries that was popularly considered to have followed such recommendations).<sup>24</sup>

The other component was the important change in the international posture of Argentina, manifested in aspects such as the participation in the Gulf War and the contribution to peace-keeping operations of the United Nations. All this improved the geopolitical evaluation of a country that not long ago had been at war with one of NATO’s main countries over the Malvinas Islands.

As a result of this changed evaluation of Argentina’s economic and geopolitical posture, the episode of capital flight that occurred after the 1994 Mexican devaluation was compensated in great measure by an important financial package put together by the IMF, the IADB, and the World Bank, with strong backing by the US government. This had not happened during the 1980’s debt crisis.

- *Conclusion*

The 1989-1990 hyperinflation experiences led to the emergence of a broad based coalition in favor of stability, which, because expectations of devaluations and inflation had become far more synchronized than before, gave strong backing to the implementation of the strict fixed exchange rate system of the Convertibility Law. This institutional innovation practically eliminated any discretion in the management of the exchange rate while substantially limiting the use of passive monetary policies to accommodate distributional conflicts. Additionally, those distributional conflicts appeared to have diminished in intensity, in part because of the way the Menem Administration handled traditional power centers such as the military and the labor unions. Finally, supporting international conditions and domestic growth created the conditions for side payments to some of the affected groups.

Although the desire for economic stability is still very strong in Argentina and it focuses basically on the exchange rate arrangement, the contours of the stability coalition may be changing in the future to the extent that economic international and domestic conditions, in the aftermath of the Asian, Russian and Brazilian financial crises, weaken further, and distributive issues resurface.

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<sup>23</sup> See Diaz-Bonilla (1996) for a comparison of the 1982 and 1994 external shocks to Argentina. It is shown that while in 1982 the whole Latin-American region entered in recession, the 1995 episode was mainly circumscribed to Mexico and Argentina, suggesting that internal conditions rather than the external shock, were the main reasons for the ensuing economic recession.

<sup>24</sup> In fact, Mexico had also implemented unsustainable monetary and financial policies in 1994, linked to its own political cycle. See the economic analysis in Calvo and Mendoza, 1996

## IV. QUANTITATIVE ANALYSIS

### IV.1 INTRODUCTION

We have argued that during the classical ISI exchange rate policies reflected the dual distributive conflict between agriculture and industry, and between capital and labor. Devaluations were controversial but controlled events, which improved the price of agricultural goods and cut real wages. Later, however, in the context of an open capital account with large fiscal deficits, a weak financial system, and spreading dollarization, devaluations began to have increasingly negative systemic effects on inflation and growth, which eventually overshadowed traditional distributional issues. Inflation that was a problem even for non-elected military governments became even more relevant for the political process once democracy returned in 1983. By then devaluations and expectations of inflation had become largely synchronized, and manipulating inflation by controlling the exchange rate produced positive political results for the incumbent, as was the case of the Austral plan in 1985 and with the Menem Administration up until 1997. The other side of the coin was the political price paid by the Radical Party, in 1987, and especially after the hyperinflationary experience of 1989. In what follows we explore quantitatively these arguments.

### IV. 2. DISTRIBUTIONAL ISSUES

We begin by analyzing one of the key distributional issues: the impact of devaluations on real wages. Granger-causality tests (see Table 5) provide a first approximation. For the whole period 1955-1997, the null hypothesis that real wage and the exchange rate do not Granger-cause each other, is not rejected. However, for the shorter period 1955-1976, the period of traditional ISI, the null of no Granger-causation in both directions is strongly rejected. This appears in line with the hypothesis that during the ISI period the distributional conflict involved the interaction of devaluation and real wages, while later the mechanism appears to have changed.

To analyze this issue further, we utilize an unrestricted VAR to study the impulse-response functions.<sup>25</sup> We consider Argentina terms of trade as an exogenous variable, and then run a VAR with the exchange rate, GDP and real wages (using that ordering for identification of the shocks).<sup>26</sup>

For the whole period, the impulse-response functions suggest that a devaluation results mainly in

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<sup>25</sup> The length of the VAR models was established considering the Schwartz criteria (due to the importance of the degrees of freedom) and the behavior of the residuals. The residuals were checked to ensure normality, homoskedasticity and lack of autocorrelation. The impulse-response functions were calculated with 100 Monte Carlo repetitions. A general discussion of estimation and inference in Vector Autoregressive models can be found in Canova, 1994; see also Sims, Stock and Watson, 1990.

<sup>26</sup> The 3-equation VAR can be derived from a setting where aggregate supply depends on capital stock, employment and intermediate inputs, and aggregate demand has a domestic component (that depends on income and assets), and net exports (that depends on the exchange rate and terms of trade). Also, labor demand depends on real wages and the level of activity for a given stock of capital; labor supply depends on real wages; and the demand for intermediate inputs (which have an important component of imports) depends on the exchange rate and world prices. With aggregate demand equal to aggregate supply, a clearing labor market, and capital stock and assets fixed in each temporary equilibrium, the VAR utilized here follows.

a fall of GDP in the first two periods (where the confidence bands show statistical significance), with negligible declines in real wages (and the significance is not different from zero) (Chart 13, first column of graphics). Also, increases in real wages appear to lead to devaluations (third column).

The hypothesis of the contractionary effect of devaluations (see for instance Krugman and Taylor, 1978), which seems to be borne by the impulse-response functions, may be the result of the supply side shock affecting intermediate imports and/or the demand shock resulting from nominal assets (mainly money supply) that are cut in real terms by the devaluation and/or a banking crisis, leading to sharp declines in deposits and credit, which would affect both aggregate supply and demand.

However, if the VAR model is estimated separately over the period before and after the 1978 opening of the capital account (see Charts 14 A and 14 B), there are two important differences. First, the negative impact of a devaluation of real wages is stronger and statistically better defined in the period 1955-1977. Second, the recessionary impact on the GDP is larger and significant in the years after 1978, compared to a smaller, and statistically not significant, effect during the traditional ISI period.

It appears that during the ISI period, devaluations could be utilized to cut real wages, and that, after the initial negative impact, the economy began to grow again. But after 1978, the responses to devaluations have been deeper and longer declines in economic activity, with real wages changing far less than before. Real wages fell more (i.e., workers were "surprised") in the 1960's and 1970's than in next two decades, when workers seem to have been able to get their nominal wages adjusted up after a devaluation occurred. This reduced the positive supply-side impact that upward adjustments of the nominal exchange rate may have had on external competitiveness, leaving only the negative impact of devaluations on GDP growth through other channels such as the increase in costs of imported intermediate inputs and the decline in real money supply.

Other distributional impact of the devaluations is associated with the price of agricultural vis-a-vis non-agricultural goods. The Granger causality tests (Table 6) suggest that the main influence on the ratio of agricultural to non-agricultural prices comes from world prices. However, there is a clear difference between the ISI period, when the ratio of agricultural to non-agricultural prices is Granger-caused by world prices, and the period since the mid-1970's where the influence of the exchange rate on that ratio increases.

The impulse-response functions show that the domestic price ratio for the whole period basically followed world real prices (Chart 15).<sup>27</sup> However, since the mid 1970's onwards the VAR model suggests a greater role for devaluations (see Chart 16). A possible interpretation is that during the ISI period, when high real agricultural prices prevailed in world markets, the exchange rate had to be adjusted periodically only when crises erupted. However, once world agricultural real

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<sup>27</sup> The VAR is constructed considering that the domestic price of agricultural goods depends on the exchange rate, world agricultural prices, and commercial policies. The domestic price of non agricultural goods is a linear combination of the domestic price of industrial goods (which in turn depends on world industrial prices, the exchange rate and commercial policies) and the domestic price of services. If commercial and other policies do not change, the ratio of domestic agricultural to non agricultural prices depends on the real world price of agricultural goods (which is deflated by manufacturing unit values) and the nominal exchange rate. The ordering for the VAR is world prices, nominal exchange rate and domestic prices.



prices began to fall in the 1980s, some of the governments tried to compensate the persistent decline through devaluations. This of course, led to higher inflation (see below).

Also, the idea that a devaluation benefited unequivocally the agricultural sector has to be seen in a broader context. Another VAR model with the exchange rate and two indices of agricultural and industrial production, shows that for the whole period a devaluation had a negative impact on industrial production, and only a positive one on agriculture after having gone through an initial decline (see Chart 17). But again, the periods before and after mid-1970's show different responses to a devaluation. During the ISI period, the negative impact of a devaluation on industry is smaller and eventually there is a return to growth, while the positive effect on agriculture is far stronger than for the whole period (Chart 18 A). In the period after 1978 (Chart 18 B), a devaluation affects negatively both agriculture and industry.

The conclusion is that even though a devaluation since the 1980's would have improved relative prices for agriculture, it would also have had a negative impact on agricultural growth. This may reflect larger forward and backward links of the agricultural sector with the rest of the economy, as well as the stronger negative effects on GDP growth of a devaluation during the last decades compared to the ISI period. Therefore it can be argued that the relative price effect of a devaluation, with its distributional advantage for agriculture, may have been more than compensated by the income effect of a fall in production, at least for the period after 1978. These new dynamics of the devaluations, with its broader-based effects, tended to dominate the issue of relative factor returns as a main concern for policy makers and the public. Part of this shift may be related to the growing role of the exchange rate as a nominal anchor for expectations. This issue is explored immediately.

#### IV. 3 THE POLITICS OF INFLATION AND DEVALUATION

##### **(a) Increasing coordination of expectations**

The relationship between devaluation and inflation is analyzed here with Granger-causality and cointegration tests, applying Johansen's procedure, on quarterly data from 1957 to 1997. The results appear in Tables 7 and 8.

The Granger-causality tests suggest that the rates of inflation and devaluation<sup>28</sup> have become more coordinated over time: non Granger causality in both directions is strongly rejected for the whole period, and also for the period after the opening of the capital account (although at a somewhat lower significance level). On the other hand, for the 60's and 70's only the null of devaluation not causing inflation is rejected, suggesting that in the earlier period devaluations preceded higher inflation, but not necessarily the other way around.

Another way to look at this issue is to ask whether both variables are cointegrated. Unit root tests show that the exchange rate and the CPI in levels are I(2), while their rates of change are I(1). Therefore it is appropriate to ask about the possible cointegration relationship between rates.

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<sup>28</sup> Devaluation is measured as the rate of change of the nominal exchange rate in pesos per \$US, and inflation is measured as the rate of growth of the CPI. Both rate growths were calculated in levels and not as the difference of logarithms because the values differed significantly for the period of hyperinflation.

Performing a standard Johansen test<sup>29</sup> before and after the opening up of the capital account (December 1978), the null of at least one cointegrating equation cannot be rejected for the period without capital controls (see Table 8). However, the same test for the period 1959:1-1978:4, cannot reject the null of no cointegration (i.e., zero cointegrating equations). This suggests that while the rates of inflation and devaluation moved somewhat independently from each other in the 60s and 70s, this was not longer the case in the 80s and 90s.

The VAR impulse-response functions tell a similar story (see Charts 19 and 20). Inflation reacts later and less strongly to a devaluation during the 1959-1978 period (Chart 19), than after the opening of the capital account (Chart 20).

The conclusion is that after the devaluations of the mid-seventies and early eighties, inflation, and presumably inflationary expectations as well, appear to have been more linked to the exchange rate than before.<sup>30</sup> Basically, the greater coordination between devaluation and inflation after the eighties, leads to the politics of inflation as the determinant factor for exchange rate policies.

## **(b) Electoral results**

In political terms, with the restoration of democracy after 1983, the question became what types of issues were selected by the electorate to reward or punish incumbents at the voting booth. In economic terms the most obvious issues are inflation and unemployment. Charts 21 and 22 are scatter diagrams showing the percentage vote for the incumbent in the presidential and congressional elections since the return to democracy in 1983, against (the log of) inflation and unemployment, respectively<sup>31</sup>. Inflation appears negatively correlated with the votes for the incumbent, while unemployment does not show any strong correlation.

Table 9 shows the results of a simple regression exploring the link between inflation and unemployment, on one hand, and votes for the incumbent, on the other (see for instance, Fair, R, 1996 and Lewis-Beck and Rice, 1992)<sup>32</sup>. Given the lack of degrees of freedom the results are

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<sup>29</sup> The test was run with 6 lags to whiten the residuals and with an intercept in the Cointegrating Equation, but not in the VAR. The main thrust of the results hold under other specifications.

<sup>30</sup> For instance, Calvo and Vegh (1998) argue that the exchange rate “provides a much clearer signal to the public of the government’s intentions and actual actions than a money supply target. Thus if the public’s inflationary expectations are influenced to a large extent by the ability to easily track and continuously monitor the nominal anchor, the exchange rate has a natural advantage.” (p.46)

<sup>31</sup> Since 1983 and until the time this was written (April 1999) there have been three presidential and congressional elections (1983, 1989, 1995) and the percentage vote utilized for the incumbent corresponds to the Presidential candidate; the rest were only congressional elections (1985, 1987, 1991 and 1993) and the percentage vote was for the political parties as a whole. The 1983 election is not included in the diagrams as there was no incumbent, being the first democratic election after a military regime. A special election to elect representatives to change the Constitution is not included in the diagrams either. Inflation and unemployment correspond to the year average.

<sup>32</sup> The equation includes all elections mentioned in the previous footnote. As there was not an incumbent in the 1983 election we chose the Peronist Party as the incumbent, because it can be argued that the Radical candidate, Raul Alfonsín, was successful in portraying Peronist candidates as the continuation of the previous military regime. There are dummies for 1983 (trying to capture the special conditions of the first election after a military regime), and for Presidential elections, considering that they may be different from the other elections.

only suggestive, but they coincide with the bivariate diagrams in showing that inflation appears negatively correlated with the vote of the incumbent. Also, the coefficient for inflation is statistically significant, but its small size suggests that the political impact is important only at high levels of inflation. Adjusting for other influences, also unemployment appears negatively correlated with the vote of the incumbent, but is not statistically significant. However, during the last election in 1997 the issue of unemployment showed a greater salience, suggesting that the politics of unemployment may be increasing its importance vis-a-vis the politics of (hyper)inflation.

#### IV. 4 CONCLUSIONS

The VAR impulse-response functions show that devaluations did indeed modify sectoral returns to different social groups and productive sectors over the whole period considered: they affected real wages (which were cut during the ISI period but less so since the end of the 1970's) and the relative price of agricultural/non agricultural goods (which tended to improve, but was basically dominated by world prices). However, the distributional and other consequences of adjustments in nominal exchange rates, produced different impacts during the traditional ISI period with capital account controls, compared to the subsequent years. Since the end of the 1970's, the impact of a devaluation appears to have been less on relative prices (which appeared to be more rigid, particularly real wages) and more on overall growth: devaluations came to affect negatively even sectors (such as agriculture) which were supposed to benefit from upward adjustments of the nominal exchange rate.

Also, devaluations generated inflation in the sixties and seventies but with a lag and the impact was smaller than later on. During the period with trade and capital controls, devaluation and inflation were not as synchronized as they became later, and to the extent that there was a linkage, it ran from devaluations to inflation. However, once the capital account was opened in the second half of the seventies, and the country experienced traumatic devaluations in 1975 and the beginning of the 1980's, expectations of inflation and devaluation became more closely coordinated; for the period since 1979 inflation and devaluation cointegrate and Granger causation in both directions cannot be ruled out.

With the advent of democracy, the electorate was able to manifest its preferences over economic and other issues. Inflation appears to have been the main concern at high levels of that variable and to the extent that it was linked to the nominal exchange rate, devaluations became a political liability. Now, at the current configuration of inflation-unemployment levels, the latter may be turning into a more determinant factor for the percentage vote of the incumbent. However, the statistical analysis does not suggest that the link between devaluation and inflation has been broken. Therefore, the political costs of a devaluation may be as significant as before.

#### V. EXCHANGE RATE POLICIES: FROM THE POLITICS OF REDISTRIBUTION TO THE POLITICS OF INFLATION AND BEYOND

The main goal of this paper has been to examine the political economy of Argentina since the

1950s in order to explain exchange rate crises and policies. We began with Di Tella's (1987) observation regarding the existence of a cycle with two phases in exchange rate policy: the "repressed stage," when some key prices (including the exchange rate) are controlled to tame inflation, and the "loosening stage," when those controls collapse and inflation jumps to new levels. We emphasized that this regularity extended beyond the period analyzed by Di Tella, and that the cycle became shorter and more violent since the mid-1980s and until the beginning of 1991. During those years, the periods of fixed exchange rates lasted less than before and the "ratcheting up" effect on inflation increased. Since 1991, however, with the "Convertibility Law," which pegged the peso to the dollar one-to-one, the "loosening" stage has not taken place, even after the "tequila effect" in 1995 and, since 1997, the financial crises in Asia, Russia and Brazil.

The questions, then, are why these cycles of repression and loosening of the exchange rate have taken place in Argentina, why they have become shorter and more explosive in the second half of the 1980s, and why they seem to have disappeared since the 1991 Convertibility Plan. Briefly, we claimed that in the first period, the step-wise adjustments reflect the politics of redistribution in the context of ISI with capital controls, within an international environment in which, in general, Argentina enjoyed more favorable terms of trade than in subsequent decades. This development strategy was based on the redistribution of the still sizable agrarian surplus toward industry, which benefited urban groups, and an expanding public sector. This pattern of redistribution among landowners, industrialists, and workers, led to recurrent, though usually gradual, strangulations in the trade balance, eventually corrected by adjustments in the exchange rate. Controls in the capital account allowed governments to manage the timing and size of the devaluations. Exchange rate crises during this period were thus of a slow-motion nature, fueled by the deterioration of the trade accounts over time.

While the economy during this period was dominated by the stop-go nature of the ISI strategy, the politics, related to the distributional struggle among landowners, industrialists and urban workers, was played in a context of the exclusion of the Peronist Party, leading to what O'Donnell (1973) labeled the "impossible game" of Argentina's party competition. The return of Peronism to the government in the 1973 election (after almost 20 years of proscription) marked the economic and political culmination of the classical ISI period, but it ended in political turmoil after the death of President Juan Perón. Determined to dismantle the ISI policy structure and dissolve the social base of Peronism, the military regime of 1976 opened a new phase.

In this period, wage redistribution was avoided by political control. The politics of redistribution shifted increasingly toward the resources of the public sector, with the Armed Forces emerging as major competitors in the tug-of-war for fiscal resources. Despite wage freezes and improvements in tax collection, fiscal discipline was further eroded by the same military who became a major claimant on government funds through defense expenditures and transfers to public enterprises in the heavy industry sector, many linked to the military structure. Toward the end of the 1970s, capital inflows provided temporary relief, though leading to a much more constrained fiscal situation once world macroeconomic conditions deteriorated in the early 1980s and the accumulated external debt had to be repaid. The conduct of monetary policy became more complicated by the opening up of the capital account, the continuous dollarization of the economy, and the newly liberalized, but ill-regulated, financial sector. Moreover, because inflation remained generally high during this period, the Olivera-Tanzi effect worked against the

possibility of placing fiscal accounts under control.

In the context of a weak fiscal and financial position, the full liberalization of the capital account in 1978, opened a new chapter. The currency became the target of speculative attacks along the lines of Krugman's model (1979) and extended in Calvo (1996), leading to further dollarization of the economy and to recurrent events of sudden depletion of foreign exchange reserves.

With the return to democracy, the Radical Party, trying to woo the labor sector, a traditional Peronist bastion, increased salaries, while at the same time tried to maintain a competitive exchange rate, all of which increased inflation further. When policies were changed with the 1985 Austral Plan, it was clear that an anti-inflationary posture yielded important electoral and the Alfonsín Administration won the first midterm election in that year. However, the economic and political conflict between utilizing the exchange rate as a nominal anchor to tame inflation or as a real price, continued unresolved during the Radical government. The collapse of world agricultural prices in the second half of the 1980's added to the economic difficulties of the Alfonsín Administration. The combination of all these factors led to more frequent and more explosive crises. The electoral defeats of the Radical Party were related to high and accelerating inflation, ending in the hyperinflationary episode of 1989. The politics of redistribution was thus displaced by the politics of (hyper)inflation.

A new phase began in the early 1990s, with the emergence of a broad coalition in favor of stability. The adjustments needed mainly in fiscal accounts and in terms of the opening up of the economy, were made less difficult by a greatly improved international context in the 1990s with capital flows returning to Argentina (marking the end of the 1980s debt crisis) and better terms of trade. The Convertibility Law, transforming the central bank in a currency board gave a strong institutional foundation to stability, practically eliminating the possibility of passive monetary policies accommodating sectoral or factor demands.

Additionally, those distributional conflicts appeared to have diminished in intensity, and supporting international conditions and domestic growth created the conditions for side payments to some of the affected groups. Also, due to larger capital inflows, credit in dollars expanded significantly at the level of middle and even lower-middle income groups, which became very fearful of a devaluation. The post-1991 anti-devaluation coalition included as well other groups heavily indebted in dollars, such as the government itself, the banking system, and the private sector investors who participated in the privatization process and took on an important amount of external debt to finance the acquisitions.

The decline of labor unions (product of economic forces such as the restructuring and downsizing of the industrial sector as well as political developments that weakened their clout within the Peronist Party) also changed the economic and political components of the traditional Peronist alliance and opened the way for a different social and political coalition more preoccupied with inflation.

In sum, we have argued that a new and broadly-based coalition emerged in the first half of the 1990s that prioritized monetary stability over unemployment, because of vivid memories of hyperinflation, along with a different perception of costs and benefits of exchange rate policies, due to changes in the structure of the economy and in their relative position in this new structure.

Looking to the future, the main question refers to the continuation of the stability coalition given the strains posed by unemployment levels not experienced in Argentina since the Great Depression. Popular complaints about unemployment and unequal distribution of economic

growth, in addition to other claims for improved governance and social issues, may be changing the economic and political picture of current Argentina. These pressures will be most likely exacerbated by the difficult international climate that began with the 1997 Asian devaluations and was worsened by the financial crises in Russia and Brazil.

In that context it would not be surprising if more voices are raised in Argentina blaming the current exchange rate system for the deteriorating economic conditions and asking for its change, presumably by letting the peso float. Although the economic validity of this proposal may be dubious (the experience of past crises in Argentina and elsewhere show the negative impact of devaluations in economies with widespread dollarization and vulnerable financial systems), a prolonged recession with high levels of unemployment, may lead to increasing political pressures "to do something". For some social groups and political forces abandoning the Convertibility Plan may look increasingly attractive.

The polar opposite would be to fully dollarize the economy (i.e., buy out all physical pesos in the economy with the dollars held by the Central Bank), an option suggested by the Menem Administration.<sup>33</sup> Full dollarization will also require to re-denominate in dollars the banking accounts now held in pesos, which can be done if confidence in the banking system is maintained. Argentina's financial system has been strengthened by the changes that took place since 1996, mainly in the form of buyouts by international banks, increased capital and banking reserves, and the Central Bank's securing of contingent lines of liquidity from international private banks. Therefore, a hypothetical run on the currency does not have to become a run on the banking system.

With the quasi-full dollarization of the Convertibility Law, or with a total conversion of pesos to dollars, for the government and the private sector indebted in dollars, the issue would still be one of solvency and how to generate the revenues through taxes or the cash flow through economic activities to serve the debt, and prospects that can be seriously impaired by a deep recession. If the Convertibility Plan is abandoned, for those economic agents with debts in dollars and income in pesos, an additional problem will be access to foreign currency.

In the medium term it may well be that more creative forms of monetary and exchange rate arrangements end up being implemented. Two alternatives, which embody very different economic and geopolitical programs, would be a formal dollarization of the Argentine economy in the context of a monetary agreement with the USA, or the creation of a regional currency in MERCOSUR. These options will have their own distinctive political economy considerations.

In the short-run, however, the key concern is how to balance the distribution of the fiscal costs and benefits involved in confronting the difficult economic conditions, particularly how to generate the fiscal revenues to assuage expanding social demands, to deal with high unemployment levels, to improve the competitiveness of the private sector, and to pay for the external debt. The distributional issue is still located at the level of the public budget, and the operation of the current exchange rate regime may well depend upon how these different pressures evolve. The transparent, efficient and equitable management of fiscal accounts is

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<sup>33</sup> Full dollarization is not significantly different from the current system. The main difference would be the loss of revenues by the Central Bank of about 600-800 million dollars, corresponding to interests received on foreign currency reserves invested abroad. A possible The proponents of dollarization present as a countervailing benefit the possible reduction in some of the components of the country risk premium paid by Argentina, mainly those linked to lingering doubts in the markets regarding the continuation of the current exchange rate parity.

probably where Argentina's most critical test, namely, consolidating economic stability along with democratic institutions, resides.

## **BIBLIOGRAPHY**

- Balassa, B. and Associates (1971) *The Structure of Protection in Developing Countries* The Johns Hopkins University Press. Baltimore, Maryland
- Balassa, B. (1977) *Policy Reform in Developing Countries* Pergamon Press, Oxford, 1977.
- Balassa, B. (1984) "Adjustment Policies in Developing Countries: A Reassessment", *World Development*, September 1984.
- Balassa, B. (1985) "Policy Experiments in Chile, 1973-83" in Gary M. Walton (ed.) *The National Economic Policies of Chile*, JAI Press, Connecticut, 1985.
- Balassa, B. (1986a) "Policy Responses to External Shocks in Developing Countries", *American Economic Review*, May 1986
- Balassa, B. (1986 b) "Outward Orientation", World Bank Development Research Department Discussion Paper No.148 Washington DC, September 1986.
- Basualdo Eduardo y Daniel Aspiazu (1991) *Cara y Contracara de los Grupos Económicos: Estado y Promoción Industrial en la Argentina* (Buenos Aires: Cántaro).
- Braun, Oscar and Joy, Leonard (1967) "A Model of Economic Stagnation - A Case Study of the Argentine Economy", *The Economic Journal*, 1967, 868-887
- Bruton H. (1989) "Import Substitution" in Chenery and Srinivasan (eds) *Handbook of Development Economics*", North Holland, 1989.
- Buiter W. (1986) "Fiscal prerequisites for a viable managed exchange rate regime" NBER WP 2041, October 1986.
- Calvo, G. (1978) "On the Time Consistency of Optimal Policy in a Monetary Economy", *Econometrica*, November 1978.
- Calvo, Guillermo A (1986a) "Fractured Liberalism: Argentina under Martinez de Hoz", *Economic Development and Cultural Change*; 34(3), April 1986, pages 511-33.
- Calvo, Guillermo A. (1986b) "Temporary Stabilization: Predetermined Exchange Rates", *Journal of Political Economy*; 94(6), December 1986, pages 1319-29.
- Calvo, G. (1987) "Balance of Payments Crises in a Cash-in-Advance Economy", *Journal of Money, Credit and Banking*, February 1987.
- Calvo, Guillermo A (1991) "The Perils of Sterilization", *International Monetary Fund Staff*



Papers; 38(4), December 1991, pages 921-26.

Calvo G. and Végh C. (1991) "Exchange-Rate-Based Stabilization under Imperfect Credibility" Draft. International Monetary Fund. May 1991.

Calvo, G.; Leiderman L., and Reinhart C. (1992a) "Capital Inflows to Latin America: The 1970s and the 1990s" IMF Working Paper. International Monetary Fund. October, 1992.

Calvo, G.; Leiderman L., Reinhart C. (1992b) "Capital Inflows and Real Exchange Rate Appreciation in Latin America: The Role of External Factors." IMF Working Paper. International Monetary Fund. August, 1992 (a revised version is in "Capital Inflows and Real Exchange Rate Appreciation in Latin America", IMF Staff Papers, March 1993).

Calvo G., Leiderman L and Reinhart C. (1996) "Inflows of Capital to Developing Countries in the 1990s" Journal of Economic Perspectives, Vol. 10 Number 2, Spring 1996

Canitrot, Adolfo (1979) La Disciplina como Objetivo de la Política Económica: Un Ensayo sobre el Programa Económico del Gobierno Argentino desde 1976, Estudios CEDES.

Cavallo, D. and Mundlak, Y. (1982) "Agriculture and Economic Growth in an Open Economy: The Case of Argentina" International Food Policy Research Institute, Research Report 36.

Cavallo, D and Domenech, R (1988) "Las políticas macroeconómicas y el tipo de cambio real. Argentina, 1913-1984", Desarrollo Economico; 28(111), Oct.-Dec. 1988, pages 375-400.

CEPAL (1969) "América Latina. El Pensamiento de la CEPAL", Editorial Sudamericana, Santiago de Chile.

Claassen E. and De la Cruz Martinez, J (1994) "Dollarization and its impact on the economy: Argentina, Bolivia and Uruguay". Workings Papers, Economic and Social Department, Inter-American Development Bank, April 1994.

Corbo, V, and de , . and de Melo, J. (eds.) (1985) "Liberalization with Stabilization in the Southern Cone of Latin America", special issue of World Development, August 1985.

Corbo, V. and de Melo, J. (1987) "External Shocks and Policy Reforms in the Southern Cone: A Reassessment" Development Research Department Discussion Paper No. 241 World Bank Washington, February 1987.

Corden, W.M. (1990) "Exchange Rate Policy in Developing Countries." PRE Working Paper 412, World Bank, April 1990.

Corrigan E.G. (1996) "Building a Progressive and Profitable National Banking System in Argentina" Goldman, Sachs. April 30, 1996

Corden, W.M. (1990) "Exchange Rate Policy in Developing Countries." PRE Working Paper 412, World Bank, April 1990.

- Destler, I.M and Henning, C. Randall (1989) "Dollar politics: Exchange rate policymaking in the United States" , Washington, D.C.: Institute for International Economics, 1989, pages xi, 174.
- Devarajan S., J. Lewis and S. Robinson (1993) "External Shocks, Purchasing Power Parity, and the Equilibrium Real Exchange Rate" The World Bank Economic Review Vol 7 No 1, 1993.
- Diaz-Alejandro, Carlos (1963) "A Note on the Impact of Devaluation and the Redistributive Effect", The Journal of Political Economy, Vol.71, 1963
- Diaz-Bonilla E. (1989) "Consistencia, credibilidad y sustentabilidad". Notas para el Curso de Macroeconomia de la FAO en Santiago de Chile, 1989.
- Diaz-Bonilla E. (1996) "The Washington Consensus and the Myth of the Tequila Effect". Fundacion Andina, Working Papers. September 1996.
- Di Tella, Guido (1987) "Argentina's Most Recent Inflationary Cycle, 1975-85", in Thorp, Rosemary, ed.; Whitehead, Laurence, ed. Latin American debt and the adjustment crisis. Pitt Latin American Series, Pittsburgh: University of Pittsburgh Press, 1987, pages 162-207.
- Drazen A. and Helpman, E. (1986) "Stabilization with Exchange Rate Management" WP 41-86, Foerder Institute for Economic Research, Tel Aviv University, November, 1986.
- Edwards, S. (1984) "The Order of Liberalization of the Balance of Payments", World Bank Staff Working Papers Number 710, 1984.
- Edwards, S. and Teitel, S (eds) (1986) "Growth, Reform, and Adjustment: Latin America's Trade and Macroeconomic Policies in the 1970s and 1980s", special issue of Economic Development and Cultural Change.
- Edwards, S. (1989) Real Exchange Rates, Devaluation, and Adjustment (Cambridge: MIT Press).
- Eichengreen, Barry, Rose, Andrew K. and Wyplosz, Charles (1995) "Exchange Market Mayhem: The Antecedents and Aftermath of Speculative Attacks", Economic Policy: A European Forum; 0(21), October 1995, pages 249-96.
- Engle, Robert F (1982) "Autoregressive Conditional Heteroscedasticity with Estimates of the Variance of United Kingdom Inflation", Econometrica; 50(4), July 1982, pages 987-1007.
- Engle, Robert F. (1983) "Estimates of the Variance of U.S. Inflation Based upon the ARCH Model", Journal of Money, Credit, and Banking; 15(3), August 1983, pages 286-301.
- Frieden, Jeffry (1991) Debt, Development, and Democracy (Princeton: Princeton University Press).
- Frieden, Jeffry (1994) "Exchange Rate Politics: Contemporary Lessons from American History,

Review of International Political Economy, v1, n1,

Guidotti, P. E.; Végh C. A. (1992) "Losing Credibility: The Stabilization Blues." IMF Working Paper. International Monetary Fund. September, 1992.

Fair, Ray C (1996) "Econometrics and Presidential Elections." Journal of Economic Perspectives; 10(3), Summer 1996, pages 89-102.

Flood, Robert and Marion, Nancy (1994) "The Size and Timing of Devaluations in Capital-Controlled Developing Economies." National Bureau of Economic Research Working Paper: 4957, December 1994, pages 22.

Frankel, Jeffrey A.; Rose, Andrew K (1996) "Currency Crashes in Emerging Markets: Empirical Indicators", National Bureau of Economic Research Working Paper: 5437, January 1996, pages 21.

Gerchunoff, P. and Cetrangolo, O (s/d) "Reforma economica y estabilización en democracia política", mimeo, s/d.

Gowa, Joanne (1983) Closing the gold window: domestic politics and the end of Bretton Woods (Ithaca: Cornell University Press).

Haggard S. and Kaufman R. (1990) "The political economy of inflation and stabilization in middle-income countries" PRE Working Paper 449, World Bank, June 1990.

Hoffmaister A. and Vegh C (1996) "Disinflation and the Recession-Now-Versus-Recession-Later Hypothesis: Evidence from Uruguay" IMF Staff Papers, June 1996

IMF (1995), Argentina, Recent Economic Developments, 1995

IMF (1998), Argentina, Recent Economic Developments, 1998

Kiguel, Miguel (1994) "Exchange Rate Policy, the Real Exchange Rate, and Inflation: Lessons from Latin America", Cuadernos-de-Economia; 31(93), August 1994, pages 229-49.

Kiguel, Miguel and Liviatan N. (1992) "The Business Cycle Associated with Exchange Rate-Based Stabilization" World Bank Economic Review, May 1992

Kirshner, Jonathan (1995). Currency and Coercion (Princeton: Princeton University Press).

Klein, Michael W. and Marion, Nancy P (1994), "Explaining the Duration of Exchange-Rate Pegs", National Bureau of Economic Research Working Paper: 4651, February 1994, pages 21.

Krugman, Paul (1979) "A Model of Balance-of-Payments Crises." Journal of Money, Credit, and Banking; 11(3), Aug. 1979, pages 311-25.

Krugman, P. and Taylor, L. (1978) "Contractionary Effects of Devaluation", Journal of

International Economics, Vol 8. 1978.

Laban, Raul and Sturzenegger, Federico (1994a) "Distributional Conflict, Financial Adaptation and Delayed Stabilizations" *Economics-and-Politics*; 6(3), November 1994, pages 257-76.

Laban, Raul and Sturzenegger, Federico (1994b) "Fiscal Conservatism as a Response to the Debt Crisis." *Journal-of-Development-Economics*; 45(2), December 1994, pages 305-24

Lewis-Beck M. and Rice T. (1992) "Forecasting Elections", Congressional Quarterly Press, Washington D.C., 1992

Little, I., Scitovsky, T. and Scott, M. "Industry and Trade in Some Developing Countries", 1970.

Liviatan, N. (1993) "Proceedings of a conference on Currency Substitution and Currency Boards." World Bank Discussion Paper 207, October 1993

Maier, Charles (1987) *In Search of Stability: Explorations in Historical Political Economy* (Cambridge: Cambridge University Press).

Mundlak Y, Cavallo D. and Domenech R. (1989) "Agriculture and Economic Growth in Argentina, 1913-1984". International Food Policy Research Institute, Research Report 76.

Murillo, Maria Victoria (1997) *From Populism to Neoliberalism: Labor Unions and Market-Oriented Reforms in Argentina, Mexico, and Venezuela*, Ph.D Diss. Department of Government, Harvard University.

Odell, John. *U.S. international monetary policy: markets, power, and ideas as sources of change* (Princeton: Princeton University Press, 1982).

Ostiguy, Pierre (1992) *Los Capitanes de la Industria: Grandes Empresarios, Politica, y Economia en la Argentina de los Anos Ochenta* (Buenos Aires: Legasa)

Perotti, Roberto (1992)

Reca, Lucio (1995)

Rodriguez C. A. (1982) "The Argentine Stabilization Program of December 20th" *World Development*, September 1982.

Rodriguez, Carlos Alfredo (1993) "Money and Credit under Currency Substitution", *International Monetary Fund Staff Papers*; 40(2), June 1993, pages 414-26.

Rodrik, Dani (1993). "The Positive Economics of Policy Reform." *American Economic Review*, v83, n2, May 1993, pp. 356-61.

Schadler S., M. Carkovic, A. Bennett and R. Kahn (1993) "Recent Experiences with Surges in Capital Inflows" *Occasional Paper 108*, IMF, Washington DC, 1993.

Schamis Hector E. (1991) "Reconceptualizing Latin American Authoritarianism in the 1970s: From Bureaucratic-Authoritarianism to Neoconservatism," *Comparative Politics* 23, 2; January.

Schamis, Hector E. (1999). "Distibutional Coalitions and the Politics of Economic Reform in Latin America," *World Politics*, January 1999.

Tornell, Aaron and Velasco, Andres (1995) " Money-Based Versus Exchange Rate-Based Stabilization With Endogenous Fiscal Policy." National Bureau of Economic Research Working Paper: 5300, October 1995

Williamson, John (1991) "Advice on the Choice of an Exchange Rate Policy", in Claassen,-Emil-Maria, ed. *Exchange rate policies in developing and post-socialist countries*. An International Center for Economic Growth Publication, San Francisco: ICS Press, 1991, pages 395-403.

Williamson, J. (1994) "Estimating equilibrium exchange rates" Institute for International Economics, Washington DC, 1994.

World Bank (1988) "Argentina, Industrial Sector Study", April 11, 1988, Industrial Development Division, World Bank

World Bank (1993) "Argentina, Public Finance Review. From Insolvency to Growth", February 11, 1993 Country Department IV, World Bank.

**TABLE 1 PRESIDENTS AND MINISTERS OF THE ECONOMY**

Arturo Frondizi, May 1958	Donato del Carril, May 1958 Alvaro Alsogaray, June 1959 Roberto Alemann, April 1961
Jose M. Guido, March 1962	Coll Benegas, Jan. 1962; Jorge Wehbe, March 1962 Federico Pinedo, April 1962; A. Alsogaray, May 1962 E. Mendez Delfino, December 1962 J.M. Martinez de Hoz, May 1963
Arturo Illia, October 1963	Eugenio Blanco, December 1963 Juan C. Pugliese, August 1964
Juan C. Ongania, June 1966	Jorge Salimei, June 1966 A.Krieger Vasena, January 1967 J.M.Dagnino Pastore, June 1969
Roberto Levingston, June 1970	C.Moyano Llerena, June 1970 Aldo Ferrer, October 1970
Alejandro Lanusse, March 1971	Juan Quilici, June 1971 Cayetano Licciardo, October 1971 Jorge Wehbe, October 1972
Hector Campora, May 1973 Raul Lastiri, July 1973	Jose Gelbard, May 1973

Juan D. Peron, October 1973  
Isabel Peron, July 1974

Alfredo Gomez Morales, October 1974  
Celestino Rodrigo, Junio 1975  
Pedro Bonanni, July 1975  
Antonio Cafiero, Aug.1975  
Emilio Mondelli, Febr.1976  
J.Martinez de Hoz, March 1976

Jorge Videla, March 1976

Roberto Viola, March 1981

Lorenzo Sigaut, March 1981

Leopoldo Galtieri, November 1981

Roberto Alemann, December 1981

Reynaldo Bignone, July 1982

J.Dagnino Pastore, July1982  
J.Wehebe, August 1982

Raul Alfonsin, Diciembre 1983

Bernardo Grinspun, Diciembre 1983  
Juan Sourrouille, Febrero 1985  
J.C. Pugliese, March 1989  
J. Rodriguez, Mayo 1989  
Miguel Angel Roig, Julio 1989  
Nestor Rapanelli, Julio 1989  
Erman Gonzalez, Diciembre 1989  
Domingo Cavallo, Enero 1991  
Roque Fernandez, Julio 1996

Carlos Menem, Julio 1989

## TABLE 2 EXCHANGE RATE REGIMES

### A. ISI PERIOD

- Important devaluation in 1959
- 1960-1961 dirty float
- In 1961, fixed exchange regime.
- 1962 first quarter: important devaluation.
- First quarter 1962-first quarter 1967; flexible exchange rate under different governments
- First quarter 1967-first half 1970; strong initial devaluation and then fixed exchange rate.
- From mid-1970 to the first quarter of 1973; multiple exchange rates with a changing mix of commercial and financial rates for different transactions.
- Second quarter 1973-last quarter 1974; fixed exchange rate.
- Strong devaluation in the last quarter of 1974
- Another strong devaluation in the second quarter of 1975 (el "Rodrigazo") (transition towards the inflationary period)

### B. INFLATIONARY PERIOD

- March 1976-December 1978; passive crawling peg
- December 1978-first quarter of 1981; pre-announced sliding peg ("Tablita"). The system collapsed in 1981
- First quarter 1981-June 1985; floating exchange rate/ adjusted passively to inflation, until Austral Plan of June 1985.
- June 1985-first quarter of 1991; four different attempts at fixing or controlling to some degree the exchange rate (Austral and Primavera plans during the Alfonsin Administration and the programs implemented by Rapanelli and Erman Gonzalez during the Menem Administration), all of them ending in episodes of sharp devaluations and very high inflation.

### C. STABILITY

- March 1991 to the present; the "Convertibility Plan", which pegged the peso to the dollar one-to-one, and transformed the Central Bank into a quasi currency board.

**TABLE 3 FISCAL COST OF PRIVATE SUBSIDIES (million of US\$)**

	1987	1988	1989	1990
Industrial Promotion	792.8	743.8	868.0	1123.0
Procurement	660.0	870.0	590.0	734.0
Export Promotion <u>589.7</u>	<u>701.0</u>	<u>693.0</u>	<u>632.0</u>	
<b>TOTAL</b>	<b>2042.5</b>	<b>2314.8</b>	<b>2151.0</b>	<b>2489.0</b>

Source: World Bank, 1993 (Tables A1.1.7 and A1.1.12, from Annex 1.1)

**TABLE 4 DOLLARIZATION AND EXTERNAL DEBT**

	1991	1992	1993	1994	1995	1996	1997
1. Banking System (stock; end period)							
-Dollar deposits (mill.pesos)	6583	10842	17532	23555	23590	28405	33475 a/
-Dollar deposits(% M3)	32.9	33.6	36.6	41.9	43.7	43.9	43.3 a/
-Credit in dollars (stock; mill.pesos)							
-Private sector	9198	15488	20945	27382	28523	31684	37992
-Public sector	...	4010	3270	3429	3544	4432	5230
-Total	...	19498	24215	30811	32067	36116	43222
-Credit in dollars (% credit)	50.6	54.2	53.1	58.9	61.2	62.7	64.3
2. Foreign Direct Investment							
-Flows (million US\$)	...	4044	2556	3066	4179	...	...
-Accumulated investment	...	14829	16476	20401	24630	...	...
3. Bond Issues, Private							
-Flows (million .US\$)	265	1230	3902	2580	952	2539	...
4. Public Debt (Stock; Billion of US\$)							
-Local Currency	1.2	0.7	5.9	7.3	6.7	10.7	...
-Foreign Currency	57.2	58.4	61.9	72.2	83.0	89.0	...
-External Debt	57.2	57.4	60.3	69.6	68.2	72.5	...
-Internal Debt	0.0	1.0	1.6	2.6	14.8	16.5	...
-Total	58.4	59.1	67.8	79.5	89.7	99.7	109.4.

a/ End of third quarter



**TABLE 5 GRANGER-CAUSALITY TESTS: REAL WAGES AND NOMINAL EXCHANGE RATE**

Pairwise Granger Causality Tests

Sample: 1955 1997 ; Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
REAL WAGE does not Granger Cause EXCHANGE RATE	40	0.18141	0.83487
EXCHANGE RATE does not Granger Cause REAL WAGE		0.59682	0.55607

Sample: 1955 1976; Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
REAL WAGE does not Granger Cause EXCHANGE RATE	20	7.08484	0.00682
EXCHANGE RATE does not Granger Cause REAL WAGE		12.9346	0.00054

Sample: 1977 1997; Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
REAL WAGE does not Granger Cause EXCHANGE RATE	20	0.15172	0.86053
EXCHANGE RATE does not Granger Cause REAL WAGE		0.91526	0.42165

## TABLE 6 GRANGER-CAUSALITY TESTS: DEVALUATION AND RELATIVE PRICES

### Pairwise Granger Causality Tests

Sample: 1950 1997

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EXCHANGE RATE does not Granger Cause WORLD REAL AGRICULTURAL PRICES	35	0.32409	0.72568
WORLD REAL AGRICULTURAL PRICES does not Granger Cause EXCHANGE RATE		3.42192	0.04585
RELATIVE PRICES AGRIC/NON AGRICULT. does not Granger Cause WORLD REAL AGRICULT. PRICES	35	1.00529	0.37793
WORLD REAL AGRICULT. PRICES does not Granger Cause RELATIVE PRICES AGRIC/NON AGRICULT.		3.34404	0.04886
RELATIVE PRICES AGRIC/NON AGRICULT. does not Granger Cause EXCHANGE RATE	35	0.04252	0.95843
EXCHANGE RATE does not Granger Cause RELATIVE PRICES AGRIC/NON AGRICULT.		0.90735	0.41438

### Pairwise Granger Causality Tests

Sample: 1950 1978

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EXCHANGE RATE does not Granger Cause WORLD REAL AGRICULTURAL PRICES	17	9.60543	0.00323
WORLD REAL AGRICULTURAL PRICES does not Granger Cause EXCHANGE RATE		3.57696	0.06047
RELATIVE PRICES AGRIC/NON AGRICULT. does not Granger Cause WORLD REAL AGRICULT. PRICES	17	1.35804	0.29399
WORLD REAL AGRICULT. PRICES does not Granger Cause RELATIVE PRICES AGRIC/NON AGRICULT.		8.59318	0.00483
RELATIVE PRICES AGRIC/NON AGRICULT. does not Granger Cause EXCHANGE RATE	17	0.10239	0.90346
EXCHANGE RATE does not Granger Cause RELATIVE PRICES AGRIC/NON AGRICULT.		1.83466	0.20174

### Pairwise Granger Causality Tests

Sample: 1978 1997

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EXCHANGE RATE does not Granger Cause WORLD REAL AGRICULTURAL PRICES	19	0.67229	0.52627
WORLD REAL AGRICULTURAL PRICES does not Granger Cause EXCHANGE RATE		1.44112	0.26970
RELATIVE PRICES AGRIC/NON AGRICULT. does not Granger Cause WORLD REAL AGRICULT. PRICES	19	0.47353	0.63242
WORLD REAL AGRICULT. PRICES does not Granger Cause RELATIVE PRICES AGRIC/NON AGRICULT.		1.47752	0.26170
RELATIVE PRICES AGRIC/NON AGRICULT. does not Granger Cause EXCHANGE RATE	19	3.60038	0.05476
EXCHANGE RATE does not Granger Cause RELATIVE PRICES AGRIC/NON AGRICULT.		4.99030	0.02311

## TABLE 7 GRANGER-CAUSALITY: INFLATION AND DEVALUATION

### Pairwise Granger Causality Tests

Sample: 1957:1 1997:4

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
DEVALUATION does not Granger Cause INFLATION	151	183.263	0.00000
INFLATION does not Granger Cause DEVALUATION		6.02627	0.00306

### Pairwise Granger Causality Tests

Sample 1957:1 1978:4

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
DEVALUATION does not Granger Cause INFLATION	77	32.2001	1.0E-10
INFLATION does not Granger Cause DEVALUATION		0.60681	0.54785

### Pairwise Granger Causality Tests

Sample: 1979:1 1997:4

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
DEVALUATION does not Granger Cause INFLATION	74	108.162	0.00000
INFLATION does not Granger Cause DEVALUATION		2.86563	0.06375

## TABLE 8 COINTEGRATION TESTS

Sample: 1957:1 1978:4

Included observations: 72

Test assumption: No deterministic trend in the data

Series: INFLATION DEVALUATION

Lags interval: 1 to 2, 3 to 4, 5 to 6

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.096651	9.638690	19.96	24.60	None
0.031710	2.320127	9.24	12.97	At most 1

\*\* denotes rejection of the hypothesis at 5%(1%) significance level

L.R. test rejects cointegration at 5% significance level

Sample: 1979:1 1997:4

Included observations: 74

Test assumption: No deterministic trend in the data

Series: INFLATION DEVALUATION

Lags interval: 1 to 2, 3 to 4, 5 to 6

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.194188	22.36754	19.96	24.60	None *
0.082736	6.390604	9.24	12.97	At most 1

\*\* denotes rejection of the hypothesis at 5%(1%) significance level

L.R. test indicates 1 cointegrating equation(s) at 5% significance level

**TABLE 9 VOTE FOR THE INCUMBENT, INFLATION AND UNEMPLOYMENT**

LS // Dependent Variable is VOTINCUMB

Date: 07/02/98 Time: 12:27

Sample: 1 9

Included observations: 9

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INFLATION	-0.005573	0.001872	-2.976666	0.0409
UNEMPLOYMENT	-0.586350	0.463660	-1.264611	0.2747
C	46.04942	4.724196	9.747567	0.0006
DUM1	9.242833	4.140635	2.232226	0.0894
DUM3	-10.25139	5.941378	-1.725423	0.1595
R-squared	0.692087	Mean dependent var	39.93333	
Adjusted R-squared	0.384174	S.D. dependent var	4.800781	
S.E. of regression	3.767392	Akaike info criterion	2.952947	
Sum squared resid	56.77297	Schwarz criterion	3.062516	
Log likelihood	-21.05871	F-statistic	2.247672	
Durbin-Watson stat	2.903164	Prob(F-statistic)	0.226044	

Chart 1

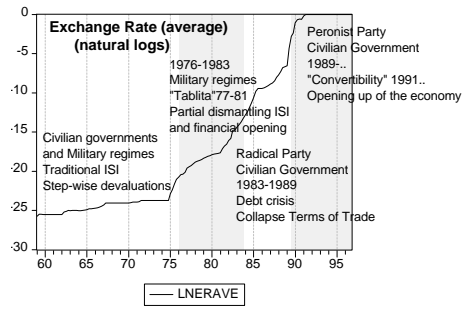


Chart 2

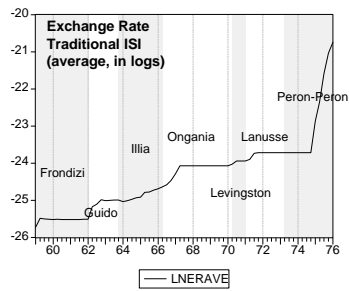


Chart 3

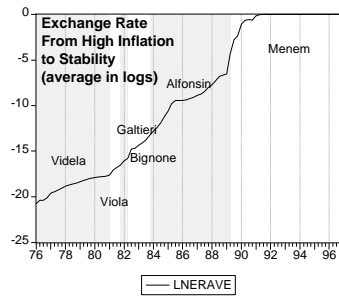


Chart 4

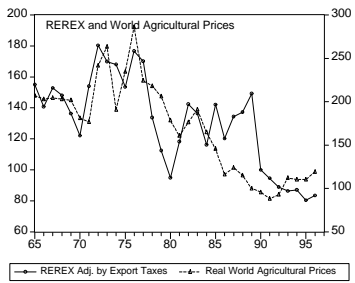


Chart 5

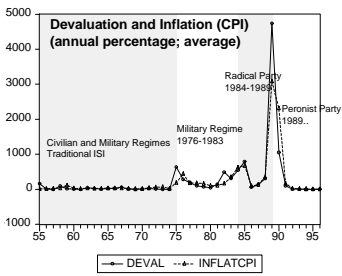


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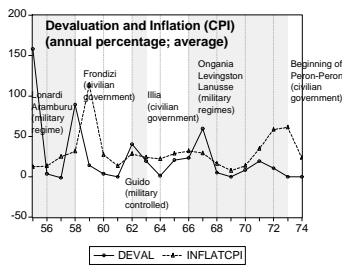


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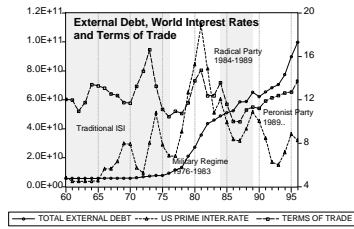


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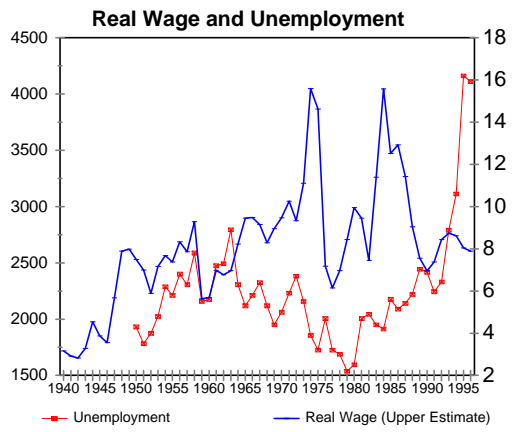


Chart 9

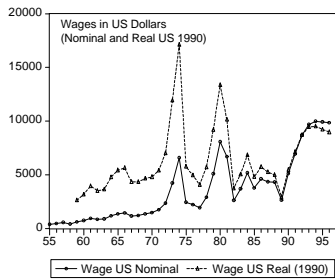




Chart 10

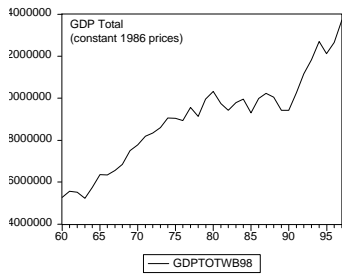


Chart 11

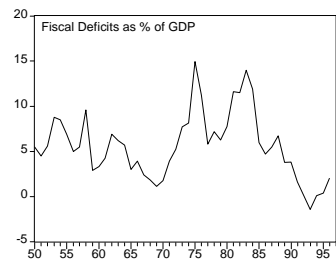


Chart 12

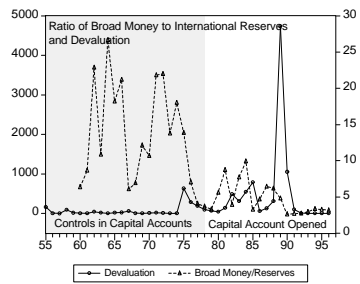


CHART 13  
 Period 1955-1997  
 Response to One S.D. Innovations  $\pm 2$  S.E.

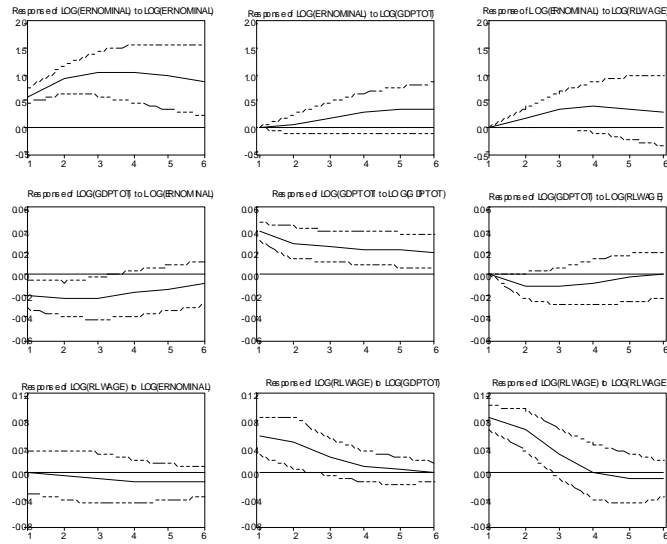


CHART 14 A  
 Period 1955-1977  
 Response to One S.D. Innovations  $\pm 2$  S.E.

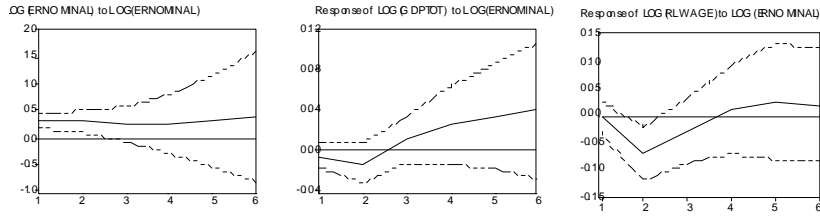


CHART 14 B  
 Period 1978-1997  
 Response to One S.D. Innovations  $\pm 2$  S.E.

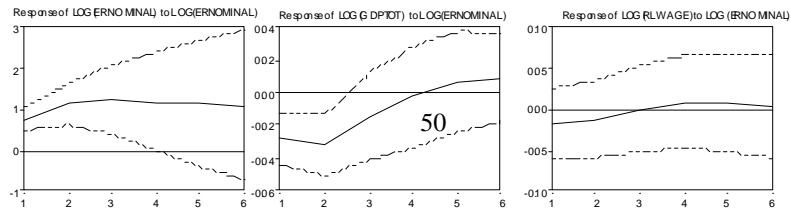


CHART 15  
 Response to One S.D. Innovations  $\pm 2$  S.E.

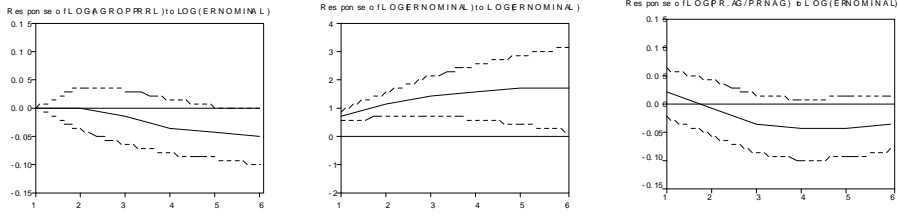
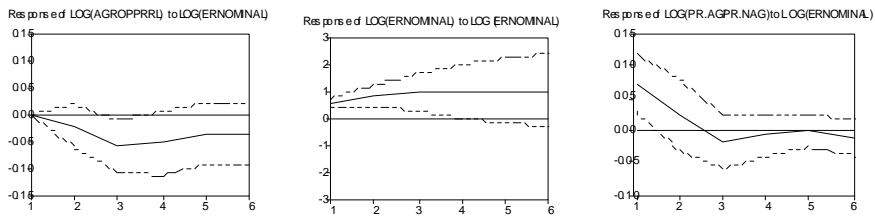
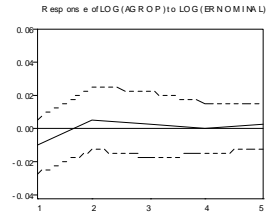
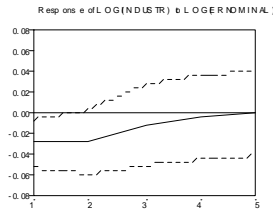
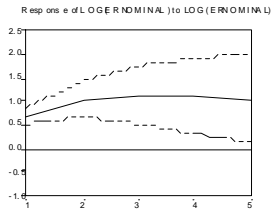


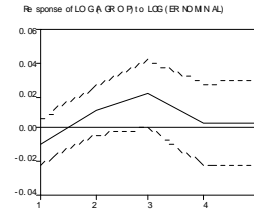
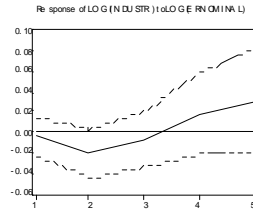
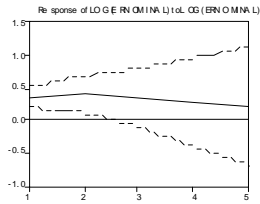
CHART 16  
 Period 1977-1996  
 Response to One S.D. Innovations  $\pm 2$  S.E.



**CHART 17**  
Response to One S.D. Innovations  $\pm 2$  S.E.



**CHART 18 A**  
Period 1965-1977  
Response to One S.D. Innovations  $\pm 2$  S.E.



**CHART 18 B**  
Period 1978-1996  
Response to One S.D. Innovations  $\pm 2$  S.E.

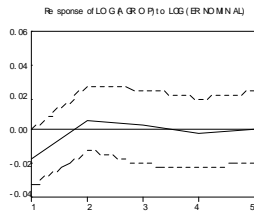
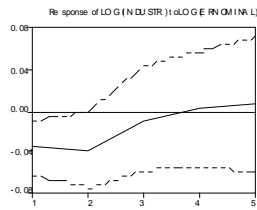
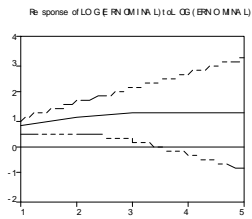


CHART 19  
 Period 1959-1978  
 Response to One S.D. Innovations  $\pm 2$  S.E.

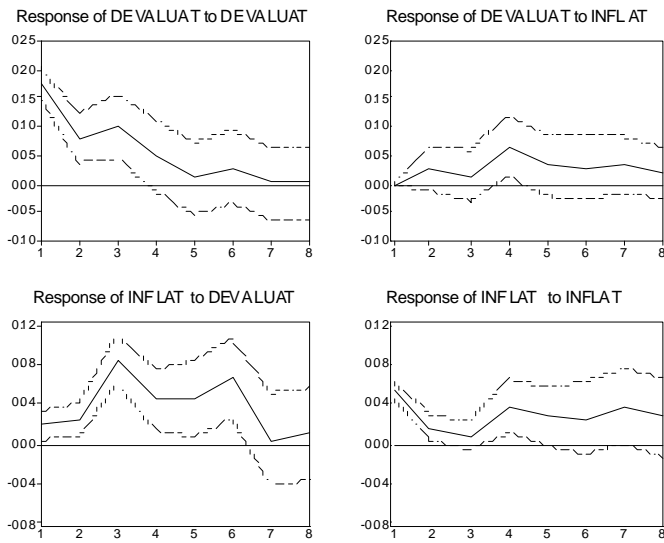


CHART 20  
 Period 1979-1997  
 Response to One S.D. Innovations  $\pm 2$  S.E.

