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STABILIZATION AND ADJUSTMENT POLICIES AND PROGRAMMES

COUNTRY STUDY

12
ARGENTINA

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POLICIES AND PROGRAMMES

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COUNTRY STUDY: **ARGENTINA**

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WORLD INSTITUTE FOR DEVELOPMENT ECONOMICS RESEARCH
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PREFACE BY THE DIRECTOR

This monograph is part of a series being published by WIDER on the experience of developing countries with stabilization and adjustment programmes in the 1970s and 1980s. Each study analyzes the package of policies implemented by a specific country; its relations with the IMF and World Bank; the effects of the policies on production, employment, the balance of payments and social welfare; and what other policies might have been followed instead.

The intention of the series is to assist developing countries to devise adjustment policies that would, while accomplishing desirable adjustment and growth objectives, simultaneously remain politically viable in the particular country settings studied.

For this purpose it was thought desirable to explore policy alternatives to the adjustment programmes being implemented. Built into the design of the series, therefore - and constituting indeed its special feature - is the requirement that each study include a 'counterfactual' exercise to illustrate the effects of alternative policies. Utilizing econometric models adapted or specifically developed for each country, the probable effects of alternative policy packages are estimated; the object was to see how far the balance-of-payments adjustment and growth goals of a particular programme might have been achieved at a possibly lower social cost with a different policy mix.

Each country study is written by an independent scholar and expert in the relevant country. First drafts of the studies in this series were discussed at the WIDER conference on stabilization and adjustment policies in developing countries which was held 19-22 August, 1986 in Helsinki. Each study has been reviewed by WIDER's research advisers for the project, Professors Gerry Helleiner and Lance Taylor, and revised substantively by the author as necessary; subsequent editing has been conducted under the overall supervision of Mr Robert Pringle, Senior Fellow, who serves also as editorial adviser on WIDER publications.

A companion volume by Professor Taylor summarizing the experience of the countries surveyed will draw broader implications for the theory and practice of stabilization and adjustment policies; this volume will be published by Oxford University Press. The individual country studies in this series will subsequently be grouped into separate volumes, also for eventual publication by Oxford University Press.

Lal Jayawardena
Director
March 1987

Argentina has had successive stabs at stabilization since the mid-1970s. Throughout most of this time it has had to wrestle with acute problems of hyperinflation, capital flight, rising external debt, a stop-go pattern of output, and for a long time a heavily depressed level of real wages. It has tried orthodox stabilization policies, a more monetarist approach, and what can perhaps be described as 'ad hocery'.

In June 1985 these efforts culminated in the Austral plan, a type of shock treatment to change inflation expectations. Essentially, this consisted of a price freeze, tight control of the monetary and fiscal aggregates, and a currency reform.

Initially, the results were encouraging. Inflation fell, output recovered and the trade balance was in surplus. But short-run success will be converted into long-run stability, the authors argue, only if international economic conditions prove helpful and, in particular, if the burden of servicing Argentina's heavy external debt is eased by an adequate flow of fresh credits.

I.   INTRODUCTION[*]

The purpose of this paper is to investigate the effects on the structure and functioning of the Argentine economy of the programmes and policies implemented in the last ten years in an effort to achieve short-run stabilization.

The work is organized in four sections. The first describes the main economic policies implemented in Argentina over the past decade; it is aimed at readers unfamiliar with the country's recent economic experience. The second section provides a long-run view of the evolution of the Argentine economy.

The third interprets the workings and structural features of the Argentine economy in terms of stylized facts. In the last section, the Austral plan is analyzed. Appended to the paper is the algebra used in the third section.

II.   SHORT-RUN ECONOMIC POLICY[1]

1.   The failure of traditional orthodoxy (1976-79)

As explained more fully later, 1975 was a crucial turning point for the Argentine economy. By the beginning of 1976 the economy was characterized by a runaway fiscal deficit, external bottlenecks caused by both a current account deficit and capital flight, and a rate of increase in domestic prices approaching hyperinflation. In response, the military government in 1976-77 signed two successive agreements with the IMF. Structural reforms were also initiated by liberalization in two areas: the financial system and external trade.

Stabilization policy centered on effecting a radical change in relative prices. Between March and May 1976 the nominal exchange rate for imports rose by 162 per cent, state controlled prices by 137 per cent, industrial prices by 144 per cent and consumer prices by 106 per cent. The increase in nominal wages was a mere 20 per cent. Real wages thus fell markedly and remained depressed until 1979. The increase in the real exchange rate and the reduction in real wages led to a redistribution of income from wage earners to profits. This in turn led to a reduction in aggregate demand which led to lower imports, reducing pressure on the balance of payments.

In 1977 the program had been in effect for a year and government officials were highly optimistic. The balance of payments outlook was excellent: the trade surplus had reached US$ 880 million in 1976 and the current account suprlus US$ 650 million. In the meantime, higher investment and exports led in the last months of 1976 to an increase in overall economic activity.

Inflation, however, had not been brought under control. In the last four months of 1976 price rises accelerated, reaching an average of 10 per cent a month as against 4.1

per cent in the third quarter. Inflation became the central preoccupation of stabilization policy. Following a brief experiment with price controls, the last quarter of 1977 saw monetary policy become the main tool of anti-inflationary strategy. This was also the quarter of the reform of the financial sector, which in McKinnon's terms was 'de-repressed': interest rates were set free to fluctuate according to market forces, and quantitative constraints on credit were eliminated. This had far-reaching effects.

Prior to financial reform, the government had not used monetary policy as an active instrument of economic adjustment. But once persistent inflation had been diagnosed to be the consequence of excessive money creation, the rate of growth of the monetary aggregates was reduced, leading to a sudden sharp drop in the real money supply. Given the rising nominal demand for credit, the decline in the supply of real money provoked a sharp increase in nominal interest rates from a monthly average of 0.4 per cent in the third quarter of 1977 to 4.6 per cent in the fourth quarter. Higher interest rates in turn led rapidly to the contraction of aggregate demand and production. Total investment dropped by 8.5 per cent in the fourth quarter of 1977, and the recession extended into the first quarter of 1978.

Although the increase in nominal interest rates had no disinflationary impact, it was effective in securing foreign capital attracted by the possibility of earning higher returns in Argentina than elsewhere. The contraction in domestic credit was thus partially offset in 1978 by an inflow of foreign capital, which jeopardized control of the money supply. Indeed, traditional monetarism in the context of financial liberalization showed little success in the short run: the main features of the Argentine economy following a year of stabilization were recession, higher inflation and speculative capital inflows. The failure of traditional monetarism opened the way for a new anti-inflationary policy which was put into practice at the beginning of 1979.

2.   The failure of the new orthodoxy: active crawling peg (1979-81)

In December 1978 a new stabilization plan was announced. It centred on predetermining the trend in the exchange rate over a given period of time. The exchange rule established that the peso would be devalued monthly at a rate diminishing progressively from 5.25 per cent in February 1979 to zero in March 1981. The plan assumed that, from that point on, domestic inflation would be identical with the external rate.

The exchange rule was complemented by rules for public prices and domestic money supply consistent with the devaluation target. Wages were exposed to a much higher degree of market determination as collective agreements by economic sectors were replaced by decentralized negotiations at the firm level. Various import restrictions were lifted and virtually no controls were placed on the foreign exchange market. The stabilization plan assumed that by fixing in advance the exchange rate and public prices, inflationary expectations would diminish. If this mechanism failed, import competition would discipline 'inflation-biased' firms. It was expected that liberalization and the integration of the domestic capital and goods markets into the world market would allow short and long-run targets to converge.

The theoretical framework for all these policy measures was provided by a monetary approach to the balance of payments. Under the assumptions used in this approach, the pre-announced rate of devaluation appeared to be an efficient stabilization strategy. Disinflation could be achieved with no cost in terms of employment or production. The law of one price and capital mobility would guarantee that domestic inflation and the nominal interest rate would both decrease in accordance with a declining rate of devaluation which was known with certainty by economic agents. The domestic real interest rate would come to equal

the international rate, and balance-of-payments performance would be determined by domestic monetary policy.

The effects of the experiment were not up to the expectations of its authors. First, the law of one price did not hold in this instance: the crawling peg devaluation rule was very powerful in influencing the prices of tradable goods, but not of wages and non-tradable goods. Consequently, the domestic rate of inflation was systematically higher than the one predicted by the exchange rate rule and by external inflation. In 1979 the peso was devalued by 63 per cent while the inflation rate was 159.5 per cent (CPI). In 1980 devaluation was 24.3 per cent while prices rose by 100.8 per cent. Secondly, the nominal domestic interest rate was higher than predicted because the risk premium - defined as the difference between nominal domestic interest rates and the cost of external credit - showed an increasing trend. In effect, as the lagging exchange rate led to an increasing current account deficit and to a widespread belief that the exchange rate rule would be broken, the expectation of an 'unexpected' devaluation raised exchange risk and nominal interest rates.

The lack of convergence between the actual and expected values of the exchange rate induced cumulative and explosive disequilibria which were to change profoundly the country's economic structure. The overvaluation of the peso at a time when the economy was being opened up to foreign capital and goods markets provoked a sharp decrease in net exports of goods and services, mainly as a consequence of rising imports. Imports as a percentage of GDP, which averaged 7.3 per cent in 1970-78, reached the hitherto unheard-of level of 15 per cent in 1980-81. In addition, monetary policy in 1979 at the beginning of the plan widened the spread between the internal and external cost of credit, resulting in massive capital inflows and a significant increase in reserves. A short-lived illusion of external solvency arose. As the exchange rate rule began to lose its credibility, the flow of speculative capital was reversed and previously

accumulated foreign exchange headed for more secure shores. One result of this reversal was that net external indebtness jumped from $ 6,500 million in December 1978 to $ 19,500 million at the end of 1980 (see table 5).

In order that the subsequent evolution of the economy is understood, it needs to be stressed that the aggregate figures for capital flows hide very different patterns of behaviour on the part of public and private sector actors respectively. Both sectors showed net capital inflows in 1979. In 1980, however, Argentinians lost confidence in the active crawling peg policy and began to buy up foreign exchange. The public sector compensated for this by stepping up its external borrowing, which in 1980 increased by 45 per cent. The increase in the public external debt during the first quarter of 1981 was almost equal to that of the entire previous year. It was insufficient, however, to compensate for the flight of private capital, and the active crawling peg policy had to be abandoned. In February 1981 the government was forced to decree an unheralded 10 per cent devaluation in an effort to halt the depletion of Central Bank reserves. This measure was utterly useless in correcting the disequilibria and the experiment with the 'new orthodoxy' came to an end. Its consequences, however, were just beginning to be felt.

3.   The chaotic adjustment (1981-83)

The three years after the crisis generated by the active crawling peg policy were chaotic in that the external and internal disequilibria produced by the active crawling peg experience were not tackled with a set of consistent economic policies. At the beginning of 1981 the economy showed a large current account deficit, a sharp decline in overall activity, and a financial crisis. From that point on inflation accelerated rapidly.

In a context of high political instability, successive economy ministers implemented isolated measures in response

to the problems which seemed most urgent at a given moment. Hence 1981 was the year of the devaluation, 1982 the year of the 'socialization' and 'nationalization' (by a fiscal bail-out) of private liabilities, and 1983 the year of wage increases in response to the strong pressure exerted by unions on a decadent military government about to give way to democracy.

A similarly chaotic profile was displayed in the negotiations with external banks during this period over foreign debt payments. After the Malvinas War, foreign credit was cut and arrears in external payments accumulated. More than US$ 3,500 million fell due. To resolve this situation, a stand-by arrangement was signed with the IMF in December 1982, the first since 1977. The targets established in the Letter of Intent were not fulfilled, however. It was clear by mid-1983 that the stabilization plan had failed. And this failure increased the economic uncertainty attending the arrival of the new democratic government.

Three sets of policies implemented during this period are particularly important for understanding the subsequent evolution of the Argentine economy: those concerning the financial sector, relative prices and private external debt respectively.

With regard to prices, the authorities favoured policies aimed at correcting relative prices over those aimed at controlling inflation. The first step was taken in 1981 when a strong increase in the real exchange rate was induced and thereafter maintained at a high level (see table 1). Given the structural features of the inflation process, the devaluation accelerated inflation from 100 per cent in 1980 to a rate of 343 per cent in 1983 (see table 1). The inflationary process was also fueled during 1982-83 by increases in real public prices and wages.

In the financial system, policy was conditioned by the growing budget deficit and by the explosive increase in

private sector indebtedness to domestic banks. With the
onset of the external crisis, public confidence in the
exchange rate policy deteriorated and savers shifted
peso-dominated assets into foreign currency. As a
consequence, the demand for money fell rapidly and the banks
were obliged to call in outstanding credits to their
borrowers to try to make up for their depleted deposits.
Enterprises, however, were for the most part unable to make
good on their liabilities. Many were experiencing strong
liquidity constraints resulting from the recession and heavy
competition from abroad. As a result, various financial
institutions (among them the top-ranked domestic bank) went
into insolvency.

In order to avoid a breakdown of the financial system,
the Central Bank decided to back the credit porfolios of
banks by increasing its allotment of rediscounts to them. In
this way, the contraction of the monetary base caused by the
outflow of foreign exchange from the private sector was
offset by the increase in rediscounts. On the other hand,
the fiscal gap widened as devaluation increased the burden
of interest payments on the external public debt. To avoid
crowding out the private sector in the credit market, the
government began to finance its deficit by issuing money,
further accelerating the expansion of the monetary base and
providing individuals buying foreign currency with the
necessary liquidity to do so. Indeed, many enterprises took
advantage of this situation by substituting domestic for
external credit; an activity which helps to explain the
explosive growth in private domestic indebtness which took
place during this period. This could not endure. Given the
high interest rates, domestic credit and its counterpart -
the rediscounts - accelerated explosively.

In April 1982 the foreign exchange market was placed
under strict control in an effort to stop capital flight. In
the second semester of the year, a new financial reform was
enacted which had as its main objective refinancing the
local currency indebtness of the private sector on longer

terms and a substantially lower real interest rates than had
hitherto prevailed. To this end, the Central Bank introduced
a rediscount facility called the Prestamo Basico, which was
offered to financial institutions for the rescheduling of
private sector debt. At the same time, ceilings were imposed
on short-term deposit rates. Since a deliberate effort was
then underway to curb inflation (among other measures by a
large devaluation of the peso decreed on July 5 1982), real
interest rates became highly negative. By way of the 'Fisher
effect', private liabilities fell rapidly as a result of the
fiscal deficit.

Private liabilities were thereby in part 'socialized':
they were involuntarily paid for by those who had domestic
assets in their portfolios, while the fiscal gap was largely
financed by the inflationary tax. As a consequence of
financial reform, a strong financial disintermediation
ensued which would put significant constraints on future
stabilization policies.

The third set of policies which needs to be highlighted
concerned private external debt and resulted in its partial
nationalization. In order to alleviate the critical
situation facing the external sector, the Central Bank
introduced during 1981-82 a system of exchange-rate
guarantees for private sector loans. The system consisted
basically of a forward contract under which the Central Bank
agreed to deliver foreign exchange at a specified future
date at a currently determined price. The system was
available only for private firms. Foreign credits
outstanding on 1 June 1981, as well as new ones, could
qualify for the guarantee if renewed or contracted for at
least 540 days. The contract was very profitable for debtors
because it underestimated the future devaluation rate.
Indeed, the mechanism aimed at subsidizing the cost of
external credit. An estimated US$ 5.000 million in exchange
rate guarantees was contracted under this scheme during
1981. To the same end, a shorter-term forward contract known
as the 'swap' was introduced in 1982.

Since, when exchange guarantee contracts fell due, the Central Bank lacked sufficient reserves to fulfil the promises it has assumed, the government agreed to cancel the debt assumed by the private sector at the subsidized exchange rate established in the contract and took over the foreign liabilities of the private sector. The state's assumption of these liabilities provoked a sharp deterioration in the budget, since from that point on the government had to pay interest on this debt.

By the end of the chaotic adjustment period, then, the inflation rate was accelerating, the fiscal deficit was out of control, the financial sector was experiencing an acute process of disintermediation and the stand-by arrangement with the Fund had been broken.

So much for the immediate background to the events leading up to the Austral plan and the present phase of policy-making in Argentina. Before turning to this, however, we take a longer-term look at the two decades either side of the turning point in 1975.

III.   A LONG-RUN VIEW

The ten years 1964-74 were a period of growth, industrialization and moderate inflation. By contrast 1975-84 was a period of stagnation, de-industrialization, high inflation, erratic evolution of relative prices and dramatic foreign indebtness. This section compares the evolution of the Argentine economy during the two decades, highlighting the effect of the inappropriate economic policies enacted between 1975 and 1984 in inducing deep structural changes reflected in the indicators just mentioned.

1.   Inflation and relative prices

Inflation during the second decade was much higher than in 1964-74. Between 1964 and 1974 the average annual rate of inflation was 30.5 per cent (table 1), with a peak of 60.3 per cent in 1973 and a trough of 7.5 per cent in 1969. By contrast, inflation in 1975-84 averaged 248 per cent annually, soaring to 626.7 per cent in 1984 and never dropping below the 100.8 per cent registered in 1980. Thus, the highest annual rate of inflation recorded during 1964-74 was lower than the lowest rate for the subsequent decade. The year 1975 represents a breaking point. The dramatic jump in the inflation rate during that year was due to a policy shock: a 100 per cent devaluation largely eliminated by real wage resistance. The devaluation was followed by a nominal wage increase of equal magnitude, so that real wages and the real exchange rate varied little in relation to previous values. The inflation rate, however, rose from 24.2 per cent in 1974 to 182.8 per cent in 1975 making the June 1975 devaluation shock the starting point of a decade of annual inflation rates topping 100 per cent.

The two decades differ markedly in the evolution of key relative prices such as real wages and the real exchange rate. Between 1964 and 1974 real wages rose by 20 per cent, peaking in 1974 as a result of the incomes policy

implemented by the Peronist government (table 1). During the
following decade wage earners' incomes showed very sharp
variations. The dramatic changes in relative prices which
took place between 1975 and 1984 resulted from the
successive stabilization policy packages of the period. The
maxi-devaluation of June 1975 provoked a small reduction of
6.7 per cent in real wages. In 1976, with a new
stabilization program under way, wages fell more
precipitously, declining by 30 per cent relative to their
1973 levels. Thereafter, until the end of 1978, the real
incomes of wage earners showed no major changes. The 'active
crawling peg' policy of 1979-80 corresponded to a persistent
increase in real wages, the counterpart of a revaluation of
the real exchange rate. This rising trend was reversed in
1981-83 when massive devaluations took place, only to emerge
again during the last six months of the military
administration (June-December 1983), which corresponded with
a phase of increasing real wages which extended into the
first year of the democratic government. Indeed, the average
real wage, in 1984, had regained its 1974 level.

The exchange rate in real terms varied erratically
between 1975 and 1984 (table 1). After the exchange rate hit
a high in 1976-77, government policy induced a drop which
continued until early 1981. Thereafter, a succession of
maxi-devaluations, followed by passive indexation of the
nominal exchange rate, drove up the real exchange rate from
its 1980 nadir to the peak levels of 1976-77.

2.   Real sector and growth

Comparing economic growth between the two decades
reveals no less striking a contrast than in inflation.
Between 1964 and 1974 the rate of GDP growth was positive
every year, and the average annual rate for the period was
4.4 per cent (table 1). Industry grew at a 6.7 per cent
average annual rate (table 2). Between 1975 and 1984, by
contrast, the average annual rate of GDP growth was 0.4 per
cent, and negative growth was recorded in five of the ten

years comprising the decade. Moreover, the industrial sector was undergoing a severe contraction as the economy as a whole stagnated. The average annual industrial growth rate between 1975 and 1984 was a negative 0.7 per cent, years of expansion alternating with years of contraction. The percentage of GDP accounted for by the industrial sector fell from 28.3 in 1974 to 24.7 in 1984 (table 2). In per capita terms GDP fell by 13.4 per cent between 1975 and 1984 while industrial production fell by 23 per cent.

In both decades consumption accounted for an annual average of 79 per cent of GDP though per capita consumption (in absolute terms) was 11 per cent lower in 1984 than in 1974. Similarly, investment as a percentage of GDP stood at 20 per cent in both 1964-74 and 1975-84. Nonetheless, the investment/GDP ratio dropped sharply after 1981, reaching 13 per cent (table 3), the lowest figure since World War II. Domestic investment clearly absorbed a major part of the capital outflow imposed by the adjustment to external disequilibria which began in 1981. There are at least four causes that explain this fact. First, interest on foreign debt weighs heavily in the fiscal deficit because the debt was nationalized. In order to close the fiscal gap, the government reduced its expenditure on capital goods. Second, since there are strong complementarities between public and private investment, the reduction in public expenditure depressed entrepreneurs' animal spirits. Third, as long as there was a rising fiscal deficit, there was an excess government demand for credit. As a consequence, the interest rate began to rise and private investment fell. Fourth, this situation provoked an increment in financial fragility and uncertainty which negatively affects the present value of future profits.

3.   Balance of payments and foreign debt

Economic growth in 1964-74 was consistent with the

favourable external situation. A balance-of-trade surplus
existed for 9 of the 10 years with a deficit only in 1971
(tables 1 and 4). The world commodities price boom in
1972-73, moreover, reversed the trend toward smaller
balance-of-trade surpluses; very favourable terms of trade
from 1972 to 1974 allowed the Argentine economy to
accumulate large trade surpluses. The current account showed
a deficit between 1968 and 1972, but a cumulative surplus
for 1964-74 as a whole.

The most important element in the evolution of the
external sector between 1975 and 1984 was the dramatic
increase in foreign indebtedness. It is rather astounding
that a stagnating economy, self-sufficient in energy,
suffered a 325 per cent increase in real net external debt
from 1974 to 1984 (table 5). Nominal net external debt rose
from US$ 5,359 million in 1974 to US$ 44,155 million in
1984. The ratio of exports to net external debt fell from 73
per cent in 1974 to 18.3 per cent in 1984, while the ratio
of interest payments on the foreign debt to exports rose
from 8.5 per cent in 1974 to 70.5 per cent in 1984.

The increase in external indebtness cannot be explained
just by trade account disequilibria. Capital flight and
current account deficits – the latter resulting mainly from
a rise in imports, interest payments, and the expenditures
of Argentines travelling abroad – together boosted the
foreign debt. Indeed, the trade account registered an
average annual surplus of US$ 596.2 million between 1975 and
1984 (table 4.b). In 1975, the net external debt increased,
mainly as a result of a significant trade account deficit.
Between 1976 and 1978 trade and current accounts show an
impressive surplus with which the net external debt was
reduced in nominal terms from US$ 7,256 million in 1975 to
US$ 6,459 million in 1978 (table 5). 1979 marks the
beginning of the 'active crawling peg' experiment leading to
a sharp revaluation of the real exchange rate. In 1979 the
current account showed a small deficit (7 per cent of
exports), the combined result of a reduction of trade

account surplus - only half that of 1978 - and a significant increase in tourism expenditures and payments on the foreign debt. The most dramatic phase of external disequilibrium occurred in 1980 and 1981. These two years' accounted for a US$ 23,000 million increase in net external debt, which respresents 66 per cent of the rise in net external debt between 1978 and 1983. The current account deficit for both years displayed almost identical values, but whereas both the trade deficit and interest payments abroad contributed to the 1980 current account deficit in roughly equal proportions, interest payments were almost wholly responsible for the current account deficit of 1981 (table 4.a). It was in 1981 that adjustment to external disequilibria began, with massive devaluations to re-balance the trade account. By 1981, however, accumulated external debt was already very high, bringing with it a heavy burden of financial payments. The following years, 1982-83, show substantial trade account surpluses (the value of imports, in constant dollars, was equivalent to the 1970 level) although not big enough to compensate the outflow in financial services.

It should be noted that the annual current account deficits for 1976-82 amount cumulatively to US$ 8,600 million, less than a third of the US$ 29,600 million increase in nominal net indebtedness in the same period. Of the remainder, a Central Bank account labelled Unjustified Capital Flows (UCF) explains US$ 9,600 million. Adding together the cumulative annual current account deficits and UCF, we obtain an 'explained' increase in net indebtness of US$ 17,500 million for 1976-82. Unexplained indebtness thus amounts to around $ 12,100 million (table 6). A large proportion of this 'unexplained' deficit resulted from unregistered government operations, mainly involving armaments. Taking into account estimates of unregistered government operations, capital flight between 1975 and 1984 amounted to $ 15,000-20,000 million[2]. Indeed, Argentina's external debt includes an important component of unidentified and unregistered asset acquisitions by

Argentines.

4.   Investment, savings and debt

The structural changes which took place are evident in the evolution of the deficits and surplus in each economic sector. We shall use the following accounting identities to investigate that evolution:

$$(sp - zp - ip) + (t - g - ig - zg) + (h + z - x) = 0 \qquad (1)$$

Where, sp: gross private saving

zp: private payments to foreign factors of production

ip: private investment

t: taxes

g: government consumption expenditures

ig: public investment

zg: public payments to foreign factors of production

h: imports (goods and services)

x: exports (goods and services)

and z = zg + zp

i = ip + ig

All variables are expressed as percentage of GDP.

Given the interlocking nature of the system, it follows that on the financial side:

ap = sp - zp - ip

ag = t - g - ig - zg

ae = h + z - x

Where, ap: net financial investment of the private sector

ag: net financial investment of the government

ae: net financial investment of the rest of the world

That is, there is an equality between the non-financial deficit (or surplus) of each sector and its financial investment. A change in the position of a sector on the real side – deficit or surplus – is related to changes in the sum of financial assets or liabilities held by that sector.

Between 1964 and 1974 the private sector registered a yearly surplus, that is, ap was continuously positive over these ten years (its average value was 3.3 per cent of GDP). However, ap showed a great year to year variation, with 0 per cent the lowest value and 8 per cent the highest (table 7). Years of low ap were correlated with periods of expanding domestic absorption. By contrast, when an adjustment program was under way, ap was usually high. The proportion of GDP which was invested (i), followed the oscillations of ap but in the opposite direction: i increased when ap decreased, and vice versa; ip+ig averaged 20 per cent during the decade. The fiscal deficit (ag with the sign reversed) was on average 3.5 per cent of GDP and, as in the case of the private surplus, oscillated greatly over the decade (from one to seven per cent of the GDP). These figures indicate that the real surplus of the private sector was roughly enough to meet the financing requirements of the public sector. Nevertheless, when there was a shortage of saving, it was met by the rest of the world although foreign saving was on average less than one percent of the GDP. It should be noted, however, that foreign saving also fluctuated considerably from year to year between positive and negative figures (table 7). Taken together, these figures show that the growing economy of 1964-74 was able to generate all the saving required to finance its own development. Rising domestic absorption, or the lack of external saving, produced periodic declines in the rate of growth but not in the level of output. From this point of view, neither internal nor external savings represented serious constraints on long-run growth. Reflecting the low importance of external borrowings, the proportion of the GDP allocated to pay for external factors never exceeded 1.5 per cent in any year between 1964 and 1974.

1975, as mentioned above, was a turning point marked by the collapse of the previously-followed model of development. Enormous pressures stemming from unresolved political, social and economic tensions produced something akin to hyperinflation in the economic sphere and, in the political arena, a replacement of the democratic government by a dictatorship. From 1976 to 1978 the new military government put into practice a stabilization program which strictly followed IMF orthodoxy. In 1975 the government budget deficit (-ag) reached the previously unheard of level of 14.0 per cent of GDP. In 1977-78, however, once the IMF program was under way, the fiscal adjustment led ag back to its traditional level of 3/4 per cent of GDP. The fiscal gap was closed primarily by making sharp cuts in workers' real purchasing power and raising taxes, and secondly by reducing overall public expenditures. The surplus (ap) of the private sector during those years was very high compared with the preceding decade. Between 1975 and 1978 ap averaged 8 per cent of GDP; that is, it was then almost three times the level of the previous ten years. The financial surplus of the private sector was as big as it was because it was necessary to finance the budget gap. Private savings were so large that they permitted a reduction of net external debt between 1975 and 1978 (table 5). That is, ae was on average negative during these years.

Success in reducing the foreign debt came at a price, however. Several disequilibria were introduced into the economy. On the external side, there was a huge 'overkill'; on the internal side, most of the surplus of the private sector was accomplished by forced saving since the distribution of income was severely skewed against workers.[3] The acceleration in inflation also cut back sharply on the financial assets of workers and the middle class, sectors which suffered a huge loss of resources. The major 'adjustment variable' that produced the huge private surplus was consumption.

The internal and external maladjustments of 1975-76 were significantly different in magnitude from those of the previous decade. But the stabiliation tools utilized and the dynamics of the adjustment of the economy between 1976 and 1978 did not differ greatly from the instruments and processes that characterized the 1960s and early 1970s. The most important structural changes of 1975-84 really began in 1979.

As already mentioned, at the end of 1978 the military government implemented a new stabilization program aimed at reducing inflation. The main anti-inflationary instrument used, a lagging exchange rate, led to a huge overvaluation of the domestic currency. In 1980, two years after implementation of the new policy, changes in the structure of surpluses and deficits were apparent. In that year, for the first time since 1961, the net surplus of the private sector was negative, that is the private sector became a net taker of loanable funds.[4] As a result, the use of external financing reached the hitherto unknown level of 5.5 per cent of GDP, even though the fiscal deficit (-ag) was at its normal level. A year later, in 1981, as a consequence of the external sector crisis (due to a trade account deficit and capital flight) the net demand for foreign saving would reach a historically high level (roughly 3 per cent of GDP in the following years).

The domestic currency was heavily devalued in 1981, initiating a process of chaotic adjustment. Since the private sector was unable to meet its external obligations, foreign private debt was progressively nationalized. The government would have to meet interest payments of the private sector as well as its own. As a result of this 'socialization' of private liabilities and the increase in foreign interest rates, zg rose suddenly in relation both to its previous values and to zp. The improvement in the budget constraint of the private sector thus corresponded with a worsening of government's overall position. At the beginning of the external sector crisis in 1980, 47 per cent of

foreign debt was held by the private sector: in 1984 the proportion had fallen to 21.3 per cent (table 5). The redistribution within z between zp and zg partly explains the rise in the fiscal deficit (-ag) during recent years, reaching a peak of 10.8 per cent of GDP in 1983. Correspondingly, the surplus of the private sector (ap) increased reaching 7.6 per cent of GDP in 1983.

It should be stressed that, in contrast with 1975-78, investment bore the brunt of the post-1978 adjustment. Investment as a proportion of GDP fell from 20 per cent on average between 1975 and 1978 to 12.8 per cent in 1984 as a result of the chaotic adjustment process. At the same time total payments abroad (z) rose to 8 per cent of GDP. Service on foreign debt was crowding out investment. On the other hand, consumption as a percentage of GDP rose as the marginal propensity to save declined. Per capita consumption, however, declined. These facts impose heavy constraints on the design of future stabilization and development policies.

Before picking up the story again in 1984-85, with the launching of the Austral plan, we now examine some of the structural features of the Argentine economy - features that go far to explain not only why orthodox medicine has failed, but also why the failures have been so costly to the Argentine economy.

IV.   STRUCTURAL FEATURES OF THE ARGENTINE ECONOMY

As is clear from post-1975 experience, standard stabilization tools have had undesirable effects in Argentina. We believe these effects can be traced to structural features of the Argentine economy which are omitted in the standard models which provide the theoretical framework for stabilization packages. In this section we delineate some of the most important of these features – e.g. the fact that institutional and political factors determine real wages and inflation – and assess their consequences for the functioning of the Argentine economy. We have organized the exposition in terms of stylized facts making use of a 'generalized' version of the two-gap model[5] (see Appendix).

1.   Real sector

Argentina is a small semi-industrialized country which acts as price taker in international markets. Its exports are mainly foodstuffs (60 per cent of total exports) and, secondarily, manufactures (36 per cent). On the import side, the most important are intermediate goods and raw materials (82 per cent of total imports) and capital goods (13 per cent). Imports of consumption goods are insignificant because of the strong import substitution process in the past. In the short run a deepening of the import substitution process is difficult because it would be necessary to undertake the domestic production of sophisticated capital and intermediate goods requiring heavy investment. When the country faces balance-of-payments difficulties, therefore, policies aimed at shifting spending from imports to domestic goods through currency depreciation are unlikely to succeed. In addition, the short-run price elasticity of export supply is very low. In this context, devaluation is not a useful tool in managing an external crisis. But devaluation affects external accounts because it induces strong income effects.

The stylized fact is that there is a negative correlation between real wages and the real exchange rate, and a positive one between aggregate spending and wage earners' income (because worker's marginal propensity to spend is higher than the average).[6] So, as devaluation cuts back sharply on workers' real purchasing power, absorption falls. This initial fall in aggregate demand leads to further economic contraction through multiplier processes. The balance of payments improves to the extent that a fall in income leads to reductions in both capital and intermediate goods imports.

In Argentina three other contractionary effects of devaluation, highlighted by the structuralist literature, are of importance in explaining the improvement in the balance of trade which follows devaluations.[7] First, when there is a trade deficit, the shift against the relative price of non-traded goods leads to a reduction in real domestic income. Second, a higher exchange rate, as we shall see, means more inflation. If, at the same time as it boosts the exchange rate, the government restrains monetary expansion (as has usually been the case in Argentina's stabilization attempts), there will be a fall in real money balances and hence a fall in aggregate demand. Finally, ad valorem taxes on exports and imports are very important government revenues in Argentina.[8] Hence, as the exchange rate goes up, disposable private income goes down.

These consequences of devaluation are very relevant, but it also has consequences as a result of the structural changes occurring in the overall asset-liabilities positions of the different sectors after 1980. These new effects act in the opposite direction.

There was, in effect, a 'dollarization' of the Argentine economy as a consequence of the government-financed capital flights of 1980-82. As a result the private sector now has foreign assets and the public sector foreign liabilities, a situation that leads to at least three new consequences of

devaluation. First, devaluation improves the overall position of agents holding foreign assets. That is, there is a new wealth effect that has to be taken into account to specify the consumption function. Second, devaluation worsens the fiscal gap because interest on external debt weighs heavily in the government budget.[9] Third, the authorities cannot gain tight control of monetary aggregates as long as they have to pay more for each dollar bought to service foreign debt. Nonetheless, whatever the final outcome of a devaluation, what does remain valid is that in the short run the main tool for generating an external surplus is to provoke a decline in imports. This is the stylized fact to account for in modelling the external sector of the Argentine economy.

In order to investigate some behavioural hypothesis, we turn now to the accounting identities expressed in equation (1), interpreting them as equilibrium conditions. Suppose that sp is the private sector's marginal propensity to save, and mk[10] the marginal propensity to import capital goods as a proportion of total investment. Taking into account the structural features mentioned above, figure one describes the relationship between external saving available (current account deficit) and private investment. The 'external balance' schedule shows all combinations of investment and foreign saving such that the balance of payments is in equilibrium. Its slope is 1/mk because one new peso of investment only utilizes mk dollars of foreign saving such that planned spending equals planned income. The internal balance schedule has a slope equal to one because, when saving increases, investment has to go up by the same amount in order to maintain equilibrium in the goods markets. At point H there is internal and external equilibrium. Or, to put it in another way, at H the planned and realized values of the variables come to be the same. Point H is the only one where ex-ante aggregate equilibrium becomes actual. That is, only at point H is equation (1), as an identity and as an equilibrium condition, met with the same values of endogenous variables (ip and ae). If the value of all other variables are exogenously determined, all the other points

in the ip-ae plane correspond to states of disequilibrium.

Hence, the two schedules determine four regions of disequilibrium which we label structural, populist, classical and overkill according to the kind of disequilibrium that takes place in each region. In the 'populist' region, which represents Argentina's economic situation in 1975, there is a shortage of both internal and external savings because absorption is too high. In this case, typical IMF packages can be applied with some success. In the region labeled 'classical', there is an excess demand for internal savings. It is perhaps the best case for McKinnon's[11] therapy. However, this region is not a place where Argentina has been accustomed to living. The other regions are more familiar for Argentina. In the 'overkill' region both foreign and domestic savings are in excess supply. The IMF's strategy applied to countries in the 'populist' sector usually carries them into the 'overkill' region. We have mentioned before that 'overkill' was induced in 1977-78. Finally structural maladjustment, where foreign savings supply binds investment and at the same time there is an excess of internal savings, is where Argentina is now.

Consider now the effect of an increase in the interest cost of outstanding debt, such as has been the case in Argentina. That is, assume that zp goes up. At the initial level of income, we now have an excess demand for saving because the private sector has to use its gross savings not only to finance investment, but also to afford foreign interest payments. Hence, there is a rightward shift of both the external and the internal balances schedules as shown in figure two. The new equilibrium is at point H_1 where more foreign saving (ae_1) is needed to finance the same level of investment/output ratio (ip_0).

But what happens if, at the same time, the international financial situation changes, the supply of fresh money by the banks becomes highly inelastic and ae does not adjust? That is, what happens if ae becomes exogenous? The answer is

that the model becomes overdetermined (i.e. we have two equations and only one endogenous variable, ip). This case is shown in figure 2 at B where the new exogenously determined level of foreign saving is ae_0. Interest payments on foreign debt crowd out investment, as has occured in Argentina since 1980. As a consequence, the potential rate of growth of the economy declines. If the external balance is the binding constraint, something must adjust on the domestic side of the economy as long as ex post the internal balance identity is by definition always true. After adjustment, investment will be ip_2. However the answer to the question of which constraint will bind is not independent of the policy implemented. That is, the government can determine ip as a target variable at ip_0 in figure two in order to give preference to the internal balance. Hence something must adjust on the external side of the economy so that the ex post level of foreign saving ae_1 results.

When the ex post outcome is B, the ex ante demand for capital goods is greater than the realized rate of investment. The economy is in disequilibrium. That is, the planned expenditure of some agents cannot be realized. This is the case when the ex post consistency is met by avoiding imports of capital goods, or when letting 'queues' at the Central Bank to obtain foreign exchange to buy import goods become longer. This was the case in Argentina after April 1982 when a lot of imports where prohibited or postponed by law and the foreign exchange markets were closed.

However, there are also mechanisms to avoid the rationing of markets. The Central Bank can close the gap by selling its reserves. This happened between 1980 and 1981 when the Central Bank lost a huge amount of foreign assets. Obviously, this means of closing the gap ceases when reserves are exhausted. One can maintain the economy artificially, say in H_1, by depleting reserves, but this mechanism cannot last too long and tends to promote market rationing.

Why not devalue? It is possible to try to close the gap this way, but the external equilibrium thus achieved cannot avoid the internal imbalance as long as devaluation has contractionary effects. Besides, since zp' is an important component of government payments, the monetary expansion that results is normally unsustainable and induces a strong disequilibrium in asset markets. That is ceteris paribus the fiscal budget gap is greater as the exchange rate goes up. Devaluation was an important component of policy packages since 1981 as a tool for closing the external gap.

Argentina's external crisis began at the end of 1980. Thereafter devaluation, loss of international reserves, import prohibitions and queues, unemployment, and a huge fall in the invested proportion of GDP were not enough to close the gap. So an unintended form of closing the gap was put into practice.The exchange rate market was closed in April 1982. The Central Bank ceased to sell foreign exchange demanded by both public and private sectors to meet financial commitments. As a result, arrears rose to more than US\$ 3.5 billions. Only at the beginning of 1985 was this situation normalized. That is, domestic expenditure was partially financed by 'forced' saving to the extent that the international banking system was forced to lend more than it wanted. The banks were driven out of their notional[12] saving supply curve. The situation of a country that systematically incurred arrears to get funds would be represented at H_1 in figure two. Arrears would allow the country to invest at a rate ip_1, since the ex post availability of foreign savings would be ae_1 instead of ae_0.

2.   Financial sector

So far our analysis of the behaviour of the economy has dealt with the real side. Let us now shift the discussion to the financial sector. In so doing, it is important to keep in mind some crucial structural features highlighted in previous sections.

First, the large increment in foreign debt and the nationalization of the debt by the government. It is now the government that has to come up with interest payments on outstanding foreign debt.

Second, it is now very difficult to get 'fresh money' because external credit is rationed. As long as interest payments are higher than the availability of foreign savings, the scarcity of external credit requires Argentina to maintain a surplus in the trade balance. That is, Argentina has become a net exporter of capital.

Third, exports come from the private sector which is, consequently, the owner of the trade surplus. So, to be able to pay the interest on outstanding external debt, the authorities have to buy foreign exchange from the private sector.

These transactions are carried out through the financial system. A priori, one might suppose that markets would provide a set of prices (asset yields)[13] such that domestic residents voluntarily accept domestic currency or government bonds in exchange for the foreign currency earned in external trade. However, given the huge volume of funds required, such a set of equilibrium prices may not exist. One way to overcome this problem might be to raise taxes and devote this revenue to external payments. A tax hike, however, would imply a huge fall in disposable income which would be disastrous for production incentives in a profit-driven capitalist economy. This dilemma is the core of the internal transfer problem.

The debt crisis, with the rationing of international credit and high interest rates, induced a structural change in the GDP/GNP ratio that has averaged 6 per cent in recent years (table 7). Hence, someone must give up a part of his or her income, or else accept domestic government debt (which means, in effect, that the government is transforming external into internal debt) which amounts to the

government's promise to pay in an uncertain future.

We turn again to accounting identities expressed earlier to demonstrate the link between the real side of the economy and the financial structure. For the private sector we have the following budget constraint:

$$ap = \Delta m - \Delta cp + \Delta bg^d \qquad\qquad (2)$$

for the government, the definition of deficit is:

$$-ag = \Delta bg^o + \Delta cg$$

and for the rest of the world it is true that:

$$ae = \Delta k - \Delta r$$

where all variables are expressed as percentage of GDP, and:

   m: money
   cg: credit to the public sector
   bg: government bonds (d stands for demanded and o for supplied)
   k: external credit
   r: foreign reserves

Since we are now introducing the financial sector into the model the following aggregate restriction is always met:

$$\Delta m - \Delta cp = \Delta r + \Delta cg - \Delta k$$

since ex post

$$\Delta bg^o = \Delta bg^d$$

These relationships provide a framework for defining a market-clearing equation for each of the main assets of the economy: money, government bonds and foreign exchange.

As long as credit is rationed in international financial markets, we will suppose (to simplify the discussion) that the country is unable to get fresh money. Hence $\Delta k = 0$. Furthermore, we assume that $\Delta r = 0$ (the Central Bank is not building reserves). From these assumptions, it follows that:

$$ap = \Delta m - \Delta cp + \Delta bg^d$$
$$-ag = \Delta cg + \Delta bg^o$$
$$ae = 0$$

From equation (1) it can be deduced that

$$\Delta m - \Delta cp + \Delta bg^d = \Delta cg + \Delta bg^o$$

and from the consolidated banking account

$$\Delta m - \Delta cp = \Delta cg = \Delta co + \Delta br$$

where co: bills and coins as a proportion of GDP
      br: banks reserves as a proportion of GDP

So, when budgets and money market are both in equilibrium, the same happens with the bond market in order to meet budget constraints. $\Delta m - \Delta cp$ is the net demand for financial assets by the private sector to the banking system. We shall call this variable nf. It follows that in equilibrium:

$$\Delta nf = \Delta co + \Delta br = \Delta cg$$

That is, the net supply of loanable funds made by the private sector to the rest of the economy has to equal to the financial requirements of the government in order to finance the budget deficit (-ag).

We can now investigate some behavioural hypotheses under the restrictions that were mentioned in relation to the real sector.

Suppose that zp increases. Then, to meet its budget constraint in equation (2), the private sector has to reduce investment in the same amount because the availability of savings after paying the external debt is lower. However, this reduction of investment is not enough because, as we have shown in figure 2, the investment must be reduced by more than zp in order to maintain the external balance. To liberate zp dollars in order to pay interest abroad, ip must be reduced by the amount 1/mk. This is so because one peso of reduction in investment only liberates mk dollars to pay abroad. That is, the existence of the two gaps implies that at point B in figure 2, we have an excess of saving over investment. Or, to put it in another way, we will have an excess supply of loanable funds in the financial side of the economy because of the higher liquidity of the private sector due to the fall in investment. That is, $\Delta nf > \Delta cg$ or $\Delta bg^d > \Delta bg^o$. This means that the interest rate has to fall[15]. Given that it is impossible to get foreign exchange in the amount mk to invest one peso (ie the queue in the Central Bank is growing), another component of effective demand must rise in order to achieve equilibrium.

If the interest rate falls, consumption credit may rise, reducing nf and s. If government expenditures rise, the equilibrium is met as long as cg or bg^o rises.

The adjustment dynamic is different if the government has nationalized the debt because in that case it is zg and not zp that rises. It can be demonstrated that, as in the first case, the outcome is a fall in s and ip. But now the interest rate goes up (see appendix). This is so because when zg rises, there is an excess government demand for credit as long as there is a growing fiscal deficit. That is $\Delta nf < \Delta cg$ (or $\Delta b^d < \Delta bg^o$). And this is so because when zg rises, there will be an ex ante excess demand for credit, given that the government must finance its growing budget gap. To reach equilibrium, investment has to fall more than saving in the private sector in order to finance the fiscal deficit with the difference between them. In other words, a

kind of 'liquidity preference' is induced in the system in the sense that the private sector must be encouraged to substitute financial (nf and bg) for real assets (ip). To maintain equilibrium, the yields of real assets must decline and the rate of interest on financial assets must rise. We believe that this kind of dynamic explains the fall in the demand price of capital goods that has depressed the ip ratio to its lowest level in the postwar period.[16]

This second alternative is not too different from the first if we look only at the real side. In both alternatives ip and s fall and the potential rate of growth of the economy declines. However, in the second alternative, the internal transfer problem appears, while in the first one (when zp rises) it does not. This is very important because when zg begins to rise, producing a strong increment in the financial assets' yield, it bears with it as a by-product an increment in financial fragility and uncertainty that is in itself capable of inducing a new increment in interest rates in the financial markets. This means lower demand prices for capital goods. In this case, it is very probable that the adjustment process led the economy not to a point like B in figure two but to one below the external balance schedule: that is, to the 'overkill' region.

The Argentine experience since 1980 shows that the internal transfer problem accelerates the domestic disfunctions which arise in an economy when a country is facing structural maladjustment in its external sector and is trying to implement stabilization policies.

We have seen that when zg goes up, the domestic interest rate rises. This seems to suggest that there might be a level of interest rate such that economy would be in equilibrium. However, as Frenkel (1983a) has demonstrated, in the Argentine experience since 1980 the increase in interest rates did not lead the economy toward equilibrium but toward an unstable state due to the continuous shift in the risk premium in the arbitrage between domestic and

external interest rates. When this happened, the government was obliged to close the exchange market in April 1982 and, a few months later, to control interest rates.

Instead of inducing overkill, the government was politically induced to choose the alternative of controlling interest rates. That is, a choice was made to put financial markets in 'disequilibrium' in order to avoid a deeper recession. As a consequence, since the end of 1982 the financing of the budget deficit has rested heavily on monetary expansion. The dynamic of the economy under such circumstances can be highlighted by using the following well-known identity:

$$M_t \, V_t = P_t \, Y_t \quad \text{or} \quad \frac{M_t}{P_t Y_t} = \frac{m_t}{Y_t} = l_t$$

where M_t: money supply at time t
V_t: velocity of money at time t
P_t: domestic prices index at time t
Y_t: real GDP at time t
m_t: real money balances at time t
l_t: liquidity coefficient at time t

From this identity we can easily deduce that

$$\frac{\Delta M_t}{P_t Y_t} = l_t - l_{t-1} \, \frac{1}{1+\pi_t} \, \frac{1}{1+g_t}$$

Where π_t stands for the inflation rate and g_t for the growth rate at time t.

If we suppose $g_t = 0$, it follows that[17]

$$\frac{\Delta M_t}{P_t Y_t} = \Delta l_t + l_{t-1} \, \frac{\pi_t}{1+\pi_t} = \frac{\Delta m_t}{Y_t} + \frac{m_{t-1}}{Y_{t-1}} \, \frac{\pi_t}{1+\pi_t}$$

This identity reveals that the increase in the money stock in nominal terms as a proportion of GDP is identically equal to the increment in real balances as a percentage of GDP (the liquidity coefficient) plus the amount of the

previous money stock that disappeared during period t as a consequence of the on-going inflation. That is,

$$m_{t-1} \frac{\tilde{\pi}_t}{1+\tilde{\pi}_t}$$

is what monetarists call 'inflationary tax'[18], representing the redistribution of wealth between creditors (the public) and debtors (the government).

To relate all this algebra to our previous framework, let us suppose that the monetary base is the only asset in the economy, and that M_t is the monetary base[19], then

$$\Delta nf_t = \frac{\Delta M_t}{P_t Y_t} = l_t + l_{t-1} \frac{\tilde{\pi}_t}{1+\tilde{\pi}_t} \qquad (3)$$

The net increment in the financial wealth of the private sector in real terms will be less than the amount of new financial assets acquired in nominal terms:

$$\Delta nwp_t = \Delta nf_t - l_{t-1} \frac{\tilde{\pi}_t}{1+\tilde{\pi}_t} = \Delta l_t$$

That is, from the wealth constraint of the private sector, it follows that Δnwp (the increment in private financial wealth in real terms)[20] declines as long as there is inflation and the owner of nominal assets suffers capital losses. The government as a debtor has a symmetric capital gain, because

$$\Delta nwg_t = -\Delta l_t$$

while the money issued to finance the budget deficit was[21]

$$\Delta cg = \Delta l_t + l_{t-1} \frac{\tilde{\pi}_t}{1+\tilde{\pi}_t}$$

If government's budget is balanced and zg rises in a context where the authorities must issue money to get the necessary funds, Δcg will be positive and ex post either the liquidity coefficient must rise (Δl_t), inflation has to go up, or both. Again, the result of an increase in zg is that

the financial assets held by the public must rise. But in this context, as long as the government keeps interest rates under control, the burden of adjustment cannot fall on interest rates.[22]

Up to now we have worked with identities. We can now interpret l_t as the demand for liquidity of the private sector. Suppose that Δl_t is an inverse function of the expected inflation, and expected inflation a direct function of actual inflation, then

$$\Delta nf_t = \Delta l_t(\tilde{\pi}_t) + l_{t-1}\,\frac{\pi_t}{1+\tilde{\pi}_t}$$

where

$$\frac{\partial \Delta l_t}{\partial \tilde{\pi}_t} < 0$$

and

$$\frac{\partial \Delta nf_t}{\partial \tilde{\pi}_t} > 0$$

So, when inflation exists, the private sector's demand for money grows as it seeks to recover the part of the real balances eaten up by inflation, and declines if inflation accelerates to avoid paying the inflationary tax. In equilibrium $\Delta cg_t = \Delta nf_t$. Graphically, in figure 3, equilibrium is at point A and the inflation rate is $\tilde{\pi}_0$.[23]

If prices adjust to the excess demand for money there will be a stationary value of inflation $\tilde{\pi}_0$ when the amount of money issued by the government is $\Delta\overline{cg}$ because if the inflation rate is $\tilde{\pi}_0$ there will be equilibrium in the money market. But, if the inflation is not a monetary phenomenon (ie if it is 'structural') and is determined from outside at $\tilde{\pi}_1 < \tilde{\pi}_0$ while the government deficit is equal to $\Delta\overline{cg}$, we have a 'third gap', a financial gap, due once again to over-determination of our system. The difference between Δnf_t and Δcg is a measure of the disequilibrium on the financial side. People will have undesired real balances in an amount equal to $(\Delta cg - \Delta nf)$. How will the economy adjust?

Given the rationing of imports and the depressed level of the demand price of capital goods, if the public 'flees' money it will be consumption and not investment demand that will rise. This kind of perverse 'transmission mechanism' worked during the short run upswing of economic activity during 1983 and 1984.

However, there is an even more perverse transmission mechanism: people may substitute dollars for domestic assets in the illegal foreign exchange market. The exchange rate will rise in the black market. If the government devalues in order to avoid illegal capital flight (under-invoicing of exports and over-invoicing of imports), given the structural features of inflation, the devaluation (as we shall see in the next section) accelerates the rise in prices.

To summarize our financial discussion. If we allow open assets markets, the huge increase in interest rates to counter capital flight will lead to growing instability and overkill. If we control these markets, the liquidity coefficient will fall and the economy will tend to become a barter economy because of the disequilibrium on the financial side which provokes capital flight and acceleration of inflation. Of course, we have been discussing here some polar cases to highlight the most important structural features in the functioning of the economy. Reality is more complex. In the Argentine case, as we have mentioned before, it is incorrect to assume that $\Delta k=0$ because of arrears and out-of-market negotiation with international banks. It remains true, however, that the economy works under high uncertainty, financial fragility and nil growth.

3.   **Dynamic of inflation**

As we have seen, the Argentine economy since 1975 has shown high and variable rates of inflation. As a consequence, key relative price changes followed a pattern with a strong random component. In such an economy, no one

wants to sign agreements in nominal terms because they will be gambling too heavily on the future behaviour of both the level of prices and relative prices. Due to the high probability of changes in future inflation rates, long-term contracts in nominal terms are eschewed and even indexed contracts become risky. The risk of changes in future key relative prices cannot be avoided since indexation makes the overall price level the basis for future nominal payments. In short, an inverse relationship between actual inflation and the length of contracts may be asserted. And, as the length of contracts gets shorter, uncertainty about the future grows. Under such circumstances, the cost of gathering relevant information about the future evolution of the economy becomes higher.

However, as long as there are no shocks to relative prices (for example, a maxi-devaluation), indexation based on past inflation is a rational and efficient choice. It is thus crucial to know not only how people form expectations of inflation, but also the costs of gathering the relevant information and of recontracting.

The Argentine experience has demonstrated that, in a normal situation, agents tend to set prices with reference to past inflation. In such a situation, wages, public sector prices, and the exchange rate tend to be governed by such rules and inflation becomes 'inertial'. There is inflation today because there was inflation yesterday. 'Normal', in this context, means that no large changes in key relative prices are under way because, for example, of supply shocks, policy measures, or union demands for higher wages. Nonetheless, apart from inertial inflation reflecting indexation, the central thesis of the structural theory in explaining inflation is that changes in key relative prices provoke inflation.

On the basis of structural theory,[24] the dynamic of inflation in Argentina[25] can be represented as follows:

$$\hat{P}_t = a_1 \hat{P}_t^{flex} + a_2 \hat{P}_t^{fix} + a_3 \hat{P}_t^{gob} \qquad (4)$$

where $\hat{P}_t$ is the inflation rate in terms of an aggregate price level and $\hat{P}_t^{flex}$, $\hat{P}_t^{fix}$ and $\hat{P}_t^{gob}$ are, respectively, the rate of change of prices in the flexible-price sector, the fixed-price sector, and the public sector[26]. On the other hand, a_1, a_2 and a_3 are parameters that represent the participation of each sector in aggregate supply.

The disaggregation implicit in (4) reflects the structural features of the Argentine economy. In the flexible-price sector, economic agents are 'price takers'. That is, prices are determined by supply and demand. This sector produces foodstuffs and raw materials. In this sector, the behaviour of prices shows more variance than in the others. So, the flexible-price index imparts more volatility to the aggregate price level.

The fixed-price sector is predominantly industrial and oligopolistic. Here, mark-up pricing is the rule. In a normal situation (ie without shocks), mark-up rates, as Frenkel (1983b)[27] demonstrated, are constant. Given that at an aggregated level the main prime costs are wages and imported intermediate goods, inflation in terms of industrial goods can be expressed as follows:

$$\hat{P}_t^{fix} = b_1 \hat{e}_t + b_2 \hat{w}_t$$

where $\hat{e}_t$ is the rate of increment in the domestic prices of imports and $\hat{w}_t$ the rate of increase of wages: b_1 and b_2 are parameters. So the fixed-price sector acts as a transmission mechanism of the inflation generated in other parts of the system. The elasticity b_1, and hence the importance of the exchange rate in explaining inflation, will depend on the proportion of tradables utilized as intermediates in the production process. The variance of $\hat{e}_t$ will depend on both international prices and authorities' policy regarding the exchange rate. In Argentina, the exchange rate is a variable largely controlled by the government (at least in the short

run). The rate of growth of wages depend on several factors including the institutional setting in which wages are negotiated, the level of demand for labour, and workers' expectations about future inflation rates. However, on the basis of Argentina's experience, it seems that institutional and political factors, such as the 'strength' of unions, play a crucial role in the determination of real wages and inflation. In 1975 and 1983 money wages increased by more than inflation as a result of union demands. Higher wages were passed along into higher output prices and a cumulative inflationary process was initiated.

The third component of (4), public prices, are under the government's control and should be considered a policy variable.

Substituting (5) into (4), we have:

$$\hat{P}_t = x_1 \hat{P}_t^{\text{flex}} + x_2 \hat{e}_t + x_3 \hat{w}_t + x_4 \hat{P}_t^{\text{gob}} \quad (6)$$

The inflation rate at time t is a function of: the rate of growth of flexible prices, the exchange rate, wages, and public prices. The elasticities x_i reflect the structural features of the economy just mentioned. In a 'normal' situation, relative prices are more or less constant, and indexation of past inflation becomes an optimal rule for both government and private agents, so $\hat{w}_t = \hat{P}_{t-1}$, $\hat{e}_t = \hat{P}_{t-1}$ and $\hat{P}_t^g = \hat{P}_{t-1}$. If, as we assume, there is no variation in the key relative price

$$\frac{P_t^{\text{flex}}}{P_t^{\text{fix}}},$$

inflation does not disappear but becomes inertial: $\hat{P}_t = \hat{P}_{t-1}$

Backward-looking indexation is not optimal in every context however. What happens when relative prices change? If the changes are gradual, indexed contracts and implicit agreements remain cheaper alternatives to a costly process of recontracting. But this will not be the case if there is

a large change in relative prices. Turning to our basic
comparative static exercise, we may ask what happens when
there is an increment in zg, as has been the case in
Argentina since 1980. As we have seen, an immediate
consequence will be that both the fiscal (financial) and
external gap will be opened. In such a context, it is highly
probable that the government will raise both public prices
(to close the fiscal gap) and the exchange rate (to close
the external gap). According to (6), this would lead to an
acceleration of inflation and to a rupture with 'normality'.
A likely result of this development is that people will
change the way they form expectations. That is, there is
structural change in the model stated in (6).

People base their expectations of inflation on available
information, including the information that the economy is
in disequilibrium, and hence huge changes in relative prices
are likely. Given that a mistake in setting prices could
imply enormous capital and income losses, people will begin
to form expectations looking forward instead of looking
backward. The costs of re-contracting and re-setting prices
become lower than the benefits of avoiding capital or income
losses. Such shifts in the way people form expectations
constitute a basic feature of the dynamics of an economy
under a policy shock.

But if people take into account all information
available in a rational way, why have shocks been so
effective in changing relative prices in the past? How were
they changed in 1976-77 and from 1981 on? The answer is that
it is one thing to have correct expectations, and another to
be able to reset wages or to recontract prices. Wage setting
and price contracting depend heavily on the institutional
setting. It is another feature of shocks that they are
capable of driving the economy to a certain kind of
disequilibrium in accordance with policy targets of the
government (such as to close the external gap while opening
simultaneously the internal or the financial gap). A
necessary condition for this result is the existence of

inflexible contracts which act as an 'anchor' for economic
stability. When economic actors show an 'undue' propensity
to draw up flexible contracts (especially wage agreements),
economic instability results, as happened in Argentina in
1975.

V.   THE AUSTRAL PLAN: AN ATTEMPT TO DO IT BETTER

1.   **Learning from the past**

During the last decade Argentina has signed orthodox stand-by agreements with the IMF in 1976, 1977, 1983 and 1984. In 1979 and 1980 the country put into practice a stabilization programme inspired by the new orthodoxy of the monetary approach to the balance of payments. In other words, the country has been pursuing 'stabilization' for the last ten years with the result we have seen - namely increased economic instability.

To summarize, the most important failures of the short-run economic policies which have been implemented have been:

1. Monetary programming has tended systematically to induce an excessive contraction in net domestic assets.

2. Incomes policies have been brushed aside even though fulfilment of the nominal targets agreed with the IMF seems to depend crucially on the government's ability to 'anchor' nominal wages.

3. Efficient allocation of resources cannot be achieved as long as stabilization programmes set targets for government expenditure and the fiscal deficit which induce huge distortions in the economy.

4. Policy-induced changes in relative prices tend to lead to overkill of targets.

5. After 1980 the implemented programmes did not take into account in a relevant way the new international situation. The key components of this situation were (a) international prices of the raw materials exported by Argentina were falling, (b) nominal (and real) interest rates were very high, and (c) international credit markets

were being rationed.

6. Since the targets established by the IMF were very difficult to meet, the process of continuous negotiation which resulted was itself a factor of uncertainty in the domestic economy.

2.   The Austral plan

At the end of 1984 the democratic authorities signed a stand-by agreement with the Fund. They agreed in the 'Letter of Intent' to carry out a stabilization plan whose main objective was to induce a change in relative prices in favour of the government and the external sector. The goal was to close the fiscal deficit (8 per cent of GDP) and reduce the current account deficit (at the time about 4 per cent of GDP). The main anti-inflationary tool was to be monetary restraint.

After five or six months the results were very disappointing. Sudden and severe monetary restraint provoked a liquidity crisis and a large rise in interest rates. The attempt to shift relative prices had led to price increase at rates approximating to hyperinflation. As a consequence, a deep recession began at the end of 1984.

On 14 June 1985, when the Austral plan was put into practice, the price index was growing at a rate of more than 25 per cent a month and the liquidity coefficient

$$\left(\frac{M_1}{GDP} \right)$$

was 3 per cent. Under such circumstances, there was no room for partial adjustments. The designers of the Austral plan therefore decided to tackle all of the relevant variables simultaneously. The policy package contained three basic measures: a) monetary reform; b) adjustment of fiscal budget and external debt agreements; c) freezing of wages, prices, the exchange rate and public prices.

(a) Monetary reform

As we have shown, the financial system had been in a critical situation since 1980 because of external and fiscal maladjustments. The main features were first, because of accelerating inflation, the cost of holding idle cash balances was growing and the liquidity coefficient was accordingly falling. Second, the demonetization of the economy had led to higher nominal (and real) interest rates. This in turn gave a strong incentive to the development of informal financial markets beyond the monetary authorities' control. The main purpose of these 'curb' markets was to reduce the 'transaction' demand for money in order to avoid paying the inflationary tax. This gave new impetus to the rising velocity of money and reduced credit available to the government and to firms in the institutional markets. Third, the high and variable inflation rate, together with the high variance of expected relative prices, impeded economic calculations as long as the uncertainty about future yields of financial and real assets was growing. As a result, contracts tended to become unavailable for terms longer than, say, a month or even a week. Finally, the disappearance of all but very short-term contracts meant that the financial structure as a whole began to crumble. Economic agents who wanted to save for the long run could do so only by placing their assets outside the domestic financial system. In other words, uncertainty created incentives to capital flight, and savings of domestic residents went to finance investments in other countries. So domestic firms were led either to reduce investment and working capital or to declare bankruptcy. The government was led either to crowd out firms in financial markets (since less money was available to finance the budget deficit) or to incur arrears with both internal and external creditors. These ways of adjusting the budget in the face of liquidity restraints are recessive because they restrain effective demand.

The Austral plan was aimed at inducing a strong change

in inflation expectations in order to reduce both inflation itself and uncertainty about the future. The main tools were the sudden freezing of key nominal prices immediately after an adjustment in public prices and the exchange rate, together with tight control of both fiscal and monetary aggregates. The monetary reform followed as a necessary factual condition for the success of the freeze. It was not, as some economists have believed, the 'essence' of the plan.

The core of the monetary reform consisted of the following elements. First, the government formally agreed not to issue money to finance the fiscal budget. Second, the nominal interest rate was reduced from 30 per cent monthly to 4 per cent. Third, a new currency was created called the austral. The exchange rate between the austral and the peso was set at 1 A = 1,000 $ on the first day of the programme. Thereafter, the old currency would depreciate daily with respect to the austral, following a pattern close to the ongoing inflation rate before the plan (that is, about 28 per cent monthly).

As we have seen, a characteristic of policy shocks has been that they change the way people form expectations. The monetary measures were aimed at influencing the change in expectations in the right direction. On the other hand, the old currency was depreciated to preclude the wealth transfer that disinflation implies: that is to avoid the Fisher effect. As long as the contracts made prior to freezing incorporated the expected inflation rate in agreements governing future nominal payments, the real interest rate which results will be too high if the rate of inflation falls suddenly.

(b) Fiscal adjustment and external debt

As discussed before, the government was unable to finance the fiscal deficit without disorganising the monetary side of the economy, driving the economy either to hyperinflation or overkill (due to the rise in interest

rates). At the time the austral plan was implemented the fiscal gap, as noted above, amounted to about 8 per cent of GDP. Given that in June the authorities reached an agreement with the IMF for external financing in the amount of 2.5 per cent of GDP, the funds needed to close the gap were about 5.5 per cent of GDP. Since the government was unable to issue money or absorb funds from domestic financial markets, it chose to close the budget gap, on the one hand, by raising public prices and taxes and, on the other, by avoiding new hirings of government officials. This choice was sub-optimal, especially in the case of public prices, but necessary given the constraints. The main purpose behind closing the fiscal gap in this way was to replace a highly disruptive way of financing the budget (the inflationary tax) with other sub-optimal but more efficient means. It was expected that the disposable income of the private sector would not change too much since the fiscal gap is always financed ex post and, as we saw in the previous section, the inflation tax and the disequilibrium in the money market become the adjustment variables. Indeed, an important objective of the plan was to reduce uncertainty by 'clarifying' both the matrix of assets and liabilities and the flow of funds among sectors.

The fiscal and monetary targets mentioned were the topics of tough negotiations with the Fund, and a stand-by agreement was signed as a prior condition for receiving the external credit required.

(c) Prices, wages and the exchange rate

This part of the programme was the most heterodox because it implied a diagnosis of inflation based on the structuralist viewpoint mentioned earlier. The IMF staff was not easily persuaded, believing that the government's commitment to refrain from issuing money in order to finance the deficit obviated the need for a price freeze.

Argentine officials, on the contrary, considered that

the effects of excess supply on inflation were very weak since, during previous stabilization programmes, the 'structural' inflation provoked by changes in relative prices had predominated. The result had always been a fall in quantities instead of in the inflation rate.

The freezing of prices, then, was implemented to change inflation expectations and to reduce the costs of gathering relevant information about the future evolution of the economy. It was expected that, as a result, contracts would be set for longer periods. In short, the freeze was implemented to provide new coordination rules to agents at a microeconomic level and to cut sharply the inertial component of price increases.

Wages, on the other hand, were raised by 22.6 per cent in July to offset the effects of past inflation and from then on they were frozen. This was done in order to avoid a fall in real wages. That is, the real wage ruling before the plan's introduction was more or less maintained.

3.   Behaviour of the economy

The purpose of this section is to describe and comment on the performance of the economy during the first year and a half of the plan's application. That is, between June 1985 and December 1986. It should be mentioned that during this period the measures mentioned above were modified to take into account changes in the economic environment. As a result, the development of the economy during this period may be analyzed more conveniently if examined in three separate stages. In the first, from June 1985 to March 1986, the initial 'shock' measures prevailed practically without change. This freeze was followed by a period of increasing flexibility, from March to September 1986. The third stage then began and is still in progress. The criteria used for timing the beginning and the end of each stage took account of the dates when key measures were announced as well as of the periods when inflation rates were relatively

homogeneous.

(a) The freezing (June 1985 - March 1986)

The lowest inflation rate of the entire plan was experienced during the freeze, which lasted almost nine months. Between July 1985 and March 1986 the combined price index (average of cost-of-living index plus wholesale price index) increased by around 1.8 per cent a month (discounting the residual effects of past inflation, reflected in the consumer price index for the first month of the programme). This result was achieved without the need for strict government surveillance of the freeze, since consumers and entrepreneurs alike cooperated with the pricing policy. Nevertheless, inflation was not zero, basically because this period was distinguished by major relative-price changes in favour of products traded on flexible-price markets (meat, fruit, vegetables) These may to a large extent have resulted from the increase in wage-earner purchasing power which occured at the outset of the plan. Indeed, there is evidence that wage-earner spending capacity increased significantly (even though the plan did not grant wage increases over and above past inflation), owing to the quasi-disappearance of the inflationary tax. Thus, with nominal wages being deflated at prices corresponding with the expenditure and not the accrual period, the sudden drop in inflation at the start of the plan resulted in an increase in workers' real spending capacity of around 20 per cent (real wages, measured traditionally, fell by 2 per cent). Also, as time went by and economic activity was revitalized, industrial wage increases occurred which did not observe the freeze. To sum up, the purchasing power of private-sector wage-earners was higher during the second half of 1985 than it had been prior to the plan.

Substantial changes have come about in the financial sector. As inflation declined, private-sector demand for money rose markedly. The coefficient of liquidity measured by M1 (M1/GDP) rose from 3.5 per cent during the quarter

preceding the programme to 8.3 per cent in the first quarter of 1986, while in terms of M5 (which includes all interest-bearing deposits) the same variable rose from 11.5 per cent to 21.2 per cent. The sources of money creation from which this demand for money was met were the external sector and the rediscounting operations of the Central Bank (used to create a lending capacity earmarked for specific purpose). Central Bank financing of the government was not the cause of the expansion of the base, since the government complied strictly with its undertaking not to issue for purposes of financing the fiscal deficit. It was also able to honour this commitment since the fiscal deficit remained around the low levels programmed at the time the plan was announced.

Despite the accelerated process of remonetization, this stage was characterized by the presence of positive real interest rates. The negative effects on the level of economic activity were offset by the increase in credit available to the private sector and by the substantial decline in nominal interest rates – which in itself had a positive effect on the level of financial fragility. During this period, however, there was no reversal in another of the basic causes of the financial system's fragility – the extremely short maturities of financial placements which prevented any extension in the financing term granted to enterprises in the productive sector.

Lastly, levels of economic activity, which were still low during the first quarter of the plan, rapidly gained momentum from the second quarter onwards. Industrial output grew rapidly during that quarter (by 13 per cent) and continued its upward trend in the following quarters. Thus, far from having recessive effects (aside from the initial short-term impact), the drop in inflation was accompanied by an increase in economic activity. Even so, since the revival did not come about until the last quarter of the year, the level of imports was very low and in consequence the commercial balance was very positive. Contributing to this result was the fact that many enterprises turned to exports

as a way of placing surplus production not sold at home
because of low effective demand.

(b) Lifting the freeze (April - September 1986)

The duration of the freeze was not determined beforehand
as this might have created expectations which would
destabilize the economy as the end of the freeze approached.
Nevertheless, the freeze could not last indefinitely as an
artificial damper on inflation since, as has been mentioned,
movements in the prices of different goods and services were
dissimilar. In particular, the increase in flexible prices
was greater than the increase in industrial prices, wages,
public-utility tariffs and the exchange rate. Thus, toward
the beginning of the second quarter of 1986, economic policy
was faced with a dilemma: on the one hand the longer the
freeze lasted the greater would be the cumulative
disequilibrium in relative prices, with consequently a
potential for greater inflation during the subsequent
adjustment, in view of the structural characteristics of the
economy. On the other hand, the longer the freeze was
extended the greater would be the probability that economic
agents would lose their inflationary memory of the past and
not revert to their defensive indexing practices during the
adjustment period following the lifting of the freeze.

As early as February/March 1986, the government was
starting to ease up on the freeze, authorizing corrections
in certain industrial-product prices. Nevertheless, the
widespread freeze officially ended in April, with the start
of a new stage marked by the announcement of new rules
designed to provide greater flexibility for the programme
within the framework of moderate inflation. Thus a system of
pre-announced increments in public-utility rates was
established, with guidelines for wage variations and a
passive crawling-peg rule for the exchange rate. With
respect to private-sector prices, a maximum-price list was
drawn up for a set of mass-consumption goods, to be
gradually modified in the future, and, in addition, a

price-control system was drawn up for around 500 major enterprises, allowing them to vary their prices to take account of variations in their costs. These measures were designed to correct the imbalances in key relative prices that had accumulated during the freeze.

Fears that lifting the freeze would mean a sudden return to excessively high inflation were not borne out - the transition did not produce any major discontinuity in price trends. Nevertheless, inflation accelerated. During the second quarter of 1986, the average consumer price and wholesale price index grew at a monthly rate of 3.9 per cent and in the third quarter by 7.2 per cent a month. These increases were more homogenous among the various categories of goods than in preceding months. This meant a smaller spread in relative-price movements, but at the same time more generalized nominal-price increases.

During this more flexible period, although price indexes accelerated, other economic variables remained largely as much under the control of the economic authorities as they were during the period of the freeze. The coefficients of liquidity attained during the first nine months of the plan remained stable, and the fiscal deficit continued to remain under control (even tending to decline). Interest rates, on the other hand, varied considerably, going from positive to negative in real terms, owing to the fact that nominal interest rates did not completely follow the price indexes. This was largely because monetary policy during the period was not very restrictive. In this connection, it is worth pointing out that during this period monetary programming lost part of the strict consistency with fiscal policy it had maintained during the freeze. This was because there was a certain over-expansion in the rediscounts granted to 'system banks', which resulted in an increase in the money supply which perhaps was not in line with the pace of the increase in the demand for money.

Levels of economic activity continued to mount rapidly,

boosted mainly by consumption and investment, since export levels suffered from the drop in the external prices of Argentina's principal grain exports. Between the third quarter of 1985 and the third quarter of 1986, the global product rose by over 11 per cent, and the industrial product by over 26 per cent. Investment in machinery and equipment went up by 34.6 per cent. Such expansion of economic activity over such a short time has occurred very rarely in postwar Argentina. In contrast with the previous year, the trade surplus declined, partly because of the increase in imports due to rising incomes, but to a greater extent because of the reduction in the value of exports caused by the drop in international prices already mentioned.

(c) Administered prices and active monetary policy

As mentioned above the period of more flexible price and wage guidelines came about within the framework of a largely passive monetary policy and of recovery in economic activity. By the middle of 1986 there were signs that the pace of expansion could not be maintained if at the same time attempts were being made to achieve a certain stability in the inflation indices. On the one hand, nominal wage increases widely exceeded the government's guidelines in the second quarter, and, on the other hand, the relative price of fresh foodstuffs continued to improve in relation to other prices. Since these prices are formed in markets where supply and demand play a decisive role, it is possible that strong excess demand was being fueled by wage increases and the expansion of industrial production.

With the aim of controlling inflation, moderating the pace at which production was expanding so as to bring it to levels sustainable over the long term, and controlling certain financial variables showing signs of instability, a new set of measures was launched in September, giving rise to the third phase of the plan. In fact, the upsurge in inflation in July and August, when monthly inflation rates jumped from 4 per cent to 9 per cent, represented the first

radical test of the stabilization plan. The government's reaction made it clear that, where policy administration was concerned, the room to manoeuvre had considerably increased since the start of the plan.

The measures taken in September 1986 were designed to make price and wage policies compatible with demand management, ie with monetary and fiscal policy. For this reason, this stage could be described as one of 'administered' prices with active monetary policy.

In accordance with the foregoing, a policy was announced giving guidelines for prices, tariffs and the exchange rate, with slower rates of variation than in previous months. The wage increases already announced for the fourth quarter were observed, since they were compatible with those guidelines. In addition, the Central Bank set itself the task of exercising greater control over the money supply, adapting it to the expected rate of inflation fixed in the guidelines.

It is very difficult to appraise the effects of these measures because of the short time since their implementation and because of the lack of a clear cut trend in the evaluation of the economy. However, the inflationary pressures underlying recent economic events still seem to be active and indeed inflation accelerated further in the early months of 1987.

4.   The future

The austral plan was an attempt to 'do it better', given existing constraints. That is, given the available foreign resources, the plan aimed to avoid the most important failures of earlier short-run economic policies. The short-run results have been encouraging since hyperinflation was stopped without inducing a recession of economic activity (in fact GDP grew strongly). But this success was in the short run. In the long run stability will be achieved

only if the constraints cited in this paper can be reduced, especially those related to interest payments on outstanding foreign debt. In the long run, Argentina has no choice but to find a solution to the debt problem. But this is not a problem which can be solved through domestic policy only. The solution depends also on future international economic conditions.

Argentina has been in a 'stationary state' during the last ten years. In coming years the country should direct its policy efforts towards achieving a socially acceptable rate of growth. As the rate of growth in population is lower than that of other LDCs (about 1.6 per cent a year), a steady improvement in economic wellbeing could be achieved with an annual average economic growth rate of 3-4 per cent. To achieve this goal Argentina has steadily to improve the performance of both exports and investment. This means, at least in the medium run, per capita consumption cannot be increased too fast. Nevertheless, as long as the interest cost of outstanding foreign debt and international credit rationing both persist, even these modest goals will be very difficult to achieve. In the present situation, if the country implements an export-led development policy to increase the trade surplus and uses this surplus to pay more debt, the most likely outcome will be a deterioration in the domestic situation because of the internal transfer problem. More trade surplus means more government internal borrowing. The further rapid growth of domestic government debt would be unbearable given the size of the Argentine financial system. Consequently, investment should increase in step with exports. This means that in the years to come Argentina will not be able to reduce its demand for external credit.

The effective amount of credit demanded will, however, be a function of the evolution of the international economic system. A fall in foreign interest rates would benefit Argentina substantially. When the prime rate falls by 1 per cent it is as if Argentina's exports grow by 5 per cent. Furthermore, the discount rate taken into account internally

in project evaluation, is a function of both international rates and the risk premium for investing in Argentina. Domestic policy can influence the risk premium but it cannot influence foreign interest rates.

A devaluation of the dollar would benefit Argentina since its debt is denominated in dollars. Furthermore, if devaluation leads to an improvement in the US trade account, this would not hit Argentina too much since the country did not take as much advantage of the US import boom as other LDCs such as Brazil or Mexico did. The evolution of Argentine exports depends heavily on both Latin American countries' purchasing power (because they are the main buyers of its industrial products) and protectionist policies put into practice by the OECD countries. A fall in interest rates and a devaluation of the dollar improves the position of Latin American countries and makes European protectionist policies more expensive. Consequently a 'cooperative scenario' would be the most profitable alternative for Argentina.

APPENDIX

This appendix contains algebraic expressions underlying the diagrams and some of the arguments presented in the text. We begin with the 2x2 system for foreign saving and investment as ratios of GDP included in figure one. Assuming $ag = o$, from (1) it follows that $ae = -ap$, then:

$$ip - ae = sp - zp \qquad (A.1)$$
$$-mk\ ip + ae = my + zp - x \qquad (A.2)$$

defining my as the rest of imports as a proportion of GDP. The slopes of internal and external balance functions are:

$$\frac{dip}{dae}\Big/_{int} 1 \qquad \text{and} \qquad \frac{dip}{dae}\Big/_{ext} \frac{1}{mk}$$

The adjustment rules are:

$$\frac{dip}{dt} = f_1\ (ae + sp - ip - zp)$$

and

$$\frac{dae}{dt} = f_2\ (mk\ ip + my + zp + zg - x - ae)$$

The Jacobian for (A.1) and (A.2) takes the form:

$$J_O = \begin{bmatrix} -1 & 1 \\ mk & -1 \end{bmatrix}$$

So standard stability conditions are met:

$$\text{Tr}\ J_O = -2$$

$$\det J_O = 1 - mk$$

In the text we made the following comparative statics exercise:

$$\frac{dip}{dzp} = 0 \qquad \text{and} \qquad \frac{dae}{dzp} = 1$$

When we analysed the financial side we used the following

model:

$$ip - sp + \Delta nf = -zp \qquad (A.3)$$
$$-mk\ ip = mk\ ig + my + zg + zp - x - \Delta k - \Delta r \qquad (A.4)$$
$$\Delta nf = -\Delta k + \Delta r + \Delta cg \qquad (A.5)$$

The right-hand side variables are all exogenous and

$$ip = ip\ (q;\ r_m)$$
$$\Delta nf = nf\ (q;\ r_m)$$
$$\Delta cg = g + zg + ig - t$$

with:

$$\frac{\partial ip}{\partial q} = ipq > 0 \qquad (A.6)$$

$$\frac{\partial ip}{\partial r_m} = ipr < 0 \qquad (A.7)$$

$$\frac{\partial \Delta nf}{\partial q} = nfq < 0 \qquad (A.8)$$

$$\frac{\partial \Delta nf}{\partial r_m} = nfr > 0 \qquad (A.9)$$

Where r_m stands for the interest rate of financial assets and q stands for the demand price of capital goods. This variable should be interpreted in the Minsky sense. That is, it represents the price which capitalists are prepared to pay for capital goods and not necessarily the actual price of capital goods on the market.

The adjustment rules are:

$$\frac{dsp}{dt} = f_s\ (ip + \Delta nf + zp - sp)$$

$$\frac{dq}{dt} = f_q\ (\Delta k + x - mk\ ip - my - zp - zg - \Delta r)$$

$$\frac{dr_m}{dt} = f_{r_m}\ (\Delta r + g + zg + ig - \Delta nf - t - \Delta k)$$

The Jacobian for (A.3), (A.4), and (A.5) takes the form:

$$J_1 = \begin{bmatrix} -1 & ipq + nfq & ipr + nfr \\ 0 & -mk\ ipq & -mk\ ipr \\ 0 & -nfq & -nfr \end{bmatrix}$$

And the stability conditions are the following:
(1) Tr J_1 = -1 - mk ipq - nfr $<$ 0, which is true given that the signs of (A.6), (A.9), and mk are all positive.

(2) det J_1 = mk (nfq ipr - ipq nfr) $<$ 0, which is met if we assume that the assets are gross substitutes.

(3) mk (ipq nfr - nfq ipr) $>$ 0, which is met if (2) is true

nfr $>$ 0, which is true given the assumption made in (A.9)
mk ipq $>$ 0, which is true given (A.6).

These are the algebraic equations relevant to the comparative statics exercises in the text; first an increment of zp:

$$\frac{dsp}{dzp} = \frac{1-mk}{mk} < 0$$

$$\frac{dq}{dzp} = \frac{nfr}{detJ_1} < 0$$

$$\frac{dr_m}{dzp} = -\frac{nfq}{detJ_1} < 0$$

and, second, an increase of zg:

$$\frac{dsp}{dzg} = -\frac{1-mk}{mk} < 0$$

$$\frac{dq}{dzp} = \frac{nfr + mk\ ipr}{detJ_1} < 0$$

$$\frac{dr_m}{dzp} = \frac{-mk\ ipq\ -nfq}{detJ_1} > 0$$

FOOTNOTES

1. For a detailed analysis of the economic policies
    implemented during 1975-84 see Canitrot (1981), Fanelli
    y Frenkel (1985b), Feldman y Sommer (1983) and Frenkel
    (1980a). For 1964-74 see Mallon y Sorrouille (1975) and
    Williamson (1983). Frenkel (1983a) and Winograd (1984)
    examine the internal consistency of the 'active crawling
    peg' policy.

2. This estimation is based on Fanelli y Frenkel (1985a).

3. Regrettably no data are available on income
    distribution.

4. For an examination of the evolution of the domestic
    financial market during the 'active crawling peg' policy
    and the financial liberalization see Damill y Frenkel
    (1985) and Fanelli (1984).

5. The formalization in relation to the real side of the
    economy follows partially Taylor (1983) and Bacha
    (1983).

6. See, among others, Diaz Alejandro (1963), Canitrot
    (1975), Canitrot y Rozenwurcel (1984) and Sidrauski
    (1968).

7. See, for example, Krugman and Taylor (1978).

8. 2.4 per cent of GDP in 1984.

9. 4.3 per cent of GDP in 1984.

10. mk averaged 10.5 per cent in the last years. For the
    model see eq. (A.1) and (A.2) in the Appendix.

11. See McKinnon (1973) and Shaw (1973). In 1977 a financial
    reform was implemented which followed the 'financial
    liberalization' paradigm to the letter. Interest rates
    were freed and quantitative constraints on credit
    eliminated.

12. 'Notional' in the 'clower' sense. See Clower (1965),
    Leijonhufvud (1968) or Benassy (1982).

13. See for example Tobin (1969).

14. See Tobin (1982) or Taylor and Rosensweig (1984). Damill and Fanelli (1986) develop a less aggregated financial matrix for Argentina taking into account the effects of capital gains and losses due to changes in relative asset prices.

15. We are ignoring here the financial adjustment within the private sector. If, as a consequence of falling investment (ie falling sales), debtors' liquidity worsens, financial fragility will grow and the interest rate will increase. For the concepts of 'financial fragility' and 'demand price of capital goods', see Minsky (1975). For the model see the second model in the appendix.

16. The conclusion, then, is that there is an inverse relationship between fiscal deficit and investment. However, this should not be interpreted as a simple crowding out argument, because we are not assuming that output is fixed. We are only trying to explain what happens with investment/output ratio, that is - given the capital/output ratio - what happens to the potential rate of growth of the economy in the medium run. The model is not aimed at explaining the level of short-run activity because its main purpose is to stress the trade off between payments on outstanding foreign debt and the potential growth rate.

Nonetheless, we want to stress here the difference between our rationale of the adjustment of the economy and the crowding out argument. The latter says that, assuming full employment, if the government increases public expenditures (either of consumption or of capital goods), private investment would fall because of the increase in interest rates caused by this action. In principle, output could remain constant because the increase in public expenditure would roughly offset the decrease in investment. In our model, on the contrary, the fiscal gap worsens because of the increases in interest payments on outstanding foreign debt. That is, the government borrows funds from the market but the government does not spend such funds on goods. As a consequence, effective demand cannot remain constant. At the same time, since our framework is the two-gap model (with rationing in the international credit market) output should not be constant as long as the main tool for generating an external surplus in the short run is to provoke a decline in imports of both intermediate and capital goods. Given that my and mk are constant, not only investment but output has to decline. In order to maintain a manipulable model we emphasize here the effect of higher interest payments on investment. But there is also a trade-off between interest payments and

activity level in the short run.

17. The main justification for this assumption is that, in the context of high inflation, the growth of output is small in comparison to price changes. So, for the sake of simplifying the algebra, g_t can be ignored. This should not be interpreted as a 'full employment' assumption. On the other hand, we are only discussing identities here. We are not saying that inflation does not influence aggregate demand. It is obvious that an acceleration of inflation would cause a contraction in demand because of the increment in the 'inflationary tax' paid by the private sector. However, this last effect might be offset by the Fisher effect. That is, in any economy there are not only 'external' assets issued by the government but also 'inside' assets issued by banks and firms. In this sense Tobin (1980) is very clear, he says 'aggregation (of financial assets and liabilities) would not matter if we could be sure that the marginal propensities to spend from wealth were the same for creditors and debtors. But if the spending propensity were systematically greater for debtors, even by a small amount, the Pigou effect would be swamped by the Fisher Effect' (p. 10). The Argentine experience in 1982 was that the acceleration of inflation provoked a fall in private (and public) debt that led to output expansion. Nonetheless, the relation between changes in inflation and effective demand depend heavily on the economic context. To be specific, it is very important to know if nominal interest rates adjust to the increase in inflation or not.

18. Damill and Fanelli (1986) develop a methodology for a correct measure of the inflationary tax that differs from Cagan (1956) and Friedman (1971).

19. To the extent that the reserve requirement was almost 100 per cent during the last years. M_1 practically does not generate credit to the private sector. In 1983, on the other hand, l_t = 3.8 per cent and the inflationary tax paid averaged 5.86 per cent of the GDP. In 1984 l_t maintained its level, but the inflationary tax paid averaged 6.9 per cent of the GDP.

20. For a more detailed discussion of this concepts see Damill and Fanelli (1986).

21. For example, in 1984, ex post:

$$\Delta l_t = 0.4 \text{ per cent}$$

$$\frac{\Delta M_1}{P_t \ Y_t} = 6.5 \text{ per cent}$$

and $1_{t-1} \dfrac{t}{1+ t} = 6.9$ per cent

This calculation was made following the methodology proposed by Damill and Fanelli (1986).

22. This dilemma appears here because of our assumption that the monetary base is the only financial asset in the economy. In fact, the government could create new government liabilities to avoid this problem. However, this alternative would put high pressure on domestic interest rates as we have seen before. Another alternative that the government usually employs is that of incurring in arrears ('atrasos de tesorería') and thus forcing the private sector to hold financial assets. This is a disequilibrium solution to the problem in the sense that ex post the private sector would have undesired financial assets in an amount equal to the quantity of arrears. This solution would also provoke a rise in the interest rate.

23. A model closely related to the present one is described in Taylor (1979), chapter 9. Taylor follows Cauas' line of work. We thank Lance Taylor for this reference.

24. For a review of Latin American structural theory of inflation, see Figueiredo et al (1985).

25. Here we follow Frenkel (1983b) and (1984a).

26. Good references on the microeconomic rationale for mark up pricing are Kalecki (1971), Okun (1981) and (for high inflation) Frenkel (1979).

27. Indeed, the mark up rate depends on expected capital losses and expected income losses. See Frenkel (1979).

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Table 1

MACROECONOMIC INDICATORS

	GDP Growth Rate (1)	Inflation Rate (CPI) (2)	Real Exchange Rate (3)		Real Wage (4)	Balance of Payments (5)		Nominal Net External Debt (6)
			(a)	(b)		Trade Account	Current Account	
1965-74	4,4	30,5	99,8	90,9	97,4	269,1	35,7	
1975-84	0,4	247,9	105,4	93,8	84,8	1166,5	-1481,5	
1970	4,5	13,6	101,6	100,5	95,5	79,1	-158,9	na
1971	3,7	34,9	90,2	91,5	99,0	-127,7	-388,7	na
1972	1,9	58,4	106,6	101,1	94,1	36,4	-222,9	na
1973	3,4	60,3	100,0	100,0	100,0	1036,5	720,7	3948,0
1974	5,7	24,2	109,4	104,7	113,1	295,8	121,2	5359,0
1975	-0,4	182,8	112,6	88,9	105,5	-985,2	-1284,6	7256,0
1976	-0,5	444,1	142,8	110,3	71,2	883,1	649,6	6467,0
1977	6,4	176,0	119,9	110,6	71,9	1490,3	1289,9	5639,0
1978	-2,9	175,5	95,8	95,6	69,3	2565,8	1833,6	6469,0
1979	6,2	159,5	68,8	72,1	79,8	1109,9	-536,4	8554,0
1980	0,8	100,8	53,6	61,3	88,7	-2519,2	-4767,8	19478,0
1981	-6,2	104,5	68,7	75,9	80,5	-287,0	-4714,0	31794,0
1982	-5,1	164,8	121,8	103,9	71,7	2286,8	-2657,7	37477,0
1983	3,1	343,8	141,1	109,5	94,5	3320,0	-2437,5	40907,0
1984	2,4	626,7	128,7	109,6	114,9	3800,0	-2190,0	44155,0

(3 - a) Deflator Domestic Prices : Consumer Price Index (CPI)
(3 - b) Deflator Doestic Prices : Wholesale Industrial Prices Net of Foodstuf
(3) and (4) Index $\overline{1973}$ = 100
(5) and (6) In Millions of Dollars
(7) As % of GDP

Sources : Based on Central Bank, Secretary of Finance and Indec.

Table 2

COMPOSITION OF OUTPUT AND RATES OF GROWTH

	Total GDP		Agriculture		Mining		Industry		Elect. & Water		Construction		Services	
	A.G.	(c)	A.G.	(c)	A.G.	(c)	A.G.	(c)	A.G.	(c)	A.G.	(c)	A.G.	(c)
1965-74*	4,4	100,0	2,7	13,0	5,8	2,1	5,7	31,1	9,1	2,4	7,2	5,1	3,7	46,3
1975-84*	0,4	100,0	1,8	14,1	2,6	2,5	-0,7	25,5	5,3	3,6	-3,4	6,0	0,7	48,4
1970	4,5	100,0	4,8	13,2	5,1	2,3	4,2	27,0	10,7	2,3	13,8	6,5	3,0	48,7
1971	3,7	100,0	1,6	12,9	7,8	2,4	6,1	27,6	9,3	2,5	6,3	6,6	2,2	48,0
1972	1,9	100,0	1,9	12,9	2,9	2,4	4,0	28,2	9,9	2,6	-1,0	6,4	0,7	47,5
1973	3,5	100,0	10,7	13,8	-2,8	2,3	4,0	28,3	7,5	2,8	-11,7	5,5	3,3	47,3
1974	5,7	100,0	2,7	13,4	2,4	2,2	5,9	28,4	6,0	2,8	7,9	5,6	6,3	47,6
1975	-0,4	100,0	-2,8	13,1	-1,5	2,2	-2,6	27,8	6,1	2,9	4,6	5,9	0,5	48,1
1976	-0,5	100,0	4,5	13,7	2,4	2,2	-3,0	27,0	3,7	3,1	14,9	6,8	-2,4	47,2
1977	6,4	100,0	2,5	13,3	8,5	2,3	7,8	27,4	4,6	3,0	12,1	7,2	5,9	46,8
1978	-2,9	100,0	2,8	14,1	1,9	2,4	-10,5	25,4	3,3	3,2	-4,7	7,1	-1,4	47,8
1979	6,2	100,0	3,5	13,7	6,3	2,4	10,2	26,2	10,7	3,3	-0,5	6,6	6,6	47,8
1980	0,8	100,0	-6,7	12,7	5,8	2,5	-3,8	25,0	7,8	3,6	1,2	6,6	4,6	49,6
1981	-6,2	100,0	2,4	13,8	0,6	2,7	-16,0	22,4	-1,1	3,8	-13,8	6,1	-3,2	51,2
1982	-5,1	100,0	7,3	15,6	-0,7	2,8	-4,7	24,5	3,1	4,1	-19,8	5,1	-7,7	47,9
1983	3,1	100,0	0,9	15,3	2,2	2,8	10,8	24,2	8,0	4,3	-6,8	4,7	0,9	48,7
1984	2,4	100,0	3,5	15,5	0,3	2,7	4,4	24,7	6,8	4,5	-20,9	3,6	2,9	49,0

A.G. : Annual Rate of Growth.
(c) : % of GDP
* : Average Rate of Growth.

Table 3

COMPOSITION OF SUPPLY AND DEMAND

(% of GDP)

	GDP	Consumption	Investment*			Absorp-tion	Imports	Exports
			Constr.	Equip.	Total			
1965-74	100	78,8	10,2	9,6	19,8	98,6	8,9	9,7
1975-84	100	78,4	12,4	7,3	19,7	98,1	9,9	11,8
1970	100	78,6	13,2	8,0	21,2	99,8	9,0	9,2
1971	100	78,9	13,7	8,3	22,0	100,9	9,4	8,0
1972	100	78,4	13,1	8,5	21,7	100,1	8,6	8,0
1973	100	78,5	11,3	8,2	19,4	97,9	7,7	8,6
1974	100	80,5	11,5	7,7	19,2	99,7	8,3	8,1
1975	100	81,5	12,1	7,3	19,4	100,9	8,9	7,3
1976	100	75,9	13,5	7,6	21,1	97,0	6,7	9,6
1977	100	72,8	13,9	9,7	23,7	96,5	8,1	11,4
1978	100	73,4	14,2	7,9	22,1	95,5	7,6	12,8
1979	100	77,1	13,6	8,3	21,9	99,0	10,7	11,6
1980	100	80,2	14,2	8,8	23,0	103,2	15,1	11,1
1981	100	82,2	13,9	7,3	21,2	103,4	15,4	12,7
1982	100	78,8	11,9	5,1	17,0	95,8	9,3	13,2
1983	100	80,2	9,5	5,3	14,8	95,0	8,8	14,3
1984	100	82,4	7,5	5,3	12,8	95,2	8,7	14,3

*Fixed investment, doesn't include inventories accumulation.

Source : Based on Central Bank and Secretary of Planning.

Table 4 (a)

BALANCE OF PAYMENTS*
(in Millions of current Dollars)

	Goods			Services			Current Account	Capital Account	Change in Reserves
	Exports	Imports	Trade Balance	Real	Financial	Net			
1970	1773,2	1694,1	79,1	-12,3	-222,5	-234,8	-158,9	413,7	185,0
1971	1740,4	1868,1	-127,7	1,7	-255,9	-257,6	-388,7	-189,5	-384,6
1972	1941,1	1904,7	36,4	78,3	-333,6	-255,3	-222,9	-74,5	167,1
1973	3266,0	2229,5	1036,5	67,9	-394,4	-326,5	720,7	15,0	921,0
1974	3930,7	3634,9	295,8	164,4	-333,3	-168,9	127,2	-53,7	-51,3
1975	2961,3	3946,5	-985,2	125,6	-429,6	-304,0	-1284,6	191,1	-791,1
1976	3916,1	3033,0	883,1	240,5	-492,5	-252,0	649,6	-515,9	1192,4
1977	5651,8	4161,5	1490,3	346,8	-578,5	-231,7	1289,9	1286,5	2226,5
1978	6399,5	3833,7	2565,8	-99,8	-680,8	-780,6	1833,6	1333,9	1998,4
1979	7809,9	6700,0	1109,9	-761,3	-920,0	-1681,3	-536,4	4686,9	4442,4
1980	8021,4	10540,6	-2519,2	-740,1	-1531,4	-2271,5	-4767,8	2551,7	-2796,1
1981	9143,0	9430,0	-287,0	-904,9	-3699,7	-4404,6	-4714,0	1489,7	-3806,5
1982	7623,7	5336,9	2286,8	42,5	-4718,5	-4676,0	-2357,7	-2323,5	-651,1
1983	7835,0	4515,0	3320,0	-365,0	-5407,9	-5772,9	-2437,5	-1403,0	243,7
1984	8100,0	4600,0	3500,0	-283,0	-5712,0	-5995,0	-2492,1	684,3	196,0

*Minor accounts are not inluded.

Source : Based on Central Bank

Table 4 (b)

BALANCE OF PAYMENTS IN CONSTANT VALUE
(Millions of Dollars of 1973)*

	Goods			Services			Current Account	Capital Account	Change in Rserves
	Exports	Imports	Trade Balance	Real	Financial	Net			
1970	2165,0	2068,4	96,6	-15,0	-271,7	-286,7	-194,0	505,1	225,8
1971	2054,7	2205,5	-150,8	2,0	-302,1	-304,1	-458,9	-223,7	-454,0
1972	2195,8	2154,6	41,2	88,6	-377,4	-288,1	-252,1	-84,3	189,0
1973	3266,0	2229,5	1036,5	67,9	-394,4	-326,5	720,7	15,0	921,0
1974	3308,0	3059,7	248,3	138,4	-280,6	-142,2	107,0	-45,2	-43,1
1975	2279,7	3038,1	-758,4	96,7	-330,7	-234,0	-988,9	147,1	-609,1
1976	2883,7	2232,9	650,8	177,1	-362,7	-185,6	478,4	-380,1	878,7
1977	3919,4	2885,9	1033,5	240,5	-401,2	-160,7	894,5	892,2	1544,5
1978	4118,1	2467,0	1651,1	-64,2	-438,1	-502,3	1179,9	858,3	1285,5
1979	4465,3	3837,3	628,0	-436,5	-526,0	-962,5	-314,5	2702,2	2539,5
1980	4020,7	5283,5	-1262,8	-371,0	-767,6	-1138,6	-2389,9	1279,1	-1401,7
1981	4203,7	4335,7	-132,0	-324,1	-1701,1	-2025,2	-2167,3	685,0	-1749,9
1982	3431,1	2401,9	1029,2	19,1	-2123,5	-2104,4	-1061,0	1045,6	-293,0
1983	3481,2	2006,1	1475,1	-162,2	-2402,8	-2565,0	-1083,0	-623,4	108,3
1984	3512,5	1994,7	1647,8	-122,7	-2477,0	-2599,7	-1080,7	296,7	84,9

*Deflator U.S. WHOLESALE PRICE INDEX

Source : Based on Central Bank

Table 5

BALANCE OF EXTERNAL INDEBTNESS AND SOLVENCY INDICATORS

	Public Debt		Private Debt		(1) Total Debt		(2) Reserves		Total Net Debt (1)-(2)		Total Real Net Debt		Exports Net Debt Ratio (%)	Finarcial Services Exports Ratio (%)
	*	A.G	*	A.G	*	A.G	*	A.G	*	A.G	**	A.G		
1973	3316		2094		5410		1462		3948		3948		82,7	12,0
1974	4300	29,6	2470	17,9	6770	25,1	1411	-3,5	5359	35,7	4510	14,2	73,5	8,4
1975	4021	-6,5	3854	56,0	7875	16,3	619	-56,2	7256	35,3	5587	23,8	40,8	14,5
1976	5189	29,0	3090	-19,9	8279	5,1	1812	192,7	6467	-10,9	4671	-16,4	61,7	12,5
1977	6044	16,4	3634	17,6	9678	16,8	4039	122,9	5639	-12,9	3912	-16,3	100,1	10,2
1978	8357	38,2	4139	13,8	12496	29,1	6037	49,4	6459	14,5	4155	6,2	99,1	10,6
1979	9960	19,1	9074	119,2	19034	52,3	10480	73,5	8554	32,4	4890	17,6	91,3	11,7
1980	14459	45,1	12703	39,9	27162	42,7	7684	-26,6	19478	127,7	9764	99,6	41,1	19,0
1981	20024	38,4	15647	23,1	35671	31,3	3877	-49,6	31794	63,2	14616	49,6	28,7	40,4
1982	26341	31,5	14362	-8,3	40703	14,1	3226	-16,8	37477	17,8	16866	15,3	20,3	62,5
1983	30108	14,5	14269	-0,7	44377	9,0	3470	7,5	40907	9,1	18176	7,7	19,1	69,0
1984	37628	25,0	10193	-28,6	47821	7,8	3666	5,6	44155	7,9	19147	5,3	16,3	70,5

* In Millions of current dollars.
** In Millions of constant dollars of 1973.
A.G : Annual rate of growth.

Table 6

SOURCES OF EXTERNAL INDEBTNESS
(in Millions of dollars)

	1976	1977	1978	1979	1980	1981	1982	1976-82
Increase in Net Debt* (1)	-788,4	-827,5	819,6	2095,6	10924,1	12315,5	5683,0	29591,9
Registered Sources** of Indebtness (2)	+1386,8	-1035,8	-1738,8	239,8	9180,3	9320,8	2892,1	17471,6
Current Account (a)	649,6	1289,9	1833,6	-536,4	-4767,8	-4714,0	-2357,7	-8602,8
Trade Credit*** (Exports) (b)	263,4	255,3	8,6	840,8	-33,0	-1463,0	-504,0	-631,9
Direct Investment (c)	-	-52,1	274,2	264,6	787,7	927,0	257,0	2458,4
Parity Adjustment (d)	-16,4	9,3	166,0	132,0	-213,0	-363,0	-106,0	-391,1
Unjustified Capital Flows (e)	499,2	-369,2	-575,9	-1142,7	-4655,8	-3499,0	107,0	-9636,4
Errors and Omissions (f)	-9,0	-97,4	32,3	201,9	-298,4	-208,8	-286,4	-667,8
Unidentified Debt Increase (1) - (2)	598,4	208,3	2558,4	1855,8	1743,8	2994,7	2790,9	12120,3

* Δ Total Debt - Δ Reserves = (1)

* - (a + b + c + d + e + f) = (2)

*** Exports credit is not included in foreign debt figures.

Source : Based on Central Bank Data.

Table 7

FINANCIAL INVESTMENT AND FOREIGN PAYMENTS
(% of GDP)

	ae	−ag	ap	z
1964	−0,5	5,5	6,0	0,5
1965	−1,5	3,2	4,7	0,4
1966	−1,9	4,1	6	1,2
1967	−1	1,2	2,2	1,4
1968	0	1,4	1,4	1,4
1969	0,9	1,1	0,2	1,3
1970	0,9	1,1	0,2	1,1
1971	1	3,8	2,8	0,4
1972	0,9	.4,6	3,7	1,3
1973	−1,4	6,6	8,0	1,5
1974	0,1	6,9	6,8	1,2
1975	2,5	14,0	11,5	1,2
1976	−0,9	9,8	10,7	1,3
1977	−1,8	3,2	5,0	1,3
1978	−1,6	3,8	5,4	1,7
1979	1,8	3,6	1,8	1,9
1980	5,5	4,3	−1,2	2,1
1981	6,8	6,6	−0,2	5,5
1982	2,7	3,4	−0,7	7,2
1983	3,2	10,8	7,6	8,2
1984	3,2	7,4	4,2	8,4*

*Estimated
Source: Secretary of planning

Table 8

Interest payments ou outstanding government
foreign debt as a percentage of GDP*

1980	0,8
1981	4,58
1982	6,39
1983	4,84
1984	4,31**

*Information is not available before 1980

** Estimated

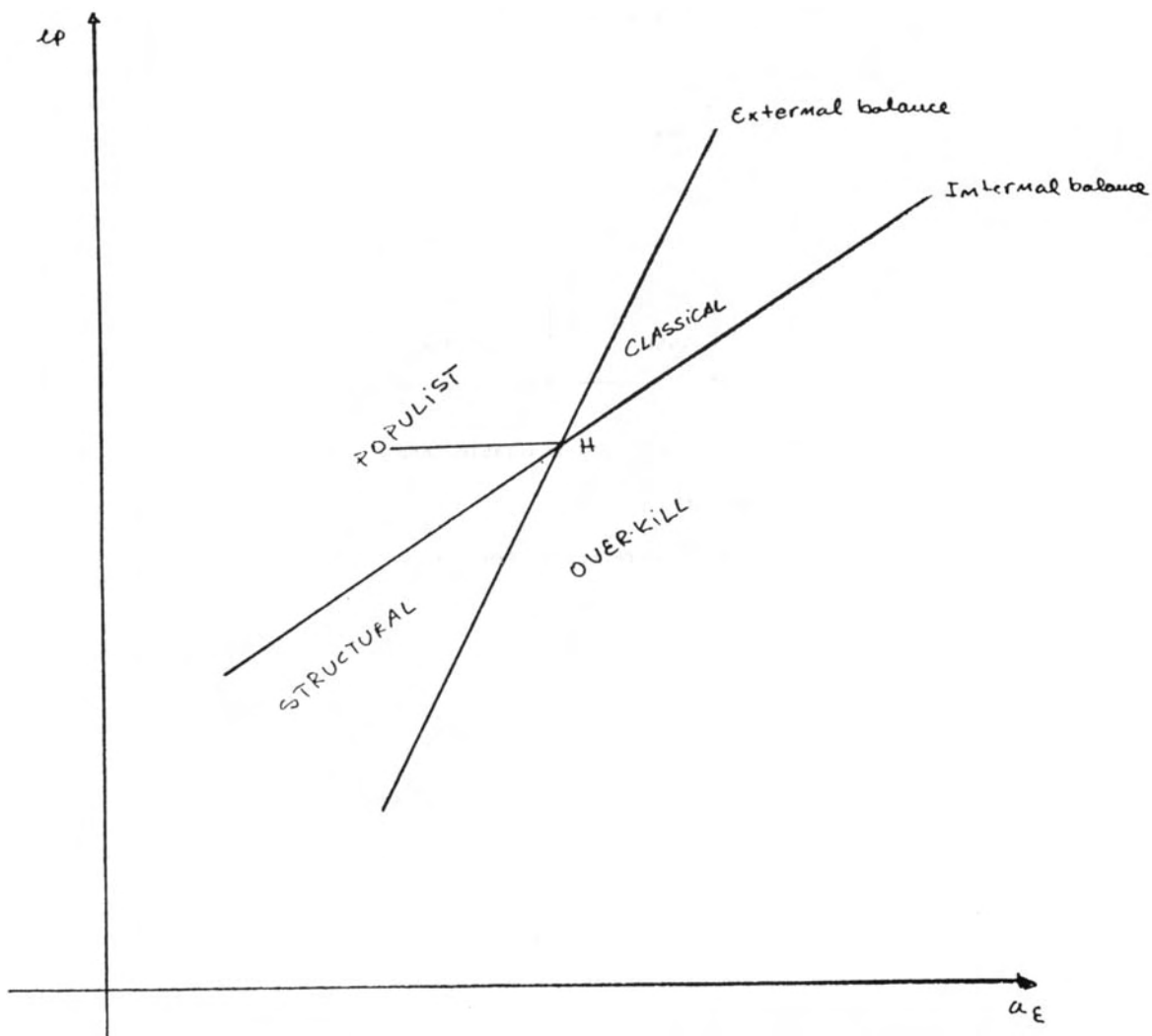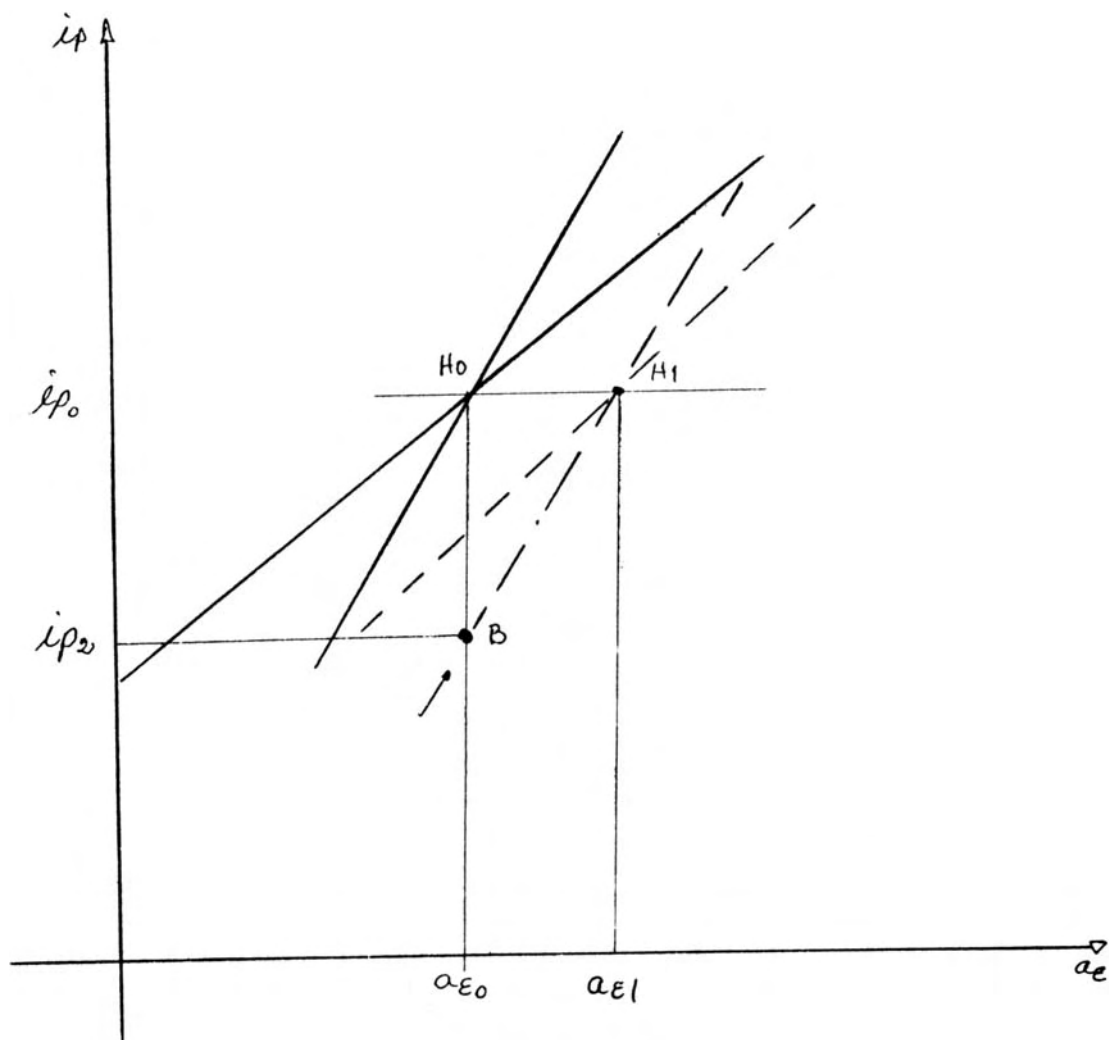   Source: Secretary of Finance

FIGURE ONE

FIGURE TWO

FIGURE THREE