DISCUSSION PAPER

WHAT WENT WRONG WITH THE RECENT REFORMS IN THE SOUTHERN CONE

Vittorio Corbo
Jaime de Melo
James Tybout

The World Bank

July 1985

Development Research Department
Economics and Research Staff
World Bank

The World Bank does not accept responsibility for the views expressed herein which are those of the author(s) and should not be attributed to the World Bank or to its affiliated organizations. The findings, interpretations, and conclusions are the results of research supported by the Bank; they do not necessarily represent official policy of the Bank. The designations employed, the presentation of material, and any maps used in this document are solely for the convenience of the reader and do not imply the expression of any opinion whatsoever on the part of the World Bank or its affiliates concerning the legal status of any country, territory, city, area, or of its authorities, or concerning the delimitations of its boundaries, or national affiliation.
WHAT WENT WRONG WITH THE RECENT
REFORMS IN THE SOUTHERN CONE

by

Vittorio Corbo
Jaime de Melo
James Tybout

The World Bank

July 1985

The World Bank does not accept responsibility for the views expressed herein which are those of the authors and should not be attributed to the World Bank or to its affiliated organizations. The findings, interpretations, and conclusions are the results of research supported by the Bank; they do not necessarily represent official policy of the Bank. The designations employed, the presentation of material, and any maps used in this document are solely for the convenience of the reader and do not imply the expression of any opinion whatsoever on the part of the World Bank or its affiliates concerning the legal status of any country, territory, city, area, or of its authorities, or concerning the delimitation of its boundaries, or national affiliation.
WHAT WENT WRONG WITH THE RECENT
REFORMS IN THE SOUTHERN CONE

Abstract

This paper describes and interprets the outcome of the reform packages in Chile, Argentina and Uruguay during 1974-83. It is shown that all three countries experienced initial success with the rescue operation from the severe macroeconomic disequilibrium at the inception of the reforms. The paper then discusses the areas in which the reforms were successful and why the countries experienced boom-bust cycles resulting in large increases in external indebtedness and internal financial crises.

The paper attributes the failure of the reforms to a combination of policy inconsistencies, implementation difficulties, and market frictions. Jointly, these factors generated a sustained appreciation of the real exchange rate and a large spread between the cost of dollar-denominated and peso-denominated loans. In turn, the appreciation and interest rate difference created protacted opportunities for arbitrage that distracted firms from the business of production.
# Table of Contents

I. INTRODUCTION ................................................................. 1

II. THE REFORMS AND THEIR INTENT ........................................... 2
   A. Liberalization Policies .................................................. 3
      1. Commodity market deregulation .................................... 4
      2. Financial market deregulation ..................................... 5
      3. Labor market deregulation .......................................... 6
   B. Stabilization Policies .................................................... 7
      1. Phase 1 .................................................................. 7
      2. Phase 2 .................................................................. 10

III. STYLIZED OUTCOMES ......................................................... 11
   A. Phase 1 .................................................................. 11
   B. Phase 2 .................................................................. 13
   C. Productivity and Growth ................................................ 15

IV. WHAT WENT WRONG ............................................................. 18
   A. Policy Inconsistencies ..................................................... 19
      1. Exchange rate preannouncements, fiscal deficits, and wage
         indexation ........................................................... 19
      2. Announcement inconsistencies and exchange risk .......... 22
      3. Conflicts between commercial and exchange rate policies 23
      4. Treatment of financial intermediaries ......................... 31
   B. Frictions and Adjustment Lags .......................................... 33
      1. Price formation ....................................................... 33
      2. Asset Substitution and Monetary Policy ....................... 37
   C. Evasions of the Intended Incentive Structure ................... 38
      1. Privatization of the tariff .......................................... 38
      2. Exploiting the financial environment ......................... 39

V. CONCLUSIONS .......................................................................... 42

NOTES ....................................................................................... 45
I. INTRODUCTION

For decades, Argentina, Chile and Uruguay pursued inward-looking development strategies that relied heavily on extensive government intervention. Accordingly, these economies were characterized by anti-export biases, high spreads in protection across sectors, and heavily controlled financial systems. Likewise, each economy suffered from recurrent balance-of-payments crises, and low growth. During the 1970s these countries attempted to switch from import-substitution-led industrialization to a more neutral strategy. Furthermore, to improve resource allocation, the three countries moved (in varying degrees) toward liberalization of markets. Commodity price controls were practically eliminated, government deficits were reduced and/or eliminated, trade barriers were reduced, interest rates were decontrolled, constraints on capital flows were reduced, and constraints on labor markets were relaxed. However, except for Chile, many forms of intervention still remained.

The reforms started around 1974 in Uruguay and Chile, and 1976 in Argentina. At that time, all three countries were in severe macroeconomic disequilibrium with acute foreign exchange shortages and severe fiscal-deficit-induced inflation. Hence, the reform packages entailed short-term rescue operations and stabilization policies, as well as long-term policies to progressively remove government intervention across product and factor markets.

The outcome of these reform packages is well known. All three economies experienced initial success with the early stages of their stabilization and liberalization programs. But each eventually encountered a boom-bust cycle, large increases in external indebtedness, and major internal
financial crises. What did the reform packages accomplish, and why did they ultimately fail?

The thesis of this paper is that initially some efficiency gains were made, but these were ultimately overshadowed by problems with policy inconsistencies, implementation difficulties, and overlooked market frictions. These factors generated a sustained appreciation of the real exchange rate, and a large spread between the cost of dollar-denominated and peso-denominated loans. In turn, the appreciation and interest-rate spreads created protracted opportunities for arbitrage that distracted firms from the business of production. Eventually, firms became sufficiently in debt that, as expectations of a major devaluation developed, they were forced into crisis borrowing to cover soaring interest costs.

To lay the basis for our argument, we review briefly in section II the initial conditions facing each country on the eve of the reforms, and the sequencing of reforms in each country. A distinction is made between stabilization policies (to reduce inflation and balance of payments crisis) and liberalization policies (to promote better resource allocation). Section III reviews the stylized outcomes of the three reform packages. Section IV traces problems experienced in each country to particular policy implementations. Lessons to be drawn from the experience of the reforms follow in section V.

II. THE REFORMS AND THEIR INTENT 1/

When the military seized power, both Argentina and Chile were experiencing high fiscal deficits, severe inflation, and balance of payments crises. 2/ Annual inflation rates were approaching 1,000% in Chile (September 1973) and 2,300% in Argentina (March 1976). In the pre-reform crisis the
government deficit as a share of GDP was 12.0% in Argentina and 16.1% in Chile (Table 1). Moreover, net Central Bank exchange reserves were negative in Argentina and close to zero in Chile. To compound these problems, both countries suffered from numerous microeconomic distortions such as tariffs, interest ceilings, and price controls.

In Uruguay macroeconomic imbalances were not as pronounced when the military came to power: inflation was only 97% in 1973, the government deficit had averaged a relatively modest 3.2 percent of GDP over the previous several years (Table 1), and partly because of severe restrictions on trade and international capital flows, there was no immediate crisis of Central Bank reserves. Nonetheless, the economy was suffering from widespread microeconomic distortions, and had registered almost zero growth for twenty years.

The first task facing the economic teams in each country was to restore macroeconomic stability. But these teams also diagnosed excessive government intervention as the fundamental cause of inefficient resource allocation and low growth. In their view, the cure called for a deregulation of commodity and factor markets, including the removal of barriers to free trade and capital flows. Such measures would improve resource allocation, eliminate recurrent bottlenecks, and lead to higher growth.

A. Liberalization Policies

With different timing and intensity, all three countries removed price controls, liberalized interest rates, decentralized intermediation, and partly deregulated labor markets. All three countries also relaxed restrictions on international trade and liberalized capital inflows. But with the exception of domestic financial market deregulation, which proceeded
rapidly in all cases, the sequencing of reforms was different in each country. Early on, Uruguay removed all controls on capital flows and many commodity price controls, but it progressed more slowly toward liberalizing foreign trade. Chile, on the contrary, went the furthest in eliminating domestic price controls, the endemic fiscal budget deficit, and trade barriers, but it kept controls on short-term capital flows for a long time and maintained important labor market regulations. Argentina also eliminated price controls and removed most restrictions on short-term capital flows before implementing a tariff reform. Below, we review the major features of each country's policies.

1. Commodity market deregulation

Two kinds of reforms were implemented in commodity markets: deregulating domestic prices and reducing tariff and nontariff barriers to trade. Chile went farthest on both counts. In the early stages of implementation, prices in the domestic commodity market were deregulated, and subsidies were practically eliminated. Most nontariff restrictions to trade were eliminated, and the commodity market was indirectly deregulated by privatizing over 500 enterprises that had been seized or nationalized during the Allende years. The multiple exchange rate system was unified with an initial large devaluation. All non-tariffs restrictions were lifted and the tariff structure was also reformed. Over five years starting in 1974, the average tariff was brought down from 90 percent to a uniform 10 percent (except for automobiles over 850 cc).

In Argentina, after a substantial price deregulation, price controls were reinstated as part of the stabilization effort in 1977 but abandoned thereafter. Initially, the liberalization included also the unification of
the exchange rate with a sharp real devaluation (close to 25%), some reduction in tariffs, and a substantial reduction of taxes on traditional exports. Furthermore, most nontariff barriers were eliminated except for basic metals. Redundant protection nonetheless remained until late in 1979 and the peso appreciation of 1979 and 1980 provided a de facto trade liberalization.

In Uruguay, price controls were nearly eliminated by the end of 1979. But from 1974 to 1980, commercial policy reforms were much less pronounced than in the other two countries. However, import quotas that were widespread in the early seventies were eliminated in 1975, and taxes on traditional exports were removed. Unlike Chile and Argentina, Uruguay encouraged nontraditional exports until early 1979 with direct subsidies and credit subsidies. Tariffs were somewhat reduced, with maximum tariff rates lowered from 300% in 1975 to 150% by 1977. But tariffs were levied on reference prices, usually much higher than landed prices. Thus, the realized protection was often a multiple of the nominal formal tariffs, and there was redundant protection throughout 1979. A formal program of tariff reductions was initiated in January 1980, with a uniform 35% tariff rate to be achieved by December 1985. As in Argentina, an appreciating real exchange rate in 1980 and 1981 was the main source of increasing external competition.

2. Financial market deregulation

The rapid deregulation of domestic financial markets, also a common feature of reforms in the three countries, was important because of many years of nonprice allocations of credit and highly negative real interest rates. In all three countries, domestic capital markets were substantially deregulated in two ways. First, interest rate ceilings were progressively eliminated. Second, restrictions on financial intermediaries were reduced. Argentina went
from 100% reserve requirements and directed credit programs to a decentralized fractional reserve system. The Chilean government first loosened its control of the financial system by allowing nonbank intermediaries to operate without interest rate controls. Then the next several years, interest ceilings on commercial banks were removed, and publicly held intermediaries were returned to the private sector. In Uruguay, dollar deposits were legalized early on, and directed credit programs were dismantled. Later, in 1977, controls on entry to the banking system were removed.

Each country also tried to open its economy to international capital flows, but the speed and extent of this action varied. In Uruguay, unrestricted movements of private capital were legalized as early as 1974, and full convertibility was reached by early 1977. In Argentina, most restrictions on capital movements were eliminated with the reforms of 1979. In Chile, medium term capital flows were progressively deregulated, with global limits on borrowing eliminated in 1979, and restrictions on the monthly inflow eliminated in April 1980. Restrictions on short-term capital inflows remained until late 1981.

3. Labor market deregulation

In all three countries, labor markets liberalization was relatively minor. These markets continued to be controlled through penalties or prohibitions on labor dismissals, legislated wages, and/or wage indexation. But the weakening of trade union power was a de facto deregulation in the early stages of the reforms. In Chile, mobility was increased by the new labor laws of late 1979 and the social security reform of May 1981. But until June 1982, Chilean wages were fully indexed to the CPI for the private and public sectors. In Uruguay, labor mobility was increased with the social
security reform of 1979, which created a unified social security fund financed mainly by government revenue from general taxes. Argentina's labor market was deregulated even less than those of Chile and Uruguay. This reflected the military's ongoing concern with political stability, and the potential threat posed by the Peronist Labor movement.

B. Stabilization Policies

In each country, the new economic teams had to immediately contend with two forms of macro imbalance. Internally, extremely high inflation rates, and externally, major balance of payments crises. Programs to redress these imbalances were implemented in two identifiable phases.

In the first phase, anti-inflationary policy was based on major reductions in monetary growth and fiscal deficits. These "orthodox" measures were recognized to be contractionary, but it was thought that the potential benefits would easily outweigh the temporary costs of recession. Absorption reductions were much more important in Chile than in Argentina and Uruguay; hence, not surprisingly, the Chilean recession was most extreme (table 1).

Anti-inflationary policy measures were, in themselves, viewed as insufficient to eliminate balance of payments crises. Hence phase I policies in each country also included major expenditure switching attempts. In Chile and Argentina switching was achieved through large real devaluations, and in Uruguay switching included a combination of real devaluation and promotion of non-traditional exports. To avoid repetition of external crises these initial adjustments were followed with a passive crawling peg exchange rate regime aimed towards maintaining purchasing power parity.
Table 1:
Macroeconomic Performance in the Southern Cone

<table>
<thead>
<tr>
<th>Import substitution period</th>
<th>Pre-reform crisis</th>
<th>Reforms</th>
<th>Post-reform recession</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHILE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average annual growth rate (percent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross domestic product</td>
<td>4.3</td>
<td>0.5</td>
<td>3.1</td>
</tr>
<tr>
<td>Expenditure</td>
<td>5.1</td>
<td>1.3</td>
<td>-8.2</td>
</tr>
<tr>
<td>Gross fixed investment</td>
<td>5.3</td>
<td>-9.8</td>
<td>-7.8</td>
</tr>
<tr>
<td>Consumer price index</td>
<td>23.3</td>
<td>149.7</td>
<td>158.0</td>
</tr>
<tr>
<td>Average (percent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiscal deficit/GDP</td>
<td>2.1</td>
<td>16.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>6.0</td>
<td>4.6</td>
<td>14.2</td>
</tr>
<tr>
<td>Real wage (1969=100)</td>
<td>98</td>
<td>98</td>
<td>69</td>
</tr>
<tr>
<td><strong>URUGUAY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average annual growth rate (percent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross domestic product</td>
<td>1.9</td>
<td>-0.4</td>
<td>4.3</td>
</tr>
<tr>
<td>Expenditure</td>
<td>2.9</td>
<td>-0.2</td>
<td>1.9</td>
</tr>
<tr>
<td>Gross fixed investment</td>
<td>7.3</td>
<td>-10.8</td>
<td>25.0</td>
</tr>
<tr>
<td>Consumer price index</td>
<td>49.8</td>
<td>62.7</td>
<td>69.2</td>
</tr>
<tr>
<td>Average (percent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiscal deficit/GDP</td>
<td>1.9</td>
<td>3.2</td>
<td>3.8</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>8.2</td>
<td>8.1</td>
<td>9.7</td>
</tr>
<tr>
<td>Real wage (1968=100) a/</td>
<td>104</td>
<td>102</td>
<td>86</td>
</tr>
<tr>
<td><strong>ARGENTINA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average annual growth rate (percent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross domestic product</td>
<td>4.2</td>
<td>2.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Expenditure</td>
<td>4.2</td>
<td>3.3</td>
<td>-1.6</td>
</tr>
<tr>
<td>Gross fixed investment</td>
<td>6.5</td>
<td>0.1</td>
<td>4.9</td>
</tr>
<tr>
<td>Consumer price index b/</td>
<td>23.5</td>
<td>77.6</td>
<td>245.6</td>
</tr>
<tr>
<td>Average (percent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiscal deficit/GDP</td>
<td>3.0</td>
<td>12.0</td>
<td>7.7</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>5.7</td>
<td>2.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Real wage (1976=100)</td>
<td>125</td>
<td>154</td>
<td>100</td>
</tr>
</tbody>
</table>

Notes: Averages for the period 1965-70 were estimated by fitting ln x = a + bt; T = time trend; for the other periods a compounded average is used.

a/ Until October 1980, the index reflects only legislated increases in wages.

Sources: National accounts and papers mentioned in note 1.
These initial policies successfully eliminated balance of payments crises. But, although the rate of inflation came down considerably in each country, several years after the contractionary policies had been implemented, it remained disturbingly high (Chilean inflation was still around 50% in late 1977, Argentinian inflation 166% in late 1978, and Uruguayan inflation roughly 50% in late 1978 -- see table 2). This persistence of inflation motivated a major shift of stabilization tactics toward what we will call "phase 2" policies.

Because the economies were seen as being more-open-to-trade and capital flows, the new approach consisted of using the exchange rate as an anti-inflationary tool. Expectations about inflation and devaluation were recognized as important in determining the dynamics of stabilization, and it was assumed that preannounced exchange rate targets (up to six months in advance) would break inflationary expectations. The rate of devaluation was set by a preannounced schedule (known as the tablita) at less than the existing difference between domestic and world inflation. This policy corresponds to an "active" crawling peg.

Proponents of the new approach thought that purchasing-power parity and interest parity -- both resulting from the forces of competition in freely operating commodity and capital markets -- would obtain fairly rapidly. In Argentina and Uruguay, anti-inflationary policy took precedence over other economic objectives with the adoption of the tablita in December 1978.

Similarly, although Chile was also implementing other liberalization reforms, bringing inflation down also became a major concern when the tablita was adopted in February 1978.
Since conditions differed in the three countries, there is no one model to describe how policymakers envisaged the path toward a stable economy. The Rodriguez model probably comes closest to describing how the preannouncements were supposed to work — at least in Argentina and Uruguay. In this model, interest-rate parity obtains continuously because of the absence of controls on capital flows and the assumption of perfect asset substitutability. The law of one price holds for tradables, and the rate of change in nontradable goods prices is a function of inflationary expectations — which are assumed to form adaptively — and of excess demand for nontradable goods. The model predicts that the implementation of a tablita should immediately reduce nominal interest rates and, to a lesser extent, inflation. The decline in real interest rates should first stimulate demand, creating an excess demand for nontradable goods, thereby inducing a temporary appreciation (that is, a fall) of the real exchange rate. As inflation falls, both the real interest rate and the real exchange rate should increase, approaching their long-run equilibrium from below. The economy should stabilize without undergoing the recession associated with traditional contractionary measures. The avoidance of a recession associated with this new approach was quite attractive politically, especially in Argentina, where the military stated that increases in unemployment should be avoided at all costs.

In Chile, the vision of Phase 2 stabilization was less closely linked to an integrated macro model. Policymakers there believed that the rate of domestic inflation would converge rapidly to world inflation simply because of competitive pressure. These policymakers were relatively concerned about the inflationary pressures capital inflows might create, hence the tablita policy was initially pursued with substantial restrictions on the volume and rate of
foreign credit use. Undoubtedly this contributed to an unemployment rate somewhat higher than the one that could have resulted with free capital inflows.

III. STYLIZED OUTCOMES

There is no easy benchmark for judging the reforms. When they were initiated, each country was in a state of chaos. And as the reforms came to an end, each country was plunging into a deep recession. To give as balanced a picture as possible, we report average values of macroeconomic indicators for five periods (table 1). The first period corresponds to years representative of the import-substitution-led development strategy, the second to the period of instability directly preceding the reforms. The next two periods correspond to the reforms. Phase 1 is broken into two subperiods to isolate better the conditions prevailing immediately before the tablita (phase 2) period (during which all three countries used the exchange rate as a stabilization instrument). The fifth period covers two years of deep recession after the abandonment of the tablita.

A. Phase 1

Phase 1, which combined liberalization with orthodox stabilization packages, was successful because the contractionary effects of the reduction in expenditures reduced macroeconomic imbalances. In Argentina, the central government budget deficit was reduced from an average of 12% of GDP in the prereform crisis period to 8%, and inflation was nearly cut in half. But growth never returned to the rates achieved during Argentina's period of import-substitution-led industrialization. In Chile, despite the 1975 recession, when GDP fell 13% mainly because of a sharp external shock, the
initial stabilization program was more successful. The government budget
deficit was brought down from 16% of GDP during the prereform crisis to 1% by
the end of Phase 1, and inflation fell from 150% to 79%. In Uruguay, the
turnaround was the most dramatic. Years of stagnation during the import-
substitution phase gave way to eight years of rapid growth, and the budget
deficit (3% of GDP during the crisis) was progressively reduced. Inflation,
meanwhile, was down from a historical peak of 97% in 1973 to 51% by the end of
phase 1.

There were nevertheless differences in adjustment in the three
countries during Phase 1. Although real wages fell in all three countries,
the trajectories of real wages and employment varied (see table 1). In
Argentina, where unemployment remained low until 1981, the adjustment involved
a drastic reduction in real wages and little change in unemployment. In Chile
and Uruguay, by contrast, a reduction in employment accompanied the fall in
real wages. Both countries also had to cope with severe external shocks
caused by the rise in oil prices and the fall in the dollar prices of their
main exports (copper in Chile and wool and beef in Uruguay). Balassa has
estimated that the output effect of the external shock during 1974-78
(expressed as a percentage of average GDP for the period) was only 1% for
Argentina but 4% for Chile and 7% for Uruguay. 10/ Argentina differed from
Chile and Uruguay in another important dimension. Chile and Uruguay were both
ultimately successful at eliminating their fiscal deficits and even at
achieving a surplus, but although Argentina managed to reduce the deficit of
its public enterprises, the fiscal deficit was never eliminated. (The lowest
values of the Argentine public sector deficit were 4.8% of GDP in 1977 and
6.9% of GDP in 1978).
The countries also differed in terms of their liberalization policies during phase 1. Although all three countries reduced or removed taxes on traditional exports, only Uruguay gave strong fiscal and financial incentives to exporters of nontraditional products. Unlike the other countries, Uruguay managed to combine expansionary government (and later private) investment growth with a reduction in consumption. Most of the increase in investment came from foreign savings, reflecting a reversal in a long-established trend of capital flight before the reforms. By contrast, Chile kept close control on capital flows and more rapidly liberalized domestic interest rates, which became positive early in the reforms. Furthermore, a sharp cut in the size of the public sector was introduced from the beginning. As a result, Chile's initial adjustment phase was more contractionary.

B. Phase 2

The outcomes of Phase 2, when all three countries pursued the same general exchange rate-based stabilization policy, are strikingly similar (table 2). In terms of inflation alone, the stabilization policies ultimately achieved their goal. In Chile inflation fell from an annual rate of 35% in 1978 (II) to -1% in 1982 (II). In Uruguay it fell from an annual rate of 49% in 1978 (IV) to 23% in 1982 (III) and in Argentina it fell from 167% in 1978 (IV) to 72% in 1981 (I).

However, because these stabilization programs created other major imbalances, they proved unsustainable. Table 2 shows that the immediate impact of the tablita was to induce a decline in the marginal cost of dollar borrowing, and to thereby create major opportunities for financial arbitrage. Hence, given the simultaneous increase in excess world liquidity, and the lifting of capital controls, large capital inflows were induced. (In
<table>
<thead>
<tr>
<th>Period</th>
<th>ANOTHER</th>
<th>STREAM</th>
<th>STEAM</th>
<th>UNITED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inflation</td>
<td>Real Exchange Rate Index</td>
<td>Real Interest Rate (pce)</td>
<td>Re-Post-Peso/Dollar Spread</td>
</tr>
<tr>
<td></td>
<td>(1978IV=100)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1977-1</td>
<td>191.0</td>
<td>175.4</td>
<td>-26.2</td>
<td>-62.0</td>
</tr>
<tr>
<td>-2</td>
<td>220.0</td>
<td>163.1</td>
<td>-1.7</td>
<td>-16.3</td>
</tr>
<tr>
<td>-3</td>
<td>161.9</td>
<td>135.4</td>
<td>-15.9</td>
<td>-18.5</td>
</tr>
<tr>
<td>-4</td>
<td>215.2</td>
<td>130.5</td>
<td>37.9</td>
<td>137.5</td>
</tr>
<tr>
<td>1978-1</td>
<td>196.3</td>
<td>182.0</td>
<td>28.8</td>
<td>112.8</td>
</tr>
<tr>
<td>-2</td>
<td>185.1</td>
<td>151.4</td>
<td>-4.4</td>
<td>94.8</td>
</tr>
<tr>
<td>-3</td>
<td>126.7</td>
<td>106.3</td>
<td>17.6</td>
<td>78.6</td>
</tr>
<tr>
<td>-4</td>
<td>106.8</td>
<td>100.0</td>
<td>-9.7</td>
<td>38.0</td>
</tr>
<tr>
<td>1979-1</td>
<td>204.3</td>
<td>96.9</td>
<td>-23.0</td>
<td>33.3</td>
</tr>
<tr>
<td>-2</td>
<td>135.6</td>
<td>95.4</td>
<td>-11.5</td>
<td>42.7</td>
</tr>
<tr>
<td>-3</td>
<td>169.5</td>
<td>86.2</td>
<td>-4.8</td>
<td>73.9</td>
</tr>
<tr>
<td>-4</td>
<td>99.7</td>
<td>76.9</td>
<td>53.3</td>
<td>63.7</td>
</tr>
<tr>
<td>1980-1</td>
<td>97.1</td>
<td>70.8</td>
<td>19.5</td>
<td>44.3</td>
</tr>
<tr>
<td>-2</td>
<td>96.2</td>
<td>60.0</td>
<td>9.2</td>
<td>48.3</td>
</tr>
<tr>
<td>-3</td>
<td>73.2</td>
<td>56.9</td>
<td>22.6</td>
<td>74.5</td>
</tr>
<tr>
<td>-4</td>
<td>87.6</td>
<td>49.2</td>
<td>13.9</td>
<td>60.8</td>
</tr>
<tr>
<td>1981-1</td>
<td>71.6</td>
<td>50.8</td>
<td>52.8</td>
<td>52.0</td>
</tr>
<tr>
<td>-2</td>
<td>129.8</td>
<td>81.4</td>
<td>-49.4</td>
<td>-120.6</td>
</tr>
<tr>
<td>-3</td>
<td>177.2</td>
<td>80.0</td>
<td>28.9</td>
<td>51.0</td>
</tr>
<tr>
<td>-4</td>
<td>125.0</td>
<td>81.5</td>
<td>1.0</td>
<td>-104.1</td>
</tr>
<tr>
<td>1982-1</td>
<td>161.8</td>
<td>71.3</td>
<td>-45.8</td>
<td>66.5</td>
</tr>
<tr>
<td>-2</td>
<td>71.7</td>
<td>34.5</td>
<td>36.7</td>
<td>47.7</td>
</tr>
<tr>
<td>-3</td>
<td>325.5</td>
<td>93.6</td>
<td>28.1</td>
<td>65.4</td>
</tr>
<tr>
<td>-4</td>
<td>342.6</td>
<td>116.6</td>
<td>55.8</td>
<td>-116.6</td>
</tr>
</tbody>
</table>

Method:
Annual growth rates are computed as follows: (1) Inflation = \( \frac{CPI_t - CPI_{t-1}}{CPI_{t-1}} \) where \( CPI_t \) = CPI in quarter \( t \). (2) Real exchange rate index (REX) [1978 IV = 100] = \( 0.5 \times (P^d / P^f) + 0.5 \times (P^{f \text{Exp}} / P^{f \text{Dom}}) \), where \( P^d \) = Dollar prices of trading partners \( (\text{in } \$) \) and \( P^f \) = Dollar prices of major exports \( (\text{in } \$) \). (3) Real interest rate (pce) = \( [(1 + r) / (1 + i)] - 1 \) where \( i \approx \text{average annual interest rate, during quarter} \). (4) Peso/dollar spread = \( [(1 + r) / (1 + R_{mx} / (1 + r^d))] - 1 \) where \( R_{mx} = \text{devaluation rate, } r^d = \text{ lending rate in dollar} \).
Argentina, public sector borrowing significantly augmented private demand for foreign credit.

The tablita-induced inflows financed a large excess of absorption over income, which drove up the relative prices of nontraded goods sharply. When it became apparent that this rapid real exchange rate appreciation was unsustainable, all three countries began to experience highly positive real interest rates. And the spreads between domestic and foreign borrowing costs increased. (Reasons for this outcome are further discussed in section IV.) As confidence in the tablita policies waned, rates of capital inflows dropped dramatically and the economic booms became busts. In Uruguay and in Argentina, where there were no controls on capital movements, major outflows occurred (table 3). In Chile, where individuals were prohibited from making large dollar purchases, speculation against the exchange regime took the form of purchases of imported consumer durables. 12/

C. Productivity and Growth

The reform packages were to bring down inflation and lead to a better resource allocation and a fuller use of labor and capacity. Was this the case? The evidence is sketchy and sensitive to how comparisons are made. We nevertheless argue that in terms of investment, employment and growth, the reforms improved resource use in Chile and Uruguay, but not in Argentina.

The evidence for Uruguay is clearest. During 1954-73 GDP grew 0.4% a year; during 1974-82, the years of the reforms, it grew 2.4% a year. Even though the rising investment-to-GDP ratio mostly reflected foreign savings, the marginal efficiency of investment (defined by the ICOR) was higher during the reforms than during 1967-73. Furthermore, evidence from financial statements clearly indicates that capital formation was concentrated in exportable products during phase I. 13/
<table>
<thead>
<tr>
<th>Country</th>
<th>Period a/</th>
<th>Increase in gross external debt (1)</th>
<th>Current account surplus = + (2)</th>
<th>Direct and portfolio capital inflow (3)</th>
<th>Reserve change gain = + (4)</th>
<th>Residual (capital flight) b/ (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>1976-78</td>
<td>4.2</td>
<td>3.6</td>
<td>0.5</td>
<td>3.5</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>1979-83 c/</td>
<td>30.9</td>
<td>-12.9</td>
<td>8.0</td>
<td>-3.8</td>
<td>29.8</td>
</tr>
<tr>
<td>Chile</td>
<td>1975-78</td>
<td>2.0</td>
<td>-2.0</td>
<td>0.2</td>
<td>1.0</td>
<td>-0.8</td>
</tr>
<tr>
<td></td>
<td>1979-83</td>
<td>11.2</td>
<td>-12.4</td>
<td>1.5</td>
<td>1.5</td>
<td>-1.2</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1973-78</td>
<td>0.5</td>
<td>-0.6</td>
<td>0.4</td>
<td>-0.7</td>
<td>-0.4</td>
</tr>
<tr>
<td></td>
<td>1979-83</td>
<td>3.3</td>
<td>-1.9</td>
<td>0.5 d/</td>
<td>-0.3</td>
<td>2.2</td>
</tr>
</tbody>
</table>


a/ For each country, the first period corresponds to Phase 1, the second to Phase 2 and its aftermath.
b/ Computed as: col(1) + col(2) + col(3) - col(4).
c/ NCA estimates for 1983.
d/ Assumes zero values for 1983.
In Chile, GDP growth was sustained in spite of relatively low investment rates and low rates of employment growth. This suggests that productivity and capacity utilization increases contributed significantly to growth. Calculations from a simulation model for 1977-81 -- in which account was taken for capacity utilization increases during 1977-79 -- suggests that reform-induced productivity gains increased the GDP in 1981 by 19% over what would have been achieved with historical TFP growth rates for the period 1950-74. Further analysis based on comparisons of the 1967 and 1979 manufacturing censuses shows that although concentration increased in 1979 relative to the pre-reform period (1967), average price-cost margins fell. The increase in concentration was due to the greater opportunities that the trade liberalization and other reforms favoring mergers opened up for exploiting economies of scale. And the fall in profitability was attributed to two factors: the reduction in oligopolistic conduct because of exposure to foreign competition and the increase in the elasticity of demand facing domestic firms caused by the entry of imports.

Case studies interviews with entrepreneurs in each country provide additional evidence of increased productivity. In each country several entrepreneurs said they achieved productivity gains beyond expectations. In addition to labor dismissals, the most frequently cited source of productivity gains was consolidation of production lines, and the use of existing distribution channels to market imported goods. Entrepreneurs also often noted that foreign competition forced them to improve product quality. An additional factor in the case of Argentina was the purchase of foreign technological know-how, usually blueprints, that enabled the firm to compete with imports by upgrading the quality of its products and producing them more efficiently.
IV. WHAT WENT WRONG

We saw in section II that the use of the exchange rate as an anti-inflationary instrument was expected to result in temporary capital inflows and temporary appreciation of the real exchange rate. Authorities hoped that these characteristics of the transition to price stability would be short-lived and mild. However, the combination of the tablita with inappropriate financial policies generated dramatic boom-bust cycles that culminated in the abandonment of each liberalization effort. Why were these effects so large, protracted, and damaging? We argue that three problems undermined the experiments: policy inconsistencies, the overlooking of market frictions, and the creation of adverse incentives to exploit the new environment.

In a nutshell, uncontrolled fiscal deficits (initially in Argentina and later in Uruguay also) and wage indexation (in Chile) clashed with the tablita program, making the tendency for currency appreciation worse. Various unanticipated frictions did the same (see below). In turn, this caused a large volume of credit to flow into the countries. Despite this capital inflow, confusing signals regarding the administration of the tablita (especially in Argentina) increased exchange risk and tended to maintain a large spread between ex-post borrowing costs in pesos versus dollars. With each economy failing to converge toward a steady state equilibrium for so long, economic agents shifted their attention from the traditional objective of maximizing operating earnings to exploiting the various arbitrage possibilities that arose. In particular, the absence of basic regulatory constraints on financial activities facilitated this process.
Even though we cannot isolate the effect of each factor on the outcome of the reforms, we take up each factor separately for expositonal purposes, starting with policy inconsistencies, moving to frictions and adjustment lags, and then examining evasions of the intended objectives.

A. Policy Inconsistencies

To begin, several policies worked at cross-purposes. At the macro level, the economies were pulled in opposite directions by the clash of strong incentives to borrow abroad, lack of fiscal restraint (Argentina and Uruguay) wage policies (Chile), and the confusing management of the exchange rate (Argentina). These macro policies generated real exchange rates that discriminated against export promotion attempts and induced risky corporate financial structures. In addition, contrary to announced intentions, micro reforms of both commercial and financial sector policies failed to eliminate important distortions.

1. Exchange rate preannouncement, fiscal deficits, and wage indexation

To be successful, the preannouncement model had to meet certain conditions. One of them was that the initial real exchange rate appreciation had to be moderate and short-lived, to minimize foreign debt accumulation and adverse effects on the earnings of tradable-producing sectors. Otherwise, the tableta would be judged unsustainable, and expectations of a devaluation -- reflected in growing dollar-peso spreads -- would set in. But a growing externally financed fiscal deficit -- starting in Argentina in 1980 and in Uruguay in 1981 -- increased capital inflows. This led to an increase in absorption over and above the one supposed to arise under the dynamic
adjustment called for by the tablita. The deterioration in the real exchange rate was thus compounded to levels that jeopardized confidence in the sustainability of the tablita and ultimately inspired the capital flight documented in table 3. 17/

Cumby and van Wijnbergen have developed a formal model linking the probability of collapse in the exchange regime to fiscal policies. The credibility of the policy is analyzed in a world of uncertainty and in a setting of rational expectations by focusing on the consistency between fiscal and domestic credit policies and the preannounced rate of crawl. The model for Argentina is estimated with monthly data. Their estimates, reproduced in figure 1, show that the probability of collapse of the exchange rate regime was very high from the beginning. In early 1980 the high estimated probability values for the collapse reflect the domestic credit expansion (63% in April and 46% in May), caused by the rescue of financial institutions. As a result of this episode the stock of credit more than doubled in two months, and the probability of collapse shot up to 99%. Later, the probability of collapse was high because of growing fiscal deficits. Simulations of the effect of a 2% temporary increase in the growth of domestic credit (not reported here) suggest that the probability of collapse returns to a slightly higher equilibrium value after about nine months (the probability is permanently raised by a temporary increase in domestic credit because this permanently increases the stock of credit). 18/

Fiscal deficits were not a problem in Chile. Indeed, the government budget was surplus during the tablita period. But capital inflows in Chile were concentrated during the tablita years as capital controls were being relaxed at a time when the tablita and inflation inertia were making foreign borrowing highly profitable. Furthermore, as discussed below, the existence
Figure 1: One-Period Ahead Probabilities of the Collapse of the Tablita in Argentina: 1979 (11) – 1980 (1)

Source: Cumby and van Wijnbergen (op. cit.), figure 1.
of one hundred percent backward wage indexation made the recovery of the real exchange rate a lengthy process. This in turn undermined the credibility of the tablita policy.

2. Announcement inconsistencies and exchange risk

Another source of inconsistency relates to the preannouncement of the exchange rate and to the lack of explicit guarantees that the government would honor the tablita. This problem was particularly important in Argentina, where no exchange insurance was provided and many ambiguities shrouded the announcements. The declarations were often vague about the future and the resulting premium for exchange risk increased the spread between the domestic interest rate and the international interest rate (plus the announced rate of devaluation). At the beginning, Central Bank Resolution 807 produced a substantial downward trend in the spread, which reached a minimum in February 1979 (figure 2a). After reaching this minimum, the spread increased as the remaining period of the devaluation schedule became shorter and shorter. Despite its ambiguity, Resolution 853 in October 1979 produced another downward trend because most agents initially interpreted that the schedule had been extended until March 1981. Indeed, Martínez de Hoz made it clear that he did not want a perfectly determined schedule because that would imply "free exchange insurance." But after the failure of the Banco Intercambio Regional in March 1980, credibility waned so much that further resolutions would no longer reduce the spread.

In Uruguay, no ambiguities surrounded the announcements, yet the spreads remained fairly wide. Moreover, commercial banks seldom took open positions, despite the profitability (and encouragement from authorities) of transforming dollar liabilities into peso assets. There was a brief period in
1981 when the Central Bank sold guarantees (March-September 1981), but even then, although the spread declined, it remained fairly high (see figure 2b). Hanson and de Melo tested a simple model of interest-rate determination using monthly data for the period 1978(11) to 1981(12) and showed that — except for the period of exchange guarantees — the spread obtained between peso and dollar interest rates was constant. The evidence suggests that the exchange risk remained high and that loans denominated in dollars were imperfect substitutes for loans denominated in pesos. 19/

3. Conflicts between commercial and exchange rate policies

Even if the unexpectedly large real appreciation had not generated speculative outflows (and the associated collapse of the tablita), it would still have imposed major costs on the economy in terms of resource allocation. Activities in the tradable sector that were profitable on the eve of the tablita were squeezed dramatically by the time phase 2 was nearing its collapse.

The effect on exporters and import competing producers was not symmetric, reflecting a further conflict between commercial and exchange rate policies. Despite announced intentions to promote exports while subjecting import substituting firms to greater competition, the real appreciation tended to reduce export profitability relatively more.

The authorities' signals about trade liberalization policies turned out to be somewhat at odds with the de facto system of incentives that emerged. In all three countries, and especially in Chile and Uruguay, the authorities stated early on that exports would become the engine of growth. But the incentives provided by the elimination of taxes on traditional exports and by the initial sharp real devaluations were soon eroded in Phase 2. The
Figure 2a:
The "News" and Peso Dollar Spreads in Argentina
(monthly observations)

Note: The spread is computed subtracting the U.S. prime rate plus the rate of devaluation from the average domestic lending rate.
Source: Fernandez (op.cit.).
Figure 2b:
Exchange Insurance and Ex-Post Spread
Between Peso and Dollar Interest Rates in Uruguay
(monthly spreads)

Note:
\[
\text{SPREAD} = \frac{(1 + \text{RPD}_t/100)}{(1 + \text{RDD}_t/100)(1 + \dot{e})} - 1
\]

where RPD\(_t\) and RDD\(_t\) are annualized interest rates on 1-6-months
peso and dollar deposits.

\[
\dot{e} = \left(\frac{\text{ER}_t^{1-6}}{\text{ER}_t}\right)^2 - 1
\]

is the annualized ex-post rate of devaluation.

Source: adapted from Hanson and de Melo, "External Shocks, Financial
Reforms and Stabilization Attempts in Uruguay: 1974-83", fig.3.
appreciating real exchange rates that accompanied tablita policies worked against exportables more than importables because exportables lacked the buffer of redundant initial protection. Besides reducing earnings mostly in the very sector authorities set out to promote, the conflicting signals bred uncertainty among producers. An example is provided by the formal tariff reduction schedules of the government. The schedules were broken on one or several occasions when it was felt that inflation was not falling fast enough. Producers reacted by delaying making major resource commitments. Such wait-and-see attitudes were confirmed by interviews with forty businessmen. The interviewees reported that they delayed taking action on government policies for periods ranging up to six months because they were uncertain whether the policy would be adhered to. 20/

The conflict between commercial and exchange rate policies is apparent in a comparison of gross margins trajectories for exportable manufacturing firms and those of import-competing manufacturing firms (figure 3). Whereas the reforms were supposed to raise profitability of exportable activities vis-a-vis importable activities, the reverse occurred, particularly during Phase 2, when real exchange rate appreciation lowered the profitability of exportable firms more sharply than that of import-competing firms.

The inconsistency between trade liberalization and exchange rate policies was particularly apparent in Argentina. Although export taxes were reduced dramatically at an early stage in the reforms, the price-level-deflated effective exchange rate for exports followed the path of the real exchange rate closely after 1977. 21/ Moreover, considerable tariff and nontariff barriers remained in place for some time. The maximum tariff rates on consumer goods were reduced from values over 200% to 100% in 1976, but import penetration in these commodities remained low. In December 1978, a
Figure 3a: Gross Margins in Argentina
Exportable versus Import Competing Goods
(1977 to 1981)

Figures are adapted from Petrei and Tybout (1984).
Figure 3b: Gross Margins in Uruguay Exportables vs. Import Competing Goods (1973 to 1981)

Figures are adapted from Galvez and Tybout (1984).
Figure 3c: Gross Margins in Chile Exportable vs. Import Competing Goods (1977 to 1981)

Figures are adapted from de Melo, Pascale and Tybout (1984).
general scheme for tariff reductions was announced, but the schedule put the major burden of adjustment well into the future. So, the trade reforms, combined with the real exchange rate appreciation, did little to translate officially announced intentions into the appropriate price signals. Instead, exporters were hurt more than import-competing producers, who were still protected by redundant protection. Figure 3.1 shows this perverse impact on average gross margins for firms in Argentina. 22/ (The problem disappears in 1981 because of the maxi-devaluation which ended Phase 2.) This outcome may have been traceable in part to the competing objectives of the Department of Commerce — accustomed to using protection to fight current account problems — and the Central Bank, which was using the exchange rate as a stabilization tool. 23/

In Uruguay there was a similar discrepancy between pronouncements and policies. Exports were encouraged effectively during Phase 1 with new financial incentives, increased fiscal incentives, and a real exchange rate stabilized by a passive crawling peg (figure 3.2). But in 1979 the incentives that reduced the bias against export activities vis-a-vis import-competing activities were eliminated. Because there was much redundant protection in manufacturing when the tariff reform started to be implemented in January 1980, exporters were hurt while import-substituting producers in manufacturing were still enjoying redundant protection. The rate of growth of nontraditional exports fell sharply during 1979-81.

The same pattern developed in Chile. During 1975-79 exportable-goods producers attracted resources, and nontraditional exports grew 32% a year. But the peso appreciation reversed this trend in 1979. During 1979-81 the leading growth sectors were nontradables (construction, trade, and financial services) even though the completion of the tariff reforms in June 1979 had
reduced the policy-induced bias against exportables to 10%. (see figure 3.3). 24/

4. Treatment of financial intermediaries

Another inconsistency in policies was between the proclaimed reliance on free market mechanisms and the de facto treatment of financial intermediaries. There are two ways of promoting efficient intermediaries in a deregulated financial sector. The first is flatly to refuse to provide deposit insurance and never to bail out failed banks. 25/ The second is to sell insurance to banks at actuarially fair rates, determined bank-by-bank after careful examination of loan portfolios. Neither policy was pursued. The governments implicitly or explicitly provided deposit insurance at no cost and with no systematic procedures for monitoring loan portfolios, liquidity levels or solvency positions. In Uruguay, banks were not even required to publish their income statements (perhaps because authorities felt that information would spread rapidly in a deregulated economy). Moreover, in at least one case, important problems of monopoly control and conflict of interest were allowed to continue unarrested.

In Chile, authorities initially chose the "no insurance" option for financial sector deregulation. Recognizing that the provision of free deposit insurance to banks induces risk-taking, they repeatedly advised depositors that they would not be bailed out if a bank failed. Even so, when a medium-sized bank failed in 1977, the Central Bank rescued its depositors completely. 26/ Thereafter, popular opinion had it that depositors no longer needed to concern themselves with their banks' portfolios. This paved the way for high-risk lending operations and the channelling of funds to affiliated enterprises in financial distress. 27/ Accordingly, when adverse earnings and the
dissolution of the tablita weakened the industrial sector, financial intermediaries were too fragile to absorb the shock. (Banks had already lost much of their capital during the Allende years.) Further bailouts and a near socialization of the banking sector were the results.

The chain of events was similar in Uruguay. No formal explicit insurance was provided, but experience generated expectations of a bailout. During the banking crisis of 1965, and again in 1979, depositors were rescued by the government from bearing the costs of failures. These precedents satisfied depositors that they need not worry about their banks' portfolios. By the end of the reform period, when firms could no longer pay the high real interest rates, 21 of 23 banks had been bailed out by the government and sold to foreign banks.

In Argentina, deposit insurance was explicitly provided but at no cost to the banks. This created even more incentives for loan officers to pursue risky ventures than in Chile or Uruguay. Furthermore, rather than call in overdue loans and register losses, Argentine banks rolled them over and financed their new resource commitments by attracting additional deposits. As Fernandez notes, this practice may have contributed to the extremely high and rising real interest rates during Phase 2 and during the aftermath of Argentine reforms. 28/

In short, the financial sector booms in the Southern Cone may have reflected something other than the flourishing of a newly liberated sector. An alternative view is that the booms were largely a consequence of rent-seekers scrambling to extract the major subsidies provided by free deposit insurance, explicit or implicit. And the high real interest rates observed toward the end of the reforms in all three countries partly reflected banks' raising deposit interest rates to attract new depositors to compensate for a
A growing number of nonperforming loans. A minimum set of basic banking regulations on bank portfolios would have gone a long way toward prevention of the internal financial crisis.

B. Frictions and Adjustment Lags

Prominent among the assumptions of the stabilization model used in Phase 2 was that tradable goods and assets were perfect (or near perfect) substitutes with their external counterparts. The evidence strongly suggests that this was not the case.

1. Price formation

During the tablita period, it was thought that domestic inflation would rapidly converge to international inflation plus the pre-announced rate of devaluation. However, as seen above, this was never the case, and the domestic currency invariably appreciated sharply.

In Uruguay, domestic inflation, P, exceeded the rate of devaluation adjusted for international inflation (PW + E) for the first two years of the tablita, although the gap between the two narrowed as time went by. Figure 4 shows that convergence in rates of change of the wholesale price index (WPI) to the exchange-rate-adjusted WPI of trading partners only occurred 24 months after the start of the program. It deserves mention that, as long as P > PW + E for tradables, the loss of competitiveness was increasing, and restoring competitiveness would have required a sustained period of domestic inflation less than world inflation. This phenomenon of limited transmission from foreign to domestic tradable prices is further supported statistically.
FIGURE 4: Price Convergence During The Tablita (Annual Rates \( \frac{a}{b} \))

\[ p \]

\[ P \]

\[ P^* \]

\[ e \]

\[ \hat{P} \]

\[ PW^* + e \]

\[ 45^\circ \]

\[ (+4) \]

\[ (+3) \]

\[ (-3) \]

\[ (+13) \]

\[ (+24) \]

\[ (-12) \]

**NOTE:** Figures in parenthesis indicate months before (-) and after (+) the start of the pre-announcement of the exchange rate.

\( a/ \) Annualized logarithmic growth rates.
\( \hat{P} = \) Wholesale Price.
\( PW^* = \) Weighted wholesale prices of ten major trading partners.
\( e = \) Devaluation rate.
In Chile also, there appears to have been considerable stickiness in the downward adjustment of inflation. As already stressed, part of this was due to wage indexation: being linked to a weighted average of tradable and nontradable goods prices (namely the CPI), wage inflation did not fall one-for-one with reductions in domestic tradables inflation. And statistical evidence suggests that a change in the rate of devaluation — keeping excess demand levels at their observed trajectories — would take over nine quarters to work its full impact on the inflation rate. 31/ 

Isolating the effect of aggregate demand from the effect of the tablita policy — by assuming that expenditure growth had remained the same as in the reference path — Corbo simulated the real exchange rate trajectory that would have resulted if, starting in the first quarter of 1980, devaluation rates had been passive — that is, if they had matched the difference between foreign and domestic inflation. The results, depicted in figure 5, show that real appreciation would still have been substantial. This appreciation is driven by a key assumption incorporated in the simulation, namely that the trajectory of expenditure growth is independent of the rate of crawl.

The implication of these results is that a stabilization policy based on a pre-announced rate of devaluation with a decreasing rate of crawl is bound to generate a lengthy period of domestic currency real appreciation. During this period, domestic tradables are losing competitiveness. To restore competitiveness to levels prevailing before the tablita requires domestic inflation for tradables to be less than trading partners inflation. This implies that the rate of crawl must be accelerated and demand policies must be restrictive to put downward pressure on aggregate demand.
Figure 5:

Effects of a PPP Devaluation Rule on the Real Exchange Rate \( \left( \frac{P_{\text{EXT}}}{P_{\text{M}}} \right) \)

\( (1976-1 = 1.00) \)

<table>
<thead>
<tr>
<th>Year</th>
<th>Real Exchange Rate</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976-I</td>
<td>( \frac{P_{\text{EXT}}}{P_{\text{M}}} )</td>
<td>- Real Exchange Rate = ( \frac{P_{\text{EXT}}}{P_{\text{M}}} )</td>
</tr>
<tr>
<td>1980-I</td>
<td>( \frac{P_{\text{EXT}}}{P_{\text{M}}} )</td>
<td>- ( P_{\text{EXT}} ) = Domestic currency price of similar imports (tariff inclusive).</td>
</tr>
<tr>
<td>1983-I</td>
<td>( \frac{P_{\text{EXT}}}{P_{\text{M}}} )</td>
<td>- ( P_{\text{EXT}} = P_{\text{M}} (1 + t) ) where,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( t ) = Average tariff rate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( \text{ER} ) = Nominal exchange rate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ( P_{\text{M}} ) = Price of differentiated domestically produced import competing goods.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control: _<em><strong><strong><strong><strong>\ Simulated (starting in 1980-I): _</strong></strong></strong></strong></em>\</td>
</tr>
</tbody>
</table>

Source:
- Derived from model in V. Corbo "International Prices, Wages and Inflation in an Open Economy: A Chilean Model", op.cit.
Micro-level studies show that even at the commodity level, substitution between domestically produced and imported tradables was low. Part of the reason for this limited short run substitutability were delayed adjustments. One factor overlooked by authorities is that it takes time to develop distribution channels for imports (especially when, as in Argentina, it takes considerable time to obtain an importer's license). The more unpredictable the environment, the longer the delay. Micro-level evidence indicates that reductions in trade restrictions took a while to affect producer pricing, even when imports and domestic goods were very similar. 32/

2. Financial Asset Substitutability and Monetary Policy

In the three countries the monetary authorities assumed that domestic financial assets were perfect substitutes for foreign assets. Furthermore, they thought that instantaneous portfolio adjustment was being impeded only by capital controls. This view led monetary authorities to conclude that if controls on capital inflows were lifted, domestic interest rates would drop to equal foreign interest rates adjusted for the expected rate of devaluation. Thus, they accelerated the opening-up of the capital account to bring into equality the domestic and international interest rate. However, spreads between domestic and international interest rates not only resulted from imperfections in domestic financial markets but also from imperfect substitution between domestic and foreign assets. These frictions were overlooked by the authorities.

Corbo and Matte provide evidence of imperfect asset substitution for Chile in a model with three financial assets: money, domestic interest bearing assets and foreign assets. 33/ In this model if domestic interest bearing assets are perfect substitutes for foreign assets and portfolio
adjustments are instantaneous (i.e. if there is perfect capital mobility) and there is no sterilization attempt by the Central Bank, a deficit in the current account and a decrease in net domestic credit by the Central Bank are matched by an equal foreign capital inflow without reserve loss and with a constant money base. This means that under perfect (no) capital mobility, one peso's worth of domestic credit reduction would be matched by one (zero) peso's worth of capital inflow. For Chile, the estimated coefficient linking capital inflows and the change in net domestic credit creation was only -0.34 and the one linking capital inflows and the current account deficit was -0.32, suggesting that Chile's financial system during the period is best described as relatively closed rather than as open with perfect capital mobility. Furthermore, as predicted by the model, the coefficients of the change in net domestic credit and of the current account deficit in the capital flow equation were not statistically different.

These results suggest that the Central Bank was wrong in assuming that a perfect capital mobility model was a good characterization of Chile's financial market. (Indeed, a causality test reported in that paper shows that changes in reserves did not affect changes in domestic credit suggesting that the monetary authorities did not attempt to control the money supply). In particular, the Central Bank could have sterilized part of the high money growth during the period (M1 grew 60% in 1979, 58% in 1980 and 33% in 1981) and thus mitigated the overheating of the economy.

C. Evasions of the Intended Incentive Structure

With relative prices moving rapidly in all three countries and with elements of financial disequilibria apparent, firms avoided making long-term or irreversible production adjustments. Instead, the focus of their
activities was largely on financial and other endeavors that held the promise of immediate returns. Such activities helped firms to remain profitable, but they also allowed many firms to behave at odds with the incentive structures that governments were trying to create.

1. Privatization of the tariff

The quick-return activities that subverted the reform programs took several forms. One of the most interesting has become known as "tariff privatization." This term refers to instances when firms that produced importable goods before trade liberalization become retailers for the now-cheaper foreign products, selling initially at prices not much below those previously charged on domestically produced substitutes. In so doing, they delayed and sometimes avoided the desired convergence of domestic relative (and absolute) prices towards international levels.

Many instances of changes in activity from producing to retailing are reported in Arriagada et al. This activity developed in part because of the advantage of having already a well established distribution framework and in part because of the uncertainties that raised the costs of entry into retailing. Tariff privatization may also help explain the slower fall in price-cost margins for importables than for exportables observed in figure 3.

2. Exploiting the financial environment

The spread between peso and dollar borrowing costs described earlier created further opportunities for quick profits. A clear shift of the profit base from real to financial activities is observable among many Argentine and Chilean firms. Earlier in the reforms, when access to dollars was relatively
limited (mainly in Chile), the spread tended to generate financial rents to larger firms, especially those whose line of production put them in regular contact with foreign lenders. Later, when access to dollar loans was more general, cheap foreign credit became a popular means to offset operating losses. Since foreign borrowing was also prevalent among nontradable firms, which could not offset capital losses from a large devaluation, the stage was set for major financial crises when the 

In Argentina the real cost of dollar borrowing became very negative in 1977 and, except for a short period in late 1979 and early 1980, remained so until the big devaluation of 1981. Moreover, peso rates were often negative in real terms during the later 1970s. This financial environment meant that any firm with access to credit, especially dollars, could create a substantial cash flow for itself simply by expanding its nominal borrowing at a rate sufficient to keep its real debt constant. When both dollar and peso rates became positive in the last quarter of 1979, the returns from this activity evaporated. But they materialized again in 1981, when the government protected firms from the big devaluations with various exchange insurance programs. These programs gave further incentives to firms, now more indebted in dollars than ever, to shift their attention from real production to financial activities. The riskiness of the corporate sector's financial structure steadily increased as a consequence, especially among large firms, the most able or willing to expose themselves in dollars. 39/

The Chilean experience was somewhat different, largely because quantitative constraints substantially limited dollar credit inflows until 1980. These constraints combined with the extremely high peso cost of debts to make borrowing a very expensive endeavor for the average firm.
Nonetheless, some Chilean producers, by virtue of their size or sector of activity, had direct access to cheap foreign funds. Moreover, some firms directly or indirectly held shares in major commercial banks, which in turn had access to credit from abroad. Both sets of favored firms were owned in large measure by a handful of powerful industrialists, and made up the country's major "economic groups." The average financial cost to group-affiliated firms was accordingly considerably below that for independent producers. And these group-affiliated firms exploited their preferential credit access to finance large acquisitions of long-term securities, thereby generating nonoperating earnings and consolidating power. In so doing they became heavily indebted and, having done poorly in real operations, were in an unenviable position when the opportunities for financially based profit-making evaporated in 1981.

Like Argentina, Uruguay opened its capital account to capital inflows almost completely at an early stage in its reforms. Firms moved decisively to exploit negative real financial costs as a source of revenue. Especially among exportable-goods producers, who enjoyed various subsidies until 1979, the returns from holding net dollar liabilities were high. In addition, in the early stage of Phase 2 (when the exchange risk was low), firms exploited large financial returns by borrowing in dollars. Net dollar liabilities of the typical firm went from a negligible share in 1973 to roughly 35% of assets for exportable producers and 13% of assets for import-competing producers in 1981. In Uruguay, as in Argentina, firm size was strongly positively correlated with dollar exposure. The general pattern of the largest firms becoming very vulnerable to devaluation-induced financial crises thus characterized all three countries of the Southern Cone.
V. CONCLUSIONS

Rarely do countries carry out reform packages as profound as those in the Southern Cone. Not only did the reform packages span all markets, but they were implemented in a short time, starting from a crisis situation and heavily distorted markets. This paper has attempted to provide explanation for the most flagrant reasons for failure, despite notable growth and productivity gains in the early phases.

What, then are the lessons? Obvious though it be, it is worth remembering that the three countries started with conditions much further from the reform targets than did other economies that liberalized successfully (notably, the East Asian countries). Import-substitution policies had been in place since the depressions of the 1930s. Interest rates had been controlled for decades. Price controls had been in place since the early 1950s. And labor markets had been subject to innumerable regulation. These initial conditions, and previously unsuccessful mild attempts at liberalization, implied that the authorities probably faced deeply entrenched political interest groups and recalcitrant expectations. The trade regime had historically discriminated against exporting activities and resulted in much redundant protection for import-竞争ing producers. And macro policies were frequently constrained by balance of payments crisis.

Despite these adversities, we showed that many positive signs emerged from the Phase 1 stabilization plans, especially in Uruguay and Chile. Exports and productivity growth picked up while the economies recovered rapidly from a crisis situation. Besides the relatively low real wages and high unemployment rates in Chile (not surprising under the circumstances), the most disquieting sign during Phase 1 was the emergence of extremely high real interest rates as soon as deregulation took place.
We have argued that troubles started to develop in Phase 2 when the approach to stabilization policy changed and the economies became increasingly open to foreign capital flows. The tablita policy, in combination with the removal of restrictions on capital flows, led to boom-bust cycles. The setting of the pre-announced devaluation schedules at much less than the internal-external inflation differential under deregulated domestic interest rates led to large short term capital inflows, increased dollar indebtedness, and booms. In turn, the booms caused strong peso real appreciation which resulted in a loss of competitiveness for tradables and generated doubts about the sustainability of the tablita. Capital flight followed and the economies went bust, with each country having accumulated staggering volumes of external debt.

The most obvious lesson is that use of the exchange rate as an anti-inflationary tool, leads to a major macroeconomic disturbance, and these disturbances ultimately undermine the stabilization effort. A related lesson is that a properly designed reform package should coordinate the opening of the current and capital accounts. We have given examples and estimates of the adverse effects on exportable producers. We have also shown some of the costs in credibility and incentives of not coordinating fiscal and wage policies with the tablita.

Another lesson is to be drawn from the comparison of adjustment paths between exportable and importable producing firms. This juxtaposition revealed that price-cost margins fell more rapidly for the former than for the latter during real exchange rate appreciation. Redundant protection, product differentiation, delays in the establishment of importing channels and other adjustment delays are thus likely to affect more adversely exportables than importables during a period of real exchange rate appreciation. Hence it
appears that exporters are particularly vulnerable to movements in the real exchange rate.

Finally, the phenomenal opportunities for nonoperating earnings in Chile and Argentina led firms to assume risky financial structures, thereby setting the stage for widespread banking crises when the tablita ended. These patterns of financial behavior were abetted by access to foreign credit and by the implicit or explicit provision of commercial bank deposit insurance. We conclude that closer supervision of financial activity is advisable when financial systems that have been highly regulated for a long time are liberalized. In the Southern Cone, such supervision would have helped avert the crises encountered when operating earnings fell and the reforms were abandoned.
NOTES

* Prepared for presentation at the AEA Meetings in Dallas on December 26-28, 1984. This paper is a summary of research in progress at the World Bank under RPO 672-85: "Liberalization and Stabilization in the Southern Cone." We would like to thank Maria Ameal, Jose Miguel Sanchez, and Kalayarat Suriyasat for their unfailing support during this research and Sebastian Edwards, Arnold Harberger, Anne Krueger and Simon Teitel for comments on an earlier draft.

The World Bank does not accept responsibility for the views expressed herein which are those of the author(s) and should not be attributed to the World Bank or to its affiliated organizations. The findings, interpretations, and conclusions are the results of research supported by the Bank; they do not necessarily represent official policy of the Bank. The designations employed, the presentation of material, and any maps used in this document are solely for the convenience of the reader and do not imply the expression of any opinion whatsoever on the part of the World Bank or its affiliates concerning the legal status of any country, territory, city, area, or of its authorities, or concerning the delimitation of its boundaries, or national affiliation.


2. The fiscal deficit was 25% of GDP in Chile, 16% in Argentina, and 7% in Uruguay.
3. In Argentina interest rates were freed by June 1977; in Chile by June 1975; and in Uruguay by October 1977. Pablo Spiller and Edgardo Favaro, "The Effects of Entry Regulations on Oligopolistic Interaction: The Uruguayan Banking Sector," in Rand Journal of Economics 15, no. 2, 1984: 244-254, show that oligopolistic interaction among incumbent Uruguayan banks was much reduced when the reforms allowed entry into the banking system.

4. Full convertibility was only introduced de jure in October 1978, but other currencies than the peso were recognized as legal tender from the start, and the spread between the floating financial and crawling commercial exchange rates was eliminated by early 1977.

5. In Argentina, capital inflows with maturity of less than 12 months were prohibited until June 1980 although in practice all controls on capital flows were lifted in early 1979. In Chile, until late 1981, short-term capital inflows (less than 24 months) were available only to finance foreign trade operations while medium term capital inflows were subject to a reserve requirement.

6. Even though labor dismissal was relaxed after September 1973, dismissal of more than 10 workers required special permission from the ministers of Labor and the Economy up until 1981.

7. For a recent presentation of the traditional orthodox approach to stabilization policy, see Rudiger Dornbusch, "Stabilization Policy in Developing Countries: What Have We Learned," in World Development vol. 10, no. 9, October 1982: 701-730.


11. The average investment.GDP ratio in Uruguay rose from 10% for 1967-74 to 16% for 1975-81.

12. For a similar decomposition, see Rudiger Dornbusch, "External Debt, Budget Deficits and Disequilibrium Exchange Rates," in Gordon Smith and John Cuddington (eds.) International Debt and the Developing Countries, (Washington, D.C.: World Bank, 1985). He also provides caveats in interpreting this decomposition particularly in the case of Argentina. Hanson and de Melo (op. cit., table 8) show that purchases of imported consumer durables shot up in Uruguay in 1980 and 1981 during the period of real exchange rate appreciation. For evidence on Chile, see Dornbusch (op. cit.) table 6.

Liberalization on Savings and Investment in Uruguay," *Economic Development and Cultural Change,* this issue. The evidence from financial statements is discussed below in section IV.


19. Fernandez (op. cit.) discusses the ambiguities surrounding pre-announcements in Argentina and Hanson and de Melo, "External Shocks, Financial Reforms, and Stabilization Attempts in Uruguay during 1974-83," examine interest rate spreads in Uruguay. Sebastian Edwards, "Monetarism in Chile 1973-83: Some Economic Puzzles," Economic Development and Cultural Change, this issue, also examines why real interests were high in Chile during the period. Evidence of imperfect substitution between peso and dollar denominated loans in Chile is discussed in section IV.

20. See P. Arriagada et al (op. cit.).


22. For further documentation of this effect, see Peter Wogart and Jose Marques, "Trade Liberalization, Tariff Redundancy and Inflation: A Methodological Exploration Applied to Argentina," Review of World Economics, 120: 18-39.

23. See Nogues (op. cit.). But also see Guillermo Calvo, "Fractured Liberalism: Argentina under Martinez de Hoz," Economic Development and Cultural Change, this issue, for the argument that the real exchange appreciation started before the adoption of the tablita.

24. The actual bias against exportables was probably higher than figures based on tariffs and subsidies would show because most exports are homogenous and consequently are invoiced in the country of destination while the reverse would be the case for imports. Given that transport costs from trading partners to the Southern Cone countries are relatively high, this effect was probably not negligible.
This option is risky because (1) only the government is likely to have the resources to insure banks, and (2) in the absence of any deposit insurance, information problems may be so severe that many wealth holders are unwilling to make deposits at all.

For reference the first major bank failures in each country occurred at the following dates: Argentina (Banco Intercambio Regional, March 1980); Chile (Banco Osorno, 1977); Uruguay (Banco Panamericano, 1979).


We are aware that there is an identification problem: price and interest rate convergence was undoubtedly affected by expectations, which in turn were influenced by the policy inconsistencies discussed above.

Strong demand from Argentine tourists (and expenditures related to capital inflows) in the presence of redundant protection contributed to this outcome. See Hanson and de Melo, "External Shocks, Financial Reforms and Stabilization Attempts in Uruguay During 1974-83."

32. See Felipe Morande, "Factores Determinantes de los Precios Internos de Bienes Transables en Chile," Estudios CIEPLAN, no. 11 (Santiago, 1984).


35. For evidence that increased inflation was accompanied by greater relative price variability in Argentina see Mario Blejer, "The Dispersion of Relative Commodity Prices Under Very Rapid Inflations," Journal of Development Economics 9, 1981: 347-56.

36. Individuals who hoarded imported consumer durables prior to the maxi-devaluations also benefited from capital gains and frustrated government policies intentions.

37. See Arriagada et al. (op. cit.).
38. For Chile, Galvez and Tybout (op. cit.) show that slow convergence was only among firms which began the reform period from low levels of protection.

39. The argument and the evidence is further elaborated in Tybout op. cit.).

40. For evidence on the size of group-affiliated firms, see Fernando Dahse, Mapa de la Extrema Riqueza (Santiago: Editorial Aconcagua, 1979), and Galvez and Tybout (op. cit.). For evidence on their intermediaries and on their foreign borrowing, see Dahse (op. cit.).

41. But dollar borrowing in Uruguay, unlike that in Argentina, seems to have been limited to tradable sector producers.