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5 What Have Populists Learned from Hyperinflation?

Roque B. Fernández

5.1 Introduction

We define populism as an approach that emphasizes income redistribution by government expenditures and income policies and deemphasizes the problems of deficit financing and inflation. The question analyzed here is whether populist governments can stop high inflation. If they can, developing nations like Argentina might be able to grow again. If they cannot, stagnation and the risk of hyperinflation seem the natural outcome.

Argentina's efforts to stop high inflation are almost permanent, and the last decades are full of attempts to stabilize prices. Attempts were made by populists, liberals, and conservative governments, by military dictatorships and democratic governments. Analyzing some major economic policies of the last decade, this paper will try to explain why stabilization has not been successful. It also will explain why a change in the populist stance is necessary but not the only condition needed to achieve stabilization.

An important attempt by a populist government started in 1985. Known by the name "Austral Plan," because of the new legal currency introduced, it tried to put an abrupt end to inflation. The plan failed, and it could not be rescued in spite of a variety of policy measures implemented by the government.

Another attempt was the Primavera Plan, which also failed. It started in 1988 and was the prelude to the hyperinflation of 1989 and 1990. Section 5.2 of this paper deals with these two experiences.

Section 5.3 explains the process of hyperinflation and the measures undertaken to control it. Section 5.4 describes the first plan of the new administra-

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The views expressed in this paper are those of the author and do not necessarily reflect those of colleagues or institutions.

tion that took power after the resignation of President Alfonsín, who felt himself unable to manage the economic crisis.

Section 5.5 discusses two major items of monetary theory related to high inflation that I believe to be highly relevant for Argentina. One of these items is the phenomenon known as "unpleasant monetarist arithmetic" (Sargent and Wallace 1981) and refers to the policy dilemma of the government that must decide how to finance the deficit and has no other choices than printing money or bonds.

The other issue is the problem known as the "time consistency of the optimal plans"; in Argentina this is related to the policy dilemma of debt repudiation through hyperinflation or forced debt restructuring. Auernheimer (1974) was the first to notice the impact on government finance of repudiation of money with price jumps. Kydland and Prescott (1977) and Calvo (1978) formalized and extended the discussion, and Lucas and Stokey (1983) raised the issue of debt term structure and time consistency. Finally, section 5.6 contains concluding remarks.

5.2 Stabilization Attempts

5.2.1 The Austral Plan

The Austral Plan was organized around three basic measures. First, prices of public sector enterprises were increased to reduce their cash flow deficit. Second, all prices, public and private, were frozen at the level prevailing on 14 June 1985. For some sectors, however, prices were frozen at the level they had held some weeks before 14 June. This occurred because there had been some anticipation of price controls, and several firms (if not all) increased prices accordingly. Third, the president promised in a public speech that, from 14 June on, the Central Bank would not print any money to finance public-sector operations.

A few days after this announcement the plan was accepted by the International Monetary Fund (IMF). It essentially respected the monetary and fiscal targets of the standby agreement reached in the previous week; even more, it was said that the plan set more ambitious targets than those agreed upon with the IMF.

Besides freezing prices and salaries, as well as public service prices (after upward adjustments), the Austral Plan included exchange control and banking system control with a regulating scheme of the main financial activities. Foreign trade regulations and the general level of protection were left without major modifications.

Before the Austral Plan, the economic conditions were very worrying, with an accelerating rate of inflation that reached levels of 30% a month and with big fears that the process should turn into a hyperinflation. Although this was foreseen by the community as a serious hyperinflation risk, price increases

were more the result of private agents' anticipation of price control than the result of a fiscal and monetary overflow.

The prevailing high inflation rates and the anticipation of changing government policies affected expectations. High expected inflation spread all across the economy in high nominal interest rates, indexation schemes, and in all types of contracts with deferred payments. If a sudden stabilization would occur, unanticipated lower inflation would cause a problem to all nonindexed contracts.

To take account of unanticipated lower inflation, the Austral Plan took the legal provisions of adjusting contracts by means of a schedule contemplating the difference between the old expected inflation and the new expected inflation supposedly generated by the stabilization plan. This measure did not have any direct implication for the working or dynamics of the stabilization program by itself. The measure just tended to avoid unexpected wealth transfers under the assumption that the plan would be successful.

Although high real interest rates and concentration on short-term maturities reflected a lack of credibility, the Austral Plan started with favorable public opinion, at a popular level at least. The popular support of the plan can be interpreted in one of two ways. First, the public may have accepted the stabilization plan as a reasonable approach to stop inflation. Or, second, the public did not know what a reasonable approach was, but accepted the plan anyway because it approved of the government's decision to give serious consideration to the problem of inflation. (Before the Austral Plan, the monthly rate of inflation had more than doubled from December 1983 to June 1985, reaching 42% in the latter month.)

The mass media (much of which was directly controlled by the state) advertised the Austral Plan and produced a favorable effect on general expectations; an abrupt fall in prices and free interest rates followed.

The favorable impact created by the government's advertising did not last, nor did the favorable public opinion. The lack of fiscal discipline—in conjunction with unsound monetary management—accelerated inflation in 1986–87 to an average level of nearly 10% per month. Interest rates for loans denominated in australs increased to reflect expected inflation, and domestic interest rates for operations in U.S. dollars reflected an important element of country risk.

Interest rates for operations in U.S. dollars were about four times the London Interbank Offer Rate (LIBOR). This high rate reflected the poor credit assessment by foreign creditors, who, unable to collect any payments, lacked alternatives other than restructuring most of Argentina's external debt. For the first time in the twentieth century Argentina decided to ignore the reputation effect of debt restructuring.

The consequences of the Austral Plan lasted for several years. The credibility of the government's announcements was low and became even lower. There grew in the mind of the citizenry the idea that populist democracy had

Table 5.1 **Argentina: Per-capita GNP and Real Wages**

	Per-capita GNP		Real Wages	
Year	Real Australs (1970 = 100)	Real U.S. Dollars	Minimum Wage	General Average
1984	96.0	2,883.5	89.4	95.2
1985	90.3	2,710.6	64.6	81.7
1986	93.8	2,815.7	78.2	83.5
1987	94.3	2,829.8	72.9	76.9
1988	90.0	2,701.9	48.7	66.3
1989	84.7	2,542.5	46.3	60.0

Source: Carta Economica.
Note: GNP is measured with real U.S. dollars from the third quarter of 1989. Real Wage is an index with the base January 1984 = 100.

failed again. Most important, the economic standard of living of low-income people—the group to whom populist governments are said to pay special attention—deteriorated or remained at the same level of the previous decade. Table 5.1 illustrates this last point for the six-year period corresponding to Alfonsín's presidency.

Although the Austral Plan was presented and discussed in the media as a "new" approach to stabilization, it contained hardly anything new. It followed the traditional income-policy approach. The only exception was the public commitment of a populist president to stop the monetary emission to finance public-sector operations. For the first time in Argentina's history a populist president sounded like his archenemies, the monetarists.

The traditional approach to stabilization in Argentina was to announce a program of fiscal discipline plus price controls; the traditional result was increasing inflation after a short period of stabilization. The Austral Plan confirmed this tradition, since, after a few months, inflation accelerated again, this time reaching a two-digit monthly rate by the beginning of 1988.

Those who elaborated the plan, and were in charge of managing it, believed that stabilization was a necessary precondition to discussing the reform of the public sector that would lead to a sound and permanent monetary and fiscal policy.

Those who did not share the heterodox view of stabilization were doubtful about the real possibility of this approach and believed that the transformation of public-sector enterprises and the institutional behavior of local and provincial governments were both prerequisites to stabilization. The failure of Argentina's Austral Plan seemed to confirm this last interpretation. President Alfonsín—who resigned five months before the constitutional date for the change of governments—acknowledged his failure to take the necessary actions to reform the public sector.

President Alfonsín's promise to stop monetary emission to finance public-

sector operations was not honored. The Banco Hipotecario Naciónal (Mortgage National Bank) spent almost $5 billion (U.S. dollars) in concessional loans presumably related to the political campaign. Another $2 billion were granted to countries with poor credit ratings like Cuba, Nicaragua, and some African countries, presumably to support the Argentine chancellor as Secretary to the U.N. General Assembly. The loans were granted in domestic currency to be used in purchasing domestic goods. These two operations alone meant more than doubling the monetary base.

As fiscal discipline was not achieved with the Austral Plan, deficits forced the government to borrow from different sources to close the budget. One source of financing was monetary creation by the Central Bank. To sterilize part of the monetary emission, the Central Bank increased reserve requirements, paying competitive interest rates on them.

This disguised borrowing eventually resulted in a dominant force that drove the hyperinflation of mid-1989, a subject I will discuss later. First, I will discuss some complementary policy actions that attempted to rescue the Austral Plan from total failure.

Mazzorin's Chickens and Other Heterodox Measures Complementing the Austral Plan

During 1987 the government undertook some policy actions to complement the Austral Plan. Some policies were a repetition of previous policies, but another was new.

The repeated policies were a new price freeze plus discretionary authorizations to increase prices up to 10% for some items. Authorizations were granted to those items that did not violate special price schedules elaborated by Secretary of Commerce Mazzorin.

Price controls did not work, and the economic authorities decided to take more direct actions to stop inflation. Somehow they imagined that increasing the supply of foodstuffs would stop inflation. One way of increasing it was importing chicken. So Mazzorin—spending additional government money in a deficit-ridden country—imported several tons of chicken. Unfortunately, he imported the wrong kind of chicken. Argentineans refused to consume imported chickens fed with anything except corn from the pampas.

Even with a gradual decrease in chicken prices, consumers did not want them. Especially when the chickens started to smell bad. Rotten chickens were the final outcome of Mazzorin's stabilization strategy. He imported too many chickens in proportion to the taste and freezing capacity of the consumers in Argentina.

Inflation did not fall, neither, in the long run, did the relative price of chicken. In the short run, the demand for chicken fell because people reduced their consumption of chicken in restaurants and other places where they might have purchased "elaborated" chickens. They were afraid of consuming a rotten chicken disguised as a special dish or delicacy. Many domestic producers

went into bankruptcy, which in turn reduced the supply of the right kind of chickens that people would like to consume.

The government also determined a wage policy in an attempt to control salaries according to price inflation. In October 1987 the economic authorities increased the minimum wage by 75% (from 200 to 300 australs per month) and increased general wages, in both the private and public sectors as well as in pensions by 12%. Yet the average real wage decreased, which raised angry complaints by labor union leaders who called several labor strikes. Toward the middle of 1988 a general strike by public-sector utilities workers ended with a severe disorder in the Plaza de Mayo and several acts of vandalism in downtown Buenos Aires. Then labor union leaders asked for the resignation of the economic minister.

As in previous stabilization plans, the government did not reduce public spending and tried to close the fiscal budget by borrowing and increasing the tax burden. But, borrowing in the capital market meant severe crowding out and high real interest rates, therefore, the government opted to use "forced borrowing."

This measure implied that the government obtained from tax payers a mandatory loan equivalent to 40% of last period revenue from income tax and net assets tax. First introduced in 1985/86 as an emergency measure, forced borrowing was reintroduced in 1987, affecting again government credibility and reputation.

The government increased the fiscal burden by raising the tax on imports, cigarettes, and checking accounts. This last particular tax—a true innovation in fiscal policy—charged current accounts each time the account was debited. To avoid tax evasion check endorsements were restricted. The tax was paid by current account holders, and commercial banks acted as a withholding agent for the government.

Fiscal experts cannot figure out the rationale for a checking account tax, but the secretary of the treasury, who proposed this tax, claimed to have a good explanation: "It was well known that neutral taxes are very high in Argentina, therefore, there is much evasion and [many] tax exemptions. So, tax revenue is low in relation to the level of taxes. But, black market operations, exempted operations, and evaders, all use checks; therefore, taxing checks increases revenues and improves the neutrality of the system." The flaw in this explanation is that all checks are taxed, and people who do pay taxes do use checks. The explanation would be right only if eluders and evaders were more intensive users of checks than regular taxpayers.

A new element in the economic policy undertaken during 1987 was the liberalization of the exchange market. This was not a full liberalization because there were two markets: the official market for commercial operations and the financial market for everything else. But the recognition of this last market ended with several years of ineffective restrictions to stop capital flight.

Jointly with the liberalization of exchange markets came an announcement of new commercial policy. Import restrictions would gradually be eliminated: the intention was to improve resource allocation, not to engage in arm-twisting measures designed to force entrepreneurs to keep prices low.

The commercial policy measures were two. First, nontariff restrictions were substituted by a system based upon indifference tariffs, which, supposedly, would eliminate redundant protection. Second, temporary admission was granted to all kinds of inputs. These measures were very weak in relation to the level of effective protection but they were in the right direction.

Another favorable event was an improvement in Argentina's terms of trade, which was used to launch another economic plan known as the Primavera Plan.

5.2.2 From the Primavera Plan to the Hyperinflation

"Primavera" means "spring season" in Spanish, and that was the name given by the press to the economic plan introduced months before the spring of 1988.

Argentina's favorable terms of trade were mostly due to the drought in the northern hemisphere that increased the international price of some agricultural commodities. Table 5.2 presents the monthly evolution of nominal and real exchange rates, which in July 1988—when the Primavera Plan started—was at 113.3. This was a figure lower than the levels of the previous months, but it was a profitable level for soybeans and other crops of the season.

The Primavera Plan allowed the government to realize a profit in the exchange operations. The proceeds from exports were obtained at a lower commercial exchange rate and were sold at a higher rate in the financial market. Table 5.2 shows that, during several months, the spread between the financial rate and the commercial rate exceeded 20%. To sell dollars in the financial market the Central Bank fixed a minimum value about which it would sell foreign exchange, although not in unlimited amounts. The amount announced was large enough to affect the price of the dollar in the short run.

Although not explicitly stated, a second intention of the government was to influence inflationary expectations affecting the path of the dollar in the free market. Other measures attempting to affect inflation were the following: first, a price agreement with trade unions to keep the rate of inflation in the order of 3%-4% per month in September and following months. On the other hand, and as a part of the agreement, the government offered to decrease the value added tax by 3%.

Second, government and trade union representatives created a Price Commission to follow up prices and costs as well as public-sector finances. At the beginning of August there was a 30% increase in prices of public-sector utilities. This increase was thought to be large enough to guarantee the balancing of the budget of public enterprises.

Third, collective agreements with labor unions would set the path for nom-

Table 5.2 **Argentina: Nominal and Real Exchange Rates**

	Real Exchange Rate	Nominal Commercial Exchange Rate	Nominal Free Exchange Rate		Real Exchange Rate	Nominal Commercial Exchange Rate	Nominal Free Exchange Rate
1984:				1987:			
January	110.5	24.89	30.77	January	108.8	1,292.76	1,713.55
February	107.4	27.77	40.51	February	110.0	1,383.22	1,712.22
March	100.4	30.86	50.05	March	113.8	1,541.00	1,879.86
April	95.7	35.08	54.62	April	111.3	1,541.00	2,039.47
May	94.4	40.84	64.90	May	110.7	1,590.79	2,066.84
June	94.2	47.62	69.28	June	110.8	1,706.19	2,076.40
July	93.9	56.17	75.55	July	110.9	1,894.18	2,384.50
August	94.1	68.40	98.19	August	110.0	2,115.17	2,926.50
September	92.0	83.39	113.25	September	109.9	2,457.34	3,451.40
October	98.6	105.42	122.23	October	120.3	3,243.29	3,955.79
November	109.6	133.38	166.91	November	120.9	3,510.00	4,068.50
December	108.4	160.84	180.79	December	121.6	3,535.00	4,572.00
1985:				1988:			
January	110.2	201.07	240.00	January	122.2	3,892.00	5,454.00
February	111.6	242.49	317.25	February	121.7	4,334.20	5,781.90
March	110.5	306.39	402.93	March	119.9	4,922.70	6,329.50
April	109.4	396.46	527.38	April	119.8	5,772.00	6,923.00
May	112.4	525.44	619.14	May	117.9	6,736.60	8,226.20
June	115.5	736.60	797.47	June	118.0	8,702.00	10,243.50

July	124.2	801.00	942.73	July	113.3	9,653.30	12,176.70
August	122.7	801.00	952.05	August	108.9	12,000.00	14,115.30
September	122.0	801.00	939.52	September	101.3	12,000.00	14,321.80
October	121.0	801.00	924.57	October	97.3	12,223.50	14,943.00
November	120.0	801.00	898.01	November	95.9	12,674.10	15,389.10
December	118.4	801.00	855.24	December	93.6	13,138.60	15,772.40
1986:				1989:			
January	117.1	801.00	899.43	January	91.0	13,665.50	16,808.60
February	115.6	801.00	860.88	February	94.8	15,378.80	24,998.90
March	111.9	801.00	908.68	March	107.7	20,325.30	40,476.20
April	111.1	827.82	921.82	April	214.3	57,411.70	64,387.00
May	110.9	849.57	900.12	May	246.7	124,493.3	135,000.0
June	109.9	873.63	895.11	June	183.3	208,333.0	416,429.0
July	107.0	903.73	914.91	July	157.7	563,238.0	660,714.0
August	105.9	965.05	1,086.48	August	148.3	650,000.0	673,727.0
September	109.0	1,050.36	1,222.27	September	140.5	650,000.0	653,430.0
October	107.8	1,093.59	1,198.26	October	137.3	650,000.0	703,000.0
November	107.6	1,150.85	1,349.75	November	131.1	650,000.0	887,770.0
December	108.2	1,212.90	1,564.75	December	117.0	875,807.0	1,350,000.0

Source: Carta Economica.

inal wages, and employees of the central government administration received a salary increase of 25%.

Fourth, commercial policy measures included the intention to reduce tax on exports for 500 products and to eliminate nontariff restrictions on 3,000 products. Nontariff restrictions were introduced during the Malvinas War (1982) and later with a special provision (Annex II, 1983) and were never removed during the Alfonsín administration.

Fifth, all reserve requirements for different kinds of deposits were substituted by two special government obligations denoted "A-1241" and "A-1242," according to the Central Bank resolutions that created them. Although I have liberally used the denomination of "reserve requirements" to give a first approximation to the idea, a word of caution is necessary. A large part of reserve requirements were not "reserves," as banks could not cash them. They were special bonds (or nondisposable deposits in the Central Bank) that substituted for reserve requirements.

The government obligations A-1241 and A-1242 were remunerated with the average deposit rate of commercial banks plus 0.5% monthly. This meant that a large part of commercial banks assets were a particular bond that, on average, would pay whatever average interest rate the commercial banks were willing to pay depositors.

For example, if depositors were afraid of a devaluation they would try to cash deposits to buy dollars. Bankers, to avoid a decrease in deposits, would increase the deposit rate, which in turn would imply a higher interest in A-1241 and A-1242. If expectations of a fiscal deficit were what generated the expectation of a devaluation, then a devaluation would occur even with fiscal surplus. An overall deficit would always occur as interest accruals on most of the domestic debt were indexed to panics.

Although some measures implemented with the Primavera Plan were in the right direction—especially the exchange rate liberalization and the commercial policy—the plan did not succeed. Fiscal reform was not realized, and the perverse dynamics of the remuneration of most of the domestic debt drove the system to accelerating inflation. Table 5.3 shows that inflation decreased from 27.6% in August to 5.7% in November 1988. In February 1989—the turning point to hyperinflation—the monthly inflation rate was 9.6% and kept increasing to reach a peak of 196.6% in July.

In a general evaluation of the period 1984–88, Fernández and Mantel (1985, 1988) concluded that price controls—of the sort introduced with income policies and heterodox polices—delayed the adjustment path to steady-state equilibrium. Firms, anticipating price controls in oligopolistic markets, set prices higher than they normally would in order to protect themselves from the government's political incentive to fix prices lower than long-run marginal costs. With a positive probability of a stabilization failure, firms may be temporarily better off with "nonoptimal" higher prices. It may perfectly be the case that, if stabilization fails the higher price will cushion the firm, for a while at least, from "authorized-prices" lower than long-run marginal costs.

Table 5.3 **Argentina: Inflation and Nominal Interest Rates**

	Inflation in Consumer Prices	Average Depositors Interest Rate		Inflation in Consumer Prices	Average Depositors Interest Rate
1984:			1987:		
January	12.5	12.9	January	7.6	8.3
February	17.0	12.5	February	6.5	7.5
March	20.3	13.4	March	8.2	4.0
April	18.5	17.5	April	3.4	7.1
May	17.1	20.8	May	4.2	7.7
June	17.9	20.3	June	8.0	8.3
July	18.3	19.3	July	10.1	10.6
August	22.8	18.5	August	13.7	12.3
September	27.5	22.1	September	11.7	15.4
October	19.3	24.2	October	19.5	12.4
November	15.0	20.0	November	10.3	8.9
December	19.7	30.9	December	3.4	12.3
1985:			1988:		
January	25.1	24.9	January	9.1	13.2
February	20.7	20.9	February	10.4	13.3
March	26.5	23.5	March	14.7	15.7
April	29.5	27.4	April	17.2	16.2
May	25.1	31.1	May	15.7	17.2
June	30.5	16.8	June	18.0	19.5
July	6.2	5.2	July	25.6	22.7
August	3.1	5.7	August	27.6	10.6
September	2.0	5.3	September	11.7	9.1
October	1.9	4.3	October	9.0	9.3
November	2.4	4.4	November	5.7	10.2
December	3.2	4.4	December	6.8	12.2
1986:			1989:		
January	3.0	4.4	January	8.9	12.1
February	1.7	4.5	February	9.6	18.9
March	4.6	4.9	March	17.0	21.7
April	4.7	4.4	April	33.4	44.5
May	4.0	4.4	May	78.5	127.8
June	4.5	4.3	June	114.5	135.1
July	6.8	4.6	July	196.6	40.1
August	8.8	6.5	August	37.9	12.8
September	7.2	6.9	September	9.4	7.4
October	6.1	7.9	October	5.6	6.1
November	5.3	7.7	November	6.5	9.6
December	4.7	8.3	December	40.1	30.0

Source: INDEC and BCRA. Average interest rate for December 1989 is preliminary.

A similar argument can be elaborated for nominal and real interest rates. These conclusions had three important implications. First, given that delaying the adjustment might imply that the real interest rate can remain for a longer period at higher values than the long-run natural rate, it is doubtful—at the least—that price controls can help to avoid the recessionary effects usually

associated with stabilization. Second, higher real rates introduced by a particular stabilization plan with price controls suggest the existence of short-run economic wealth transfers across sectors that should be carefully evaluated before justifying the "social advantage" of price controls. Third, price controls with fiscal lags imply an important delay in the adjustment of the global deficit, since its size depends on the magnitude of the real rate of interest and of the rate of inflation.

Although the economic plan failed, the authorities insisted on price controls even after the monthly rates of inflation were well above 10%. Of course, price controls were totally ineffective, and a high inflation accelerated even more. When the authorities abandoned the idea of "heterodox" economic policy-making, and gradually moved to more orthodox measures such as reduction of public-sector deficit and sound monetary management, it was too late. The strong credibility available at the beginning of the Austral Plan was gone, and the side effects of orthodox measures in the absence of credibility was taking a significant political toll. The lack of credibility and the fear of repudiation of the government debt increased interest rates to levels never seen before in Argentina. Government borrowing in the domestic financial system, at the beginning of 1988, took place at annual effective rates of more than 30% for operations adjusted to the U.S. dollar; that is, at four times the LIBOR rate.

Structural reform of the public sector was never given serious consideration by the political authorities. There were timid attempts at deregulation and privatization, and when they wanted to be more effective on structural reform it was too late; they awoke in the middle of the hyperinflation.

5.3 The Administration of Hyperinflation

During the second half of 1988 inflation was kept under control with the Central Bank auctioning dollars in the free market. But a growing debt and the political campaign for the presidential elections, which would be held in May 1989, were the dominant forces driving the economy.

Advertising during a political campaign may have different forms, and many of these forms can be inconsequential for economic developments. But the form chosen by the ruling party had severe consequences for the administration of the economic crisis.

Toward the end of 1988 the polls showed a clear advantage for the opposition candidate. The political advertisement of the ruling party characterized the opposition candidate as representing "chaos." Therefore, the situation in Argentina at the beginning of 1989 was a ruling party driving the economy to increasing inflation and an opposition party that represented future chaos.

The chaos exploded for the ruling party as soon as 6 February 1989, when the exchange rate policy became unsustainable and the economic authorities introduced the following modifications. First, they devalued the commercial

exchange rate by 2.5% to 14.45 australs per U.S. dollar and announced an additional devaluation of 6% for the rest of the month. Second, they created a new differential exchange rate 25% higher than the commercial rate to trade special goods and services. Third, the Central Bank ceased to intervene in the free market by auctioning foreign exchange. Fourth, the Central Bank released 6,500 million australs worth (about 11% of the monetary base) of reserve requirements in the form of nondisposable deposits (previously created by Central Bank Resolution A-1324).

The run against the austral continued, and the economic authorities were forced to introduce new measures almost every week. Some important measures include the following. The two official commercial exchange rates were unified in a single official rate. Imports and exports of goods, and also interest corresponding to the financing of commercial operations, were exchanged 50% at the official rate and 50% at the free market rate. Services were allowed 100% at the free market rate.

The financial problems caused by the run against the austral induced the monetary authorities to create every financial asset that could possibly be imagined. Irrespective of its cost, the government issued anything the public would be willing to hold. Therefore, the Central Bank, by means of Resolution A-1388, created five new bonds indexed to: the free exchange rate, the stock market quotation of BONEX (a Treasury bond in U.S. dollars), the exchange rate for imports, the greater of either the consumer price index or the nominal interest rate, the greater of either the free exchange rate or the nominal interest rate. A special deposit indexed to the price of crops, was also created for producers and exporters (Central Bank Resolution A-1391).

Several people and financial institutions took "advantage" of these options; but later, such advantages could not be realized, as the government was unable to honor them. Other people, understanding the nature of the Ponzi scheme in which the government was involved, decided to buy U.S. dollars in the free market, driving up their price and forcing the government to take new actions.

On 13 April 1989, the government decided that all transactions in the official exchange rate market were transferred to the free market. Exports were taxed at a floating rate computed as the difference between the free market exchange rate and a reference price of 36 australs per U.S. dollar. Reference prices would be modified periodically. The government also decided to increase by 14% the price of public utilities and by 16% the price of gasoline. Income policy remained unchanged.

Inflation, which in March 1989 was 17% monthly, could not be mitigated. It doubled to 33.4% in April and more than doubled to 78.5% in May. This was the month when general elections were held, elections that the ruling party lost.

From May to 10 December—the constitutional date to transfer the power—the ruling party was supposed to manage the Argentine economy. A very difficult task if the official pronouncement was right in characterizing the next

government as representing "chaos." The ruling party tried at all costs to transfer the government immediately, something that the opposition party did not want. Therefore, the ruling party lacked alternatives other than to manage the hyperinflation.

There is an abundant literature explaining the failure of heterodox plans designed to try to stop inflation in Argentina, but there is no literature analyzing heterodox measures to manage hyperinflation. From May to July 1989 I have the empirical evidence of a populist government using heterodox measures to stop hyperinflation. Of course, hyperinflation accelerated.

In May the government introduced the following measures. First, the economic authorities announced new taxes on durable goods (real estate and automobiles) and increases in prices of public utilities and gasoline. Second, the payment of forced savings and other fiscal obligations were claimed in advance. Third, the minimum wage was increased to 4,000 australs (the equivalent to $23 monthly in U.S. currency at the official exchange rate at the end of May). Prices were frozen for almost all goods except fruits, vegetables, meats, and fish and other seafood.

Plain figures perhaps are not the best indicators of the nature of the difficulties during the period April–July 1989. To illustrate the drama of hyperinflation the following paragraphs give a special timetable of financial restrictions affecting depositors, financial institutions, exchange houses, and the stock market.

April 3 and 4 were mandatory banking and exchange holidays; April 17, an exchange holiday but a working day for financial transactions. April 28 was a mandatory banking and exchange holiday.

May 2 was a mandatory exchange holiday. May 22, 23, and 24 were mandatory banking and exchange holidays. Bank withdrawals were restricted to 20,000 australs in each bank account. May 26 and 29 were mandatory exchange and banking holidays. May 30, withdrawals from time deposits and acceptances were restricted to 40,000 australs. Balances in excess of withdrawals were restructured to become due seven days later.

June 6: bank withdrawals were restricted to up to 50,000 australs for any type of operation. On June 9, the withdrawal restriction was increased to 100,000 australs.

Exchange controls were reintroduced, fixing the exchange rate toward the end of May. The Central Bank would buy each U.S. dollar at 175 australs and would sell it at 177 australs. Buying or selling foreign exchange outside the official regulated market was considered a misdemeanor, and, according to legislation, it would be punished through a special criminal law for exchange operations.

Yet there was another law that authorized the exchange of BONEXs by foreign exchange and BONEXs by australs. Triangulation through BONEXs replicated a free market for foreign exchange, and that was how the most important transactions were made. In fact, and independently of what the

monetary authorities decided, Argentina was operating in an unrestricted market for financial operation in foreign exchange at least since 1978 when the BONEXs were introduced for the first time.

The hyperinflation measured as the rate of devaluation of the austral in the free market reached its peak of 186.4% per month in June. If measured with the consumer price index the peak is in July with 196.6% monthly.

The severity of hyperinflation and the danger of social unrest forced the elected government to accept an immediate transfer of power. A new populist administration took power on 9 July and insisted on price controls, although not everything was heterodoxy in the BB Plan.

5.4 The Meném Administration and the BB Plan

The announcements of the new administration were a mix of heterodox and orthodox doctrines. On the one hand, the heterodox idea of having an income policy was always present from the very beginning. But on the other hand, the rhetoric and the appointment of high ranking officials tended to be orthodox. As I construct this discussion, I have doubts about how to classify the policy-making of the period July–December 1989. I would not call it heterodox because the problems of the budget constraint of the public sector were given serious attention even though they were not provided serious solutions. Neither would I call the policy-making orthodox because policymakers firmly believed that price "agreements" were effective to deal with inflation.

The first plan of the Meném administration was the BB Plan. Here, "BB" means Bunge Born Corporation, the multinational firm that provided the government with a high-ranking executive to take the post of economic minister.

The political rhetoric was very impressive and unexpected from a populist leader. President Meném announced a program of privatization of almost everything that could be transferred to private hands. The Argentine Telephone Company, ENTEL, was scheduled for privatization during 1990. Two TV channels owned by the state were privatized toward the end of 1989. Oil exploration and exploitation was subject to privatization and, in less than 90 days, Argentina signed a standby agreement with the IMF. Table 5.4 summarizes the projection of public finance of the BB Plan and its relation with previous years.

The preliminary figures for 1989 indicated that the overall deficit decreased 1.6% of GDP from 1988 to 1989. A further reduction was expected for 1990 according to budgetary projections.

The BB Plan was effective at stopping the hyperinflation of the moment and reaching inflation levels of one digit per month during September, October, and November. But in December the Argentine economy was again heading for hyperinflation with the monthly rate of 40.1% in the consumer price index.

The evidence available so far does not support the hypothesis of a fiscally driven high inflation process toward the end of 1989. During the months fol-

Table 5.4 **Argentina: Public Finances as a Percentage of GDP**

	1984	1985	1986	1987	1988	1989	1990
Public-sector operational deficit	8.0	4.8	2.4	4.8	5.0	6.2	−.1
Central Bank quasi-fiscal deficit	2.5	2.8	1.1	.9	1.4	1.4	1.5
Overall public-sector deficit	10.5	7.7	3.5	5.7	6.4	4.8	1.4

Source: Ministerio de Economia and BCRA.
Note: All figures measured on cash basis. The table reflects preliminary figures for 1989 and budget estimates for 1990.

lowing the hyperinflation, the Central Bank did not issue any significant amount of money to cover the operating expenses of the public sector. Most of the monetary emission of the period was generated by the purchases of foreign exchange by part of the Central Bank (some of it was used to pay international organizations). Part of the monetary emission was sterilized issuing CEDEPS or short-term Central Bank debt.

This new debt was issued at very high nominal rates. Given that it was announced to keep a fixed exchange rate of 650 australs per U.S. dollar up to the end of 1990, in the period from July to October the average yield of financial assets was more than 15% monthly in U.S. dollars. This seemed not to be a serious problem for bankers or depositors because most of the money was lent to the government, which remunerated average reserve requirements of about 80% of private bank deposits.

All indexed debt created by Resolution A-1388 (see sec. 5.3) that became due in the second half of 1989 was compulsorily reprogrammed with a new bond called BOCON.

Even the most naive of depositors knew that the situation could not last long, and, at a given point in time, he or she would consider it reasonable to convert austral deposits to U.S. dollars. In a few months a few smart depositors could realize in Argentina a gain that would take almost a decade to obtain in the world financial market. Of course, not all could realize such a gain. It was the attempt of many to capitalize on such a gain that promoted the run on the financial system and led to hyperinflation.

I believe that, more than fiscal disarray, debt dynamics is the simpler and more powerful explanation of the hyperinflations of 1989, with one episode beginning in February and the other starting in October, but being aborted in January 1990. Hyperinflation was aborted by a compulsive conversion of most of the short-term domestic debt to a long-term debt in the form of a new series of BONEX.

Table 5.5 shows the evolution of monetary and debt aggregates. Notice that the last column of the table correctly predicts the demonetization process of

Table 5.5 Argentina: Monetary and Domestic Debt Aggregates

	M1	M5	Debt	BCRA Debt in U.S. Dollars	Total of Austral Debt in U.S. Dollars	Share Debt (%)
1987						
January	6.4	19.6	13.2	4,550	5,387	84.5
February	6.3	19.8	13.5	4,765	5,669	84.1
March	6.5	19.4	12.9	4,729	5,838	81.0
April	6.6	19.6	13.0	4,646	5,755	80.7
May	6.5	19.5	13.0	4,629	5,740	80.6
June	6.1	18.6	12.5	4,964	6,246	79.5
July	5.8	17.8	12.0	4,545	5,762	78.9
August	5.2	16.8	11.6	4,040	5,537	73.0
September	4.8	16.2	11.4	3,671	5,162	71.1
October	4.4	14.7	10.3	3,390	5,192	65.3
November	4.4	15.3	10.9	3,634	5,370	67.7
December	4.7	16.8	12.1	3,508	5,303	66.1
1988						
January	4.7	16.4	11.7	2,973	4,687	63.4
February	4.5	16.6	12.1	3,187	5,139	62.0
March	4.3	16.6	12.3	3,792	5,371	70.6
April	4.2	16.4	12.2	3,798	5,506	69.0
May	3.8	15.3	11.5	3,829	5,392	71.0
June	3.5	14.0	10.5	3,801	5,294	71.8
July	3.2	13.3	10.1	3,877	5,439	71.3
August	3.0	12.9	9.9	4,471	5,956	75.1
September	3.3	14.2	10.9	6,117	7,322	83.5
October	3.6	14.8	11.2	6,357	7,617	83.5
November	3.5	15.8	12.3	6,750	7,955	84.9
December	3.9	17.2	13.3	6,972	8,187	85.2
1989						
January	4.1	18.9	14.8	7,967	9,222	86.4
February	4.3	19.3	15.0	5,692	7,125	79.9
March	4.1	18.4	14.3	3,909	5,456	71.7
April	3.7	17.8	14.1	3,120	4,905	63.6
May	3.0	13.8	10.8	2,388	3,760	63.5
June	2.6	12.4	9.8	1,857	2,989	62.1
July	1.6	7.9	6.3	2,594	3,984	65.1
August	2.1	10.0	7.9	4,158	5,547	75.0
September	2.8	12.2	9.4	5,176	6,658	77.7
October	3.6	13.9	10.3	5,133	6,763	75.9
November	4.3	14.7	10.4	3,584	5,183	69.1
December	. . .	. . .	. . .	1,866	3,639	51.3

Source: *Carta Economica*.

Note: Monetary aggregates in proportion to GDP, debt aggregates in millions of U.S. dollars.

hyperinflations. The last column measures the share of nonindexed debt denominated in australs but earning a substantial nominal interest rate. As government's debts are private-sector assets, and as the private sector decided to shift from australs to dollars, a run began leading to hyperinflation. Notice the turning points in February and October 1989 where the share of the austral debt leads any of the monetary aggregates.

Sometimes in the standard financial programming exercises an increase in M1 suggests credibility and monetization of the economy. The empirical evidence for 1989 does not confirm this interpretation, and there may be some instances—as will be explained in the next section—where monetization is achieved by increasing the real interest rates.

5.5 Economic Policy and High Inflation

There are two topics in monetary theory that deserve special attention in high inflation environments. One is the case of "unpleasant monetarist arithmetic" that deals with the policy dilemma of financing deficits by printing money or by printing bonds. The other is the problem of time inconsistency and the existence of nominal bonds in private hands.

5.5.1 Unpleasant Monetarist Arithmetic

Sargent and Wallace (1981) ask what would happen if the government decided to decrease the share of the deficit financed with money creation. By itself this would tend to decrease inflation. But if the government is expected to shift to full money creation later, lower money creation means faster transitory accumulation of debt and higher money creation in the future. Anticipations of higher money creation in the future imply higher inflation today.

With a positive constant real interest rate, a higher debt means higher interest payments in the steady state. If the economy is on the left side of the Laffer curve, an increase in the stock of debt implies a higher inflation tax in the steady state. However, if the economy is on the right side of the Laffer curve, a higher debt will require a lower inflation and the Sargent and Wallace proposition would not hold.

When the assumption of a constant interest rate for different levels of government debt is replaced by the assumption that higher debt is associated with higher real interest rates, higher inflation is obtained on both sides of the Laffer curve. This can be verified with the following set of relationships (see Fernández 1990, for an optimization model with a liquidity constraint providing the micro-foundations for this subject).

The government financial policy dilemma is represented by the following steady-state relationships:

$$\alpha \cdot b \cdot r = m \cdot \pi, \tag{1}$$

$$(1-\alpha) \cdot b \cdot r = s. \tag{2}$$

The first relationship is the share (α) of the quasi-fiscal deficit (that is, the deficit generated just by the real interest on government debt) that is financed by inflation. The second relationship is the share ($1-\alpha$) of the quasi-fiscal deficit that is paid with the primary surplus s.

Let $\phi(\pi) = m/b$ be the proportion of real money yielding no interest to the stock of real government debt with $d(\phi)/d\pi < 0$. In the particular case of Argentina, m corresponds to the definition of real M1 and b can be considered bonds and deposits yielding interest. Deposits are government obligations because of the high reserve requirements remunerated at competitive rates by the Central Bank. Let $b = b(r, \pi)$ with $db/dr > 0$ and $db/d\pi < 0$. Substitute this relationship in (1) and (2) to obtain

$$r = (1/\alpha)\cdot\phi(\pi)\cdot\pi, \tag{3}$$

$$b(r, \pi)\cdot r = s/(1-\alpha). \tag{4}$$

Assume that $\pi\cdot\phi(\pi)$ is increasing in $\pi < \pi'$ and decreasing in π for $\pi > \pi'$. This implies that, if the stock of bonds $b(\cdot)$ were a constant or independent of π and r (as in most of the literature on inflation tax), the graph of seignorage revenue against the inflation rate would have the usual Laffer curve property.

Figure 5.1 illustrates relationships (3) and (4). Fernández (1990) shows, in a model where the dynamics are explicitly specified, that the line representing

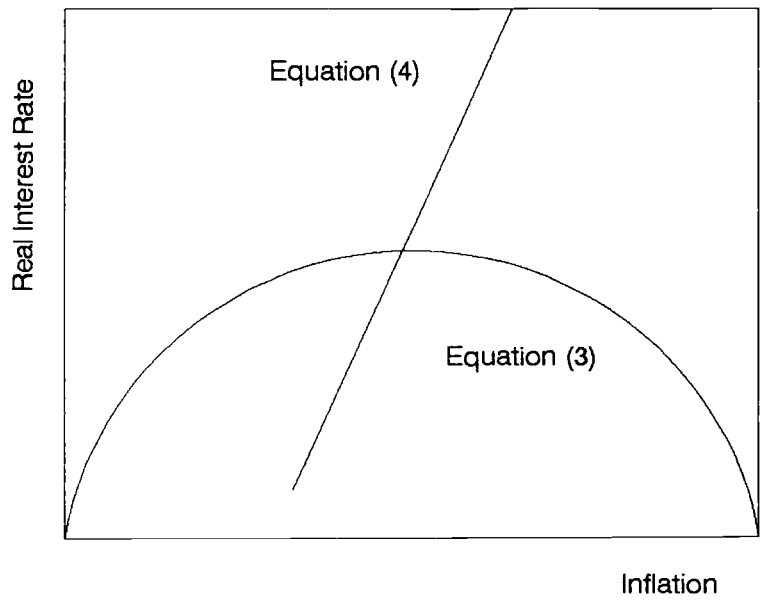

Fig. 5.1 Determination of inflation and real interest rate

(4) must cut from below the line representing (3) to obtain a saddle-point equilibrium; otherwise the system is unstable.

A decrease in α implies an upward shift in (3) and a rightward shift in (4) and, as shown by figure 5.2, I obtain a solution with higher inflation irrespective of whether the economy is on the left side or on the right side of the Laffer curve (see points A' and B').

What this analysis tells us is that the crowding-out effect on the service of government debt by increasing borrowing produces higher inflation. The impact of higher borrowing on the stock of debt and on real interest requires more inflation to pay for it than the alternative of not borrowing. The alternative of just printing money to pay for debt services produces less inflation than the alternative of paying a lower share but of a higher total debt service increased by borrowing.

Notice that the old remedy to stop inflation, that is, by reducing deficits or by increasing primary surplus, works nicely on either side of the Laffer curve. This result constrasts with previous literature, where this inflation remedy would work only on the left side of the Laffer curve.

5.5.2 The Problem of Time Consistency of Optimal Plans

A textbook risk-free government bond paying low interest is a concept found in textbooks but not in Argentina's financial markets. Governments with poor reputations cannot issue risk-free bonds. So, we wonder, when a government loses its reputation how can it be regained? Starting from a positive debt, the real interest cost to build up one's reputation might be too high

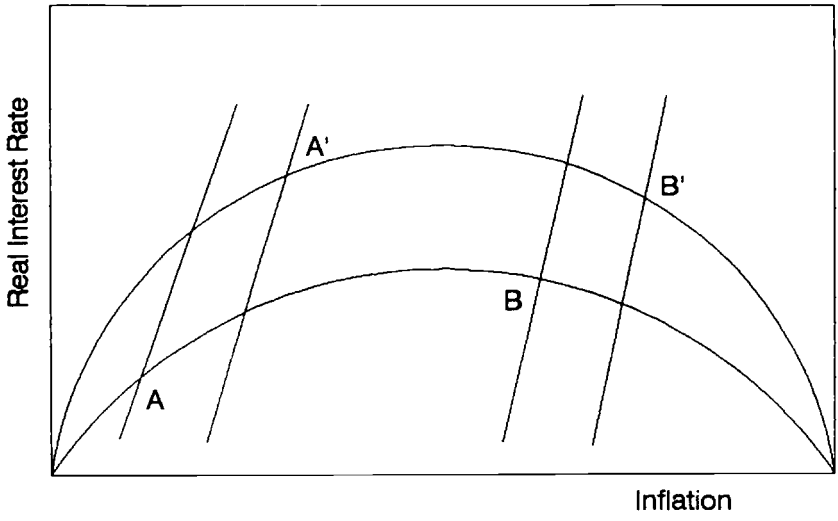

Fig. 5.2 The effect of increasing borrowing

to afford. Perhaps if debt is canceled or substantially reduced through hyperinflation, repudiation, or reprogramming, the social cost is lower than collecting distorting taxes to pay for debt services. Perhaps it is higher. These are topics that should be carefully analyzed, and I have not been able to find definite answers to all these questions. Below, however, I will venture some answers.

In policy discussions in Argentina, Ricardo Arriazu (Arriazu, Leone, and Murphy 1988) emphasized the necessity of a careful analysis of government financial wealth before considering a change in the stabilization policy of the late seventies. That policy consisted of a preannouncement of future devaluations in an attempt to reduce inflationary expectations.

Eventually that policy produced a revaluation of the peso. To correct the revaluation, a series of devaluations were introduced in 1981 that accelerated inflation and caused a deterioration of the financial wealth of the government. Those results tend to confirm Arriazu's conjectures and suggest that before changing policy the government should pay special attention to the composition and the time structure of claims and liabilities.

The failure to understand this point may imply that to correct a real distortion—a real appreciation of the peso—a greater distortion is introduced. In other words, if inflation must increase, the government should first try to restructure the debt toward long-term nominal claims at fixed interest rates. Unfortunately, as time consistency analysis emphasizes, it would be very hard to find private agents willing to accept such unhedged restructuring, as Resolutions A-1241, A-1242, and A-1388 and the general experience of 1988 and 1989 confirmed in Argentina. Those resolutions were issued to provide fully hedged positions to financial investors.

The success of time consistency analysis to explain some important issues of stabilization is not because populists are inconsistent, either because they do not know economic theory or because they commit obvious policy mistakes. If neutral taxes are unavailable governments would tend to maximize social benefits, repudiating debt either through taxes, inflation, reprogramming, or the like. Yet, if this were the case, why would rational people in populist countries hold nominal debt?

It could be the case that nominal bonds yield liquidity services (as assumed in Fernández 1990) or that people hold nominal debt if they can fully hedge it. Hedging a nominal bond could be implicit; for example, tax deferrals or fiscal lags are good hedges against jumps in the price level. Also it could be the case that in countries like Argentina, where the stock of nonindexed domestic debt is substantially less than 10% of GDP, tax deferrals and the Olivera-Tanzi effect of fiscal lags might imply a zero-net-present-value nominal debt.

I have tried to analyze this topic elsewhere (e.g., Fernández 1989a, 1989b). Working with the original Lucas-Stokey cash-in-advance framework, the proof of the time inconsistency of government nominal debt is straight-

forward. But is a zero-net-present-value nominal debt time inconsistent? In a model with money in the utility function as used by Persson, Persson, and Svensson (1987), Calvo and Obstfeld (1988) show that zero-net-present-value for nominal debt does not solve the time inconsistency problem (see references for other results on time inconsistency). I obtained the same results for a cash-in-advance model.

However, another result follows. For example, a policy able to produce a shift from a government net-positive-nominal debt to a net-negative-nominal debt can be made time consistent. Also, time consistency might be achieved in several cases where individual agents are not deprived of volition at the stage of nominal assets restructuring.

A very important underlying assumption in the time inconsistency results is that governments may restructure, at will, all real and nominal obligations at market prices, and economic agents will passively accept such restructuring. If this is not so, as some available evidence on private-sector behavior incurring in fiscal lags and tax deferrals suggests, the problem under discussion becomes a true differential game where time inconsistent solutions are more difficult to obtain.

The compulsive reprogramming of the domestic debt at the beginning of January 1990 as an alternative way to avoid hyperinflation in Argentina is perhaps the most interesting case to analyze this type of problem. Obviously, if people would have willingly accepted restructuring, compulsion would have not been necessary. This occurred in January 1990, and it is too soon to evaluate the results and the future consequences of such policy action. But it will certainly be the subject of my future research.

5.6 Conclusions

The question we raised at the outset was, Can populist governments stop high inflation? If the answer were yes, developing nations like Argentina might be able to grow again. If the answer is no, stagnation and the risk of hyperinflation seem the natural outcome.

Populist governments used to approach economics by emphasizing income redistribution and paying little attention to deficit finance and the risk of hyperinflation. The experience I have analyzed seems to suggest that the populist approach to economic policy has failed to achieve even a minimum improvement in the well-being of low-income people. Traditional political parties have not disappeared from electoral competition, but they are in a process of aggiornamento and rationalization of their later experiences.

Populist leaders learned that they were wrong when they believed that transitory stabilization through price controls was a necessary condition to carry out the reform of the public sector. They thought of transitory stabilization as buying time for a structural reform that, in the future, would result in a sound

and permanent monetary and fiscal policy. But they never had the time to reach the future. They also learned that the transformation of public-sector enterprises and institutional behavior of local and provincial governments were prerequisites to stabilization. The failure of Argentina's Austral Plan, Primavera Plan, and BB Plan were the learning experiences.

After decades of failures, governments of any type lose their credibility, and transitory stabilization with heterodox measures increases real interest rates and the burden of the domestic debt which, in turn, builds up pressures for a new inflation burst. The problem of high inflation is usually the problem of an oversized public sector and fiscal disarray. Any program that does not immediately attack these two problems will almost surely fail. It remains to be seen, at least in Argentina, whether a successful heterodox plan is possible. Heterodoxy has failed, not because all heterodox plans are wrong or illogical, but because those that were employed were used to postpone reforms of the public sector that had been badly needed for several decades.

What populist leaders have also learned is that not all the problems facing a country like Argentina are the result of naive income policies or the government spending too much. Domestic debt, credibility, financial runs, and policy mistakes are almost as important as naive populism.

The change in the populist approach of basing stabilization on deficit-ridden income policies is a necessary condition for price stability. It is also necessary to start the stabilization with well-known fundamental reforms in the public sector. Any delay in taking these measures is seen as a lack of political will and deteriorates even more the low credibility of the government. Finally, careful attention must be paid to domestic debt dynamics that can easily jeopardize any serious attempt at stabilization. It may be the case that domestic debt restructuring is necessary to assure the stability in financial markets.

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Comment

José De Gregorio

In my remarks I want to focus on the following issues: First, there are two kinds of policy failures, those where the announced plan does not work and those where the plan is aborted before all the measures are implemented. The former case is the most relevant, and I want to stress that the key issue is not *what* the missing component was rather than *why* it was actually missing. Second, I will concentrate on the timing of a disinflation. There is tension between the stabilization shock, which may include monetary reform, incomes policies, and so on, and the long-run transformation required to live with lower inflation. Then I will refer to the relevance of incomes policies as a component of a stabilization program. This is an old discussion but in this case important to address in light of Fernández's claims.

Why Are Stabilizations Abandoned?

It is not puzzling to see that many stabilization programs end up failing. In Argentina this is the case in all three programs analyzed in the paper. The disturbing issue is not what were the measures not undertaken during the stabilization but rather why they were not implemented in spite of the fact that they may have been announced.

On the reasons for the program's failure there is enough evidence showing that the lack of fiscal adjustment was the main reason. However, there is little work on why the fiscal adjustment was not carried out. I want to discuss some of the possible explanations.

We could argue that the policymakers are "ignorant populists." This may be true not only for this vaguely defined species called "populist." This seems the explanation underlying Fernández paper. Unfortunately the answer is not as simple as to send policymakers to study macroeconomics. Especially in Argentina, where most economists had the chance to stop inflation, they certainly are not ignorant. At a deeper level it is not an attractive assumption to consider that private agents make rational decisions while governments are completely irrational. In the particular case of the Austral Plan, Fernández mentions that Alfonsín promised not to create money to finance the budget. Hence, we can discard the "ignorance hypothesis."

An alternative hypothesis is that the program had bad luck (bad terms of trade) or a lack of credibility (reforms that were not believable). The problem with these explanations is that programs fail without being completely implemented. Governments abandon stabilization plans before they are able to see

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whether they will be successful. The Austral Plan started with a large degree of support, so the lack of credibility is also not a serious issue.[1]

Finally, I think the most plausible reason for program failure is that some institutional and political factors impose severe constraints on the completion of the program. The costs that the government has to bear, if they stick to the original plan, are so high that they prefer to abort it. I will develop an example that looks consistent with the Argentinean experience.[2]

Let us consider the Austral Plan. It has everything needed for success, especially unprecedented popular support. Despite the fact that the plan worked for some period, the deep roots of inflation were not eliminated.

Why was Alfonsín's economic team unable, although they may have been willing, to make the fiscal correction? It is possible that they did not know how difficult it would be to implement a fiscal reform. After the first stages of the plan were implemented, they realized that the required adjustment was more substantive than they had originally expected. They could not find enough political willingness, in the Congress or in the political parties, to support the adjustment needed to carry forward the required reforms.[3] The cost that the government would have to bear alone would have been too high to make continuing worth the effort. Hence they prefer to administer the crisis in the hope of better luck in the future.

All further attempts to stop inflation are condemned to fail unless there exists a broad consensus among the main interest groups to support fundamental economic reform. The costs the country has to pay in order to reach this stage are enormous. Meném's first attempt to incorporate radicals into the government shows that the search for an agreement is considered important.

What Should Come First: The Fiscal Reform or the Short-Run Shock?

An interesting discussion raised by Fernández is the question of the fiscal reform and its timing. A summary of his point is that proponents of the Aus-

1. The evolution of interest rates also shows that successful programs are not necessarily those that had the most credibility. In some sense, credibility came later. On a recent failed stabilization in Ireland and its contrast with Poincaré in France in 1926, see R. Dornbusch, "Credibility, Debt, and Unemployment: Ireland's Failed Stabilization" (*Economic Policy* 8 [1989]: 174–201). For a discussion of the Bolivian hyperinflation, see J. Sachs, "The Bolivian Hyperinflation" (NBER Working Paper no. 2073, Cambridge, Mass., 1986). In the Argentinean case the large drop of nominal interest rates in the months following the Austral Plan shows that the plan did not lack credibility.

2. In "Why Stabilizations Are Delayed" (Mimeograph, 1989), A. Alesina and A. Drazen model the delay of stabilization as a concession game among different interest groups. Nevertheless, my example will suggest that the stabilization will come when everybody agrees to share the burden of stabilization rather than when a particular group concedes and bears the entire cost of stabilization. Another related model is discussed by R. Fernández and D. Rodrik, "Why Is Trade Reform So Unpopular?" (CEPR Discussion Paper Series, No. 391, March 1990).

3. A simple formalization of this point is that there is uncertainty about the Olivera-Tanzi effect. Therefore, when inflation is reduced they realized that the fiscal adjustment has to be greater than the expectation they had before starting the program.

tral Plan would argue that the plan was a necessary condition for a serious discussion on the budget issue. The opponents of the plan thought that a precondition of implementation should have been a transformation of the public sector.

There are at least two reasons why the stabilization should start with the anti-inflationary shock. It is necessary to know how the economy will look like with low inflation to have a good sense of the magnitude of the reform. Also, the recovery of seignorage after the remonetization generates enough revenues while better taxation is designed.

These seem the reasons why Daniel Heymann and Stanley Fischer, in their analysis of the Austral Plan and the Israeli stabilization of 1985, support this timing. The last paragraphs of their respective discussions are:

> Still high inflation and stagnation are more than occasional problems in Argentina. Longer-run changes . . . seem necessary to overcome them. The stabilization program has stimulated a debate within the country that may, hopefully, produce some agreement on such reforms.

> Second, the economy needs major structural reforms. The ending of inflation was a necessary precondition for dealing with the economy's real problem.[4]

However there are also reasons why starting with a structural reform may be preferred. It can help to avoid time consistency problems of the fiscal reform. The increase in seignorage has the disadvantage in that it reduces the incentive to undertake the "deep reform," then the reform may be time inconsistent. It is also possible that after many failed attempts to stop inflation the effectiveness of new short-run programs is diminished. The endogenous accommodation of the economy to high inflation will make stabilization very difficult.

It seems that in Argentina today to reduce inflation it is first necessary to press for a deep reform of the public sector. Short-run attempts have all failed, and it is unlikely that a new one will succeed.

However, before classifying the Austral Plan as a useless program we have to ask: Would it have been possible to implement a deep fiscal reform before the Austral Plan? If Alfonsín's team did not succeed with the high level of support he had when the plan started, it is extremely unlikely that they would have succeeded in bringing public-sector reform without the anti-inflationary shock. If they did not have the incentive and/or the support to carry out that enormous and risky operation at the peak of their popularity, they surely would have not been able to do it without the Austral Plan.

Today there is consensus that fiscal reform is essential, and this is the result of the failure of previous attempts. It seems that disinflation is like "experi-

4. See D. Heymann, "The Austral Plan" (Papers and Proceedings of the *American Economic Review* [1987]: 284–87) and S. Fischer, "The Israeli Stabilization Program" (Ibid., pp. 275–78).

ence goods" in industrial organization: you have to try them to know their quality. You have to try to stabilize to know how difficult it is.

Incomes Policy Support to Stabilization[5]

Fernández also raises the question of whether incomes policies are an important component of a stabilization program. He argues that they were a mistake and elsewhere he shows that they only delayed the "adjustment to the steady state."

In Argentina, only incomes policies have been implemented. It is obvious that they alone are not enough to control inflation. The idea that high inflation comes purely as an indexation phenomenon is generally false. There is always an ultimate macroeconomic imbalance that triggers this process. It is not a surprise to find that incomes policies introduce an additional disequilibrium when the problem is not entirely resolved. Incomes policies are justified only as a complement of a stabilization program that helps to reduce the recessive costs of disinflation. Their failure in Argentina is not a case against incomes policies, but a case in favor of a complete program. Otherwise it should be necessary to question why stabilization programs that included incomes policies have been successful in Israel and Mexico.

Incomes policies are not a panacea, and they involve some risks that are worth mentioning. Relative price distortions are always a problem; however, in high inflation they may be a second-order cost. Their most pervasive effect is in the pricing strategies of firms that are expecting a price freeze. The expectation of price controls may lead to an overreaction in the magnitude of price adjustment; this introduces an additional friction into the price dynamics. New pricing practices will emerge in order to avoid being caught with prices too low when the price freeze occurs. A typical example is the existence of rebates. Firms can have permanently high quoted prices and then adjust them through discounts. Although this pricing mechanism may allow for relative price adjustments during a disinflation, it also jeopardizes the effectiveness of a price freeze since firms will be effectively increasing prices. This may suggest that incomes policies should only focus on the control of few key prices and allow the rest to adjust during the disinflation.

Some Concluding Remarks

The more a stabilization program is delayed the higher are its recessionary costs. The reason for this is that, as inflation remains high, the macroeco-

5. I will not repeat studies on incomes policies instead of focusing on Fernández's remarks. For extensive discussion of the subject, see R. Dornbusch and M. Simonsen, *Inflation Stabilization with Income Policy Support* (New York: Group of Thirty, 1987); E. Helpman and L. Leiderman, "Stabilization in High Inflation Countries: Analytical Foundations and Recent Experience" (*Carnegie Rochester Conference Series on Public Policy* 28 [1988]: 9–84); M. Kiguel and N. Liviatan "Inflationary Rigidities and Orthodox Stabilization Policies" (*World Bank Economic Review* 2 [1988]:273–98).

nomic fragility is increasing. Sophisticated pricing practices and other ways to circumvent price controls emerge. The monetary and financial system also become very unstable, which makes it too costly to raise seignorage.[6]

The fundamental cause of inflation is still the budget deficit. The fact that the government is following an unsustainable policy weakens the contemporaneous correlation between inflation and the budget, which of course can make even more obscure the design of a coherent disinflation program.[7] Fernández discusses other problems, such as the monetarist arithmetic of Sargent and Wallace and the time consistency of public debt. All these considerations reduce the degrees of freedom for sound macroeconomic policy and the economy accumulates significant losses. Unfortunately these may be the costs that trigger the necessary willingness to undertake a serious disinflation effort.

6. See J. De Gregorio, "Welfare Costs of Inflation, Seignorage, and Financial Innovation" (MIT, Cambridge, Mass., Mimeograph, 1990).

7. See A. Drazen and E. Helpman, "Inflationary Consequences of Anticipated Macroeconomic Policies" (*Review of Economic Studies* 57 [1990]: 147–66).