
TOPICAL REVIEW

THE INFLATION CONTROVERSY IN LATIN AMERICA: A SURVEY

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THE QUESTIONS OF WHETHER INFLATION IS HARMFUL OR HELPFUL OR indifferent to economic growth, whether the elimination of inflation should come before or after a high rate of economic growth has been achieved, and the whole issue of what are the roots of the Latin American inflations, have pre-occupied at one time or another almost every economist who has worked in the region. More than any other economic problem, inflation has aroused strong passions in otherwise reflective and technocratically inclined economists, and has compelled many to partake in what almost amounted to an ideological controversy. This experience has, on the one hand, had the effect of forcing economists to reexamine some of the basic value judgments that have been implicit in their analytical work, while, on the other hand, it has often obscured the basic analytical strand that each was following.

For a while, the Latin American inflation argument seemed to have polarized economists into two schools of thought—the so-called “monetarists” and the “structuralists.” And the argument they engaged in has been characterized by a prominent economist to be “. . . not just a technical issue in economic theory. At the heart of the controversy . . . are two different ways of looking at economic development, in fact two completely different attitudes toward the nature of social change, two different sets of value judgments about the purposes of economic activity and the ends of economic policy and two incompatible views on what is politically possible.”¹

What makes the controversy frustrating is that the claims and hypotheses of one side or another can be supported and attacked with empirical evidence. Thus, for example, a number of countries have experienced high rates of inflation and slow rates of economic growth, other countries have experienced high rates of inflation and high rates of economic growth, and there have been

examples of stability combined with high growth rates and stability combined with stagnation. With a yearly average price increase of about 25 percent in the fifties, Argentina experienced an average yearly rate of growth of its Gross Domestic Product of less than 2 percent; Chile in the 1950's with a rate of inflation averaging about 38 percent per year, had a growth rate of its GDP amounting to 3.2 percent; while Brazil, whose rate of inflation in the fifties averaged about 20 percent (the rate increasing to the high twenties by the late fifties), had a growth rate of its GDP averaging close to 6 percent a year (the rate of growth being higher also in the later part of the period, reaching over 7 percent in 1961).

It is impossible at the present stage of our empirical knowledge to resolve the issues in favor of one school of thought or the other. As will be seen later, the nature of the problem is such that it can never be completely resolved. Most of the possibly relevant issues have, however, been brought out in the debate over the last decade. I shall therefore try to summarize the principal arguments of each school of thought. This involves synthesizing the writings of a number of economists, none of whom will probably want to be completely associated with what I shall claim below as representing their thoughts. I hope, however, to acquaint both the non-economist interested in Latin American problems and the economist not working in the area with what seem to me to be the main issues. The bibliography at the end should help some to pursue any particular interest aroused by this summary.

THE MONETARIST CASE

It is the position of the "monetarists" that inflation is prejudicial to economic growth in the long run. Inflation leads to distortions in the allocation of resources. In an inflationary milieu there is a tendency for savings to be put into unproductive investments like real estate or housing or the accumulation of inventories, since these are assets that best protect the saver against price increases. This allocation of investment resources does not increase the productive capacity of the country, and thus hampers the long-run capacity of the country to maximize its economic growth rate. Even if productive investment takes place under inflationary conditions, this investment will tend to be channeled more into projects with a short gestation period. Other projects will be avoided, since under inflationary conditions (when there is uncertainty about the rise in prices from one year to the next; in most inflations the rate varies from month to month and year to year) it is hard to predict changes in the costs of inputs and thus it is difficult to make long-term investment plans. The emphasis on short-gestation investment projects will also tend to introduce a distortion or imbalance in the development of the industrial structure of the economy.

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Inflation also causes difficulties in the balance of payments. Since Latin American countries generally operate under a system of fixed exchange rates (these are adjusted only periodically, and political pressures often make devaluation difficult even when recognized as economically necessary), inflation encourages imports and discourages exports. Given a fixed exchange rate, rising internal prices will make imported goods more attractive, while rising costs will tend to discourage exports. As the balance of payments of the country worsens, there will be speculation against the currency in the expectation of a devaluation, thereby increasing the pressures on the balance of payments.

Although continuing inflation will sooner or later force the country to devalue, devaluations will not necessarily come in quick successions; in order to protect its international position the country will resort to direct exchange and/or import controls. Such a situation will discourage foreign investments, since foreign capital will be hesitant to invest in a country whose inflationary and balance of payments difficulties threaten to block the repatriation of their earnings.

In most Latin American countries undergoing inflationary pressures, severe price distortions will appear, leading to further maldistribution of resources and creating bottlenecks that can hamper the growth of the economy. In most major countries of Latin America (e.g., Argentina, Brazil and Chile), the government controls the prices of public utilities (both privately- and publicly-owned) and sets maximum prices on basic foodstuffs. Since inflations are never politically popular, the government will be hesitant to raise the rates of the controlled price sector. Raising the rates on railroads, buses, electricity, telephones, milk, meat, etc. exposes the government to public criticism much more than producing a budget deficit. Usually utility rates and controlled food prices will be allowed to rise with a substantial time lag and the increases are often substantially below the rise of the general price level. Because costs are rising faster than their prices, private utilities will not expand and/or modernize their services, many of which will soon begin to experience breakdowns. Most travelers to Latin America will be familiar with the backward telephone system in the major cities, the many breakdowns in public services such as electricity, transportation, etc. (Of course, in most of the major Latin American countries, expansion of power has taken place through substantial amounts of public investments.)

In many Latin American countries control of basic food prices in the midst of inflation has caused perennial shortages. The experience is generally the following: the price of milk is controlled; the general price level is rising; milk prices are not allowed to rise. After a while the producers and/or distributors of milk will assume that the price of milk will have to be raised soon. As a speculative move, they will hoard their milk supply (in the case of milk

the "hoarding" might consist of increased cheese or butter production which can be better hoarded), and severe shortages will occur in the cities. Social tensions will rise to the point where the government will either have to interfere directly to get milk to the market (which, in the long run might discourage the production of milk altogether) or they will have to raise the price. Generally, the latter will happen. But the perennial shortages causing social tensions and possibly discouraging investment in the modernization of milk production will not prove beneficial for the smooth development of the economy and the society.

In the publicly-owned utility sector, a refusal to raise prices in an inflationary situation will produce large deficits of public companies. For example, this can be found in the public transportation systems of Argentina, Brazil, and Chile. The government will cover the deficit of these companies. These deficit covering expenditures will then contribute to the general government budget deficit and further feed the inflation.²

In some countries price controls extend to financial markets. That is, one will find a legal maximum on interest rates. In Brazil, for example, the maximum interest rate a bank can charge is 12 percent. Since in most inflationary countries the yearly inflation rate is substantially above the maximum legal interest, the real rate of interest will be negative (this is so even if one takes into account that banks will circumvent the maximum interest charge permissible through various types of service charges). The net result will usually be a general scramble for the "free money," personal connections rather than rigorous economic criteria will determine who gets the loans, investment decisions of firms based on strict calculations of the best returns on alternative projects or alternative production techniques will disappear; in short, interest rates as a guide to the efficient allocation of investment funds will disappear, and this will have a prejudicial effect on the growth of the economy.

Another source of inefficiency occurs through the appearance of illusory profits.³ In the accounting of a firm, part of the receipts are put aside in a depreciation fund, i.e., a fund that will ultimately be used to replace machinery. In most Latin American countries firms calculate depreciation on the basis of the original (historical) cost of the machine, i.e., its costs in local currency when it was purchased (in some countries the laws force firms to do this). In an inflationary economy the new machine will cost substantially more than the original machine in local currency (even when discounting the possible improvements in the new machine), and the depreciation fund based on historical cost will not accumulate enough money to replace the machine. In other words, firms should be charging much more to the depreciation fund; they should be charging an amount geared to actual replacement costs. If this is not done, the total profits of firms will appear much larger than they really are. If these

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profits are paid out as dividends, the firm will "decapitalize" itself, i.e., it will not accumulate enough funds to replace its equipment. The failure to recognize these "illusory profits," which is common even in countries with long historical experiences in inflation, can lead to severe difficulties. It can cause investments to decline and also a decline in the efficient functioning of the existing productive capacity that can prejudice growth in the long run.

MONETARIST POLICIES

Given all these distortions and balance of payments difficulties resulting from the inflationary process, the monetarist considers it a *sine qua non* for economic development that the economy be rid of inflation and all the concomitant distortions. Since he sees the root of inflation as an overabundant creation of money supply through substantial government deficits and easy credit policies, he will recommend stringent anti-inflationary policies via the curtailment of government expenditures and/or increased collection of taxes to eliminate deficits; the severe tightening up of credit; the elimination of inflationary subsidies; the control of wage increases, which is a necessary complement to control of credit increases; and the elimination of subsidized exchange rates, if there existed a system of multiple exchange rates. The rationale for a control of wage increases (real wages falling because wage increases continue to lag behind price increases) is twofold. On the supply side, it is argued that with credit controls, declines in real wages will increase the profit rate of the capitalist, who needs increased profits to replace credit, now in short supply, as a source of short-term working capital and as a source of long-term expansion. On the demand side, wage restraint will lower the excess demand, which is the basic cause of inflation. Of course, a lower wage level, by decreasing aggregate demand, might discourage the capitalist's use of retained earnings for investment activities, thereby causing a slowdown in economic growth.

The monetarist admits that these policies might have a dampening effect on the rate of economic growth. But once the economy is rid of its distortions, once the price level is stable, once the balance of payments is put in order thereby making it unnecessary to continue foreign exchange controls, both domestic and foreign capital will resume their investment activities and once more a healthy growth rate without distortions will be attained. The stagnation accompanying stabilization policies is considered a short-run sacrifice that the country must make to "clean up" its economy.

THE STRUCTURALIST POSITION⁴

The structuralist states that the problem of inflation in Latin America should be viewed against the broad sweep of socioeconomic developments in the region. In the last three decades Latin American societies have undergone

substantial degrees of urbanization and industrialization. These trends have resulted in socioeconomic pressures and frictions that manifest themselves in part through inflation.

The friction that initially received most attention by the structuralist school was the inelasticity of the agricultural supply for domestic consumption. With a high rate of growth of the urban population, demand for food by the urban centers has risen substantially. The rise in the demand for food will provoke a rise in the relative price of domestically consumed food products. Unlike what one would expect in a market-responsive economy, the rise of the relative price of food products will not provoke a strong response in the food producing sector; in some countries there might be a slight rise and in others none at all, as a result of the more favorable relative prices. The reason for this small response is the socioeconomic structure prevailing in many Latin American countryside. The latter are dominated by either large non-capitalistic latifundios, which are not interested in profit maximization, or by minifundios which barely eke out a living and are scarcely integrated into the larger market economy. It should be noted that as long as most of the countries were predominantly rural economies, as long as the vast majority of the population lived in the agricultural sector, the problem of food supply did not arise because the bulk of the rural population was self-sufficient in food products. In the cities, however, the new proletariat is completely dependent on marketed food products, and the demand pressure for food is considerable.

With the lack of a supply response from the agricultural sector, the food shortages of the cities will continue and even worsen. The cost of living of the workers (a large proportion of the city workers' budget is made up of food products; in Brazil it amounts to about 45 percent) in the cities will rise, the subsistence wage will rise, and the cost of production to industries will increase, because in many industries in Latin America wages constitute a large item of total costs (especially in the lighter industries, such as textiles, food products, etc.). The rise in industries' cost of production will result in a rise in the price of domestically manufactured products. Local manufacturers usually have no trouble in passing on increased costs to consumers since they usually have monopolistic powers, i.e., each industry, having a small market, is usually dominated by only a handful of firms. Thus agricultural inelasticity will bring on a continual upward spiral of wages and prices.⁵

Some countries, like Brazil, do not fit into the strict agricultural inelastic pattern as outlined by the initial structuralists. The rate of growth of output of foodstuffs in these countries has kept pace more or less satisfactorily with the rate of growth of the population. Structuralists will argue that this is due to the agricultural frontier possessed by large countries. Even though output in the traditional food producing areas does not rise, increased demand will

stimulate production in the frontier region. But this, argue the structuralists, will also have an inflationary impact. Considering the large migration of the population to the cities, the producing areas are farther and farther away from the consuming areas. With poor transportation facilities, antiquated food distribution systems, the cost of food will rise and the net results will be the same as those in countries (like Chile) that were taken as the original models for the theory.

Agricultural inelasticity is complemented by what has been called import inelasticity. Many Latin American countries have suffered from acute balance of payments difficulties due to the slow growth of their traditional exports (accompanied in certain cases by a decline in the terms of trade, i.e., the ratio of export to import prices) in the face of an accelerated growth of their imports.⁶ The world market for many traditional Latin American exports has expanded at a very slow pace due to a low income elasticity of demand for such products in advanced countries, partially due to the introduction of synthetic substitutes, and also due to the preferences that some African and Asian countries have obtained in the European market. The urbanization-industrialization process, however, raises considerably the import requirements of most Latin American countries. The net result is a deficit in the current account of the balance of payments, which is not financed by autonomous capital inflows. The latter have been very small in the post-World War II period.

The tendency for continued balance of payments difficulties exhausts foreign exchange reserves, and sooner or later these countries will have to resort to direct import controls—quantitative import restrictions and/or foreign exchange restrictions.⁷ Control of imports, implying the cutting down of imports to the size of export receipts, will create shortages of many formerly imported goods. The relative domestic price of these goods will rise and thus contribute to the inflationary forces. Of course, balance of payments difficulties will sooner or later force countries to devalue their currencies; this will also have the effect of an immediate upward push on the price level, especially if imports consist of many consumer goods, including basic foodstuffs, which the agriculturally inelastic country might be forced to import.

The rise of the relative prices of imported goods due to their shortage has in many countries been part of the stimulus toward the import-substitution of these goods, i.e., the domestic production of formerly imported goods. Import substitution has two initial inflationary effects. The cost of local production is high due to limited markets that prevent firms from benefiting from economies of scale, and due to the fact that the efficiency of newly created industry is of necessity low in the early stages of production. The creation of import substitution industries also implies a period of investment in new firms during which labor and capital are employed to create new productive capacity.

For a while, however, the investment activity generates income without producing marketable goods. Here again, we have an inflationary force, but it is self-correcting: once the gestation period of the investment is over, new goods will appear on the market.

A third line of argument explaining the Latin American inflationary phenomenon is closely related to the initial structuralist considerations, though it has not received as extensive a treatment in the literature as the agricultural inelasticity phenomenon. The high rate of urbanization and industrialization in most Latin American countries has substantially increased the sphere of necessary government activities. An urban-industrial society needs substantially more infrastructure investment than a predominantly rural one. There are increased needs for better roads, port facilities, power projects, schools, health services, to complement the growing urban-industrial sector. Substantial lags in the construction of these services could severely prejudice the growth of the new industrial sector. High urbanization rates also require more government attention to the construction of low income housing, urban transportation, etc. In other words, the investment responsibilities of the government in the short run increase at a rapid pace. Lack of government investment in these infrastructure facilities can severely increase social tensions in the cities and hamper the smooth growth of industry.

How should the government finance these investment activities? Although it might be feasible in the short run to overhaul tax laws in order to increase government revenues to finance investment projects, most Latin American societies are saddled with antiquated, inefficient and sometimes corrupt tax collecting bureaucracies. The habits of the latter do not change rapidly and the possibilities of effective administrative reforms at an early date are limited. Thus many governments have difficulties in finding adequate finance for the necessary projects and face a dilemma. In the short run investment needs in infrastructure are necessary to produce adequate economic growth, but the overhaul of the tax collecting bureaucracy is a longer-run proposition.⁸ Given this dilemma, many Latin American governments have gone ahead with their investment projects, financing them through deficits.⁹ The inflation due to this phenomenon can be considered one type of taxation. That is, through deficit financing, the government attracts factors of production (labor and capital) to government projects from other sectors. The degree to which prices rise faster than wages due to this deficit and lower the real income of salaried people¹⁰ has been called forced savings. If we consider saving as that part of the real national product that is not consumed (in a full employment situation), inflation leads to increased savings by causing the country to consume less, save more and therefore invest more.¹¹

STRUCTURALIST POLICIES

Structuralists vehemently oppose the policy prescriptions of the monetarists. The elimination of the deficit recommended by the monetarists can be achieved either by increasing tax revenues or by cutting government expenditures. Since the former is usually more difficult in the short run, the latter policy will prevail. Government will curtail its investment expenditures.¹² This will not only have a dampening effect on urban-industrial growth to the extent that government investment activities have a powerful effect on the economy, but it will also interfere with private industrial growth, since a lag of infrastructure investment behind private industrial investment creates bottlenecks that can substantially slow the general growth rate. Credit restrictions will harm the growth of the private industrial sector. Thus the monetarist policies affect mainly the most dynamic sector of a Latin American economy, industry, and cause general economic stagnation.

The structuralists argue that the monetarist policies will produce industrial stagnation, which might possibly cure the symptoms of the economic malady, i.e., the rise of the general price level, without getting at the roots of the problem. The latter implies a structural change of agriculture, making it more productive and responsive to the price mechanism.¹³ Monetarist stabilization programs do not deal with this problem. Another structural change required is a diversification of the commodity structure of exports and the continuation of import substitution, thereby dealing with the import inelasticity root of the inflation. Monetarist programs would halt import substitution industrialization, and credit restrictions would not help to diversify exports. It is also said that a slowdown of industrial production due to a stabilization program raises the per unit fixed costs of firms (overhead costs are spread among fewer units of goods produced) and that the industries with their monopolistic powers might raise prices and thus produce an automatic counter-stabilization force. Finally, monetarist policies would halt the process of forced savings, which financed many necessary infrastructure projects, and produce long-run inflationary bottlenecks.

To the monetarist argument that stability would attract domestic and foreign capital to invest in sound and profitable activities, the structuralist answers that if a monetarist stabilization program produces stagnation and hence excess capacity, one can hardly expect foreign capital to want to create new capacity where excess capacity already exists. Also, the social tensions created by a stabilization program would hardly convince the investors of the long-run political stability of an economic stabilization program; the monetarist replies that the social tensions created by an inflation are worse than those created by a stabilization program.

Monetarists claim that inflation causes balance of payments difficulties, while structuralists claim that balance of payments difficulties cause inflation. Structuralists sometimes claim that Latin American inflations are not the cause of balance of payments difficulties. The export of products such as coffee, cotton, cocoa, have their prices determined either in the international market through the forces of demand and supply, or through international agreements, e.g., the International Coffee Agreement. Thus, no matter what happens internally to the price level, the international price (say, dollar price) is a given. The monetarist will grant this, but will reply that, given fixed exchange rates, increased domestic prices and fixed prices for export products will squeeze the exporters' profits and they will tend to turn from producing an export crop to producing for the domestic market, where prices are flexible in the upward direction. Whether or not this happens is a matter of fact. For a number of reasons (especially due to the support programs) this has not happened in most Latin American countries. Again, the structuralist will emphasize that the foreign problem is due to the small growth of markets for traditional exports rather than due to the fact that Latin American countries are pricing themselves out of the market.

EMPIRICAL VERIFICATIONS

In the last few years some attempts have been made to test empirically many of the economic relationships assumed by one side or another in the debate. I shall just mention the results of a few of these efforts in order to give the reader a flavor of the type of verification work that can be done and also to give an idea of the extent to which these efforts can clarify issues.

Harberger's efforts concentrated on examining the effects of wage increases and the expansion of the money supply on changes in Chile's price level, employing the technique of regression analysis.¹⁴ One of his principal conclusions was that ". . . when monetary variables and wage variables compete to explain the variations in the rate of inflation in Chile, wage changes end up explaining a substantially lower fraction of these variations than do the money supply changes, and in many cases wage changes do not appear to have any significant explanatory power at all."¹⁵ He also found that there was a lag in the adjustment of the price level to variations in the money supply. ". . . For the wholesale and consumer prices, and for most of their main components, we can expect that changes in the money supply between a year ago and six months ago will have a significant influence on price changes in the quarter to come. In the case of house rents, the lags are even longer. This year's change in money supply, and the change in money supply during the year before last, both have a substantial influence on the movements of rents this year." He also

found that changes in the rate of inflation in the past years have an influence on the rate of inflation in the present year, either upward or downward.

The difficulty with Harberger's analysis is that he uses only some of the possible variables that can cause inflation. The inflationary process may be due to the operation of a number of variables affecting each other in a circular way. When there is a steady ongoing inflation, there may also be substantial collinearity between the explanatory variables. Finally, money supply increases might simply be a symptom of a number of institutional difficulties which are not explained by this approach. The conclusion drawn that money is a powerful independent variable affecting the price level and should be restricted would not necessarily strike at the root of the problem. Nevertheless, a knowledge of the degree to which changes in the money supply affect the price level and with what lags is important even for the policy maker looking for deeper structural causes of the problem. Harberger's pioneering efforts are one of the many steps that can be taken in the right direction.

A similar, more elaborate, empirical investigation was recently undertaken by a group of Brazilian economists.¹⁶ Taking as independent variables changes in the money supply, changes in the local currency cost of imports, and changes in the minimum wage rate, their regression analysis tests led them to the conclusion that increases in the money supply are by far the most important explanatory variable, while the influence of the other variables was substantially smaller.¹⁷ The growth of the money supply was linked to the deficits of the federal government's budget. They undertook a fairly elaborate analysis of the government budget and found that a large part of the deficit was due to the inefficiency of the factors of production employed by government. Increases in the efficiency of government-run firms, e.g., railroads, reduction of unproductive civil servants, etc., could substantially reduce the government deficit and thus reduce the increases of the money supply.

This analysis leads us right back to the institutional problem discussed above. Given an antiquated institutional framework, given a backward tax collection system, and given the need for new government infrastructure investment, should the government postpone the latter until the antiquated part of the government machinery has been modernized? Or, for the sake of development, should government expenditures take place even before the unproductive government sector has been modernized, thus causing increases in the money supply and hence rises in the price level?

The most interesting attempt at empirical verification to date is a study by Matthew Edel.¹⁸ He undertook to verify the agricultural inelasticity hypothesis of the structuralist school. For example, Edel made an estimate of the required rates of growth of food production in various Latin American countries in

order to keep the relative price of food constant, using alternative assumptions about the income elasticity of demand in each country. He then compared the required rates with the actual rates of growth of food production in the period 1952–62. His results show that the rate of food output in Mexico, Brazil, and Venezuela was greater than the required rate. In the case of Argentina, Chile, Colombia, Peru, and Uruguay, output increased at a rate lower than even the lower of the alternative estimates of the required growth rates. Edel also showed that in countries where there was a definite lag in food production, this was not due to price disincentives; many countries with inadequate growth rates of food production had increasing relative food prices.¹⁹

Edel also shows evidence that in Mexico, Colombia, and Brazil many parts of the agricultural sectors are responsive to the price mechanism, i.e., the production of different types of crops in certain regions of these countries is highly responsive to relative price changes.²⁰ In Chile and Peru, however, he found that the response to price incentives in most crops is rather small. He also found that certain countries with lagging food production avoided strong inflationary pressures by importing foodstuffs, if they had an adequate foreign exchange. In others, where there were both food shortages and shortages of foreign exchange, this was undoubtedly one of the principal causes of inflationary pressures.

The Edel study, on the whole, shows, with appropriate qualifications, that in a number of Latin American countries the structuralist agricultural thesis can get some solid empirical support. It also shows that the thesis as such does not hold for all Latin American countries.

In my own work on Brazil,²¹ I have been interested in finding an explanation for the high rate of economic growth in the period 1947–61, which took place in an inflationary milieu. Evidence in the Brazilian case shows that inflation acted partially as a mechanism to redistribute income from the consuming sector (mainly wage and salary earners) to the business sector and government. Like the Brazilian economists mentioned above, I found that not all of the inflationary pressures in Brazil were productive in the sense of acting as a mechanism of forced savings. It is also possible that the “productive” part of the Brazilian inflation cannot be repeated again. The fast rate of growth of Brazil’s urban centers in the fifties (5.4 percent per year) meant that a large part of the urban population was new to a money economy and rather unsophisticated in detecting a relationship between their income and changes in the price level. A greater degree of sophistication and organization on the part of this urban proletariat, and possibly an effective expansion of the wage legislation to rural workers, might make it more difficult in the future to achieve growth through an inflationary redistribution of income, and inflation might continue to be a simple unproductive spiral.

The high rate of growth of the Brazilian economy under inflationary conditions has led me to investigate the claims of the monetarists that inflation leads to stagnation due to distortion in the allocation of resources. I found that in Brazil unproductive investment in the sense of an out-of-proportional increase in inventory, investment in land or housing, and in short-gestation period investments did not occur. Brazil's industrial growth was amazingly balanced—both heavy and light industries and the complementary infrastructure were developed—and foreign capital did not hesitate to enter the country. The explanation is that various institutional factors prevented the occurrence of the expected distortions. Rent controls discouraged overbuilding in housing; special incentives and credits by the government development bank encouraged long-gestation investment by government and private firms, e.g., steel, automobiles, heavy machinery; credit for inventory speculation, on the other hand, was not plentiful. Generally, the opportunities of a protected and fast expanding market were more appealing in a country the size of Brazil than the placing of money in land as a hedge against inflation. It is true that distortions did appear—price distortions that prevented the growth of private infrastructure, or caused artificial food shortages. These distortions, however, did not hamper the basic growth process.²²

Brazil's stagnation since 1962 (the growth of the real Gross Domestic Product fell from 7.3 percent in 1961 to 5.4 percent in 1962, 1.6 percent in 1963, 3.1 percent in 1964, and 4.7 percent in 1965—and even in 1965 the growth rate was due to a bumper crop in the agricultural sector, especially coffee, while industrial output fell by 5 percent) has led to speculation about its cause. Some say that it was the inevitable price of years of inflation, while others claim that the political agitation characterizing the period 1962–64 was the main cause of the drop in growth and the explosion of the inflation from rates ranging around 15 to 20 percent to rates around 80 percent. The stagnation since the new regime took over in 1964 is blamed by some on the stabilization program and by others on the excesses of the previous government. It is certain that neither side of the argument will be able to convince the other or the uninvolved outsider, even with more data available to prove a number of different hypotheses. Of course, there will always be enough data available to show that the increase in the money supply had an effect on the price level.²³

STABILIZATION PROGRAMS

Much heat has been generated over methods to combat inflation. The experience of the stabilization efforts in Chile in the mid-fifties, in Argentina in the late fifties, and in Brazil in the period 1964–66, has left enough evidence for arguments on both sides.

In the Chilean case the anti-inflationary program in the mid-fifties brought

the rate of inflation down from 70 percent in 1954 to about 40 percent in 1956. The anti-inflationary measures consisted of a partial wage-freeze, credit restrictions, exchange rate consolidation, tax increases, and various types of budgetary cuts. In fact, there was a curtailment of wage increases, a slow-down on the rate of increase of the money supply, a decrease in the budget deficit. As a consequence of the program the per capita Gross Domestic Income declined by 8 percent in 1956, and even by 1960 it had not recovered from that decline. Unemployment grew throughout the late fifties. The planners of the stabilization program expected some decline in income, but poor harvests in 1956–57 worsened the decline. In the period from mid-1956 to mid-1957 food prices increased faster than the other price indicators. In 1958 food imports rose substantially; the exchange position of Chile worsened. Rioting in April 1958 led to the abandonment of both fiscal and monetary restraints. Another attempt at stabilization in 1959 in a similar vein was again hurt by bad harvests and the 1960 earthquake.²⁴

The Argentine stabilization attempt of the late fifties started in December 1958, after some visits and negotiations of representatives of the International Monetary Fund with the Frondizi government. The latter removed all quantitative foreign trade controls, the peso was allowed to fluctuate freely within limits, credit was severely restricted, mortgage loans were curtailed, internal price controls and subsidy prices were eliminated in order to do away with the deficits of the state-owned enterprises, attempts were made to reduce government expenditures by rationalizing government bureaucracies and enterprises, wages were kept from expanding at the same rate as food prices and the exchange rate (and did not catch up until the end of 1961), and reserves were increased by IMF loans and by the attraction of foreign capital, especially for the expansion of the petroleum industry.

The rate of inflation in Argentina declined, and there was a decline in the Gross Domestic Product of 5 percent in 1959. There was a recovery of GDP in 1960 and expansion in 1961, but in 1962–63 the economy again experienced severe stagnation. In 1961 wages were already catching up with price increases, domestic consumption of beef increased more rapidly than exports. Food production did not rise fast enough to take care of both increased domestic demand and increased exports (i.e., beef production). The decline in livestock export prices in 1962 worsened the situation. Internal food prices rose, labor dissatisfaction expressed in a large Peronist vote in local elections resulted in the overthrow of the Frondizi government. The stabilization program was abandoned and in 1963 money supply was allowed to increase rapidly. The stabilizers claimed their program was wrecked mainly by the poor showing of food production.²⁵

The Brazilian stabilization program of 1964–66 also consisted of severe

credit restrictions, efforts to eliminate price distortions, a containment of the rate of wage increases, and a curtailment of government expenditures. The stagnation which had already started in the previous administration continued. It is interesting to note that though the Brazilian government has succeeded partially in eliminating the inflationary influence of subsidizing public utilities, (e.g., railroads, whose rates have risen and some of whose unnecessary operations have been cut), its curtailment of expenditures to date has been more successful in the government investment programs than in effectively modernizing the machinery of government to decrease the government's current expenditures. Despite the fact that the present regime is strong and authoritarian, it is in the short run experiencing difficulties in accomplishing the necessary institutional changes to permit continued growth without inflation. So far, it has opted for a lower rate of growth prior to overcoming the institutional barriers it faces.²⁶

All parties would agree that stabilization programs will have certain negative effects on the rate of growth of the economy.²⁷ The very fact that there is a "reversal of expectations" (e.g., producers who have been used to rising prices will tend to decrease their orders when they no longer have expectations of higher prices) will have an initial slowdown effect in economic activities. The pro-stabilization forces argue, for example, that "... one of the effects of inflation is the encouragement of industries which would be uneconomic in a non-inflationary world. Stabilization may bring a quick cutoff in the development of these industries, leading to a decline in the demand for investment resources. While a stable environment will make alternative industries appear to be profitable fields for investment, it takes some time for entrepreneurs to convert their investment desires into consumption of resources . . ." ²⁸ The critic of stabilization argues that "... these policies can only succeed if the economy can be held in a semi-paralyzed state. But this state obviously cannot be maintained for a long time."²⁹ The basic trouble is that nothing can be proved conclusively. The fact that stabilization programs have produced stagnation is certain. The fact that stagnation is a bitter medicine to swallow in countries with low per capita incomes and high population growth rates is also certain. It is not certain, however, that stabilization programs would ultimately have produced the ideal of high growth in a stable financial environment. The Chilean and Argentinian stabilizations were not allowed to continue. Thus the pro-stabilization forces will claim that their programs were never given a chance, that all sorts of extenuating circumstances impeded them, while the other side will claim that the stagnation already experienced was bad enough and could not have been allowed to go on.

The Brazilian program, however, is continuing. So far the rate of inflation has been brought down, but at this writing (1966) the economy has yet to

pull itself out of its prolonged stagnation. The Brazilian stabilizers have encountered some curious problems in their 1964–66 experience, which ought to give many economists interesting opportunities for analysis. The Brazilian policy makers hoped to bring the inflation rate down from 80 percent in 1964 to ten percent in 1966 (or, at least, some say now, to a yearly rate of ten percent by the end of 1966). The rate of inflation fell, however, to only 45 percent in 1965 and at this writing it looks as if the rate in 1966 will again attain 45 percent. This has occurred in spite of the measures taken by the Brazilian authorities. Economists in Brazil explained the initial continuance of the inflationary process under a stabilization program on the grounds that an economy must undergo necessary "corrective inflation." That is, all the price distortions which developed during a long inflationary period have to be corrected. (I mentioned above the lagging utility rates. The impact of curtailing subsidized exchange rates for favored imports is also a factor.) This correction process will result in a continuing push on the price level even after the stabilization program has begun.

What is curious about the Brazilian case is the continuing inflationary pressures even after the corrective inflationary phase was passed (say, the second half of 1965). Ironically, it seems that the stagnation of growth and investment brought about by the stabilization program has created some inflationary forces. In Brazil the fall of investments and the generally slow rate of growth of industrial production have caused a substantial decline in imports.³⁰ The fall of imports, combined with slightly growing export receipts, due mainly to better export prices in 1965, resulted in substantial balance of payments surpluses. The latter, in turn, have been responsible for the creation of an additional increase in the supply of money, thus becoming a new inflationary force. During 1965 the balance of payments surplus was accentuated by an attempt of the Brazilian government to recreate a bond market by selling bonds that are readjustable to changing price levels and exchange rates. It was discovered that foreigners buying these bonds could get returns on their dollar investment equaling 25 percent in dollars in one year because of special conversion rates allowed on the bonds. The result was a vast influx of unwanted dollars (since Brazil, due to the trade surplus mentioned above had already accumulated large foreign exchange reserves). It remains to be tested, however, once all the data are available, why an increase in the money supply in an economy working below capacity³¹ should have such strong inflationary results.³²

FINAL REMARKS

If the above survey seems inconclusive, it was meant to be so. The debate between the monetarists and structuralists was useful for a time in pinpointing certain issues: the dangers of continued and unchecked inflation vs. the dangers

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of not understanding the roots of inflation and thus fighting the symptoms instead of the causes.³³ Hirschman has even claimed that inflation was used as a way to call attention to certain traditional grievances against the Latin American socioeconomic system. He claims that “. . . the structuralist position is really an attempt to get some external economies out of the problems of inflation, to utilize it for the purpose of bringing some new pressure and of rallying some new forces for the purposes of solving others . . .”, i.e., the problem of socioeconomic reforms necessary to better the life of the submerged masses.³⁴ It seems, however, that further debate without some hard empirical-analytical work will not advance our knowledge. The empirical work will probably show that many of the contentions of the monetarists concerning the inevitable evils of inflation are not necessarily going to occur; while the claims of the structuralists will also have to be qualified by the more complex reality. The structuralists might discover that the latifundio image of agriculture for all of Latin America is not the complete reality, and that ideologically conceived agrarian and other reforms might thus not solve the basic problems. The monetarists might discover that their greatest fear of a runaway inflation—à la Germany 1923—will not necessarily occur in societies where the purchasing power of money was never stable, where money was never considered to be a store of value, but only a means of exchange.

NOTES

1. Dudley Seers, “Inflation and Growth: The Heart of the Controversy,” in Werner Baer, and Isaac Kerstenetzky (eds.), *Inflation and Growth in Latin America*, Homewood, Illinois: Richard D. Irwin, Inc., 1954, 89.
2. For the Brazilian case see: W. Baer, Isaac Kerstenetzky, and Mario H. Simonsen, “Transportation and Inflation: A Study of Irrational Policy-Making in Brazil,” *Economic Development and Cultural Change*, January 1965; for the Chilean case see: Robert T. Brown, “The Railroad Decision in Chile,” in Gary Fromm (ed.), *Transport Investment and Economic Development*, Washington, D.C.: The Brookings Institution, 1965; also, Robert T. Brown, Comments in Baer and Kerstenetzky, *op. cit.*, 440–443.
3. W. Baer, and Mario H. Simonsen, “Profit Illusion and Policy-Making in an Inflationary Economy,” *Oxford Economic Papers*, July 1965.
4. I would like to stress again that this is a synthesis of a number of different approaches which resemble each other only to the extent that the stress is on the institutional causes of the rise in the money supply. The original “structuralist” writings were not as all-inclusive as this presentation, emphasizing principally the agricultural and foreign trade inelasticities.
5. In addition, the rising urban cost of living will bring pressures on the government by the usually immense government bureaucracies for wage increases, and these pressures are hard to resist.
6. There exists a long-standing debate on the trade position of Latin American countries. A flavor of this debate can be obtained by consulting: *The Economic Development of Latin*

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America and its Principal Problems, Economic Commission for Latin America, Lake Success, New York: United Nations, Department of Economic Affairs, 1950; D. Seers, "A Model of Comparative Rates of Growth in the World Economy," *Economic Journal*, March 1962; W. Baer, "The Economics of Prebisch and ECLA," *Economic Development and Cultural Change*, January 1962; M. J. Flanders, "Prebisch on Protectionism, An Evaluation," *Economic Journal*, June 1964; Margaret G. DeVries, "Trade and Exchange Policy and Economic Development: Two Decades of Evolving Views," *Oxford Economic Papers*, March 1966.

7. In a number of countries the agricultural inelasticity has been overcome by importing substantial amounts of food supplies. Those countries having export difficulties will thus face balance of payments problems even sooner. Those exporting goods which face growing world markets, like Peru, can import foodstuffs for long periods of time, thus avoiding inflationary pressures.
8. It is true that most Latin American governments have swollen bureaucracies, spend money financing unnecessary deficits of public companies, etc., and thus could trim those expenditures and switch resources released to more necessary investment expenditures. Again, there are many sociopolitical obstacles which make this difficult in the short-run.
9. Arnold C. Harberger has shown that budget deficits in Latin American countries, where the money supply amounts to a much smaller fraction of the national income than in the U.S. or Europe, have a much greater inflationary potential than in more developed economies; see his article "Some Notes on Inflation," in Baer and Kerstenetzky, *op. cit.*, 323–324.
10. This does not necessarily imply a decline in the standard of living of salaried people. In a growing economy it might simply mean that their share of the increment in income will be smaller than their share in the income in the initial period considered. Thus, their standard of living might even rise, but at a slower rate than the growth of the national product.
11. An interesting contribution was recently made by Nicholas Georgescu-Roegen. Although his arguments are original, they can be considered to fall more within the structuralist tradition. Georgescu maintains that the initial industrial structure that was built up in many Latin American countries consisted of industries producing goods for upper-class consumption. Recent efforts in some countries to redistribute incomes via social reforms resulted in a change of the structure of demand. The tendency of the lower income groups is to demand goods of different types of industries than the ones that were established initially. The inherited industrial structure is not flexible enough to adapt itself to new demand. Thus new industries have to be built, but old industries are threatened to have huge amounts of idle capacity. This cannot be allowed to occur. The distribution of income has to be redistributed again in favor of those groups that consume the goods of the old industrial structure. This redistribution can occur via inflation. Georgescu concludes that ". . . no country can get out of a structural inflation-lock by purely monetary wizardry. The operation requires a prolonged and well-planned action upon the real—as opposed to the monetary—elements of the problem." See Georgescu-Roegen, "Structural Inflation-Lock and Economic Development," written and mimeographed in 1966; to be published in late 1967 by the *Revista Brasileira de Economia* and to appear in English in the *Proceedings of the Cordoba Second International Congress of Economics*.
12. A good example is the Brazilian stabilization program of 1964–66. Most of the expenditure declines have been due to curtailment of government investment expenditures. Even with a strong government, Brazil has found it difficult in the short run to get rid of needless pub-

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lic servants or modernize the administrative structure of government agencies and corporations.

13. Structural changes in agriculture mean different things to different types of structuralists. Some advocate outright expropriation of large landowners and dividing the land among the peasants; others, aware of the danger of breaking up large units into unproductive small units, advocate the creation of large cooperatives. Others feel that land reform should be administered through a tax program, which would enable capitalistic and productive landowners who pay decent wages to their workers to continue, while the feudal type of landlord would be forced through steep taxes either to increase productivity or to sell out.
14. Harberger's empirical findings were published in a volume of collected essays: see Carl F. Christ, *et al.*, *Measurement in Economics: Studies in Mathematical Economics and Econometrics*, Stanford, California: Stanford University Press, 1963, ch. 9, "The Dynamics of Inflation in Chile," by Arnold C. Harberger, 219–252; Harberger discusses his findings at length in his essay "Some Notes on Inflation," in Baer and Kerstenetzky, *op. cit.*, 319–551.
15. This and the following quotes are taken from Harberger's "Some Notes on Inflation," Baer and Kerstenetzky, *op. cit.*, 332–333.
16. Antonio Delfim Netto, Affonso C. Pastore, Pedro Cipollari, and Eduardo P. De Carvalho, *Alguns Aspectos da Inflação Brasileira*, São Paulo: Associação Nacional de Programação Econômica-Social, Estudos ANPES 1, 1965.
17. The authors worked with two regressions. One was based on data from the late forties to the early sixties, taking as independent variables only the money supply and the cost of imports; another includes minimum wages, but only runs from 1959 to 1964.
18. Matthew D. Edel, "The Adequacy of Food Production for Economic Development in Latin America," unpublished M.A. Dissertation, Columbia University, 1965.
19. The Argentine and Uruguayan cases are different. Here ". . . the composition and amount of agricultural production seem to be conditioned by a pattern of shifting land use between livestock and cereals, in response to shifting price ratios between them. These ratios were constantly changing due either to changes in world market prices, or to the differential exchange rates instituted in response to these external changes and later abandoned. An increase in the wheat price would lead to an increase in its production the following year, but a shift in favor of meat might cause an immediate drop in production as land is taken out of cereals and put into pasture, while fewer animals are brought to market at first, as farmers try to build up their herds. This system must be charged with overelasticity, not inelasticity, in that it would seem to incur too-high costs through constant changes in land use." Edel, *op.cit.*, 58; Argentina was also recovering from long periods when relative prices were set against the agricultural sector.
20. A recent study has shown that in many parts of South-central Brazil agriculture seems highly responsive to relative price changes; see Antonio Delfim Netto, Affonso C. Pastore, and Eduardo P. De Carvalho, *Agricultura e Desenvolvimento no Brasil*, São Paulo: Estudos ANPES 5, 1966.
21. Werner Baer, *Industrialization and Economic Development in Brazil*, Homewood, Illinois: Richard D. Irwin, Inc., 1965, ch. 5.
22. For a more detailed description of the distortions created during the Brazilian inflationary process, see: Mario H. Simonsen, *A Experiencia Inflacionaria no Brasil*, Rio de Janeiro: In-

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- stituto de Pesquisas e Estudos Sociais, 1964; to be published soon in English by the Committee for Economic Development.
23. There can be no doubt, however, that due to the political situation the inflationary spiral in 1963–64 got out of hand, and wages no longer lagged.
 24. The best descriptions and analyses of the Chilean stabilization programs can be found in: Tom E. Davis, "Eight Decades of Inflation in Chile, 1879–1959: A Political Interpretation," *The Journal of Political Economy*, August, 1963; David Felix, "Structural Imbalances, Social Conflict, and Inflation: An Appraisal of Chile's Recent Anti-Inflationary Effort," *Economic Development and Cultural Change*, January 1960; and Albert O. Hirschman, *Journeys Toward Progress*, New York: The Twentieth Century Fund, 1963, ch. 3, "Inflation in Chile."
 25. See especially Carlos F. Diaz Alejandro, *Exchange-Rate Devaluation in a Semi-Industrialized Country: The Experience of Argentina, 1955–1961*, Cambridge, Massachusetts: The MIT Press, 1965, chs. 5 and 6.
 26. Since Brazil is still in the midst of its stabilization program and all the data are not yet available, more scientific analyses have not yet appeared. The best current source of information are the monthly issues of *Conjuntura Econômica* of the Fundação Getulio Vargas.
 27. However, no one to date has given an analytical framework to show the necessity of stabilization leading to the working of the real economy below its capacity.
 28. Baer and Kerstenetzky, *op.cit.*, 64, statement of Dorrance.
 29. *Ibid.*, statement of Sunkel, 423.
 30. The quantum of Brazilian imports fell in the following manner (1953 = 100): 1961–161; 1962–140; 1963–146; 1964–118; 1965–98. Source: *Conjuntura Econômica*.
 31. There already exists evidence that many sectors did work below capacity. For example, domestic steel consumption fell from 3.8 million tons in 1963 to 2.9 million tons in 1965.
 32. An interesting by-product of Brazil's stabilization program has been the "denationalization" of Brazilian industry. That is, due to credit restrictions, many firms were caught in such a tight situation, that they sold out to foreign firms. The latter usually find themselves in a relatively favorable position in a tight credit situation, since they always have access to resources from the parent company abroad. Thus, many Brazilians have already charged that monetarist credit restrictions are heavily weighted against domestic rather than foreign firms.
 33. It might be useful for someone to make a comparison between the contemporary structuralist-monetarist debate and the great debate in the last 30 years of the 19th century in the United States over the monetary system. To what extent were the free-silver-easy money forces of the West arguing in the same spirit as the structuralists, and the Eastern financial forces in the spirit of the monetarists? See, for example, Samuel Eliot Morison and Henry Steel Commager, *The Growth of the American Republic*, Volume 2, 1865–1950, ch. 11, "The Battle of the Standards," New York: Oxford University Press, Fourth Edition, 1953.
 34. See Albert O. Hirschman in Baer and Kerstenetzky (eds.), *op.cit.*, 455.

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following papers contained in this volume: Closing Remarks, by W. Arthur Lewis, 21–33; The Effect of Inflation on Economic Development, by Graeme S. Dorrance (presenting what I consider to be the lead paper of the conference on the monetarist position), 37–87; Inflation and Growth: The Heart of the Controversy, by Dudley Seers, 89–103. (representing the structuralist lead paper); Invisible Hands in Inflation and Growth, by Joseph Grunwald, 290–319; Some Notes on Inflation, by Arnold C. Harberger, 290–319; Monetarists, Structuralists, and Import-Substitution, by David Felix, 370–400.

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