The Structuralist-Monetarist Controversy on Inflation in Latin America: A Case Study of Chile

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Abstract

The inflations of Latin America which have been both long in duration and strong in intensity have given rise to a debate on inflation between two groups of economists--the structuralists and the monetarists. The structuralists argue that inflation is inevitable in a Latin American country striving to develop its economy since internal and external bottlenecks cause growth to be uneven and require policy steps that have the side effect of generating inflation. The monetarists counter by saying that inflation hinders the achievement of a desirable rate of economic growth; they base their case on the distortions that inflation produces in the economy.

The Chilean case is examined in order to determine how well each theory applies to a country with a long history of strong inflation. The pattern of inflation throughout the history of Chile is studied and the attempts made at stabilization are analyzed. The theories and hypotheses of each school of thought as applied to the Chilean case are outlined.

Evaluation of the relative merits of the approaches of each of the two groups to such issues as bottlenecks and stabilization policy is made in light of the Chilean case. Finally some conclusions are drawn on the effects of the inflation on such elements in the economy of Chile as investment, exports, and growth.

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Note: The numbers within parentheses, e.g., (4), indicate footnotes.

Chapter I

Introduction

The debate over inflation in Latin America is an important one to study for several reasons.

First of all, it is obviously important to the practical problem of designing appropriate anti-inflationary policies. The countries of Latin America have been plagued by long periods of inflation, at times of severe intensity. An understanding of the causes and cures of inflation would be of considerable assistance to those responsible for the management and direction of those economies--and for that matter, to any other underdeveloped country in areas outside Latin America.

Secondly, the debate forces one to consider carefully the process of economic development and to determine the key variables in economic growth and what effect inflation has on the process of growth.

Thirdly, the debate over inflation raises serious questions about the entire field of "development economics". This means that one must enquire as to the usefulness of economic theory as it is known in Western societies in the study of economic development of underdeveloped countries. Not only has the debate raised questions about the applicability of our economics but also whether any strictly economic analysis is valid for less developed countries.

The debate over inflation, in Latin America at least, has been carried on by two main schools of thought: the "structuralists" and the "monetarists". The former group has taken a more "radical" approach to the issue while the latter has made its case on economic theory as it is presently known and understood. The structuralist approach asserts that inflation necessarily accompanies economic growth. It does not always say that inflation produces growth in a directly causal relationship, but rather tends to regard the former as necessarily accompanying the latter. The "monetarists" see inflation as discouraging growth; they do not believe that inflation is a by-product of growth or that growth is a by-product of inflation, but that inflation is the result of fiscal and monetary mismamagement by governments.

While the "structuralist" school has been largely occupied with explaining inflation, some of the issues they have raised have asked questions about economics as a discipline which are more profound than simply, "What has caused Latin American inflation?" Instead, they, and others not directly connected with this debate, have doubted the validity of Western economics to the less developed countries.

A quotation from Gunnar Myrdal is appropriate as a starting point.

> Our main point is that while, in the Western world, an analysis in 'economic' terms -- markets and prices, employment and unemployment, consumption and savings, investment and output -- that abstracts from modes and levels of living and from attitudes, institutions, and culture may make sense and lead to valid inferences, an analagous procedure plainly does not in underdeveloped countries. There, one cannot make such abstractions: a realistic analysis must deal with the problems in terms that are attitudinal and institutional and take into account the very low levels of living and culture. (1)

(1) Gunnar Myrdal, Asian Drama, (New York, Pantheon, 1968), pp. 19-20.

Myrdal is raising two issues here. First, he is questioning the validity of Western theory to less developed countries. He doubts whether we can escape the bind of "valuations", or value judgments, which he considers inevitable in social science research, and which serve to produce biases in the Westerner's approach to the economics of less developed countries--namely, biases in theory. (2) But, secondly, he is raising the issue of whether economics can stand upon its own as a social science in the less developed countries. He suggests that study by the social scientist means study of those institutions and features of a society normally abstracted by economists from their analysis. (3) This is not simply a question of "preserving an awareness of the relations between (economics) and other parts of social life" (4) but rather a blending into the social science of economics elements of all other social sciences. That is, indeed, a very direct challenge to economics as practiced today.

While these questions raised by Myrdal (who is not regarded as a member of the Latin American structuralist school) may not be present in the thoughts of all structuralists, the debate over inflation cannot, I feel, be understood without taking this matter into consideration. This is not to suggest that the rhetorical question of

(2) By biases, he probably means either objectives inappropriately specified or inappropriately specified structural relationships.

(3) Alternately, this may mean that economists assume not only the existence of the institutions, but also that the institutions are assumed to be functioning smoothly.

(4) Maurice Duverger, Introduction to the Social Sciences, (London, George Allen and Unwin Ltd., 1961), p. 21.

whether present theory is applicable to the less developed countries is legitimate. However, one cannot assume away the structuralist challenge on the grounds that it is merely an attempt to rationalize profligacy or to read into economics much more than is already there. But similarly, one must not fail to recognize that there is a strong desire for indigenous theory and for a break with the "ideological poverty" which has prevailed in Latin America. In much of the writing emanating from this region there are feelings of frustration over the lack of social change and the failure to develop. Such frustration may well have produced desperation about everything, including the theory which attempts to explain the cause of the frustration. The result is that the theory too is rejected.

An individual schooled in the Western tradition of economics will look with some apprehension at this new approach. One is not likely to accept the assertion of some structuralists that theirs is "a profound intellectual revolution comparable to the Keynesian Revolution in economic theory...." (5) Similarly, one is justified in asking what becomes of "theory" when an attempt is made to make it more "general" in the sense of incorporating a greater number of disciplines into the theory. The main point is, however, that the structuralist school of thought must be viewed as a challenge to what might be called "conventional" economics, i.e., Western economics.

(5) Julio H.G. Olivera, "On Structural Inflation and Latin American Structuralism", Oxford Economic Papers, 1964, p. 332. He does not endorse this point of view.

The thesis will study the question of inflation in Latin America by first outlining the theories and policies of the two schools of thought. Next the history of the Chilean inflation will be studied in order to learn of the trends the inflation has shown over time. In that same section consideration will be given to the explanations provided by the two schools of thought on the Chilean case. Then an evaluation of the effects the inflation has had will be made in order to determine which line of thought fits, in the more appropriate manner, the actual case history. In the last chapter, a broader survey of the controversy will be made in order to provide a better understanding of the two schools of thought and to provide one the basis upon which to make a choice between the two schools of thought. In addition, some comments will be made on the issue raised in this chapter--namely, the place of Western economic theory in the study of the economies of underdeveloped countries.

The methodology employed will thus be both analytical and historical. It will be analytical in that it strives to see cause and effect relationships within the inflation and historical in that it seeks to understand how past events have shaped present modes of thought.

Chapter II

The Controversy

1. Introduction

The first thing to do in the study of the debate itself should be to clear away spurious notions about the argument, to determine what the debate is not. From that point, we shall proceed to an analysis of the principles of the two schools: how each believes inflation began in Latin America and the policies that ought to be followed to counteract the inflation. Finally, some space will be devoted to various issues over which the two sides have clashed.

Roberto de Oliveira Campos takes credit for having coined the terms "structuralist" and "monetarist". As to the latter term, he claims that it is perhaps unfair to this school of thought, for the term implies a pre-occupation with monetary policy--and that is not true. He claims they might be better termed "fiscalists" because they are more concerned with the root cause of the inflation (as they see it): excessive demand as fueled by the government deficit.

The term "structuralist" is perhaps more appropriate than its counterpart as a name for the school of thought. The term suggests that the performance of each economy will be determined by its structure, i.e., such features of the economy as its input-output linkages, the percentages of national income originating in the various sectors of agriculture, industry, exports, and services. Unfortunately, no one has ever provided a definition of "structure", as it applies to this school of thought. Following Myrdal's lead, one should perhaps include the political system, the social system (with respect to equality among the various groups in the society), and the foreign relations of the country. For example, a country on friendly terms with, say, the United States would be more likely to obtain foreign aid than would a country less friendly with the U.S. Generally, however, structure means to the structuralists such economic features as the above-mentioned input-output linkages and the export situation.

One danger of the approach which takes what are generally regarded as non-economic factors into consideration is that any concept of structural defects becomes so broad as to be virtually meaningless and useless. It may be extended to every economic rigidity present in the economy, including both those that produce and those that are produced by the inflation. Such indiscriminate inclusion may have helped to give rise to some of the ideological controversy which has tended to cloud the issue. The ideological dispute has arisen between those on the left who are generally sympathetic to structuralist ideas and those on the right who have tended to favour stability.

The debate is not between one group that recognizes rigidities in various sectors of the economy and a group that does not. Both camps are aware of them, but differ as to their sources. Likewise, it is not a dispute between one group that favours economic growth and another group which does not. Finally, the monetarists are not simply reincarnations of nineteenth-century economists believing in the crude quantity theory, free and unrestricted international trade for all, and laissez-faire government. The monetarists are not slaves to tradition, and the structuralists do not possess a monopoly on the ability to recognize the progress that has been made in economic analysis and thought.

But while the debate can arouse the emotions of different groups and despite the fact that much ink has been spilled in the putting forth of one viewpoint or another, this discussion will strive to be objective, rather than to arouse the emotions. Enlarging of understanding is clearly much more appropriate than is the propagandizing of a point of view.

2. Structuralist Theory

(a) Models

While a considerable amount has been written on the subject of structural inflation, much of it has been rather general in nature and has tended to apply to all countries in Latin America as if they were sufficiently similar to be discussed as one. That may not be a valid assumption to make, given the obvious differences in geography, political systems, and exports of just three Latin American countries: Venezuela, Peru, and Chile. Some of it, also,has been unduly abstract, which is unfortunate, for the aim of the structuralists has been to construct a theory not only more realistic to Latin American countries but also more useful to their policy makers than is, in their opinionn conventional theory. Nevertheless, at least two authors have constructed simple models with which they attempt to explain structural inflation. As with all structuralist analysis, essentially they attempt to lift the "monetary veil" surrounding the economy. (1) These

(1) Lifting the monetary veil is not unique to structuralists, of course: multiplier theory attempts to do essentially the same thing.

two models will be presented here.

Dudley Seers (2) has constructed a model with which he attempts to explain the inflation which can occur in a country characterized by a large proportion of its exports being composed of a few primary products. The model he presents is based, he claims, upon the economies of Latin America; Seers feels that the recent history of the Latin American region contains lessons important to other underdeveloped countries, and possibly developed countries as well.

Seers begins with some assumptions about the economy. These include statements that the exports of primary products form a proportion of G.D.P. higher than five per cent, that little domestic capacity exists for production of manufactured articles, and that manufactures amount to a significant proportion of imports. He then assumes that land distribution is unequal, with a large proportion in the hands of those who cultivate it extensively; also that a large percentage of the labour force is composed of unskilled and under-employed workers in rural areas. The market for capital is uncompetitive and the supply of enterprise unresponsive to new opportunity. The industrial organization of the manufacturing sector is highly monopolistic but wage-earners possess political and industrial power. Patterns of consumption are marked by different income elasticities for goods. Seers also assumes that certain changes are taking place in the economy: these include a growing population, rising economic aspirations, with tastes changing as a result of the demonstration effect, and a migrat-

(2) Dudley Seers, "A Theory of Inflation and Growth in Underdeveloped Economies Based on the Experience of Latin America", <u>Oxford Economic Papers</u>, 1962, p. 173.

ion of population towards the cities.

As G.D.P. grows, the increase in the demand for manufactured consumer goods will be more rapid than the increase in income due to the high income elasticity of demand for these goods. (3) If the value proportion of imports in the total absorption of manufactured consumer goods is constant then the total imports of finished goods are also rising more rapidly than income. As manufactured consumer goods have the highest income elasticities of demand, then the inequality between the two growth rates (of G.D.P. and of these imports) will grow. As the growth rate of imports other than manufactured consumer goods will likely continue to be greater than the growth rate of G.D.P., the growth rate of total imports will thus be higher than the growth rate of G.D.P. If M = imports, Y = G.D.P., and X = exports, then

$$\frac{dM}{dt}\cdot\frac{1}{M} > \frac{dY}{dt}\cdot\frac{1}{Y}$$

and if X = M because of no international capital flows, then external balance requires that

$$\frac{dX}{dt}\cdot\frac{1}{X} > \frac{dY}{dt}\cdot\frac{1}{Y} \qquad [1]$$

This is the condition, says Seers, for dynamic equilibrium of the model. (4)

Clearly, whether what Seers calls an "adequate rate of growth" can be achieved will depend upon the performance of exports. The "adequate" growth rate will be determined by the rate of population

(3) This condition will obtain only at a certain stage in the economy. At a given point the income elasticity of demand for manufactures must become equal to or less than unity.

(4) It is probably only one necessary condition among several.

growth and on how rapidly aspirations are rising. Seers then proceeds to define Y' as the minimum tolerable G.D.P. $\frac{dY'}{dt}.\frac{1}{Y'}$ equals the rate of growth of population $\frac{dP}{dt}.\frac{1}{P}$ plus the rate of growth of I', the "minimum tolerable per capita product". (5)

That is $$\frac{dY'}{dt}.\frac{1}{Y'} = \frac{dP}{dt}.\frac{1}{P} + \frac{dI'}{dt}.\frac{1}{I'} \qquad [2]$$

The necessary condition for continuous social equilibrium is $$\frac{dY}{dt}.\frac{1}{Y} \geq \frac{dY'}{dt}.\frac{1}{Y'} \qquad [3] \qquad (6)$$

To achieve full dynamic equilibrium, therefore $$\frac{dX}{dt}.\frac{1}{X} > \frac{dP}{dt}.\frac{1}{P} + \frac{dI'}{dt}.\frac{1}{I'} \qquad [4]$$

Thus, in inequality [1], the rate of growth of exports must exceed the growth rate of income by a certain amount.

If the growth rate of exports were initially satisfactory to maintain dynamic equilibrium, but were to fall below the rate required under inequality [4], the conditions for dynamic equilibrium would be unsatisfied: the growth rate of income would decline (7) and "would cease to be politically tolerable (in the long run)".

In his second version of the model, Seers allows for a

(5) "Minimum tolerable per capita consumption" would likely be a better choice for a datum than "minimum tolerable per capita product". The former relates to the latter through the savings-consumption choice.

(6) This assumes that the initial G.D.P. was greater than or equal to the initial minimum tolerable G.D.P., i.e., $Y_o \geq Y'_o$.

(7) This is Seers' assertion. Actually it need not decline if the growth rate of exports does not decline further. It will, however, be too low.

decline in the proportion of manufactures imported. This can permit

$$\left[\frac{dM}{dt}.\frac{1}{M} = \frac{dX}{dt}.\frac{1}{X}\right] < \frac{dY}{dt}.\frac{1}{Y}$$

There may be a lower limit to "m" (the ratio of imported consumer goods to total consumer goods) due to technical considerations. However, says Seers, if m is to decline because of industrialization there will appear an urban proletariat. On the one hand this will cause a rise in $\frac{dI'}{dt}.\frac{1}{I'}$ and hence $\frac{dY'}{dt}.\frac{1}{Y'}$ (assuming the population growth rate does not decline) but on the other hand urbanization itself will mean a rapid growth in demand for manufactures. Thus the difference in the desired rate of growth of purchases of manufactured consumer goods $\frac{dG}{dt}.\frac{1}{G}$ (where G is purchases of manufactured consumer goods) and the rate of growth of income $\frac{dY}{dt}.\frac{1}{Y}$ becomes greater.

However, the immediate effect of a programme of accelerated industrialization is to produce an even faster rise in capital goods imports. This will prevent $\frac{dM}{dt}.\frac{1}{M}$ from falling quickly. In addition, as the economy continues to develop, the total imports will not fall much because of further needs for imports of capital goods for both direct production and for social overhead capital facilities. The decline in the need for imports may not come about for some time. This is one of the sources, says Seers, of "structural" inflation: it arises from the need for import substitution. (8) If exchange and import

(8) But the inflation also arises because investment is greater than savings and is not matched *ex ante* by imports greater than exports, since this level of imports cannot be financed. That, in contrast to Seers' assertion, is a form of demand inflation.

controls are not effective (as is often the case in less developed countries) then pressure is maintained on the exchange rate with periodic devaluations likely to be the result.

But, as well, factor costs will make domestic production relatively more expensive than imported goods because of difficulties in obtaining labour, capital, and enterprise. The new plants will likely be extensions of the existing monopolies with the result that competition cannot lead to more efficient production. The technology of the industry will require large-scale plants but the small market will mean excess capacity and high costs. They will also be raised by slow response to new demand in social overhead capital sectors.

Involuntary savings may rise due to the unavailability of durable imports, "but the likely effect is to upset the previous balance between voluntary savings and investment, so that local excess demand in various sectors will be increased by global inflationary pressures". (9)

The inflationary spiral will begin after the initial price rise commences. Because many (although not all) groups can exercise some control over their position in the market, and because no group wishes to fall behind, the wage-price spiral can continue. (10) For example, if as G.D.P. increases, the food supply is very inelastic, then the relative price of food will rise; if the urban workers suffer a decline in their standard of living, they will demand higher wages from their employers. Because of the uncompetitive industrial organization, the employer can pass along his increased costs to the pur-

(9) Seers, op. cit., p. 180. The assumption that a previous balance existed may be invalid.

(10) Some groups in the society may have little power, which would reduce the likelihood of a spiral.

chasers of his products.

Government deficits arise because the inflexible tax collections--many taxes denominated in specific money values, and low marginal tax rates--are not sufficient to pay the rising wages of civil servants and to cover other government purchases. Deficits here and in the public utilities contribute to the inflation. Seers concedes that for the process to continue, there must be an expansion of the money supply. Because prices are likely to be inflexible downwards in most sectors, the price rises in given sectors due to the influences considered are not likely to be matched by price declines in other sectors. If monetary policy were restrictive, the necessary rate of growth of income could be combined with price stability only if the price rises generated in certain sectors were offset by price declines in others.

Seers also considers the possibility that while required imports are matched by exports, the output of a particular sector may begin to grow more slowly than the others. The same type of structural problems will emerge internally and if imports must now be made of this commodity an external imbalance will occur. (11) The classic case in Latin America (which will be explored in more detail later) has been lagging agricultural output. However, Seers contends that the same type of problem can arise if attempts are not made to accelerate overall growth without accelerating growth in each major sector,

(11) In this version of structural inflation, Seers implies a lagging supply, whereas in the argument above, he focussed on lagging demand--for exports. One could translate the latter into a lagging supply of foreign exchange.

assuming no increase in the pace of export expansion. That is essentially a balanced growth argument.

This, then, is his model. It attempts to demonstrate how, given certain assumptions (which seem reasonably plausible), an economy may be forced into an inflationary situation, through the need for growth. However, if the economy is "forced" into the inflationary situation because of a desire to maintain high or full employment, that may be regarded as more a matter of policy than a case of being pressured into the difficult situation. In other words, a choice is available. However, Seers has succeeded, I feel, in summarizing, in the form of a model, the main points raised by structuralists. His analysis focussed on the external sector and tended to neglect the other bottleneck which worries the structuralists, namely the lagging food supply. But to the extent that the foreign demand for a country's exports is even less amenable to domestic policy action than is the lagging food supply, perhaps that is the most appropriate element upon which to focus.

A weakness of the model is that it includes a large number of assumptions about socio-political elements in the economy that may not apply to all underdeveloped countries. In addition, Seers tends to add assumptions as he proceeds: for instance, he casually introduces the assumption that exports will not be able to grow sufficiently rapidly in order to finance the required imports, but does not indicate in a satisfactory manner why exports of primary products do not increase, or why they decline. Finally, he is careless in his analysis and his use of terms. One does come to understand from his model the case the structuralists are attempting to make, but he must be corrected from time to time.

Another model is that constructed by Geoffrey Maynard. (12) Seers' article was in response to Maynard's analysis: the former felt that the latter's model was too restrictive--confined to the experiences of Chile and Argentina--and hence could not legitimately be generalized to all of Latin America. However, it is a useful model to consider, and its different approach throws more light on structuralist analysis.

In the model, Maynard attempts to demonstrate how

> excessive emphasis on industrialization, to the neglect of agriculture, tends to produce upward pressures on prices quite apart from any general excess demand that might exist so that if the latter is removed, prices may none the less continue to rise. (13)

He recognizes that the growth rates of agriculture and industry ought not ~~to be~~ expected to be the same in the process of development. As the income elasticity of demand for food tends to decline as income rises (14) the growth rate of demand for agricultural products will fall relative to the growth rate of income and relative to the growth rate of demand for non-agricultural products.

Maynard feels that given the level of real income there

(12) "Inflation and Growth: Some Lessons to be Drawn from Latin America", Oxford Economic Papers, 1961

(13) Ibid., p. 194.

(14) Statistics would tend to confirm this fact. See, for instance, John W. Mellor, The Economics of Agricultural Development, (Ithaca, Cornell University Press, 1969), p. 64, where F.A.O. statistics document the difference between high and low income countries' income elasticities of demand for food.

will be an "appropriate relationship" (presumably in terms of relative income elasticities of demand) which will leave the terms of exchange between the two sectors the same, given their relative growth rates. (15) But if the growth rate of the industrial sector is greater than that of the agricultural sector, then the terms of exchange will move in favour of the agricultural sector. (16) This is what will cause the general price level to rise.

He assumes that an increase in the output of the manufacturing sector occurs: if this takes place only in capital goods production, then while incomes rise, they cannot be spent on consumer goods for the output of those has not increased. This is, Maynard says, "normal" excess demand inflation. If marginal savings rates are low and if the income elasticity of demand for food is also low, then the price of manufactured consumer goods will rise (17), compared with food prices. The same situation may obtain if investment results in an increased output of manufactured capital goods and manufactured consumer goods: general excess demand appears because of the failure of savings to match investment. But here, unless the income

(15) To be more precise, Maynard should say that for a particular level of income an "appropriate relationship" will obtain and for any different level of income a different "appropriate relationship" will be found. With the level of real income "given", he implies that it will remain constant; if that were so no growth of outputs would occur.

(16) He ignores demand conditions as well as supply conditions; if demand is high for industrial products and low for agricultural output, the terms of exchange may not alter.

(17) This contrasts with the assertion in the previous paragraphy that the "terms of exchange will move in favour of the agricultural sector"; again this is because the supply and demand changes are not distinguished in the phrase "growth rates".

elasticity of demand for food is very low, the price of food will rise more than the price of manufactured consumer goods. "The higher the income elasticity of demand for food and the larger the proportionate increase in the supply of manufactured consumer goods the more likely it is that food prices will rise relatively to others." (18)

A government could attempt, says Maynard, to increase the amount of saving being done in order to match investment. But this balance could be achieved only at the expense of an excess supply of manufactured consumer goods. There would not be a general excess supply, for excess demand for food would exist at the same time; similarly there would be no general excess demand. But the combination of excess supply of manufactured consumer goods and excess demand for food will likely cause prices to rise, for "the upward pressure in the food market is likely to produce a rise in prices much more quickly than a downward pressure in the manufactured goods markets produces a fall in prices". (19)

In the short run, there will be a substitution effect away from food. What happens after that depends on the sensitivity of wages to prices: if sensitive, they will rise and put further pressure on food prices. In turn, higher wages may mean higher production costs and higher prices, if the increases can be passed along. This will be so if the increase in manufacturing output was brought about by an influx of labour from the agricultural sector into the indus-

(18) Maynard, op. cit., p. 196.

(19) Ibid., p. 197. Essentially, this is a process of ratchet effects.

trial sector. If, on the other hand, the increase was due to higher labour productivity in manufacturing, because of new capital equipment causing the capital-labour ratio to rise, then the effect of a rise in wages may not be so great in the increase in prices. Because the prices in the manufacturing sector do not fall, the improvement in the terms of trade to agriculture must be achieved via a rise in agricultural prices. The result, says Maynard, is a general inflation.

To Maynard, the important feature of the model is that food supply per capita fails to rise at a rate appropriate to the increase in real income per capita, given the high income elasticity of demand for food. Maynard recognizes that his model stresses food prices a great deal; this is justified, he claims, by the large proportion of total expenditure devoted to food in an underdeveloped country.

He points up the fact that his model attempts to demonstrate precisely how inflation can be internally generated by lopsided growth and fueled by an increase in the money supply. But still,

> It is important to note that (this) type of inflationary pressure...does not stem simply from too high a rate of investment or from the failure of the government sufficiently to restrict total consumption (i.e., a failure to provide the necessary saving). Rather it is the result of unbalanced development which is forcing total consumption into a less desired pattern; the community is being forced to consume more industrial goods and less agricultural goods than its level of real income would normally lead it to do, at unchanged relative prices. In a free consumer market, therefore, food prices have to rise relatively to other prices, and if this necessarily involves an absolute rise in food prices then general inflation is the inevitable consequence. (20)

(20) Ibid., p. 198.

These are the two models; both are useful despite the corrections required. Seers' involves an open economy, and gives some idea of the political pressures in the society caught in the dilemma of declining export receipts in conjunction with a rising import demand. Maynard's article assumes a closed economy, but he demonstrates how the growth of an economy, given some initial proportions and postulating certain trends, will lead to inflation.

But, in the end, what do the two models tell us? Essentially, they say that given the conditions obtaining in Latin America, if growth is to occur, there will be inflation. According to Seers' model, if the rate of income growth is to exceed the rate of export growth then import substitution raises problems of its own--namely, inflationary pressures. By import substitution is not meant substituting for everything, for if everything is protected by tariffs and other devices of commercial policy, no guidance is provided as to what production is to be encouraged.

A weakness of the models is that they assume that the inflation has few undesirable consequences. Perhaps the burdens placed upon the economy by inflation, burdens which will be explored below, are assumed to be known and understood by the reader. However, the implication of the models, especially that of Seers, is that the inflation which will necessarily accompany growth is of no serious concern. He claims that if an "indiscriminate policy" of financial restraint is employed, the sort of policy he sees the International Monetary Fund as advocating, the result is a "serious check to growth and there is no reason to expect the resultant level and pattern of investment to be compatible with development needs". (21) This issue will be explored in more detail both in this chapter and in Chapter IV, and at present it suffices to say that there is no reason to expect that the resultant level and pattern of investment under inflation will be compatible with development needs either.

A further weakness of both models is that they fail to explain sufficiently well why there is no mechanism present in the economy to correct the distortions that emerge. In keeping with his attempts to point up the differences between the developed economy and the less developed economy, Myrdal focusses on this in a short piece on structural inflation.

He employs a model similar to that of Maynard, in which production in the industrial sector rises more rapidly than does production in the agricultural sector. While there would be three mechanisms in the developed economy which would correct the imbalance--relative price changes, with the price of manufactured goods falling (22), rising unemployment in the manufacturing sector, and/or a shift of non-human resources from one sector to the other--these would not, he submits, obtain in the less developed economy. In it, industrial prices are, Myrdal assumes, inflexible downwards. As the demand for agricultural products rises as income rises and their prices rise relative to those of manufactured goods, if the latter prices do not fall a general price rise is the result. Despite the underutilization of labour in

(21) Seers, op. cit., p. 192.

(22) Again this takes into account only the supply side. Changes in demand would offset a drop in the relative price of manufactures.

the manufacturing sector and rising prices in the agricultural, there will not be a shift of resources. "According to where we look we can diagnose the situation in terms of either inflation or deflation." (23) In fact, the producers in the agricultural sector may well put less of their product onto the market for their real income has risen along with the price rise, and they need sell less. Thus the shortage is exacerbated.

As mentioned above, the two main bottlenecks usually considered in structuralist discussion are the food supply bottleneck and the capacity-to-import bottleneck. Often some structuralists will include such "structural" features as the lack of responsiveness of utilities to increased demand, low tax collections, and the lack of entrepreneurial spirit. But such agglomeration only clouds the issue. Every economy has bottlenecks in various areas; they will naturally hinder smooth development.

The importance of the "narrower" structuralist approach is that it claims the economy is forced into its eilemma by the two fundamental bottlenecks, the foreign exchange and food supply bottlenecks. They cannot be easily altered by domestic action in the short run. To include transport and utility bottlenecks weakens the argument for these are much more amenable to policy and correction than are the principal two. Also,in the experience of Latin American countries, these other bottlenecks have to some extent resulted from poor government policy.

(23) Myrdal, op. cit., p. 1928.

(b) The Food Supply Bottleneck

Matthew Edel has remarked that the structuralist version of the argument on agricultural bottlenecks is similar "in its tone, although not in its detail" to Ricardian analysis of agricultural stagnation and how it slows down the entire economy. (24) Whereas Ricardo saw the poor performance of agriculture as due to diminishing returns on land because of population pressures, the structuralists see institutional factors at the core of the problem. The population growth rate, while it may be hindering overall development and diminishing the per capita growth of income, has not placed the same sort of pressure on the land in Latin America as Ricardo saw in nineteenth-century England.

The first task here is to outline the features of the agricultural sector. As noted above, there is no general population pressure on the land. Only about one-fourth of the total area of Latin America is used for agriculture: most of this is employed extensively, for grazing purposes, and only twenty per cent of the agricultural area is under crops. (25) But the population growth rate is one of the highest in the world.

The land tenure system is composed of both latifundia--large estates--and minifundia--small estates, often being only ten hectares in size. The latifundia reflect the extremely high concentration of

(24) Matthew Edel, Food Supply and Inflation in Latin America, (New York, Frederick A. Praeger, 1969), p. 4.

(25) Doreen Warriner, Land Reform in Principle and Practice, (Oxford, Clarendon Press, 1969), p. 220.

ownership of land. They are used very extensively and not in a profit-maximizing manner. Rather they are status symbols, sources of power, and very often hedges against inflation. Their owners usually are absent from the estates, for they have interests in other areas of the society. The minifundia system is characterized by holdings far too small to be practical for production of a marketable surplus of food. They emerged very often as a result of subdivision of reasonably-sized holdings, at least initially. For the most part, the minifundia involve simply a hand-to-mouth existence for their owners, and hence are outside the market economy. The high rate of population growth has tended to aggravate the problem of subdivision (through inheritance). Besides being limited in their ability to supply cash crops to the market, the low incomes on the minifundia mean that urban secondary industry has a smaller market to which to sell its consumer goods.

The land tenure system has been blamed by many for the lagging food supply. On the one hand, the owners of the minifundia have no ability to introduce new inputs into their production processes in order to take advantage of technological change. And on the other, the owners of the latifundia have no desire, although they do have the ability, to make further improvement on the land. The tenant on the latifundia does not stand to benefit to any great extent from risks he may take to increase output: the landlord will probably obtain around fifty per cent of the new profits, but he does not provide any of the capital for the risk-taking. Combined with this are the social structures based on class or race which produce discrimination and prejudice.

The backwardness of the agricultural system and the manner in which it has acted as a brake on development did not come to be recognized by Latin American economists until after the Korean War. The high export prices resulting from the War had made the capacity-to-import problem somewhat less pressing and attention began to be focussed on the agrarian sector, largely as a result of the Bolivian land reform and the abortive Guatemalan reform.

But in addition, some real shortages of food began to emerge. Statistics showed that the rate of population growth was beginning to exceed the rate of growth of the food supply and that imports of food had begun to occur in countries that had previously been exporters. Projection of the trends in food imports began to alarm economists who blamed the agricultural system for a failure to expand. As some data emerged to demonstrate that food prices were climbing faster than the overall price indices, the structuralist school found some ammunition to add to its arguments.

But recently, structuralists have levelled another criticism at the agricultural sector: because of its backwardness it has been unable to employ on the land the growing population. These people were therefore moving into the cities. As they migrated, they became employed in the service industries--or rather "underemployed"--and often fell on the social security rolls. Thus the government responsibilities were increased, the deficits grew and a further boost was provided to inflation.

One might say that the solution to the problem is simply to institute a reform in the agrarian sector, to provide new inputs, to redistribute land, in short to bring about greater productivity. But, the structuralists counter, the archaic land tenure system has spilled over into the political arena. The big landowners are those with political power: they can effectively prevent any land redistribution except under the most demanding conditions--e.g., full compensation immediately for expropriated land.

The whole food supply bottleneck issue is found in Ricardo and Malthus; the lack of technological change in agriculture is the problem in the twentieth century. This the structuralists do not deny. But they also say that if growth is desired then this bottlneck must be tolerated, for the question is that of a choice between no growth (or at least very slow growth), and growth with inflation. While the obvious solution is land tenure reform (i.e., not merely land redistribution, but a reform of the entire agrarian sector), in the short run such a remedy does not come easily. Even a revolution would take considerable time to bring about satisfactory output on the land.

(c) Capacity to Import

Seers' article suggested that this was perhaps the principal problem. If imports of food could be made, the lagging agricultural sector might be a less serious obstacle. However, so the argument goes, the capacity to import of Latin American countries has been declining through time and has forced industrialization when the economy was ill-prepared for it. (26)

(26) Clearly, Latin American exports are not rising as rapidly as world exports. From 1948-56, the volume of world exports rose 77%, while Latin American exports rose only 21%--and much of that was due to oil from Venezuela. Eugenio Gudin, "Inflation in Latin America", in Douglas C. Hague, ed., Inflation, (London, Macmillan, 1962), p. 343.

Raul Prebisch has been, perhaps, the man most responsible for this theory. The Economic Commission of Latin America, an organ of the United Nations, has been one of the strongest proponents of the structuralist thesis and Prebisch, until recently the executive secretary of E.C.L.A., has attempted to demonstrate the problems that accrue to the primary producer when changes occur in its export markets. (27)

Essentially, Prebisch, and others, have maintained that there has been a long-term deterioration in the terms of trade facing the primary producers on the "periphery" of the world economy. This has meant that primary exports--which tend to characterize the exports of less developed countries--have come to earn less in imports for these countries. That is, the real purchasing power of the exports has declined. Two basic reasons for this decline have been suggested.

First, the gains in productivity have not been equitably distributed over the world community. Prebisch has claimed that a fair distribution of gains from productivity was one of the assumptions underlying what he has called the "out-dated schema of the international division of labour". (28) While the industrialized countries have benefitted from technical progress the primary producing underdeveloped countries have not. The former countries are characterized by producers able to usurp productivity gains in the form of higher

(27) The case put forth by those in opposition to this thesis will be presented below.

(28) United Nations, The Economic Development of Latin America and Its Principal Problems, (Lake Success, United Nations Department of Economic Affairs, 1950), p. 1.

profits; also unions in these economies have obtained higher wages for their members. Thus prices of the exports from the developed countries have not fallen. By contrast, any gains in productivity experienced in the primary-producing countries would be reflected in lower prices to the purchaser; they are characterized by more competitive domestic markets and are not as able to keep for themselves the productivity gains as are the participants in the markets of the developed countries. Therefore, the supply increases but the price falls and the gains in productivity are lost by the underdeveloped countries, or, rather, are transferred to the industrialized countries which import these primary products.

Had prices on all sides reflected productivity advances, then the terms of trade would have moved in favour of the periphery, since productivity gains have been greater in manufacturing. However, they have not moved in that way, for the prices of exports of the peripheral countries have declined relative to the prices of exports of industrialized countries. Thus the terms of trade facing the underdeveloped countries have declined.

Secondly, on the demand side, there has (supposedly) been a relative decline in demand for primary products. Nurkse (29) sets forth six reasons which attempt to explain why the income elasticity of demand for imports of primary products is low in the developed countries at the present time. This, he says, is a different situation

(29) "Patterns of Trade and Development", in Gottfried Haberler and Robert M. Stern, eds., Equilibrium and Growth in the World Economy, Economic Essays by Ragnar Nurkse, (Cambridge, Harvard University Press, 1961), pp. 294-95.

from that which prevailed during the period of development of the economies which are presently advanced and which were undergoing their process of development in the nineteenth century. The six reasons are:

(a) In the developed countries, a shift has occurred to "light" industries, in which the value added is low, from "heavy" industries, where the value added is high.

(b) The rising share of services in G.N.P. causes the demand for raw materials to lag behind the growth rate of output.

(c) Income elasticity of demand for agricultural products tends to be low.

(d) Agriculture protectionism deters imports of food products. (30)

(e) The raw materials required in the industrial countries can now be used more efficiently.

(f) Synthetics have displaced natural raw materials in production processes.

Nurkse argues that these assertions are borne out in fact. He claims that during the nineteenth century the pace of trade expansion was five times faster than the present rate of expansion. (31) If one excludes petroleum from the calculation, he points out that the share of the non-industrial countries in world trade has declined, over the period 1928-57, from 32% to 24% for exports. Alternatively, the share of imports has climbed from 27% to 30%. The conclusion at which Nurkse arrives is that

> over the last three decades most primary producing countries have suffered a marked shrinkage in the

(30) The experience in this area in recent years is described in Colin Clark, "Too Much Food", <u>Lloyds Bank Review</u>, January, 1970.

(31) The figures he suggests for changes in volume of world trade are: 1850-80: +270%; 1880-1913: +170%; 1928-58: +57%. Nurkse, <u>op</u>. <u>cit</u>., p. 290.

> importance of their exports in relation to the output and income of the industrial world. (32)

The lesson for the peripheral countries, as Prebisch sees it, is industrialization--specifically import-substitution industrialization. But this process will generate inflationary pressures. The economy must evolve from an outward-looking one to one which is focussed inwards. Shortages in strategic areas will arise, while the need for foreign exchange (with which to purchase imports of capital goods) continues to be high. The problem of food supply, if the argument behind this theory is accepted, will compound the problem of development without inflation.

3. Structuralist Policies

Almost by definition, structuralist policies for the control of inflation are long-term policies. The basic policy steps are clearly suggested by the analysis of the problems facing the countries. Import substitution is in itself a policy, for it involves a conscious step taken in a certain direction.

But while the structuralists have been concerned with diagnosis of the sources of Latin American inflation, their policy recommendations have not been as well thought out. Often their policies are simply "pious hopes for structural changes". (33) For the most part the policy recommendations which emerge are concerned more with eliminating some of the bottlenecks that exist in the economy and which are seen as

(32) Ibid., pp. 295-96.

(33) Roberto de Oliveira Campos, "Economic Development and Inflation, with Special Reference to Latin America", in Campos, Reflections on Latin American Development, (Austin, University of Texas Press, 1967, p. 107.

causing the inflation than with stopping the inflation itself. As pointed out earlier, the structuralists do not always recognize the problems which accompany inflation; thus the policy recommendations which are put forth are not able to provide any real answer to the question of what to do with inflation in the short run. Nevertheless, here are their policies.

The difficulty of lagging agricultural production is a substantial one. Land reform is the most obvious solution in the eyes of the structuralists. But land reform challenges the vested interests of the society: the landed classes often control the legislatures and make peaceful reform very difficult. Equally large political difficulties emerge with the attempts at reform of the minifundia. The desire for individual holdings is strong and a government might be portrayed as less than sympathetic were it to take land from peasants.

One solution is to carry out rationalization of the tenure system: set upper ceilings on the land holdings, consolidate some of the minifundia into co-operatives, and provide ancillary institutions such as extension education in farming and credit facilities. The precise requirements of the land reform will depend on the specific circumstances of each country. However, the structuralists claim that some of the attitudes held by the landowners will not be amenable to programmes for increased production which focus on incentives and on provision of favourable terms of trade to the agricultural sector. Much of the land is held for reasons of prestige and power and not simply as a hedge against inflation, although the latter cannot be dismissed. Therefore, the owner is not interested in maximizing his profits (although by his actions he may be maximizing his utility) but rather wishes to occupy himself in other pursuits.

Another policy step is to diversify the exports of the economy. The need for foreign exchange is still great, despite the desire for greater autarky; import-substitution programmes continue to require foreign exchange with which to purchase capital goods. If exports can be diversified, the society can escape from dependence on one export, usually a primary product, with all the vagaries of price fluctuations associated with it. Diversification will allow the foreign exchange earnings to remain more stable, in that a decline in receipts from one export will, supposedly, be offset by rises in others.

Further bottlenecks that require reform are the social overhead capital sectors. Their inadequacy, the structuralists believe, has contributed to inflation by making transport difficult and electric power scarce and unreliable, to name only two problems. If these can be improved, then industry can become more efficient and import substitution need not be so expensive.

Myrdal suggests that structural inflation is not inevitable but is to be combatted "less by general anti-inflationary policies than by specific controls based on effective physical planning, which should mainly aim at overcoming bottlenecks". (34) Therefore, he recommends six policy measures for dealing with bottlenecks:

(a) Planners should avoid cutting demand for products of the bottleneck sector by cutting down total demand and hence reducing overall production unnecessarily.

(34) Myrdal, op. cit., p. 1929.

(b) Various measures such as price incentives and direct investment should be taken to raise output in these sectors.

(c) Efforts should be made to encourage factor mobility.

(d) Attempts should be made to divert demand from bottleneck sectors to those with surplus capacity.

(e) Planners should confine price increases to those sectors where they promote growth or cause little harm, and prevent spillovers into sectors where they have little effect on output and penalize the poor. However, one might question this policy on the grounds that a considerable number of prices may be outside the control of planners, unless the entire economy is subject to direction. Another danger is that price increases may proliferate and a general price rise may occur; this is one of the problems associated with price incentives, as in (b).

(f) Attempts should be made to anticipate future bottlenecks.

Another policy is that of expansion of the market for import substitutes. While this is not possible unilaterally, structuralists argue that if regional economic integration can be achieved to a certain extent, the problems of inefficiency and the lack of economies of scale stemming from small markets can be overcome. The Latin American Free Trade Association is an attempt at this.

Finally, one of the few short-term policy measures available to structuralists is control of the money supply. Many of the members of this school admit that the inflations which have occurred have been "propagated" by a mechanism such as a wage-price spiral, even though they still maintain that the inflation was generated initially by structural factors. This may in fact be one of the few, if not the only, short-term policy tools available to structuralists.

4. Monetarist Theory

This school of thought questions the validity of the argument which says that inflation necessarily accompanies growth, or, at least, that it should be tolerated. It believes that the distortions produced by inflation are sufficiently severe to hamper growth. The monetarists also challenge the assumption that only the developed countries can afford to submit to the discipline of market forces in disposing of exchange rate restrictions and tariffs. They claim that an underdeveloped country can even less afford an uneconomic use of its resources and that inflation gives rise to just that uneconomic use of resources about which they are concerned. The monetarist school of thought, as championed by the International Monetary Fund, may be regarded as the more "traditional" approach to inflation. This is not to say that it is a nineteenth-century laissez-faire liberal approach, but it does hold to the more conventional arguments about inflation: that too much money is chasing too few goods, that the export bottleneck is caused by inflation, and that internal bottlenecks are the result of bad policy on inflation, rather than being autonomous factors.

But there is an important implication in the monetarist line of thought. Basically it sees as important the creation of an atmosphere in which private enterprise can recognize opportunities for profit and respond to them.

> The implied judgments are in favour of a stable society where one knows the 'rules of the game', because these are not changed over-night by bureaucrats, and where one does not have to worry constantly about how to safeguard one's business and one's family against the effects of inflation. (35)

Such arguments are not easily dismissed.

(35) Dudley Seers, "Inflation and Growth: The Heart of the Controversy" in Werner Baer and Isaac Kerstenetzky, eds., Inflation and Growth in Latin America, (Homewood, Richard D. Irwin, 1964), p. 94.

The monetarists attribute inflation in less developed countries to the desire to break away from the low-savings-low-investment-low-productivity circle which plagues these countries. They see underdeveloped countries as using the central bank to finance the development programme in the expectation that higher growth can be achieved in this way.

In some of the monetarist writing, there is a feeling of moral superiority, albeit not flaunted, but still present. This paternalism has been disturbing to some economists of Latin America; the recognition that the pressure for development is strong; combined with the warning against being profligate may disguise the profound concern that monetarists feel about the way inflation damages prospects for development.

Indeed, some of the monetarists have even traced the inflations to a decline in the "quality" of government. Eugenio Gudin suggests that under an oligarchic system in which the president was picked by a small handful of the most powerful in the country, the leadership would not be subject to pressure from such groups as unions or the small merchants, as is the case today with many democratic electoral systems. The leader is often judged in terms of his "capacity-to-accomplish", i.e., construction (or the beginning of construction) of roads, stadia, and other public facilities--all this despite disorganization and distortion in the economy.

(a) <u>Inflation and the Economy</u>

The monetarists are not unaware of the distinction that must be made between (a) a sectoral price rise due to, say, a poor harvest following which food prices rise, but which should be eliminated the next year if the harvest is once again satisfactory, and (b) general price rises which do not result from temporary shortages. The monetarists also recognize that not all inflations are set off or are compounded by domestic profligacy only. Bernstein and Patel (36) feel that higher export or import prices may trigger off an inflation, but they do not hold to the structuralist point of view that inflation should not be controlled.

The concern which the monetarists have about inflation is summarized in this quotation:

> If a country embarks on a rapid development programme without taking steps to restrain inflation, the end result of the programme may be progress less rapid than it would have been if the programme had not been attempted. If a severe inflation continues and prices rise rapidly year after year, not only will development slow down, but the social fabric will be severely strained. (37)

The concerns they express over inflation will now be considered in more detail.

Some monetarists contend that to make the poor classes sacrifice consumption in order that the more wealthy can accelerate capital formation is to ignore fundamental social justice considerations. (38) One argument often put forward in favour of inflation is

(36) E.M. Bernstein and I.F. Patel, "Inflation in Relation to Economic Development", International Monetary Fund Staff Papers, 1952.

(37) Graeme S. Dorrance, "Inflation and Growth", Finance and Development, 1964, p. 33.

(38) One who holds this view is Felipe Pazos, "Economic Development and Financial Stability", International Monetary Fund Staff Papers, 1953-54, p. 54.

that it can serve to redistribute income towards those able to make best use of it for purposes of capital formation. However, some of the monetarists counter that this may be a policy which is valid only in those countries where the consumption loss will not cause really severe losses of welfare. In a less developed country, those who must suffer a decline in the standard of living are not likely able to afford any decline whatsoever. Similarly, the Phillips Curve approach--where the inflation may succeed in bringing about a full(er) utilization of resources--is dismissed on the same grounds: that the distortions and problems accompanying inflation are far too high a price to pay for a (marginal) fuller employment of resources.

In a continuous inflation, the hardship of forced savings will very often be ameliorated by the ability of the non-entrepreneurial classes to match the increases in incomes enjoyed by the entrepreneurs as a result of the inflation. Once those suffering from the rising prices recognize that their real incomes are declining, they will take steps to redress the imbalance. If the wage and salary earners can achieve this, or, in fact, run ahead of the game for a time, then the argument about the social costs is weakened, but that in favour of inflation and forced savings is similarly weakened. Some claim that this is precisely what has taken place in Latin America: the workers have tended to benefit from the inflation through higher real incomes.

Not all authors of the monetarist persuasion are quite so dogmatic about forced savings. Bernstein and Patel feel that the attaining of a higher level of real income is a possible justification for inflation, although it is the <u>only</u> possible justification. The achieving of a higher level of real income is the final goal: to reach it, income redistribution should be tolerated. (They would put less emphasis, therefore, on welfare considerations than do Pazos and some others.) These two authors divide the benefits derived from investment into two categories: the private benefits which will go to businessmen, and the public benefits--e.g., higher productivity leading to higher real incomes--which go "ultimately" to labour and the public. After the inflation has ceased, the latter benefits are generally larger than the former. However, the two authors base their conclusion on the assumption that the inflation can be brought under control and will not continue indefinitely.

A second argument put up against inflation is that it can result in distorted investment. That is, no matter what might be the increase in the total savings of the economy due to redistribution, the use of that saving is less than optimal. The monetarists claim that inflation will generate a desire to invest in assets promising a rapid payback on the initial investment, due to the uncertainty about how prices will move in the future. Thus, there has been a reluctance to invest in such "basic" industries as iron, steel, cement, fuel, etc. These industries are characterized by large requirements of capital and long periods of investment which make them subject to greater uncertainty than light industries. In addition, the ease with which their prices are controlled by the political authorities has meant that their profits have tended to be lower than profits in the light industries because of price controls.

Inflation serves to distort the price mechanism's signalling abilities. Undoubtedly, a gap exists between the signal which would be given as a reflection of social benefits and the profit rate which signals private benefits; this gap is present even when prices are stable. With inflation, the gap between private and public benefits tends to widen; in an inflation, windfall profits and capital gains become more likely and thus broaden the scope of investments in which use benefits to the public are low, but profits high.

One type of investment that will be made as a result of this distortion is that which goes into luxury housing construction, high-priced office buildings, or land. While not entirely sterile, this type of investment is of lower social productivity than, say, industry or agriculture. The attractiveness of this investment stems from the fact that this type of asset will appreciate in money value along with the general trend in prices. The problem is compounded by the greater prestige attached to the ownership of real estate. But, in addition, because of special circumstances in the financial markets of some Latin American countries, those engaged in the building trade--"incorporators"--have been the best able to borrow from the banks. Thus, much of the credit that was available went to construction. The securities markets are not well organized, and this has not assisted the economy in making efficient use of savings.

A second type of asset dearly sought is inventories. A business enterprise needs liquid assets, and in an inflation cash and fixed value securities decline in their real value. Inventories, while not as liquid as cash, are more liquid than fixed assets. The problem is not inventory investment per se: this may be socially-productive. But if inventories are desired as a hedge against inflation, there may be over-investment in them. In addition, if the price of the good held in inventory is expected to rise even higher, more supplies may be kept off the market, thus pushing the price up yet further.

A third type of unproductive investment encouraged by inflation is foreign assets. Capital flight becomes especially dangerous for a reserve currency country, but for a less developed country it is also a problem, since foreign exchange is scarce and can be put to better use than as simply a private hoard. When the possibility of a currency devaluation is present, the chances of reaping greater profits are created.

Another problem, perhaps an ancillary one, is that if inflation results in exchange controls and tariffs (or any type of commercial policy of this sort) because of difficulties in the balance of payments, the type of industry likely to spring up with domestic investment is the luxury goods industries. Import controls are usually placed first of all on this type of good, and so while the supply may decline demand does not. Hence a profitable investment opportunity emerges.

Inflation also produces problems for long-term financing of projects. Most social overhead projects are of a long-term nature and many are carried out by the government. If the government does not offer interest rates on its long-term debt that will compensate for both uncertainty and inflation, investors will shun this type of bond. On the other hand, the government does not wish to become bound to very heavy public debt service requirements, especially if the debt is held externally. Thus, to the extent that social overhead projects have the characteristic of being long-term in nature, they are discouraged and growth is made more difficult.

There may also be discouragement of voluntary savings. Forced savings have been considered above, but people may become less eager to engage in what Pazos calls "spontaneous savings". This problem may well arise only after inflation reaches a critical level. Generalization on an issue such as this is dangerous for the effects inflation will have upon voluntary savings will depend on a wide variety of factors: the inflation may be of long duration, it may be smooth rather than marked by fluctuations, income distribution will determine savings to a large extent, and financial institutions may be capable of making adjustments which will encourage voluntary savings.

The final area of concern is the balance of payments. Continuous inflation encourages a flow of capital into foreign currencies (as pointed out above) and discourages an inflow of foreign investment. In addition, the general problem of falling export sales and greater imports emerges. If the exchange rate is allowed to fall at the same rate as that of the inflation, the problem may not be solved, for capital may still leave the country. (39) The difficulty is compounded by the practice of pegging the exchange rate for a period, and then devaluing. Whenever the rate is too high, exports are discouraged, and if too low imports are discouraged; the "just-right" rate cannot be maintained for long if the inflation continues and the likelihood of devaluation in the near future will make foreign investors wary of purchasing domestic securities and domestic investors likely to send capital out of the country.

(39) This may be offset by appropriate policy on domestic interest rates.

One might claim that an economy could adjust itself to a continuous inflation. However, during such an inflation, the government is unlikely to be able to borrow on a medium- or long-term basis or to avoid borrowing from the central bank. Similarly business is hampered by the inability to deal on a firm monetary basis, except in the short run; as an employer, a businessman cannot escapt constant renegotiation of wages and faces the possibility of strikes. "All that might be said, therefore, is that if the rate of inflation was known beforehand (if it were a 'planned inflation'), then with the help of electronic computers, its effects might be minimized." (40)

(b) Inflation in Latin America

Most of the discussion thus far has been on the general subject of inflation and little consideration has been given to the monetarist school in Latin America and how it has evolved in contrast to the structuralists. While the analysis will not be radically different from general monetarist thought on inflation, the precise manner in which this school has looked at the Latin American experience is important in a comparison with the structuralists.

When the International Monetary Fund, a postwar phenomenon, came to consider the Latin American inflations, most of them had been going on, at varying degrees of intensity, for a long period of time. The chief interest of the I.M.F. was in arresting the inflation and it was not concerned with a full-scale search for causes other than the accepted one of a too-high level of demand. The I.M.F. presumed that the source of this inflation would be similar to the source of inflation

(40) Gudin, op. cit., pp. 357-58.

in other countries. Therefore, the main interest for the moment was in policy. With E.C.L.A. on the other hand, the need was to explain the root of the inflation before prescribing policy. The result of this is that the monetarists have not given much consideration to features of the Latin American inflations unique to that area.

However, one analysis has been provided by J. Keith Horsefield (41): in it he looks back to the 1930s to attempt to determine the initial force behind the Latin American inflations. He points out that in the 1930s all Latin American countries were debtors to the rest of the world: a large amount of investment had flowed into Latin America during the 1930s. After that, external obligations were composed of contractual amortization payments and there was therefore a need for an annual export surplus on current account with which to meet these obligations--assuming no further inflow of capital. To produce such an export surplus required either an increase in private savings or a government budget surplus. The "urge to expedite development" meant that government budget surpluses were unlikely and because of a low marginal propensity to save, a surplus of savings over investment was not achieved. But in addition this high propensity to consume was accompanied by a rigid supply of domestically-produced consumer goods. The result was a high marginal propensity to import. In addition, the facilities for production of capital goods were "rudimentary" with the result that expansion of their output was likewise difficult.

(41) "Inflation in Latin America", International Monetary Fund Staff Papers, 1950.

Given this initial set of circumstances, the occurrence of World War II brought with it strong inflationary pressures. High export demand, as a result of heavy demands from participants in the war for strategic raw materials, combined with declining imports--because the type of manufactured imports which Latin America traditionally acquired was not available due to the war--meant that inflation was generated through an export surplus. This compounding of the shortage of imports and the export surplus was further exacerbated by government deficits, created by the relative decline in one former source of revenue--import duties--as well as by the pressure for development.

Horsefield claims that despite the war, the pressure for development continued, with the result that investment continued to be carried out. (42) However, it was mainly construction investment, responding not so much to the inflation as to the fact that this was one of the few types of investment that could be made without imports, then unobtainable. The result was that national income continued to rise, as did prices, and although wages exhibited some lags they did in time catch up to prices with the result that the upward tendency was strengthened.

After the war the new imports failed to eliminate the inflationary pressures. This was partly because their prices were high, for exports continued to be buoyant, with the result that few import

(42) Horsefield does not seem to reconcile $X + G + I = S + M + T$. He specifies $X > M$ and $G > T$ but does not say precisely that $S > I$. He mentions heavy private and government investment, but does not indicate that $S > I$, which would have to be the case if the above two conditions were to hold.

surpluses emerged. Because the imports that did enter the country were either capital goods or luxury goods the demands of the wage earners were not met. Government deficits persisted, again reflecting the desire for development, but partly out of fear of a recession, as was being expected in the United States. Hence, the high level of demand continued to generate inflation.

While Horsefield's analysis ends at the beginning of the 1950s, it sets the tone for much of the analysis that characterizes the monetarist mode of thought. Naturally, much of the monetarist criticism could be applied to a wide range of countries.

Harberger claims that, "It is my impression that the basic force which has created the inflationary pressure in Latin American countries has been a chronic budget deficit". (43) He recognizes that budget deficits need not invariably produce an inflation and that budget policy has considerable latitude in which it can move without generating inflation. He says that a government deficit and an increasing money supply can be continued without inflation so long as economic growth is taking place. The real problem for a less developed country is that the money supply of such a country is a much smaller fraction of G.N.P. than is the money supply of a developed country. (44) Therefore,

(43) Arnold C. Harberger, "Some Notes on Inflation", in Baer and Kerstenetzky, op. cit., p. 322.

(44) That may depend, of course, on the definition of the money supply which is employed.

while the latter type of country can manage a budget deficit of two per cent of G.N.P. with no difficulty, the same deficit, in percentage terms, in an underdeveloped country would produce a much greater increase in the money supply.

In Latin America, Harberger claims, inflations have been due to the unfortunate practice of government borrowing from the central bank rather than from the private bond market. The debt has thus been monetized. While borrowing from the central bank may be offset by restricting credit to the private banking system, this must in time cease--because no more credit can be withheld or because such a practice has very undesirable effects on the economy. The result is that the money supply is greatly expanded. Harberger also feels that a devaluation can have a substantial effect on the internal price level. He has discovered instances where, over a given period, the increase in the money supply did not match the increase in prices. One such case was Argentina. Harberger could not find that the lag in the response of prices to a previous increase in the quantity of money accounted for the full extent of the price rise. Hence, he attributes the rise in the general price level to devaluation.

A devaluation will put pressure on those formerly using internally the resources that are now devoted to export production. As well, if exporters begin to make higher profits, non-exporters will attempt to obtain their share of the new "bonanza". An inflation is one way of accomplishing this task for it disturbs the equilibrium in income between importers and exporters. This type of disturbance, says Kafka, has been very frequently the result of inflation in Latin

America, "more frequent there than elsewhere". (45)

To the extent that Latin America has been subjected to a long series of devaluations, these may have been instrumental in "assisting" the inflations. Harberger suggests that small devaluations are easier to handle than are large ones. Also to the extent that relative prices are more significant in resource allocation than are absolute prices, he suggests a floating exchange rate policy:

> A policy which attempted to keep the relative price of foreign exchange stable in the face of an internal price inflation would undoubtedly be wiser, from the standpoint of resource allocation, than a policy which tended to keep the nominal rate of exchange constant for long periods of time, and which was periodically forced by the cumulative rise of internal prices to take the step of massive devaluation. (46)

However, to suggest that the monetarists see any unique features in Latin American inflations is misleading. Their main point is that the inflations in Latin America are caused by much the same type of forces as characterize inflations in developed countries. The above points about the borrowing practices of the government and the relatively small money supply compared with G.N.P. are aberrations or special cases which must be considered, but which are in no way unique

(45) Alexandre Kafka, "The Theoretical Interpretation of Latin American Economic Development", in Howard Ellis, ed., Economic Development for Latin America, (London, Macmillan, 1961), pp. 18-19. See also Henri Aujac, "Inflation as the Monetary Consequence of Social Groups; A Working Hypothesis", International Economic Papers, 1954.

(46) Harberger, op. cit., p. 351. He echoes this view in other articles; see Chapter IV.

to Latin America. The monetarists are saying that, were the same conditions to obtain, say, in one of the western manufacturing countries, inflation would emerge there also.

Arthur Marget, a monetarist, points out that in the postwar period, countries at similar stages of development had a wide variety of monetary experiences "according to the varying degrees of rigour of the fiscal and monetary policies followed in the respective countries". (47) Also, an individual country usually has had a wide-ranging monetary experience, again depending on the policies followed at the particular time. He points to the wide variety of experiences among the countries of Latin America and how different they are in their desires and abilities to accept the "discipline" of "conventional monetary remedies". Again, we have the suggestion that the structuralists are reluctant to "face the music" and suffer the temporary pain of remedy.

Marget submits that a country such as France had much more in common with a country such as Brazil in its actions in fiscal and monetary policy and in the consequences of those actions than France had with countries such as Germany or the Netherlands. Also the convertibility of its currency has made Mexico similar to the developed countries whose currencies are also de facto convertible than to Argentina or other Latin American countries.

Marget claims that the same sort of controversy that arises in the less developed countries--between the need for economic growth

(47) Arthur W. Marget, "The Applicability of 'Orthodox Monetary Remedies' to Developed and Underdeveloped Countries", in Hague, <u>Inflation</u>, p. 320.

and the need to control inflation--is present in the developed countries. He suggests that critics of the monetarists have claimed that the issue does not arise in the industrialized countries; in fact, he counters, it has been equally as relevant there. He claims that the problem has arisen from the tendency to regard the underdeveloped countries as qualitatively different from the developed countries without giving any real thought as to precisely how they were supposed to be different, or "without bothering to examine the facts of experience with respect either to doctrinal discussion or to implemented policy in the developed countries, in particular". (48)

However, the inflations in Latin America have produced some peculiarities. One of these is the lack of incentive to invest in the social overhead capital sector. Because of the ability to control rates in these sectors, the profits in these activities fell with the result that the industries had to be nationalized, in order to secure any output whatsoever. They were run less efficiently than under private enterprise and their deficits have increased. This has, for example, brought about a shift from publicly-owned railroads to road transport, one of the few means of transport remaining in private hands. Such a solution may not be the most economic, given transport needs. Another peculiarity is that flights into foreign currency have not been as serious as one might have expected, largely because of such features as opportunities to make short-run profits in industrial investments protected by special provisions, special exchange rates, and exchange controls.

(48) Ibid., p. 325.

5. Monetarist Policies

In line with their assertion that Latin American inflations are really no different from inflations anywhere else in the world, the policy measures put forward by monetarists are rather conventional. The monetarists call for elimination of budget deficits, usually by means of a reduction of government expenditure rather than an increase in the tax collections--not so much because the latter is not desirable, but because it requires a longer time to be achieved. And they are not reluctant to say precisely where the blame lies: "In the end the monetary authorities are the ones that bear the responsibility for a continuous inflation. They alone have the power to limit credit expansion." (49)

If the budgets can be brought into balance the need for borrowing from the central bank can be avoided. But in addition, credit controls on private banks should be instituted. Steps should be taken to eliminate price controls. The purpose of this is to allow the relative prices to rise to such a level as to encourage investment in those sectors formerly controlled. Very often price controls are put on those sectors most easily managed but least able to withstand the decline in investment: the agricultural sector, the utilities, the transport system, housing. The policy should also include steps which will eliminate the features built into the economy which serve to permit inflation to continue--wage escalator clauses geared to the cost of living, bonds which contain provisions for repayment in real terms, not simply in monetary amounts.

(49) Bernstein and Patel, op. cit., p. 370.

Again the specific requirements for stabilization will depend upon the situation obtaining in the country. The degree of inflation and its duration will make the attempt more or less difficult. Very often one of the greatest problems in bringing an inflation under control is that the very length of the inflation gives rise to features in the economy which serve to perpetuate the inflation. One of the major problems in Canada's inflation has been to break "the inflation psychology"; in a country in which the inflation has continued for several decades, a large proportion of the economy will likely have become geared to inflation. The price that may have to be paid for quick control of such an inflation may be a phenomenal rate of unemployment. (50) The specific division of powers in the country --that is, whether it is a unitary or a federal state--may effectively circumscribe the actions of the level of government responsible for control of inflation.

To the monetarist, however, inflation policy is not simply a matter of cutting off excess credit. Rather the process also involves correcting price and income distortions. In what seems to be a tacit recognition of structuralist assertions, the monetarists say

(50) The Indonesian inflation, which in intensity rivalled anything found in Latin America, has been fairly successfully controlled; part of the reason for such success may be that the inflation had not continued for as long as some of the Latin American inflations. For instance, the consumer price index for January to June, 1969, declined 2.6%, compared with an increase of 125% in 1968 and as much as 1045% of a rise in prices in 1966. (Source: United Nations, Monthly Bulletin of Statistics, July and December, 1969.) An I.M.F. report makes no mention of serious unemployment or a substantial decline in the rate of economic growth. See International Financial News Survey, April 24, 1970.

that if the corrections are not made

> the continued imbalance will generate new elements of instability. The new pattern of relative prices and the new distribution of income must include such use of productive resources by different sectors of the economy as will be consistent with the maintenance of stability. (51)

6. <u>The Controversy Revisited</u>

Up to now, we have examined the respective arguments of the two schools as to the sources of the inflation and the policy measures each would take in order to eliminate the trouble; and there has emerged some conflict as to precisely what the trouble is. Thus far, however, very little "interation" between the two schools of thought has been presented. That is what remains to be done in our examination of the issues. This is the area in which the literature on the subject is the richest, reflecting the debate which has taken place.

While the dispute has forced economists of both persuasions to reconsider their theories and to look more closely at the realities of Latin American economies, it has at times become more than merely an academic debate, or an honest questioning of the ways in which to approach Latin American inflation. However, at the economic level, there are considerable differences between the two schools of thought.

The first issue is that of bottlenecks. The structuralists claim that these are "(a) peculiarly inherent to the growth process in Latin America, and (b) autonomous and causal factors of inflation". (52)

(51) Bernstein and Patel, <u>op</u>. <u>cit</u>., p. 385.

(52) Roberto de Oliveira Campos, "Two Views on Inflation in Latin

Because of the archaic social system--with great concentration of land and power--the land system has acted as a deterrent to agricultural output growth. No matter how favourable the domestic terms of trade between agriculture and the non-agricultural sector might be, the extra production will not be coaxed out. Hence the fact is, say the structuralists, that the Latin American economy can make progress only at the expense of suffering low food supplies, at least in the short run.

On the other hand, the monetarists claim that the rigidities in certain sectors are products of the inflation. They point to the sectors about which the structuralists complain the loudest and say that these are precisely the ones which have been subjected to price controls, and hence the rigidity which has emerged is not autonomous. (53) Haberler refers to inflation controls as evidence of repressed inflation. The attempts at repression may have served to keep the Latin American inflations from exploding, he claims, but "such good effects as inflation sometimes might have had were lost thereby". (54)

Campos (55) makes the following attempt to explain how

America", in Albert O. Hirschman, ed., Latin American Issues: Essays and Comments, (New York, The Twentieth Century Fund, 1961), as reprinted in Richard Perlman, ed., Inflation: Demand-Pull or Cost-Push?, (Boston, D.C. Heath, 1967), p. 121.

(53) This stance is probably somewhat extreme, but it touches on a valid criticism of structuralist thinking. That is that the structuralists too often fail to separate autonomous rigidities--such as capacity to import and the food supply--from those bottlenecks produced by government mismanagement of inflation policy itself.

(54) Discussion on Kafka's paper, op. cit., p. 27.

(55) In Perlman, op. cit., pp. 121-22.

bottlenecks arise. First, there was excess demand over the entire economy resulting from, perhaps, an export boom which was not offset internally. Second, the attempts made to control the inflation were not designed to curb excess demand but rather to eliminate the symptoms in certain key areas--such as food prices and utility rates. Third, the inflation which continued despite the price controls discouraged private investment in these sectors, with the result that government deficits replaced private investment. Fourth, these deficits made the inflation continue, and as long as the controls were maintained the sectors remained at less than optimum output. Their deterioration over time gave rise to genuine bottlenecks, sectors unlikely to be able to respond rapidly should the price restrictions be removed.

Similar explanations can be found for the lack of private savings. Theoretically, higher interest rates should be able to compensate for inflation. But if usury legislation has the effect of cutting off private savings or of leading to excess demand for credit, then the economy cannot attempt to finance itself other than by government surpluses. Clearly, this may not be the most efficient method of saving. Also if liquid private saving is discouraged, funds will be invested in real estate or foreign currency as hedges against inflation. The structuralists would argue that low private savings are the result of the free spending patterns set by those with high incomes.

The main focus of the monetarist policy is to cut down the over-abundant money supply. The structuralists claim that such a policy ignores the real problems of the underdeveloped economy. There often appears to be the feeling on the part of the monetarists that "price level stability and the elimination of various direct controls seem to be viewed as virtually a sufficient as well as a necessary condition for reviving economic growth". (56) The structuralists would dispute this on the grounds that this is essentially the solution of a developed country applied to the problems of a underdeveloped country. Structuralists also argue that the monetarists cannot legitimately apply one policy recommendation to all inflations--e.g., the balanced budget. They maintain that analysis of the economy is essential before steps can be taken to solve the problem and suggest that this is not always done by monetarists.

Structuralists maintain that a slowdown in the rate of development would result if the growth rate of the money supply were curtailed too rapidly. Investment would be retarded both in terms of investment in new areas of the economy and in terms of new equipment for existing plants. This slowdown of investment will retard the growth rate of the economy. Therefore, to the structuralists, the monetarist assertion that inflation cannot continue without continuing expansion of the money supply is actually irrelevant.

Still on the question of production, the argument put forward by the structuralists is that the capacity for output in the economy can continue to grow if the inflation is allowed to continue. They are not saying that the inflation actually encourages economic growth but, again, that it is necessarily complementary to the growth. The monetarists dismiss this argument: they assert that structuralists

(56) David Felix, "An Alternative View of the 'Monetarist'-'Structuralist' Controversy", in Hirschman, op. cit., p. 82.

are deluding themselves in expecting that progress will stabilize the economy. The instability is not only hinering progress but also is giving rise to a struggle in the economy for shares of national income. "The way to stop the inflation is to stop the struggle; and that requires positive action...." (57)

Finally, the capacity-to-import bottleneck is a matter of debate. Obviously a long period of inflation will, per se, discourage exports. But, the structuralists claim their exports are not being priced out of the market so much as the market is simply drying up, i.e., the price elasticity of demand effects are far less important than income elasticity of demand effects.

The monetarists claim that this bottleneck arises more from abuse of multiple exchange rate systems than from the circumstances outlined in Prebisch's thesis; his is more of a special case than one that can be applied without qualification to all Latin American countries. A multiple exchange rate system ordinarily implies subsidized exchange rates for items considered essential; these may be important cost-of-living items or perhaps capital goods for necessary projects. An indiscriminate use of this system can cause imports to be encouraged when their substitutes could easily be produced domestically, and investment may be overstimulated by the lower costs. Offsetting the subsidized import rates may be export taxes. Very often exports are all that can be taxed in an underdeveloped economy and taxes for purposes such as creation of stabilization funds are often beneficial. However, the practice of multiple exchange rate systems has been abused

(57) Bernstein and Patel, op. cit., p. 385.

in Latin America and some countries "have come dangerously close to killing the hen that laid the golden eggs". (58)

As to the overall question of capacity to import, Campos summarizes the monetarist position very well:

> Even though (the limited capacity to import) may be true in the short run it is important to determine to what extent it is again an 'induced' bottleneck arising from deliberate policies that combined internal inflation with external overvaluation and aimed at financing the rise of import substitution through export taxes, rather than through general taxation and other incentives: or from the lack of foresight in building up reserves in boom periods to avoid excessive import contractions in low periods. (59)

Many of the Latin American countries have deliberately biasec their development programmes against exports, say the monetarists. This might well be anticipated if a large proportion of a country's resources are to be employed in an import substitution programme. This fact seems to have escaped many structuralists: that the foreign-exchange bottleneck may be caused by insufficient resources going to export industries. Monetarists use Chile as an example of discouraged investment in the export (copper) industries and of multiple exchange rates tending to work against export diversification. This is not to deny that the export sector may not be a leading sector; there may well be problems arising out of the specific nature of the export and world demand trends. However the monetarists still insist that

> upon those who emphasize the limitations of the capacity to import as an 'original' and almost unavoidable bottleneck explaining a good part of the irresistibility of inflationary 'real' pressures in Latin America rests the burden of proving that this bottleneck

(58) Campos, in Perlman, op. cit., p. 123.

(59) Ibid., p. 123.

> has not gone beyond the normally expected gap precisely as a result of inflationary policies and anti-export-biased development programmes. (60)

The monetarists have concentrated primarily on the argument that inflation in a country makes its exports more difficult to sell on world markets and imports more attractive. Some have noted that an import substitution programme raises the requirements for imports in the short run, to a point which may be well above the former import level. Few, however, have engaged directly in the discussion about the secular decline in the terms of trade. Nevertheless, some consideration ought to be given to this, if only to balance off the presentation made earlier in favour of this argument.

Viner (61) suggests that to look at simply the terms of trade is not to see the entire picture. An "adverse movement in the commodity terms of trade, although always in itself an unfavourable factor, is not necessarily associated with an adverse movement in the material gains from or the profitability of foreign trade". (62) One must also consider the volume of trade and the fact that a decline in the "real costs of exports more rapid than the decline in their prices" may more than offset any losses which may result from a falling terms of trade.

But there are also qualifications which should be made in the data upon which the theory has been based. It was founded orig-

(60) Ibid., pp. 124-25.

(61) Jacob Viner, "The Economics of Development", in International Trade and Development, reprinted in A.N. Agarwala and S.P. Singh, eds., The Economics of Underdevelopment, (New York, Oxford University Press, 1963).

(62) Ibid., p. 25.

inally on the favourable shift in the terms of trade for Britain: a given quantity of primary products exported to Britain at the end of the nineteenth century represented forty per cent less manufactured goods from Britain at the end of the 1930s. (63) The "inverse" of this trend was employed for analysis of the terms of trade of primary producers, because of the lack of data which could be used in the calculation of the terms of trade. But the terms of trade for Britain used c.i.f. costs for imports and f.o.b. prices for exports. As the cost of ocean transport declined considerably over the period, the c.i.f. cost for imports could have declined while the price received by the primary producers for their exports could have risen. Likewise, the cost of British exports, which were f.o.b., could have risen, but the cost to the primary producing importer could have fallen, again because of the decline in transport costs. Services are omitted from the net barter terms of trade calculation. But if these accompanied the imports from the centre countries, the primary producers stood to benefit.

Another reason for distrusting the trend is that the export and import figures included broad categories of products and these conceal individual price movements. And to the extent that the imports and exports of each less developed country are different from all other countries of that type, one country's terms of trade may be moving in a favourable direction while another's are moving unfavourably.

(63) M.O. Clement, R.L. Pfister, and K.J. Rothwell, Theoretical Issues in International Economics, (Boston, Houghton Mifflin Co., 1967), p. 159.

Also, the terms of trade between manufactured goods and primary products are not equivalent to the terms of trade between industrial countries and underdeveloped countries. Some developed countries export primary products--e.g., Canada with wheat and nickel ore--while some under-developed countries export manufactured goods--textiles and other light manufactures. (64)

Finally, index numbers are difficult to construct in such a way as to take into consideration new commodities and quality improvements in old commodities. Because manufactured goods are more likely to be characterized by new commodities and quality improvements than are primary products, the price index for them contains a strong upward bias. New products give rise to problems in calculation "because the prices of new products typically decline during the early years of their production". (65) Similarly, quality improvements are reflected in price rises.

As to the theory of declining terms of trade itself, Viner claims that Engel's Law will not cause a positive decline in the demand for agricultural products as income rises: i.e., the income elasticity of demand for food is non-negative. "The relative decline in demand for agricultural products will not be a positive decline, and therefore

(64) See Sanford Rose, "The Poor Countries Turn from Buy-Less to Sell-More", in Fortune, April, 1970. He suggests that had domestic commercial policy not been deleterious to Indian production of lathes, inroads into the European markets could have been made.

(65) Clement, et. al. op. cit., p. 160.

will not prevent but will only lessen the rate of progress in per capita agricultural incomes...." (66)

Another criticism is that levelled against the concept of monopoly power in the centre countries preventing a world-wide sharing of technical progress. This argument holds only if there is monopoly power over the world supply. The situation may well be that a large number of industrial countries are producing the same commodity, for which both demand and supply are elastic.

> The mere existence of monopoly in the exporting of manufactured goods will not give rise to a trend in the terms of trade against primary products; it could cause the index to be less favourable both at the beginning and at the ending of a period than it would otherwise be. Monopoly power would influence the trend in the terms of trade only if the degree of that power were to change during the period under study. (67)

The main point that the critics of the secular deterioration hypothesis are making seems to be that some doubt exists over the correctness of this concept. Given the debate that has emerged over the issue, one cannot, perhaps, put as much reliance as have Prebisch and some other structuralists on this cause of inflation. Perhaps individual countries have experienced a decline in the terms of trade, but to generalize over the entire area of Latin America is rash.

In conclusion, each group is probably too rigid in its approach. A compromise may be the result of the debate, since neither side seems able to emerge completely victorious. McKim suggests that

(66) Viner, op. cit., p. 28.

(67) Clement, et. al., op. cit., p. 163.

E.C.L.A. has moderated its stand on inflation, having become somewhat persuaded of the dangers of inflation. (68) That is probably long overdue, for the structuralists often blithely dismiss the serious problems inflation can produce; they seldom mention the costs that are associated with it. Whereas the structuralist theories are concerned with the sources of inflation, as is necessary, they sometimes fail to recognize the consequences of it. This has also meant that they have seldom discussed the traditional advantages that are supposed to accrue to an economy experiencing inflation--e.g., forced savings. What may have happened is that during the "growth period" of the structuralist school of thought these potential disadvantages have been ignored; as the school has matured it has come to recognize them.

The structuralists may also find that in Latin America, as in other countries, growth can occur without a full-scale land redistribution on the order of "land to the tiller". The preoccupation with the land tenure system may gloss over the need for better institutions of credit and education in order to achieve greater productivity in agriculture. And, as noted above, the foreign exchange bottleneck is perhaps not quite as autonomous as structuralists would lead one to believe. In addition, the structuralists may come to recognize that to a certain extent inflation must be controlled in the short run and that their remedies are not addressed to these difficulties.

(68) "The Monetary Structure: Stability, Growth and Inflation", in Walter Krause, ed., The Economy of Latin America, (Iowa City, University of Iowa Press, 1966), p. 95.

"The truth is that in the short run all structuralists when entrusted with policy-making responsibilities become monetarists...." (69) Finally, some criticisms have been (and should be) levelled at E.C.L.A. for using the Chilean case, perhaps accidentally, to generalize to the other countries of Latin America without always specifying that was being done.

The monetarist school may come to discover than an economy can adjust itself to an inflation to a degree and that the fears of inflation transmitted from Western economies and societies may not be strictly applicable to underdeveloped or semi-developed countries.

> The monetarists might discover that their greatest fear of a runaway inflation--à la Germany of 1923--will not necessarily occur insocieties 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. (70)

It may well be that inflation is more damaging to developed countries than to underdeveloped economies because of the

> greater importance of the market, as compared with subsistence agriculture, in the richer countries, and the greater importance there also of long-term contracts and long-term debts stipulated in legal tender money terms.... (71)

Forced savings must occur in the monetized sector of an economy and the entire economy of an underdeveloped country may not be monetized.

(69) Campos, in Campos, op. cit., p. 108. He adds: ".... All monetarists are in the long run structuralists."

(70) Werner Baer, "The Inflation Controversy in Latin America: A Survey", Latin American Research Review, 1967, p. 19.

(71) Jacob Viner, "Stability and Progress: The Poorer Countries' Problem", in Douglas C. Hague, ed., Stability and Progress in the World Economy, (London, Macmillan, 1958), p. 47.

They may also come to accept a degree of inflation, realizing that complete monetary stability in an underdeveloped country is no more possible than completely full employment in a developed country. With greater experience of working in underdeveloped countries, the policies may be shaped to fit more closely the political and social situation than they have been in the past. Monetarist policies which are too general may result from the monetarist theory which maintains that inflation in less developed countries is not unique; however, the day-to-day carrying-out of the stabilization programme requires more than simply generalized policies.

However, the fundamental distinctions between the two schools of thought must not be overlooked, despite any "convergence". And those are that the structuralists regard inflation as inevitable if growth is to occur, while the monetarists see it as a deterrent to growth. Also the structuralists tend to regard an approach to the economics of less developed countries as being different from the approach employed in developed economies, while the monetarists do not feel such a distinction is either necessary or valid.

Chapter III

The Chilean Inflation: History and Explanations

1. Chile as a Case Study: The Reasons for the Choice

Chile has been chosen as a case study for analysis of the monetarist-structuralist controversy for a number of reasons. In the first place, it has experienced a long period of inflation, dating back to the nineteenth century, and as structuralist thought refers to secular inflation rather than periodic inflation, Chile qualifies eminently on this count. Secondly, it has been studied closely by both monetarists and structuralists, hence a fair amount of data is available on the economy and the changes that have occurred in it. Thirdly, the stabilization attempts that have been made have thrown into fairly clear relief the issues involved in the debate on inflation: these attempts have largely sparked off the debate, not only for Chile, but for the rest of Latin America as well.

But exclusive of the issue of the controversy, one might consider Chile in terms of its development in order to determine if it can validly be regarded as an underdeveloped country. The Chilean literacy rate is 84%, third highest in Latin America, behind Argentina and Uruguay. (1) G.N.P. per capita is $605 (U.S.) behind Venezuela with $910 and Argentina with $649. (2) Chile has been, for a long time, characterized by a stable political system with many characteristics of government not generally found in underdeveloped countries, such as almost universal franchise and a wide range of

(1) United States Agency for International Development, Selected Economic Data for the Less Developed Countries, Washington, June, 1969. The average for Latin America is 68%.

(2) *Ibid.*, 1967-68 figure. The average for Latin America is $423.

political parties. (3) Finally, Chile has one of the most advanced social welfare systems in Latin America, and perhaps in the world. One indicator of the degree of development of the social security system is that around 1950 the annual average increase in the social security reserves of Chile (also of Brazil and Paraguay) was between one and two per cent of national income. The comparable figure for the U.S. was one per cent. (4) Chile was one of the few countries to have instituted minimum salary legislation before minimum wage legislation.

However, Chile also possesses many characteristics of an underdeveloped country. Of the total export revenues, 74% derive from copper, a higher concentration on one product than for any other

(3) "Based on our criteria for political development, Chile has come the furthest. It has a viable and self-sustaining government which elicits a moderate degree of responsiveness and which oversees a relatively integrated society. It is a free society in most respects; its government is stable and succession is orderly and predictable. Political bargaining is legitimate and opposition parties and interests are recognized and sanctioned. Chile's governments have been responsive to public pressures and ostensibly dedicated to ending poverty, ill-health, and lack of education. Legal protection is given to publications, meetings, strikes, and general political activity. The government is responsive to world culture, open to change and willing to engage in self-criticism. Public debate is articulate and differentiated. In general, Chile seems to be approaching a pluralistic political community." Peter Ranis, "Modernity and Political Development in Five Latin American Countries", Studies in Comparative International Development, 1968, pp. 37-38.

(4) Bernstein and Patel, op. cit., p. 392.

country in Latin America. (5) There is a considerable degree of foreign ownership in the export industries--primarily in the copper mines--and while an enclave has never emerged, the export sector is different from the domestic sector--for instance, productivity per worker is considerably higher in that sector than in any other, probably due to its higher capital-intensity. There is also considerable poverty. One study suggests that the family "model diet" as established by Chile's Department of Food and Nutrition would "absorb 132% and 121% respectively of the incomes of Santiago's callampa dweller and worker". (6)

One is probably justified in classifying Chile as "under-developed". But one factor that should not be overlooked is that the characteristics of Chile which make one qualify the label "underdeveloped" may be sufficient to allow conventional economic analysis to be employed in studying the inflation and its consequences. That is, the objections raised by Myrdal and some others to the Western approach to the study of underdeveloped countries may not be as applicable here as in, for example, some of the African or Asian countries.

(5) Uruguay derives 74% of its export revenues from wool and meat, but one distinguishing feature of Chile, as noted by some authors, is that copper is highly inedible.

(6) Andrew G. Frank, "Urban Poverty in Latin America", Studies in Comparative International Development, 1966, p. 76. A callampa is a slum area.

But the distinction between "underdeveloped" and "developed" does not allow sufficiently for the unique elements bound to be present in Chilean society. For instance, the industrialist class is very conservative in nature. (7) For the most part, it is not characterized by the Schumpeterian entrepreneur. This difficulty is compounded by the rigid social system; its inflexibility has produced an economy without a "self-sustaining process of industrialization" (8) despite the promotion of industry which has been carried out by the government. To what extent Chile's inflation difficulties have been compounded by this fact is difficult to say. But such factors as this make the inflation unique in the ways in which it was generated and in which it has proceeded.

2. History of the Inflation

Perhaps the best way to begin to understand how the social forces (as well as many other factors) in Chile have helped to produce the inflation is to examine the history of the inflation. While the period of primary interest to us is the 1950s and 1960s, the Chilean inflation dates back to the nineteenth century, and recent experience has differed only in the degree of inflation and not in the difference between inflation and stability. Following the resumé, explanations from each school will be put forward.

(7) "Chilean industrialists are not the modernizing elite of which one reads so much in the current literature on development." Dale J. Johnson, "The National and Progressive Bourgeoisie in Chile", Studies in Comparative International Development, 1968, p. 66.

(8) Ibid., p. 64.

(a) Up to 1925: Laying the Groundwork

Interestingly enough, Chile was initially (i.e., during the early years of the nineteenth century) characterized by financial stability, while many of the other Latin American countries were suffering from inflation. Chile was also one of the few countries noted for political stability following independence. The monetary stability was in no small part due to the power of the landed classes which strongly opposed anything but metallic currency. The experiences of other Latin American countries had convinced those in power that any attempt to use paper money would be unwise. After a debate about the merits of a central bank, an institution long opposed out of fear of mismanagement and inflation, one was established in 1849, only to be withdrawn a year later.

The rising needs of a growing economy for means of payment, combined with a distrust of government activity, produced a banking law which allowed virtually "wildcat" banking. (9) The law had been drafted by Jean Gustave Courcelle-Seneuil, a French economist who was both a university professor and an adviser to the Finance Minister. While his economics may have been less than first-rate, he must have possessed a very persuasive character, for he greatly influenced

(9) Hirschman notes that the only provision for the operation of the banks was that their right to issue notes was limited to 150% of their capital. There was no restriction in the legislation on loans which could be made, no reserve requirements, and no allowance for government supervision or regulation of the banks. Albert O. Hirschman, "Inflation in Chile", in Hirschman, ed., Journeys Toward Progress, (New York, Twentieth Century Fund, 1963), p. 64.

economic thought in Chilean academic and official circles. Although he was probably rather temperate in his own approach to political economy, some of his students became very imbued with laissez-faire, a doctrine which he preached; later events in Chile, when his former students were attaining positions of power, reflect this. Because of his vast influence, "virtually every serious ill subsequently experienced by the Chilean economy, from inflation to monoexportation, has been traced to him". (10)

The main source of ammunition for the anti-Courcelle-Seneuil forces has been the above-mentioned banking law of 1860. Despite falling export prices and government budget deficits, the liberality of the law was blamed for producing unsound banking, which in turn was seen as the cause of the suspension of specie payments in 1878. Ironically, such an event was the very reason a central bank had been opposed in the first place.

Generally, the Chilean inflation has been dated from 1879. After the 1878 "lapse from virtue" (11), a variety of explanations has emerged for the Chilean inflation. Many of them have attempted to "pin the blame" on certain individuals or certain classes, just as Courcelle-Seneuil's banking law was blamed, probably unjustly, for the 1878 suspension of convertibility. After 1879, the scapegoat became the landed interests who, some claimed, were attempting to debase the

(10) Ibid., p. 166.

(11) Ibid., p. 169.

currency in order to pay off their mortgages and to finance European excursions. However, while this theory may have appealed to the intellectuals and those hostile to the hacendados--a group which sought almost any pretext for attack on the landed classes--and while it may have added an element of excitement to thought on inflation, generally the explanation is found to be much more mundane in nature. Hirschman suggests that the act of suspension of convertibility would not have assumed the proportions it did if external events had not conspired to postpone time and again the return to convertibility--events such as wars with Bolivia and Peru (1879-82) and the Chilean Civil War (1891).

The desire on the part of Chilean governments to return to convertibility was strong indeed. The goal was to return the peso to a parity vis-à-vis the pound sterling, and the theory of a conspiracy among landowners to convince the government to debase the currency was proved less than completely sound by the return to convertibility which occurred in 1895. In fact, the landed interests were blamed for the results of this event. Again they were seen as part of a conspiracy to defraud the rest of the country. This conversion is described by Hirschman as "probably one of the most disastrous monetary operations of all time". (12) It involved a revaluation of the peso from a floating rate of one peso = 14 pence, to one peso = 18 pence. This revaluation, combined with falling world prices, sharply curtailed economic activity. The result of this attempt to return to "grace" was

(12) Ibid., p. 172.

a return to inconvertibility in 1898, and a shift in public opinion in favour of paper money.

From this point on, the economy proceeded with an inflation fueled by increasing amounts of paper money. From 1890-1900, the average annual inflation was five per cent and this figure rose to eight per cent for the decade 1900-10. (13) A business boom which began in 1904 was the cause of much of the expansion in the money supply during the first decade of the twentieth century (even though some observers continued to blame the landowners). By 1907, the boom had terminated and inflation ceased along with it. After this, the "papaleros", those favouring paper money, and the "oreros", those favouring the gold standard, were both discredited, although the latter had already fallen from favour somewhat after the disaster of 1895.

By 1912-13, some thought was given to establishment of a central bank, but the outbreak of World War I prevented this. During the war, the exchange rate of the peso rose (by about 70% from 1916-18) but declined after the war. The instability of the peso led voters to the belief that the traditional ruling groups were unable to govern. The result was a victory for the anti-oligarchic Libaral Alliance led by Arturo Alessandri. He was frustrated by conservative elements in the Senate in his attempts to create a central bank, and by 1925 the situation in Chile was sufficiently serious to allow him to obtain from the Congress virtually dictatorial powers; he had been forced to resign in 1924, but had led a military junta back to power a year later.

(13) Ibid., p. 160.

What is to be learned from this initial period of Chilean inflation? While the events do not foretell all that was to occur later, this period does reveal some important features. First is the attempt to find someone or some group that tended to benefit from the inflation (or, in cases, the deflation) and then to attribute to him or them the inflation itself. This sort of attitude was held by as astute an observer of the Chilean inflation as Frank W. Fetter whose Monetary Inflation in Chile (14) is generally regarded as the prime source of information on the early Chilean inflation. Tom Davis (15) takes much the same approach. He feels that government borrowing from the banking system, as well as from abroad, was designed to provide loan funds to agricultural mortgage banks which would in turn relend these funds to agricultural interests. "It was an amazing period of virtually undisguised use of political power by conservative governments in their own narrowly conceived, short-run economic self-interest...." (16)

The case against this interpretation has been sketched above and comes largely from Hirschman. What must be noted, of course, is the fact that the landowners were thought to have engaged in alternately debasing the currency and then in escalating the exchange rate. Whether they were so inclined or whether the inflation had its source in other areas is not the only matter at stake, but the

(14) Princeton, Princeton University Press, 1931.

(15) Eight Decades of Inflation in Chile, 1879-1959--a Political Interpretation", Journal of Political Economy, 1963.

(16) Ibid., p. 389.

attitudes generated during the early inflation have proved significant in later years. (17)

A second important feature emerging from the 1879-1925 period is the importance of the foreign adviser. Courcelle-Seneuil was to be followed by several other foreign missions to Chile. While the position of Courcelle-Seneuil was different from what was to be the case later on, foreign advisers have played a very significant role in Chile's history. The problem of inflation "has lent itself to the recurring hope that somewhere there might be an 'expert' who, like the specialist in a rare disease, will know just the right prescription or perform the right operation". (18)

Naturally such an individual or group is much more open to such criticisms as foreign intervention and failure to recognize political realities than is a domestic policy adviser. To the extent that he or they can emerge as a scapegoat for troubles which may have arisen, the foreign mission may fulfill a very important need. But a society cannot really solve its problems by searching for scapegoats.

(b) From 1925 to 1939: Depression and Industrialization

When Alessandri regained power in 1925, high on his list of priorities was monetary stabilization, for inflation had been one of

(17) This should not lead one to think that an honest attempt at analysis of class or sectoral conflicts falls into the same category as seeking a scapegoat. In fact, sectoral conflict will be considered below in an attempt to understand the Chilean inflation. What should be condemned is the sort of knee-jerk reaction against an opposing group which can result when one group grasps at straws in an attempt to discredit others.

(18) Hirschman, op. cit., p. 163.

the sources of trouble in 1924. The second foreign economic mission in Chile's history was headed by Professor Kemmerer of the United States. He had been called in because the strong desire for monetary reform had produced, since 1913, such a variety of proposals for reform that great confusion over the issue had developed. Also, Kemmerer had undertaken missions to other Latin American countries. What is interesting is that none of the recommendations of the Kemmerer Mission was particularly novel: all had been put forward at one time or another during the 1913-24 period. "The conclusion is therefore inescapable that the mission served principally as an umpire, or perhaps even as a random device...." (19)

Three primary proposals came from the Kemmerer Mission. First the exchange rate was to be one peso = six pence, which had been the prevailing exchange rate for some months previously. Secondly, a Chilean Central Bank was to be established. Thirdly, a commercial banking law was to abolish the permissive statute that had been drafted by Courcelle-Seneuil and to replace it with a better-regulated system.

The Central Bank provided power to the private, credit-using interests in the formulation of policy; the purpose of this was to remove power from the hands of the government. (20) Davis claims

(19) Ibid., p. 177. Hirschman admits that this does not cast the mission in a very creative role.

(20) Bruce McKim says that Chile's Central Bank was similar to other west-coast banks established by Kemmerer Missions (Bolivia, Ecuador, Peru, and Colombia) in that none was able, initially, "to control credit operations in the counter-cyclical manner

that, in fact, power over the Central Bank had not been kept away from the government, but rather public and private interests could now share power. "As a result, the government could not increase its borrowing at the expense of the private sector but had to allow the private sector to increase its borrowing pari passu with the public sector." (21)

The return to the gold standard was to prove interesting. In the latter half of the 1920s, the Chileans felt they had achieved progress over what had gone before: either a rigid adherence to gold or a floating exchange rate. The gold exchange standard permitted redemption of pesos in pounds or dollars rather than simply gold. But the tenacity with which the rules of this new system were obeyed was to prove unfortunate during the early years of the Depression. The government attempted to defend the peso's convertibility until March of 1932, which was six months after the pound was devalued. The discount rate was pushed up to nine per cent in the attempt to follow the "rules of the game" and the chaos that resulted from this misguided effort allowed a military dictatorship to take over. The result was that while Chile's second return to the gold standard was able to avoid some of the mistakes of the first attempt, the experience left Chileans bitter about the whole situation, as they had been in the 1890s when attempts failed to return the peso to a parity with gold. As with Courcelle-Seneuil and his attempts to introduce into Chile a

which identifies a modern central bank". "The Monetary Structure: Stability, Growth, and Inflation", in Walter Krause, ed., <u>The Economy of Latin America</u>, (Iowa City, University of Iowa Press, 1966), p. 90.

(21) Davis, <u>op</u>. <u>cit</u>., p. 390.

financial system that was absent in his own country--i.e., free banking, reflecting his dislike of the powerful Bank of France--this experience "displayed once more that propensity...to take imported dogmas more seriously and to apply them more rigidly and dogmatically in a foreign country than in their country of origin". (22) Chile, of course, is not alone in having such a propensity but the results of it there have been especially sad.

The most significant feature of the Great Depression in Chile was the drastic drop in export revenues--88% from 1929-32. This was the most serious loss suffered by any country in the world during this period. It must be regarded as very important in the troubles that were to plague Chile during the 1930s. The collapse of the copper markets was serious enough in itself, but the development of synthetic nitrates removed what had been a monopoly for Chile in the natural product. Seers claims that the purchasing power of exports (which he defines as the value of exports deflated by an import price index) has never regained the level of 1929, "or anywhere near it". (23) But another unique feature of Chile during this period was that it suffered from inflation at the average annual rate of seven per cent, despite the deflation that was proceeding. In 1932-33, the Treasury borrowed so heavily from the Central Bank that wholesale prices doubled

(22) Hirschman, op. cit., p. 180.

(23) Dudley Seers, "A Theory of Inflation and Growth in Underdeveloped Economies Based on the Experience of Latin America", p. 174.

and the cost of living rose 30%. (24)

From 1933-35, relative price stability prevailed, along with a fair degree of recovery. But the monetary authorities fought the inflation of 1936-37, a manifestation of an over-active private sector, with policy tools which should have been employed on the inflation of 1932-33.

In summarizing this period, Hirschman notes that the finance minister, Gustavo Ross, was able to eliminate a large portion of the unemployment and to promote a fair amount of industrial growth. With Ross, a believer in conventional remedies, Chile became an anomaly among the countries of Latin America, for most of them were engaging in radical experiments and reforms in the economic and social spheres. However, in the process of stabilization and eliminating unemployment, Ross alienated the middle and working classes. Although Kemmerer's mission had been welcomed by these groups in the expectation that a stable currency would be a good thing, with Ross "the orthodox financial and monetary policies were now considered weapons of the oligarchy in its attempt to freeze an unfair distribution of the national income or to enforce an even more unfair one". (25)

(c) From 1939 to 1952: Speed-Up of Inflation

The year 1939 is often regarded as marking the beginning of the modern phase of the Chilean inflation. During the decade 1940-50,

(24) Hirschman, *op. cit.*, p. 180.

(25) *Ibid.*, p. 182.

the average annual price rise was 18% (26), with 1943 and 1945 showing the lowest increases--8%--and 1946 the highest--30%. The years 1939-52 are often regarded as the "Radical" years because the Presidency was held by three members of the Radical Party. The period was marked by a great heterogeneity of factors which assisted in generating the inflation. Some of these were fiscal deficits, monetization of balance of payments surpluses, war-induced international price rises, bank credit expansion, and wage and salary increases in excess not only of productivity gains, but also of price rises. Hirschman comments on this heterogeneity: "Perhaps the only common thread running through all the successive stages was the extreme weakness of anything that we would today call meaningful anti-inflationary action." (27)

In this period, the Radical Party, or the Popular Front as it was sometimes called (28), undertook a substantial programme of development. Following the 1939 earthquake, the Chilean Development Corporation, CORFO (29), was established by the government. While the

(26) Data for the rates of inflation up to 1951 are from Hirschman, and after that are from the I.M.F. A considerable range of rates has been employed by authors in their discussions; this variety probably results from different methods of calculation.

(27) Hirschman, op. cit., p. 183.

(28) The Centre and Left parties joined together in 1938 in reaction to the right-wing Alessandri government. Alessandri had returned to power in 1932. The pattern for Popular Fronts was set in various European countries and was copied by Chile.

(29) Corporacion de Fomento de la Produccion.

earthquake was generally taken to be the reason for the creation of this body to assist in reconstruction efforts, in fact its creation reflected the ideology of the Popular Front--government support for industrial development. This corporation was to become the tool for future government economic development operations.

Another element in the inflation was the underconsumptionist thought that had emerged from the 1930s. Hence government policy was designed to maintain a high level of demand through high salaries and wages, despite the fact that Keynesian analysis had not been considered for the less developed countries, and despite a high rate of inflation --10% in 1940, 23% in 1941, and 26% in 1942.

During the decade, the first attempts at using price controls, exchange controls, and subsidies were made. Hirschman suggests that this was not simply a pragmatic set of tools to be used in fighting inflation, but that the Popular Front felt confident that such powers as were possessed by the state could be employed to counter the inflation that might emerge as a result of a high level of demand. As might be expected, the controls had little effect on discouraging the inflation but did have important effects on resource allocation. The lesson learned by the government from this experience was not that the controls were undesirable per se, but that they required some perfecting.

But controls soon fell into disrepute, for they were seen as being incapable of controlling the inflation and attempts were made by the government to provide ways for the country to live with inflation. Such features as a "minimum salary" were employed, but very often the revisions in this overshot the mark set by the rise in prices, with the result that the salaried classes achieved higher real incomes and their greater spending power contributed to further inflation. In the private sector, new provisions were made for adjustment of wages as set under contracts, particularly in the mining industry. Towards the end of the period, a 1952 readjustment of civil service salaries was made automatic; the cost of the law which provided for this was estimated to equal one-fourth of total revenue of the government in 1952. This last measure in the drive to institutionalize inflation had an especially strong impact on stimulating inflation. The other earlier measures had contributed their share to the cause, but the latter set the stage for the acceleration of inflation which occurred after 1952.

Still, throughout the entire period, the attitude towards inflation was one of complacency on the part of Chilean governments. This was largely due to the observation that most of the world was suffering from inflation, and therefore Chile was not unique. Besides, the ex planation continued, a large part of the Chilean inflation was imported and could not be contained until world prices became stable. Moreover, on the domestic side, the rationale was that inflation was the price to be paid for economic progress. CORFO was seen as a success; the import-substitution programme's benefits were offset by the inflation, but they were still regarded as out-weighing the costs.

By 1950, however, concern began to be shown for the inflation. Some serious attempt at stabilization had been made in the late 1940s, but such mistakes as leaving surplus Treasury funds--which arose from a budget surplus--in the commercial banks allowed inflation to proceed through unchecked credit creation. The government was surprised that inflation did not cease because of the budget surplus, for the critics of the inflation had told the government repeatedly that the deficit was the source of the rising price level. The time came again to call upon foreign advice, for a declining world price for copper threatened to turn the fiscal surplus into a deficit (since taxes on copper exports were one of the prime sources of revenue) and strong inflationary pressures were again mounting. Thus the United Nations was asked for advice and it agreed to come to observe and report; the International Monetary Fund registered its dislike of this slighting and so it too, belatedly, was requested to come to Chile. (30)

Before the missions submitted their reports, the government imposed, in January, 1950, a restriction on the adjustment in the minimum salary for white-collar workers in the public service. This salary level acted as a guide for other salaries, and the hope was that it would be able to set a pattern and help to slow down the inflation. This action produced street demonstrations by the white-collar workers who disliked being called upon to bear the entire burden of the anti-inflationary effort. The Radical Party, which relied on this group for much of its support, recognized its folly and tried to extricate itself from its quandary. The result was salary adjustments

(30) The United Nations was the first preference because it was recognized as being favourable to the need for development, rather than being a strong advocate of stability, which was the impression held by Chileans of the International Monetary Fund.

in the past tradition--this time of 44%, with the consequence that inflation was stimulated. Hence the very radical attempt ended in failure and left Chile in a condition worse than the one in which it had started. This paralleled earlier efforts at radical action which were to fail and to produce bitterness--for instance the attempts to return to the gold standard.

The U.N. report recommended essentially a disguised wage, salary, and price control programme. As this was similar to the programme which had just recently failed, it stood little chance of being accepted. The I.M.F. report was much more direct in its criticism of credit creation practices and recommended controls on the amount of commercial bank credit creation. However, on the whole Chile was not prepared at this time to make good use of the recommendations and the benefit derived from them was small.

Thus the initial stage of the modern inflation began with an acceleration of the rate of inflation and with various attempts to control it. Again the presence of foreign advice is to be noted. The period ended with accelerated inflation which was to culminate in an 85% rise in the cost-of-living in Santiago in 1955. The first steps were taken to control the inflation--through price and exchange regulations--and to "live with it"--through automatic readjustments of the wages and salaries of various groups. However the main fact is that the Chilean society lived through fourteen years with an average annual inflation of 17%. This was to make future attempts at stabilization much more difficult.

(d) From 1952 to 1958: Rapid Inflation and More Foreign Advice

In 1952, General Ibanez was returned to power, twenty-one years after he had been driven from office during the deflation of 1931. One theory regarding why he was able to return is that he was regarded as a strongman who could provide leadership in fighting inflation; the inflation had, in the eyes of many, come to be associated with parliamentary government. However, Ibanez disappointed the hopes of many who had seen in him the authoritarian. He abided by the Constitution.

This is not to suggest that no attempts were made to stop the inflation; rather, much effort was focussed in this direction, some of it involving more sophisticated tools than those employed in the earlier years. The Central Bank finally received the power to vary reserve rates and to control bank credit. By 1953 and 1954, the view that inflation had been necessary to secure "progress" was losing, or had lost, favour. In 1953, the rate of inflation was 18% (31) and this was to reach 77% in 1954.

The attitude held previously had been that the inflation was important in the promotion of growth. The negative real rates of interest had been regarded as subsidies to industry and as likely to promote capital formation. How, however, the industrial system was seen to be stagnating. Economic growth was slow, and the inflation had begun to sharpen social conflicts and to cause economic losses, at

(31) In this year, the I.M.F. calculates a rise of 18% in the cost of living, Hirschman provides a rate of 56% and the United Nations a rate of 25%.

least partly because of an increased number of strikes.

Any attempts made by Ibanez to fight the inflation proved abortive. Despite a promising beginning in 1953, in the form of a tax increase bill sponsored by a youthful Finance Minister, Felipe Herrera, the legislation was stymied by the Congress. An increase in wages and salaries in early 1954 was justified on the grounds that it would produce social peace, increase production, and hence be disinflationary. This was not, unfortunately, the case, and inflation continued.

A "sociological" approach to the inflation was made in 1954 in an attempt to break away from strictly technical analysis. This approach focussed on conflicts among the various groups of the society in their attempts to maintain or improve relative income and wealth. With this fact recognized, the way to stop the inflation was to appeal to all groups in the society to desist from their attempts at improvement of their economic positions. Thus the programme that was started called upon all groups to cease their striving and the government, for its part, endeavoured to practise austerity. However, the programme as put forward, while comprehensive in nature, came at the wrong time: Congress would not give Ibanez the powers he requested because of bad relations which had developed between the two branches of government. Hence the policy could not be implemented. But even had not the bodies of government been quarreling at the time, could the policy really have worked, given the high rate of inflation and the length of time it had been continuing? Hirschman suggests not: "The whole idea that utter conflict could be replaced abruptly by utter harmony via 'shared sacrifices' had the quality of an escapist wish-dream." (32)

Once this policy proved to be a failure, no one had any real idea as to how the handle the situation of an even higher rate of inflation for 1955 (33), a rate which E.C.L.A. described as "remarkable ...even by the standards of a country accustomed to long-standing dis-equilibrium". (34) In that year, two general strikes took place, indicating an aggravation of social tensions. In six months, three Finance Ministers came and went. The government budget seemed to be out of control as mandatory salary increases quickly outran the possibility of growth in revenues. The price of foreign exchange for financial transactions was rising more rapidly than the internal price level, which Francis Schott claims to have been indicative of large-scale capital outflow. (35) He maintains that the situation was so serious that a "distinct possibility" existed of the public's repudiation of the peso "in a final outburst of hyperinflation. Thus inflation had turned from a chronic irritant into a major and immediate threat to the survival of orderly government and, indeed, of democracy itself." (36)

(32) Hirschman, _op_. _cit_., p. 199.

(33) The rate of increase in the cost of living in Santiago was higher in 1955 than it had been in 1954, although the rate for Chile as a whole fell. To the extent that pressure put on government decision makers would come largely from Santiago, perhaps the accelerated rate there explains the drastic action taken, despite the lower rate for the entire country.

(34) _Economic Survey of Latin America, 1964_, Santiago, 1965, p. 310.

(35) Francis H. Schott, "Inflation and Stabilization Efforts in Chile, 1953-58", _Inter-American Economic Affairs_, 1959, p. 11.

(36) _Ibid._, p. 11. While all observers do not share this alarm, _clearly_ the situation was serious.

In the latter part of the year, however, the situation brightened somewhat. Ibanez retained office, although either a dictatorship or military coup had been predicted. The Central Bank, which had long been silent came out with forceful recommendations on policy for inflation. Some members of Congress recognized that Ibanez had to have some support if inflation were to be beaten and therefore attempted to rally support for the President.

The Klein-Saks Mission had been regarded by some (37)as coming at the invitation of a right-wing government, as being chosen for its known laissez-faire leanings. Others (38) suggest that the government was desperate for any advice whatsoever, regardless of the ideological slant of the source of counsel: Pierre Mendès-France, no right-winger himself, was for a time considered by the Ibanez regime. But general agreement exists on the reason for a foreign advisor being invited at all. The hope was that, as before, the outside influence could be above the conflicting views which were present in Chilean discussions on inflation. Mutual suspicion, as before, made for a political atmosphere scarcely conducive to solution of the problem. Klein-Saks itself was chosen at least partly because of its success in a Peruvian stabilization programme in 1949, and partly because its connections in Washington might produce American credits which would be required to reduce the impact of the stabilization programme.

(37) Davis, op, cit., and David Felix, "Structural Imbalances, Social Conflict, and Inflation: An Appraisal of Chile's Recent Anti-Inflationary Effort", Economic Development and Cultural Change, 1960.

(38) For one Hirschman, op. cit.

But the task set out for the Mission partly offset the possibility of its objectivity. In past experiences with foreign advisory missions the recommendations had not always been taken seriously, or at least had not been put into the form of policy. The Kemmerer Mission was[a] partial exception to this rule. The innovation to be made here was that Klein-Saks would take part in the day-to-day implementation of the policy, rather than act merely in an advisory capacity. Obviously this could lead to serious trouble. The advantage of perspective could be lost. No country ever appreciates foreigners telling it what to do, and appreciates even less the foreigners doing it for them.

In addition, some of the complaints registered about Klein-Saks' philosophy of laissez-faire were extended to demonstrate that the Peruvian experience had been successful largely because of a dictatorship in power at the time. The Chilean Congress was not in favour at this time of transferring all power to the President.

Added to these two factors was the failure of the Mission itself to include Chilean economists on its staff, even in a public relations role. Because of this initial mistake, the Mission was never able to achieve a rapport with Chilean economists as a group, whatever their ideology, or with the Centre and Left in Chilean politics, which tended to regard Klein-Saks as a creation of the right wing.

But the arrival of the Mission had some unexpected results, which were not entirely unfavourable to the fight against inflation. The Finance Minister was able to attempt once more to limit the adjustments in wages and salaries. In this instance, in which inflation was much more serious than in 1949-50, there was a general recognition that if the wage and salary adjustments were 90-100% of the previous year's inflation, the situation would be as bad as before. Hence the rise was limited to 50%; the blow was softened by an increase in family allowances and by the establishment of a minimum wage alongside the minimum salary. Secondly, the nascent coalition that had emerged in 1955, during the worst of the troubles, was continued, in the hope that some support could be provided to both Ibanez and the Mission. This support was made tangible in the Congress when the bill regarding adjustment of salaries and wages was passed, although with a majority of only one. The greatest benefit this had was to produce a realization that what had formerly been impossible politically had now been achieved. The wage-salary restrictions accompanied by some credit controls "constituted the first significant shock to the inflation spirit of the country". (39)

As for the Mission and its programme, a member of the Mission identifies two fundamental stabilization considerations: (a) because of the "closely-connected and mutually-intensifying contribution of various underlying factors" a broad attack had to be made on all parts of the economy, since by this time all sectors and groups were participating in the inflation; (b) the policy recommendations for inflation had also to consider the structural factors which, he claims, resulted from the long-term inflation--these had to be eliminated. (40)

(39) Joseph Grunwald, "The 'Structuralist' School on Price Stabilization and Economic Development: The Chilean Case", in Hirschman, ed., Latin American Issues: Essays and Comments, p. 102.

(40) Schott, op. cit.

But what were the precise recommendations of the Klein-Saks Mission? They fall into six categories.

I. <u>Fiscal Policy</u>

An attempt was to be made to eliminate the budget deficit. (41) Steps to be taken were a curtailment of expenditure on military supplies and overseas diplomatic missions, and on public works which could be postponed. Food subsidies were to be eliminated and public services were to be priced at higher rates. Reform of the tax system, with stiffer penalties for evasion, was recommended; the ultimate goal was to be pay-as-you-go taxation. In addition, tax assessments were to be linked to cost-of-living increases.

II. <u>Public Administration</u>

Besides the steps to be taken under I., there was to be a rationalization of the public service in such areas as salary scales and fringe benefits.

III. <u>Monetary Policy</u>

Assignment of credit quotas to each commercial bank by the Central Bank was to be the primary target. The desire was for a reduction in profit margins, combined with a still satisfactory supply of credit to businesses for purposes of production. In addition, the rediscount rate was to be raised, and some reforms were to take place in the practice of rediscounting. The ultimate aim was to employ the methods of the interest rate and reserve ratios to serve as rationing devices for credit.

IV. <u>Wage and Salary Policy</u>

The annual adjustment of wages and salaries was to be below the rate prevailing during the previous year; to lessen the hardship this would create, family allowances were to be increased. In the end, the

(41) Interestingly enough, a budget deficit in Chile is contrary to law. This "technicality" is usually skirted by means of a balanced budget at the beginning of the year followed by special legislation to permit additional borrowings to meet rising expenditures.

Mission wanted the wage-salary determination process to be returned to the market place and taken out of government hands.

V. Prices and Subsidies

Prices were to be freed from the controls placed upon them and subsidies on goods and services (e.g., government services) were to be removed. Tariffs were to be employed in place of quotas and anti-monopoly legislation was to be introduced.

VI. Foreign Exchange Policy

The multiple rate system was to be consolidated into two rates, one for merchandise transactions and the other to cover capital transactions and tourism (42); both rates were to be flexible, although in emergencies the Central Bank could step into the market to buy or sell, in order to maintain a rate of exchange. Tariff rates were to be adjusted to correspond with the rise in the exchange rate in order to maintain fiscal revenues. Import licensing was to be replaced by a single list of permitted imports. Importers were to be required to deposit with the Central Bank, for a specified period of time prior to the arrival of the goods, quantities of pesos bearing varying ratios to the peso price of the goods; these ratios would be established by the Central Bank according to the availability of exchange and the essentiality of the imports. In the long run, the goal was to achieve one rate of exchange, to eliminate such things as deposits on imports and an import list; also desired was a reform of the tariff system to match fiscal needs and anti-combines needs.

The approach was, clearly, a gradual one. Schott claims that the Mission saw a "crash programme" as futile. One could not avoid the fact that upward salary adjustments had been traditionally associated with cost-of-living increases. Also the rises in wages

(42) The rate for capital transactions with copper companies had itself been different from the trade rate for other companies. See United Nations, Foreign Capital in Latin America, (New York, United Nations Department of Economic and Social Affairs, 1955).

could not be expected to be financed out of profits, and drastic reduction in the government budget would require mass firings of civil servants, the consequences of which might be imagined.

For the most part, none of the policy measures recommended was particularly novel. Many suggestions about the mechanics of controlling the inflation had been put forward in the Central Bank's document of 1955. (43) The restriction of wage and salary adjustments was attempted in 1955-56, and the exchange rate reform had been anticipated in 1953. The import deposit scheme was new to Chile but had been attempted elsewhere, as an alternative to quantitive import restrictions.

The Mission in its recommendations resembled the Kemmerer Mission of 1925 more closely than it did either the U.N. or the I.M.F. Missions of 1950; the latter two introduced novel concepts and approaches, but the former two drew largely on what already existed. But the Kemmerer Mission was in Chile during a period of absolute authority for Alessandri; Ibanez, however, had lost most of his political power and any prestige that might have been associated with his election victory by the time 1955 arrived. The power vacuum that existed was filled by Klein-Saks for the period 1955-56: "The Klein-Saks Mission had no compunction about assuming a role inherited by default of the usual carriers of authority." (44) It became very closely involved in the day-to-day activities of stopping inflation,

(43) An Appendix to the Monthly Bulletin, May-June, 1955.

(44) Hirschman, op. cit., p. 206.

for it was not prepared simply to write a report containing recommendations. "Instead, by its memoranda on specific questions, its lobbying in Congress, and its general matter of operations, it in effect usurped the role of policy-maker." (45) Such action produced substantial criticism of the Mission and made its relations with Chilean economists and other groups even more strained.

But what of the Mission's results? The timetable it initially set called for cutting the rate of inflation in half in 1956, and again in half in 1957. This was achieved: the rate in 1957 was 25.9%. But by the end of 1957, the zeal for stabilization was slackening, probably the result of the gradual approach which had been chosen. Unemployment was rising: in December, 1955, the employment index was 107.7, (the index of employment for all of 1956 being 100), in December of 1956, 96.5, and in December, 1957, 88.4. (46) The adjustments of wages in 1956 and 1957 produced declines of 12% and 1% respectively in the real minimum wage. G.N.P. per capita declined 7.9% in 1956 although it rose 1.1% in 1957 and 1.3% in 1958. Real gross investment fell by 4.7% in 1956, rose by 14.4% in 1957, but fell again by 1.6% in 1958. (47) The distortions which had tended to be covered over by the high rate of inflation were now laid bare by the

(45) Ibid., p. 207.

(46) Davis, op. cit.

(47) Ricardo Ffrench-Davis, Three Stabilization Programmes, Ph.D. Thesis Prospectus, University of Chicago, August 8, 1967, pp. 3-5. Most of the increase in 1957 was due to foreign investment in copper mines, and not to domestic investment.

modest stability that was achieved.

The stabilization programme had, by 1957, begun to run into opposition. The external sector was weakened by a fall in the world copper price from 44¢ per pound in 1955 to 27.9¢ in 1957. (48) Chile was thus forced to rely to a large extent on foreign borrowings to finance imports which reached, that year, the highest dollar value in Chilean history. The country was left with a very serious problem of debt servicing for the next few years. One opinion on the difficult period tends to downgrade the significance of exports: "The most obvious reason for this relative failure is that only part of the emergency measures and none of the long-run steps were carried out." (49) The Mission had warned of the danger of attempting to stop the wage-price spiral simply by freezing wages; it felt that were this to be done, not only would all the burden be placed upon the wage-salary class, but the possibility of a "revolution of the social order" would be increased. In the end more problems than ever would be created.

The Left in Chile did not press for implementation of the short run measures, "preferring to oppose the whole programme for longer-run political advantage". (50) The Right, made up of business and agricultural interests, opposed the Left and the long-run proposals, for these were clearly directed at property income. (51)

(48) Felix, <u>op. cit</u>., p. 134.

(49) <u>Ibid</u>., p. 131.

(50) <u>Ibid</u>., p. 131.

(51) An interesting explanation of the way in which the Right has emerged in Chile is found in Fernando H. Cardoso, "The Entrepreneurial Elites of Latin America", <u>Studies in Comparative International Development</u>, 1966, pp. 151-52.

With the 1957 fall in copper prices came a decline in tax revenues from the large copper companies. The government increased its borrowings from the Central Bank; this constituted a break in the progress that had been made towards elimination of government borrowing from this source. In 1956, Central Bank credits to the government had declined.

In 1958, the adjustment of minimum wages and salaries rose to 100% of the inflation rate of 1957, compared with adjustments of 50% for 1956 and 80% for 1957. From 1955-57, moreover, a drop occurred in the relative share of income and/or consumption going to wages and salaries. This lent some plausibility to the thesis about inequality of sacrifice. Part of this decline may have been due to a greater drop in employment than in output in the manufacturing and other high wage sectors and to a shift of labour to such sectors as services where wage adjustments were slow; in fact, the wage-salary adjustments which took place usually equalled or exceeded the increase in cost of living which had occurred in the previous year. The main point is, however, that organized labour and other groups on the Left were not convinced that the propertied classes were willing to bear some of the burden and the former groups were able to organize resistance to the programme.

On the exchange question, some progress was made towards adopting the immediate reform proposals; in 1956, with the assistance of short-term credits from the U.S. and the I.M.F. the system was consolidated into two rates. These rates involved a substantial devaluation, but no special tax on windfall profits from exports, as was recommended, was instituted. No progress was made towards the longer-term objective of a unified rate. The rate for capital transactions and tourism was allowed to float but that for manufacturing transactions was kept fixed by the Central Bank.

While the Mission managed to lower the rate of bank credit expansion, it did not achieve its goal of having the rate of interest act as the signalling device. For the years 1956-68, the real rate remained negative. (52) Credit quotas became the chief method of restricting credit, for rediscount rates were far too low to discourage borrowing.

To attempt to determine in detail why the stabilization effort did not live up to expectations will not be done here. A variety of theories on stabilization will be presented below and in Chapter IV and from these one can learn something about the Klein-Saks experience. The fact that the inflation was slowed down to 25% from 74% in the space of two years need not be attributed solely to the Mission. Even in 1955, encouraging signs were emerging in Chile of a new awareness of the need for reform. The Mission may have helped this process to take shape but it cannot claim the entire credit for any success; neither should it be denied any recognition due it.

(e) From 1959 to the Present: Recent Inflation and Stabilization Attempts

While the Klein-Saks stabilization period is the most important

(52) -23.8% in 1956, -2.9% in 1957, and -16.8% in 1958. This compares with -43.6% in 1953, -57.9% in 1954, and -69.6% in 1955. See Charles T. Nisbet, A Model for Analyzing Some Effects of Discriminatory Credit in Chile, Land Tenure Centre Reprint No. 34, University of Wisconsin, May, 1967.

one in the study of the Chilean inflation, two other attempts at stabilization have been made since that time.

The programme of 1959-61 put great emphasis on the external sector. The exchange rate was finally unified, after a readjustment of its value. A new currency unit was created, the escudo (one escudo = 1,000 old pesos). The Central Bank revised and strengthened the system of credit controls and the government stopped the Central Bank practice of rediscounting to the commercial banks.

The programme was begun in the middle of 1959. Most of the efforts preceding this one had begun towards the end of the year and the first task facing the government was the wage-salary adjustments at the beginning of the next year. Such practice "aroused considerable resistance which either killed the whole effort as in 1950 or definitely tagged it as unfairly anti-labour from the start". (53) In this instance, the programme was begun in April, 1959, which gave the government some months of anti-inflationary efforts; by the time next January came the government could point to the necessity of wage-salary restrictions in order to avoid destroying the programme entirely.

By August of that year, prices had virtually stopped rising. Public confidence in the government was high and international credits were secured. Imports were liberalized somewhat, despite the continuing necessity of import deposits; they served to complement internal supply and provided some competition to domestic producers.

In 1960, the wage-salary adjustments were held to 10-20% compared with the previous year's rise of 33%. Former businessmen

(53) Hirschman, op. cit., pp. 218-19.

turned cabinet ministers attempted to persuade the business community to absorb these increases out of profits. In 1960, prices rose only 11.5%. (54)

However, in 1960 industrial production was still slow. Real G.N.P. per capita grew by only 0.5%. (55) Exports failed to increase at a rate satisfactory to match the rate of growth of imports--26% for exports versus 56% for imports. One-third of the increase in exports, says Ffrench-Davis, was due to an increase in external prices. The exchange rate as set in 1959 was not altered in the face of necessity for change: its failure to be readjusted was the symbol of stability but also was one of the main sources of the failure of the programme of stabilization. By the end of 1961, the Central Bank had to suspend all foreign exchange operations because the international reserves had been exhausted. This was effectively the end of the stabilization programme, although the government delayed a substantial devaluation until the end of 1962. The cost of living rose 13.7% in 1962, after being held to 7.8% in 1961. (56)

The third attempt at stabilization in ten years began in 1964.

> The most notable characteristic of the third programme is that it constitutes only one segment of a broad programme of economic and social development. As such,

(54) While the price rise was low, the current bank interest was still in keeping with previous years. Hence the real rate of interest was 11.3%.

(55) Ffrench-Davis, op. cit. This compares with a decline of -0.8% in 1959.

(56) David Redding, Chile Again Tries Gradual Stabilization, Federal Reserve System, July 13, 1967. He employs I.M.F. statistics.

> stabilization goes together with economic development and social reforms. In that framework, stabilization was to be achieved in gradual form. (57)

This programme has been introduced by the Christian Democrats under the leadership of Eduardo Frei. (58) Redding describes the government as attempting to redistribute income towards the agricultural sector and the poorer classes. (59) Fiscal reform has involved tax reforms designed to improve collections; greater reliance has been placed on property and income taxes and less on foreign trade levies. This has resulted in an increase of 50% in real revenue from 1964-66. On the wage-salary front, the adjustment mechanism has taken into consideration productivity advances. Selective credit devices were overhauled and made more restrictive. The exchange rate was to be adjusted monthly rather than on a less frequent basis.

In the years of the programme for which details are available inflation had declined from an annual rate of 45% to 17% in the years 1963-66. There is some evidence of a decline in the velocity of money, a fact which could signify a moderation of the inflation psychology.

(57) Ffrench-Davis, op. cit., p. 9.

(58) While this party was initially, in the late 1930s, formed by disillusioned young Conservatives, it now stands at the left-centre of Chilean politics. It is similar to the Christian Democratic parties of Europe. Eduardo Frei was influenced by Jacques Maritain, a Christian philosopher, who argued that pluralistic democracy in an environment of guaranteed personal and political freedom was the form of government most consistent with the Christian Gospels. See Paul E. Sigmund, "Christian Democracy in Chile", Journal of International Affairs, 1966.

(59) Op. cit., p. 5.

The budget deficit declined from 19% of total government expenditures in 1962 to 12% in 1965. The growth rate of G.N.P. per capita rose from 1.8% in 1964 to 5.0% in 1965, and 5.4% in 1966. (60)

Recent data show a rate of inflation in 1968 of 27.9%, and in 1969 of 29.3%. (61)

Given this history of the inflation in Chile, what now must be done is to consider the monetarist-structuralist approaches to the study. While the debate over this issue has continued for a fairly long period of time, neither school has produced a full-scale analysis of the Chilean inflation in terms of the effects the inflation has had upon economic growth, income distribution, and other economic variables.

What each school has done has been to state its principles--as has been done for each in the preceding chapter--and then to do some analysis on Chile, from the standpoints of either the way in which inflation has proceeded, or the reasons why one method of analysis is best for Chile. Hence we have Harberger's "The Dynamics of Inflation in Chile" (62) describing the intiating and transmitting mechanisms of the inflation, and Sunkel's "Inflation in Chile: An Unorthodox Approach" (63) which outlines the reasons for doubting the legitimacy of the monetarist approach.

(60) Redding, op. cit.

(61) International Financial News Survey, June 19, 1970, p. 200.

(62) In Carl F. Christ, ed., Measurement in Economics: Mathematical Studies in Economics and Econometrics in Memory of Yehuda Grunfeld, (Stanford, Stanford University Press, 1963).

(63) International Economic Papers, Number 10, 1960.

What will be done now, therefore, will be to consider the elaborations by these observers and others on the events in the inflationary process and the way in which structuralist theory has been applied to the Chilean experience. With those elaborations and clarifications complete we can proceed in the next chapter to the analysis of the consequences of the inflation.

3. The Monetarists and the Chilean Inflation

For pre-1950 analysis of the Chilean inflation, one can turn to Horsefield. He attributes the inflation in this period largely to government deficit spending: "a major factor in the continuous expansion of the money supply". (64) The deficit arose because of an increasing intervention on the part of the government in economic activity, such as subsidies to agriculture for price supports (65), subsidies for housing, and subsidies to industry for purposes of diversification. Combined with these were the traditional expenditures on education and defence.

In addition was an export surplus, resulting in a further increase in the money supply. Adding to the high level of demand was private construction: this is testified to by increases in annual issues of mortgage bonds from 1940-46. (66)

(64) Op. cit., p. 187.

(65) Some observers would question how important this was. See Chapter IV.

(66) Horsefield, op. cit., p. 187.

Finally, commercial bank credit expanded throughout the period. "The credit policy of commercial banks has been lenient, the reserve requirements rather low, and the discount policy of the Central Bank liberal." (67) Much of the bank credit, he says, went to the agricultural sector.

In another article on the 1940-50 experience of Chile, David Grove (68) attempts to show by how much the increases in the money supply were excessive. He points out that import prices rose substantially over the period 1940-50. (69) Over the same period, real G.N.P. rose 24.5%. Grove then asks the question of what ought to have been the policy of the Chilean government regarding the price level and the money supply, given the growth in G.N.P. and price of imports, and assuming that the exchange rate could not be employed as an equilibrating mechanism. Had price stability been the goal, in some years a very restrictive monetary policy would have been required. What he calls a "more reasonable monetary policy" would have meant allowing the prices of domestic goods to rise along with the rising import prices.

He maintains that the velocity of money remained stable over the period. The economy had by then become adjusted to a fairly steady rate of inflation over a period of years "so that money was no longer regarded as a store of value". The product velocity of money (G.N.P./Supply of Money) remained around 6.9.

(67) Ibid., p. 187.

(68) "The Role of the Banking System in the Chilean Inflation", International Monetary Fund Staff Papers, Volume II, 1951-52.

(69) While he had no data on the index of foreign prices of Chilean imports, he approximates by means of the U.S. wholesale price index for manufactured products: from 1940-50, this rose 104%.

Assuming that the product velocity of money would have remained fairly constant and that the annual growth rate of national income was likely to remain relatively unchanged, Grove presents Table I on page 103.

Grove's conclusion is very forthright. "With the exception of three years (1941, 1946, and 1950) the banking system expanded the money supply far beyond what would seem to have been appropriate." (70) The reasons for such expansion are familiar: passive rediscounting procedures by the Central Bank, with the rediscount rate below the rate of inflation. A low rate of interest on loans to the public by the Central Bank encouraged borrowing by the public.

Arnold Harberger has provided some of the most careful analysis of the Chilean inflation, in terms of its sources and the way in which it has proceeded. (71) He claims that experience in Latin America has shown that if the money supply expands by more than 10% per annum for a period of several years, this will be likely to produce a "serious inflation". To avoid inflation, he continues, a country in Latin America has to expand the money supply at not more than five per annum. To keep monetary expansion within such "prudent limits", the "most important force is fiscal restraint on the part of the government". (72)

(70) Ibid., p. 39.

(71) Harberger is usually described as a monetarist, a title he likely warrants. However, he has shown considerably more sympathy to the problems of Latin American countries suffering from inflation than has been the case with many monetarist writers.

(72) The Inflation Problem in Latin America, p. 3.

Table I

Changes in the Money Supply

1941-50

Year	Percentage Changes in Money Supply Necessary to Correspond with Increases in: Real G.N.P. (1)	Foreign Prices of Imports (2)	Total "Appropriate" Percentage Changes in Money Supply* (3)	Actual Percentage Changes in Money Supply (4)	"Excessive" Percentage Increases in Money Supply (5)
1941	11	14	27	23	-4
1942	0	5	5	23	18
1943	3	1	4	27	23
1944	4	1	5	15	10
1945	6	1	7	16	9
1946	0	32	32	27	-5
1947	0	14	14	21	7
1948	5	2	7	14	7
1949	3	0	3	19	16
1950	0	14	14	16	2

* This figure is calculated by adding 1.00 to the percentage figures of columns (1) and (2), expressed decimally, taking their product, and then subtracting 1.00.

Over the period 1958-65 (73), he calculates that the percentage increase in credit extended by the banking system as a whole to the government was 4210%. (74) In contrast to that, the actual increase of the money supply was only 555%. He suggests that if the banking system had responded to demands for credit from the private sector in the same way it responded to demands from the public sector, the money supply would have increased by 4210%. Harberger claims that one can say that if government credit expands by x%, then a plausible consequence is an expansion of private credit by the same x%. To the private sector, bank credit "performs a real economic function", and if this sector suffers a curtailment in the amount of real credit available to it, its reaction may be to reduce its level of investment, with repercussions on employment, output and growth. (75) His stated conclusion is that, "It would have been virtually impossible to avoid serious inflation....given the demands placed on the monetary system by the government". (76) He thus accuses the government of being the stimulus to inflation in Chile (although this was not the case in other Latin American countries). His implied conclusion is that because the

(73) While he does not specify the period, given the date of publication it is probably 1958-65.

(74) Ibid., p. 5.

(75) In addition, he points out that as private credit continues to be squeezed by government demands for credit, public sector credit becomes a larger fraction of total credit and expansion of it is offset only with difficulty by further contractions of private sector credit.

(76) Ibid., p. 5.

money supply did not expand in proportion to the increase in credit to the government, there was a squeeze on the private sector.

On the issue of exchange rate policy, Harberger points up the need for expansion and diversification of exports and then says that the courses of action followed by Latin American governments have been opposite to those which ought to have been followed. There has been a disincentive to export due to an overvalued exchange rate as well as due to uncertainty over what the exchange rate will be at any given time. He has calculated the "real exchange rate" of Chile: the ratio of the actual price of the dollar in terms of the peso to the wholesale price index of home goods. The results of the calculations can be found in Table II on page 106.

Harberger recognizes that the choice of a base period is important but claims that the real exchange rate in the first quarter of 1959 was not excessive: rather it was sufficient to have given a "substantial stimulus to the development of new export products, had (it) only been maintained through time". (77) He doubts that any export industry would have had a rate of profit higher than 15% on sales. Had one had such a rate of return with a real exchange rate of 100, no profits would be made when the real exchange rate reached 85 (assuming, of course, that the costs of the industry varied with the internal price level). In Chile, zero profits would have been recorded in the third quarter of 1964 even by an industry with a 30% profit rate in 1959.

(77) Ibid., p. 34.

Table II

Real Exchange Rates for Chile

1959-65

Year	Quarter	Real Rate
1959	I	100
	II	88
	III	80
	IV	81
1960	I	81
	II	80
	III	77
	IV	77
1961	I	80
	II	80
	III	78
	IV	77
1962	I	77
	II	77
	III	73
	IV	96
1963	I	96
	II	88
	III	84
	IV	89
1964	I	79
	II	73
	III	70
	IV	76
1965	I	75
	II	72
	III	73

But in addition, the uncertainty surrounding the level of the exchange rate was equally deleterious to the earning of foreign exchange. (78) If a firm's profit picture is likely to be tied to the real exchange rate, the variability of the rate over a short period will discourage investment.

> Rather than ex pose their investments to great dependency on government policies that have historically been very erratic, businessmen seek instead outlets for investment that are either relatively insulated from the likely areas of government policy action, or that depend on government policies (such as import prohibitions or high tariff protection) that are unlikely to change adversely in the future. (79)

This would appear to be the case in Chile. (80)

Harberger has also done some research on the effects that rising wages and an increased money supply have upon the rate of inflation. He recognizes that the place of wages in the inflation in Chile has generated substantial controversy. Two ways to regard the inflation and its causes are either (a) that wages are passive and and that monetary factors explain the inflation, or (b) that wages are the principal factor in explaining the inflation and once they have

(78) "In periods of inflation, fixed rates, single or multiple, inevitably generate the impression that devaluation will eventually become unavoidable." Roberto do Oliveira Campos, "Inflation and Balanced Growth", in Howard S. Ellis, ed., Economic Development for Latin America, (London, Macmillan, 1961), p. 98.

(79) Harberger, The Inflation Problem in Latin America, p. 35.

(80) Campos agrees with this explanation. He claims that the results of "multiple overvalued exchange rates" (as found in Chile) would be a "progressive decline of the quantum of exports, leading to a retardation of growth in the export sector and a shrinkage in the capacity to import". "Inflation and Balanced Growth", p. 98.

been considered, monetary variables are simply passive. (81) Both these views are extreme and a middle view, which seems realistic in light of Chilean conditions, would allow for each factor to play a role in the inflation.

A "wage-push" explanation, he feels, cannot be utilized in explaining agricultural prices or rents. The relationship between wages and prices is better for the industrial sector, but even here price rises may have been made simply in conjunction with a rise in the "sueldo vital"--the minimum salary paid to white-collar employees in the public service--rather than as a result of the higher wage costs; this explanation takes into account the market structure of Chilean industries, which many feel is uncompetitive.

For Chile, Harberger finds that wages have not been the main factor in the inflation.

> A monetary policy that was generally easy, that tended to finance wage rises even in its tighter periods and to overfinance them by varying degrees in its looser periods, would tend to produce the sort of results we have observed for Chile, the typically higher partial correlations between monetary variables and the rate of inflation than between wage changes and the rate of inflation. (82)

He calculates that a 10% increase in the money supply will, in the end, yield an 8% increase in the price level, while a comparable rise in wages yields a rise in the level of prices of 1.5%. Harberger estimates that two years are required for an increase in the money

(81) The "sophisticated" version of this argument would allow for certain variability of velocity of money over a range and this would permit prices to adjust to wage changes, even without a change in the money supply.

(82) "The Dynamics of Inflation in Chile", pp. 248-49.

supply to have its full effects on either the wholesale price index or the consumer price index. Described above was the difference in relationships between the wage-push factor and the various components of the indices. The food and clothing prices indices respond within the year, house rents respond usually a year after the money supply increase has occurred, and industrial goods prices are somewhere in between; about half their response occurs within six months after the increase in the money supply.

What does seem reasonable to Harberger is that a wage-price spiral may be present in Chile. The correlation between a rise in wages at the beginning of year (t) and the change in the money supply during year (t) is 0.66 (83) suggesting that "wage changes may have been one of the important factors influencing monetary policy decisions". The same correlation exists for the change in the money supply during year (t-1) and the wage change at the beginning of year (t). The spiral would result from monetary policy in the preceding year having an effect on the adjustment in the sueldo vital at the beginning of the next year, which in turn determines monetary policy for that year.

Harberger feels that the Central Bank had no real autonomy. It was forced by law to purchase securities offered by the government, to buy and sell foreign exchange at the rates in force, and to rediscount commercial paper from the private banking system at a rate lower than the rate of inflation.

> These provisions, particularly the last, precluded the Central Bank from exercising the 'normal' means of control over its portfolio and over the size of its

(83) Ibid., p. 245.

> note and deposit liabilities, which formed the base of the Chilean money supply. It is difficult to see how in these circumstances the Central Bank could have followed a policy of general restraint, yielding, when it yielded, only to just finance (but not to over-finance) recent wage rises. Hence it should not be surprising that during the period of this study, money-supply changes tended more often to outstrip than to lag behind wage changes, and that wages played much more a transmitting than an initiating role in the Chilean inflation. (84)

The monetarists build a good case. All three authors considered point to the increases in the money supply as being the prime source of inflationary pressure in Chile. Horsefield looks also at the foreign exchange which was monetized during the 1940s and regards this as a contributing factor. Harberger's analysis of the "dynamics" of the inflation looks more at the wage-price spiral than at the source of the inflation. The importance of his study is that the pointing up of the wage-price spiral serves to discredit any who might claim benefits from inflation: few benefits are to be found in an uncontrolled spiral.

4. The Structuralists and the Chilean Inflation

While the above analysis is important in an understanding of the Chilean inflation, does it really refute the arguments of the structuralists? They may well claim that an assertion that the money supply is the primary cause of the inflation is irrelevant to the argument: to them, either wages or monetary policy could be the initiator of the inflation. They recognize, of course, than an increase in the money supply is necessary for inflation to proceed. But what

(84) Ibid., p. 245.

they do suggest is that an increase in the money supply is not an autonomous factor, that for the society to grow and to remain politically stable in the face of such developments as declining terms of trade and stagnating output, an expansion in the money supply must occur.

Osvaldo Sunkel is generally credited with having produced the seminal article on structuralism in Chile. (85) For a variety of reasons, Sunkel suggests that the Chilean inflation is somewhat "peculiar": for one thing, he says, the inflation has been secular but has not resulted in a breakdown in the productive system when the inflation has become a "runaway" inflation. (86) Secondly, says Sunkel, some of the traditional features which often accompany inflation have been absent, until just recently: redistribution of income against fixed income earners, the shunning of money as a means of exchange, and overinvestment in inventories. (87)

Given these peculiarities, Sunkel asserts that, "It would therefore seem logical that neither the diagnosis nor the remedy lie in

(85) "Inflation in Chile: An Unorthodox Approach".

(86) Grunwald, another structuralist, explains this by saying that the mechanism which emerged for defending the interests of each group in society, i.e., the wage-salary adjustments brought in annually by legislation, and the ability of businesses to obtain bank credit, in the end helped to prevent a panic and a hyper-inflation by bringing a certain self-confidence to the community. "If among the factors of hyper-inflation is public panic, then the defense mechanisms which the Chilean community has built up over the years have helped to avoid it--no matter how inflationary these mechanisms may be in themselves." Grunwald, op. cit., p. 101.

(87) "Just recently" to Sunkel means 1955-57, for his article was written in 1958.

the analysis and policy traditionally followed". (88) The alternative that he offers to the "traditional" method is to analyze the inflation "in the light of a distinctive interpretation conditioned by the reality to which it purports to apply"--namely the historical, social, political, and institutional evolution of the country. Sunkel claims that the traditional method was essentially short-term in nature and involved identifying those groups responsible for the inflation--such as the government or the Central Bank. This method was itself scarcely able to trace the path of the inflation in the financial sphere and could provide no real explanation of the causes of the inflation or of what has made it continue.

He makes the usual structuralist assertion that a fundamental interdependence exists between the growth process and inflation and claims that once this is accepted, one can produce a model in which the "primary" and "derived" factors in the inflation can be arranged in conjunction with the structural conditions of the country. In the process, the primary and secondary causes of the inflation can be separated and one can understand precisely how the inflation proceeds. This is what he attempts to do for Chile.

Sunkel looks back to the 1920s in his explanation. At the end of that decade, Chile, along with some other countries in Latin America, namely Argentina, Brazil, and Uruguay, had achieved a fairly high level of per capita income, at least for their urban populations. The population had become concentrated in the cities and the crisis of

(88) Sunkel, op. cit., p. 108.

the 1930s produced substantial unemployment in the urban areas. A beginning had been made at the development of a manufacturing sector. The severe effect of the Depression and the fall in export sales produced strains on the economy, but, Sunkel claims, "social and political pressures made it impossible to impose a downward adjustment process". (89) The response to this was to isolate the domestic economies via external protection and to attempt "to maintain the level of income, by means of a policy of deficit financing brought about by government purchases of export surpluses and/or by measures to cope with unemployment". Import substitution was to serve to fill the gap in imports which would be created.

> But since the pre-crisis level of exports was not restored to these countries until after the war, while income levels were kept high and expanding and industrial production could not increase substantially in the short run, the adjustment between total demand and supply necessarily involved not only strong increases in the price level but also a major change of relative prices in favour of manufacturing. (90)

To the extent that 1940 is generally accepted as the beginning of the modern inflation, Sunkel may be correct in this explanation for the generation of the inflation. However, also at issue are the basic structural features of the Chilean economy which have continued to produce inflation.

He puts forth three sources of inflationary pressures:

(89) "The Structural Background of Development Problems in Latin America", Weltwirtschaftliches Archiv, 1966, p. 50.

(90) Ibid., p. 51.

(a) "Basic" pressures: These are essentially the lack of mobility among sectors of productive resources and the failure of the price system to function properly. In Chile, he claims these are four: (i) the stagnating food supply; (ii) the foreign exchange bottleneck; (iii) an inadequate rate of capital formation; and (iv) the inefficient tax system. "Stability cannot be restored unless they are eliminated." (91)

(b) "Exogenous" pressures: These include a rise in the price of imported goods and "major increases in public expenditure arising out of a national calamity or political measures". (92)

(c) "Cumulative" pressures: These are induced by the inflation itself and become more important as the inflation continues and becomes more severe. In Chile, these include the harmful effects of price controls, misallocation of investment funds, and the altering of economic expectations.

Given these pressures, they will not all emerge without what Sunkel calls a "propagation" mechanism. In the case of Chile, this propagation mechanism has been the "result of the political inability of Chilean society to solve in some way two major struggles of economic interests", i.e., the struggles over income distribution among different social groups and over the distribution of productive resources between the public and private sectors. (93)

In the matter of rigid food supply, Sunkel points out that food supplies increased insufficiently between 1940-52, given the growth of other parts of the economy. With an index for 1940 = 100, Sunkel

(91) "Inflation in Chile", p. 110.

(92) Chile has suffered, of course, from severe earthquakes. "Political measures" could include almost everything.

(93) Seers suggests that the stagnation which has emerged has meant that "all groups struggled hard to achieve rises in income, so as to avoid declines in standards of consumption, and cumulative forces have proved persistent". "A Theory of Inflation and Growth in Underdeveloped Economies Based on the Experience of Latin America", p. 187.

provides the following indices for 1952:

Agricultural production	104
Wage-earning population	127
Population not engaged in agriculture	151
Real national income	167
Real national income per wage-earner	132
Real consumer expenditure on food	157

In conjunction with this failure of agricultural production to match growth in other sectors, he points out that for the same period the ratio of the agricultural wholesale price index to the general wholesale price index has had a persistent trend in favour of agricultural products. The index was rising from 1933 but for minor declines in 1938, 1942, and 1948. In addition, the index of relative prices of agricultural inputs and outputs has shown a rising trend, in favour of agricultural output prices. Given these facts, Sunkel claims that "the stagnation of global agricultural production (in Chile) cannot be attributed to market, demand, and/or price conditions ...." (94) Instead, it must be due to factors present in the "institutional and economic structure" of agriculture itself.

One of these factors is the great inequality in land holdings; if one accepts the argument that productivity is low on latifundia then Table III demonstrates precisely how this factor is instrumental in holding down agricultural output.

(94) "Inflation in Chile", p. 115.

Table III - Chilean Land Tenure (95)

	Sub-family	Family	Multi-Family Medium	Multi-Family Large
Number of farm units	36.9%	40.0%	16.2%	6.9%
Area in farms	0.2%	7.1%	11.4%	81.3%

As to the foreign exchange bottleneck, Sunkel notes that, with 1940 = 100, the purchasing power of exports had risen to an index of 115 by 1952. This slow development of Chilean exports has been insufficient to match the growth in import demand stemming from the growth in income and in population. Import substitution also requires imports for construction of plant and equipment. And the lagging agricultural production has meant that Chile has had to import a great amount of food. (96) The problem of low foreign-exchange earnings has been accentuated by short-term fluctuations in export prices. The price indices for copper for the period 1948-59 are found in Table IV.

Table IV - World Copper Prices

Average for Period = 100

1948	58	1954	108
1949	58	1955	153
1950	78	1956	143
1951	96	1957	95
1952	113	1958	86
1953	111	1959	104

(95) S. L. Barraclough, and A. L. Domike, "Agrarian Structure in Seven Latin American Countries", Land Economics, 1966. The sub-family category refers to farms large enough to provide employment for fewer than two people. The "family" farm is one large enough to provide work for two to four people, assuming most of the work is carried out by members of the family. The multi-family medium farm provides employment for from four to twelve people, and the multi-family large category refers to those which can provide employment for more than twelve people.

(96) Grunwald notes that whereas in 1940 foodstuffs amounted to six per cent of the total value of imports, in 1954-59, the average

The average fluctuation was twenty-two. (97)

Both the above factors, the slow growth and the fluctuations, are responsible, Sunkel claims, for repeated devaluations. The devaluations have been particularly hard on Chile, because industrial production depends largely on imported inputs and for a long time depended almost entirely on imported fuels and lubricants; food imports were also considerable.

The low rate of capital formation is seen as contributing to the inability of the economy to absorb the growing manpower which developed from the population growth. This has meant that a large part of this "excess" labour force has gone into the services sector where productivity is low. Partly responsible for this low rate of capital formation has been the spending habits of the upper-income groups. While differences in opinion may arise as to whether or not this is a structural factor, what is clear is that the upper classes are inclined to consumption more than are their counterparts in other countries. Kaldor has calculated that were the ratio of consumption

was 19% for foodstuffs. Much, but not all, of the increase is accounted for by "non-competitive" imports, such as tea, coffee, and sugar.

(97) Sunkel, "The Structural Background of Development Problems". He uses data from the United Nations, Monthly Bulletin of Statistics. The calculation for the average fluctuation was made with this formula

$$\text{Average Fluctuation} = \sum_{i=1}^{n} \left| \frac{x_i - 100}{n} \right|$$

where x_i is the price index for copper and n is the number of years covered by the index.

to income derived from property reduced to the level found in Britain, i.e., 30%, the personal consumption expenditures of this group would fall from the present 21.1% of national income to 10.3% of national income. "The freed resources would be more than sufficient to double investments in fixed capital and in inventories. This means that according to the official estimates, net investment would increase from 2% to 14% in net national income." (98)

The tax system has been incapable of adjusting revenues to the requirements of government expenditure. The largest single source of taxes has been the export sector, but the importance of this source has declined due to export stagnation, and the reduction in the tax on differential rates for buying and selling foreign exchange (because the gap between the two has narrowed). The decline in taxes from this source has not been offset by an increase in taxes from internal sources, because of the inflexibility of the system, its regressivity, and its complexity.

Under the heading "exogenous" pressures, Sunkel lists general increases in salaries and wages and increases in import prices, accumulation of foreign exchange during the war, international instability, and again, national calamities.

He recognizes that, as inflation has continued, it has produced "cumulative" pressures. These include misallocation of investment resources away from goods and services whose prices were controlled and, presumably, away from those areas where the gestation period is long

(98) "Problemas Económicos de Chile", El Trimestre Económico, April-June, 1959, p. 196, as cited in Barroclough and Domike, op. cit., p. 405.

towards those where it is shorter. Inflation also affected productivity because of the number of strikes and work stoppages, but also it allowed numerous inefficient enterprises to exist; price controls and social security requirements absorbed resources.

As pointed out, the Chilean stabilization attempts have been the starting point for much structuralist analysis. Sunkel demonstrates that the 1955-57 stabilization attempt had serious repercussions on the Chilean economy. He calculates that in 1957, on a base of averages for the years 1953-55, the following had resulted from the attempts at stabilization:

(a) Gross production per capita had declined 8.8%.

(b) Real income per wage earner had declined 19.8%.

(c) The share of the wage-earning sector in total consumer expenditure was down 10.5%.

(d) Gross investment was down 24.4%.

(e) Construction was down 55.2%.

(f) The number of unemployment benefits authorized by social insurance was up by 428%.

The stabilization effort brought about a "regressive" shift in income distribution toward the private sector. (99) The share of

(99) In an analysis of Chilean income distribution, Sunkel presents this table for Chile in "The Structural Background of Development Problems in Latin America":

Percent of Population	1950-52	1954-56	1958-60
0 - 60	18.5	24.0	24.0
61 - 90	34.8	42.0	40.3
90 - 100	46.7	33.5	35.7

(The percentages are calculated as being of total income.)

If one considers what took place for the years 1954-60, there was the entrepreneurial sector in consumer expenditure rose by 10%. He questions the implication that this may not be too high a price to pay for stabilization on the grounds that this is not the real alternative involved. He argues that such is not the best way to achieve economic development, but that the public sector necessarily plays a "dynamic" role in development. He argues in fact that "the redistribution of income has considerably aggravated the maladjustments between the structure of production and the composition of demand". (100)

In an article dealing with stabilization plans of the Klein-Saks type, Sunkel generalizes for Latin America. His objections to this sort of programme are summarized in this quotation:

> (Those countries undergoing stabilization programmes) find themselves anew where they were five or six years ago, but with much larger external debts, having regrettably lost the opportunity to begin correcting some of their structural problems. Moreover, as a direct consequence of stabilization policy, the concentration of property and incomes has tended to become accentuated, a surplus of unemployed and under-employed manpower has been created or increased, investment for the replacement and enlargement of infrastructure capital has continued to be neglected, and the deep deficiencies in housing, health, and education have been intensified. (101)

in addition to the "regressive" shift towards the private sector, a shift towards the upper income group away from the middle income group. If the years 1950-60 are considered, the lower and middle income groups have gained at the expense of the upper.

(100) "Inflation in Chile", op. cit., p. 126.

(101) "El fracaso de las politicas de estabilizacion en el contexto del proceso de desarollo latinoamericano", El Trimestre Económico, October-December, 1963, p. 637, as cited by James H. Street, "The Latin American 'Structuralists' and the Institutionalists: Convergence in Development Theory", Journal of Economic Issues, June, 1967, p. 50.

In another article, Sunkel points out that almost all countries in Latin America show a substantial increase in G.N.P. growth in 1964, after some years of poor performance. He suggests that in some cases the acceleration of growth is due to more favourable terms of trade, but for Chile, "the considerable expansion of G.D.P. in 1964 is mainly the consequence of the resumption of expansionist policies after some years of stabilization or restrictive policies." (102)

David Felix, in his structuralist approach to Chilean inflation, concentrates on the failure of the stabilization programmes of 1955 and 1958. His contention is that the programmes did not achieve what they had set out to do, not because the authorities could not hold on long enough, or were not sufficiently cold-hearted, but that the programmes were simply not reallocating resources in the economy, "in the 'directions' needed to create viable growing economies". (103) He attributes this to "excessive confidence" in the workings of the price mechanism; this is a standard structuralist criticism of monetarist thought. But Felix also claims that the programmes did not take account "of the adverse effect of the import-substituting pattern of industrialization followed by...Chile on the structure of consumer demand and on the capacity to import". (104)

(102) Sunkel, "The Structural Background of Development Problems in Latin America", p. 26. He continues, "Therefore this cannot be taken as an indication of the initiation of another period of high long-term growth trends."

(103) "Monetarists, Structuralists, and Import-Substituting Industrialization: a Critical Appraisal", in Baer and Kertenetzky, _op. cit._, p. 371.

(104) _Ibid._, p. 371.

The programmes, he said, recognized supply rigidities which were retarding the growth rate; these rigidities were regarded more as results than causes of the inflation, and so the "distortions" which they involved were either the results of price expectations built up during the inflation (i.e., overinvestment in inventories and luxury construction) or of price controls (i.e., over-valued exchange rates and low agricultural prices). As to the first, Felix questions just how much of this has occurred in Chile; he suggests that inflated inventories are due as much to the fact that the economy is poorly integrated and higher inventories are required to account for this, as due to inflation. Other countries are better known, he claims, for their investment in luxury apartments. As for controlled prices, the real need was not so much to remove the controls altogether as to "change the relative position of controlled prices".

However, the main fact is that the programmes failed. Felix says this occurred mainly because the major rigidities in the economy were more firmly entrenched than had been expected; they were causes and not products of the inflation. To eliminate these rigidities, a reallocation of resources towards them was required; this the programmes did not do. The main effect of the programmes was to divert resources towards industries of fairly sophisticated technology--e.g., autos and electronics, to use his examples. These were not industries with export potential, and instead of resources going to such industries, the stabilization policies "continued the pattern of precocious widening of the industrial spectrum". (105)

(105) Ibid., p. 395.

Felix does undertake a fairly rigorous analysis of the programmes, and his essential conclusion is that of a structuralist, albeit somewhat different from standard structuralism. He maintains that the real problems of the less developed country are not solved by conventional policy measures. While he touches only generally on the bottlenecks, his assertion is that the problem will not be solved without meaningful redirection of resources to the slow-growth sectors: general policies will not achieve this. He does qualify for the structuralist school by his belief that the rigidities produce the inflation and are not produced by it. While his main emphasis is on the stabilization programmes for Chile, his message is essentially the same as that of Sunkel.

What remains now to be done is an assessment of the monetarist-structuralist explanations for the Chilean inflation. Involved in such an assessment will be a consideration of how well each theory fits the facts of the case. Baer has pointed out that one of the features of the debate over inflation is that both sides can find data and can point to events which will justify their point of view. (106) However, some judgment on the validity of the two positions will be made.

Also there will be a study of the effects the inflation has had upon the Chilean economy. Neither side has really done this; monetarists have generally been occupied with demonstrating how the inflation has been generated and some of the relationships in it, while the structuralists have often assumed only two alternatives to be facing the economy--satisfactory growth rates with inflation, or minimal growth

(106) Werner Baer, "The Inflation Controversy in Latin America: A Survey", Latin American Research Review, Spring, 1967, p. 3.

with stability. To my mind, this does not exhaust the possibilities, for there is no guarantee that the growth that is produced during the inflation is the type wanted or that the distortions produced by the inflation do not represent a greater burden than low growth. In addition, structuralists have not proved that the growth that supposedly occurs will eliminate the structural bottlenecks that they see as producing the inflation; if anything it seems that these bottlenecks are not eliminated through the growth-with-inflation process.

Chapter IV

Assessment and Evaluation of Inflation and Approaches to It

1. Introduction and Statement of Findings

As indicated at the end of the last chapter, the debate on inflation has not, in my opinion, really been resolved by the explanations and approaches of either of the two groups. This chapter will attempt to shed some more light on what has resulted from the Chilean inflation and it will also attempt to explain the cause of the inflation in Chile. The monetarist and structuralist theories are necessarily broad but they have not been able to fit their theories to the Chilean case in a satisfactory manner. Initially, therefore, the conclusions reached on the issue will be set forth and then some material will be presented to support the reasoning and to provide some amplification on what has been set forth in the above chapters.

The inflation is, essentially, a demand-induced inflation. The high level of demand has been fueled by a government deficit financed by borrowing from the Central Bank. The inflation is not, after many years, a structurally-generated inflation: structural causes are initial causes and do not explain why inflation should continue at a very high rate or why it should fluctuate from year to year, sometimes to a great extent. Structural bottlenecks have, nevertheless, made the inflation more difficult to control.

The bottlenecks which are acknowledged by both monetarists and structuralists appear to result more from policy than from autonomous forces. The agricultural and export sectors under Chilean government policy have been penalized and/or neglected in order to provide resources for the industrialization effort that has proceeded since the 1930s. The penalties, in the form of price controls and special taxes, have been instituted since that time in the attempt to control inflation. The penalizing of the export sector has contributed to the balance of payments problems although it cannot be regarded as the only source of difficulty, for markets for Chilean exports have been unstable and the net barter terms of trade have never regained their pre-Depression level. Controls on the agricultural sector have helped to produce food shortages; again this is not the sole source of difficulty, since the land tenure system has had a detrimental effect upon output from Chilean agriculture. But the controls and the lack of publicly-sponsored investment in agriculture have hampered efforts that might have been made within the sector in order to generate greater productivity.

The failure of the stabilization attempts can largely be explained, I feel, by the fact that the inflation has continued for such a long period of time that it cannot easily be arrested in a period of two or even five years. The economy has tended to adjust to the inflation and the adjustment process has meant that expectations have developed about future price rises, about the increases required in money wages in order to safeguard real wages, about the most profitable type of investment, given future prices and present interest rates, and about alterations in the exchange rate. These adjustments have meant, e.g., that long-established ideas on annual wage and price revaluations are held tightly and no group (understandably) wishes to be the first to make a sacrifice for the good of the country in general. In many ways, the inflation has been institutionalized and this means that a painful reorganization process is necessary if inflation is to be slowed down. The adjustments have taken many years to mature and cannot be smoothly undone in a relatively short period of time. The stabilization effort fails because the problems and pressures generated by the attempt at halting inflation cannot be or will not be tolerated by the economy and society. Often the stabilization programmes have tended to describe the conditions which should obtain in a financially stable economy without taking care to guide the economy through the difficult period of transition from inflation to financial stability.

My conclusion on the policy measures is that neither school of thought has grappled effectively with the issue of bringing the inflation under control. The monetarist school places too much emphasis on short-term policy, while the structuralists virtually disregard the need for any policy, suggesting that the cure would be worse than the disease. To their credit, the structuralists recognize the problems of short-term stabilization of an economy suffering from inflation of long duration--whatever the cause. The proper set of policy measures falls somewhere in between the two extremes, with emphasis being placed on elimination of some of the bottlenecks which cause the inflation to continue while reducing the rate of growth of the money supply. A gradual stabilization seems the most appropriate.

Finally, one must side with the monetarists when they say that inflation is a "Bad Thing" for an economy and society. The growth rate of Chile has been low, and while studies on the relationships between inflation and growth tend to be full of qualifications, at the same time they point up a number of cases in which rapid inflation has been associated with slow growth. Although a mild rate of inflation may assist in bringing more resources into use and may allow for a higher rate of economic growth, when inflation continues for a long period of time at a rate higher than 10% and occasionally reaching above 25%, the potential benefits which arise from mild inflation are swamped by the distortions which emerge from high inflation. The Chilean society and economy have been adversely affected by the inflation. Social groups have aligned against one another and have engaged in mutual recriminations. The bottlenecks of which the structuralists complain have not been eliminated by the inflation--if anything they have been aggravated by it. No evidence exists that the hoped-for progress in the economy has come forth during the long period of inflation.

In short, I tend to doubt the structuralist ideas. While one must recognize some of the problems they point up--such as an archaic land tenure system and the possibility for the terms of trade to decline--one can dispute many of the conclusions they draw from the facts they put forth mainly because the "facts" are open to dispute. As has been demonstrated, the declining terms of trade argument has not been resolved one way or another and a sufficiently large number of arguments exists on the side of the opponents of the thesis to cause one to approach this idea with some hesitation. The models of the structuralists are, generally, internally consistent, but they explain only what may set off an inflation and not what causes it to continue.

The structural bottlenecks have been instrumental in causing inflation to begin and in preventing stabilization but the government deficit has been the primary factor in causing the inflation to continue at a high rate. The structuralist assertion that stabilization is inappropriate to the needs of an underdeveloped country suffering from inflation reflects more a concern for the temporary slow growth to be endured during a slowing down of inflation than for the inability of the economy to progress without inflation because of "structural factors". The structural problems are not being solved by inflation and will exist with or without a rising price level.

The main lesson to be drawn is that even if structuralist theory is sound, the solution is not to run such a high level of demand that inflation emerges. Seers and others maintain that a "politically tolerable" rate of growth of per capita income with an import substitution effort will result in inflation. However, the low growth rate that Chile has suffered in conjunction with its inflation is hardly acceptable either. To be sure, low growth is partly the result of the (misguided, say the structuralists) stabilization attempts and may have occurred despite an inflation. Likewise, one cannot ignore the earthquakes that have devastated large areas of Chile; other ex ogenous factors such as wars and world-wide inflations or recessions have affected the external position of the economy. Nevertheless, such forces are real and poor policy which does not take them into account cannot be excused on the grounds that conditions were made more difficult for the policy makers by these exogenous factors. If the structuralist assertions about terms of trade and stagnant agriculture are correct, then the economy may well be forced to endure slow growth in national income per capita.

2. Bottlenecks and Structural Change

In an attempt to determine how the bottlenecks have emerged, one must take a broad view of the Chilean economy and look back a few decades in order to learn the reasons for the controls which have been placed upon the two sectors whose lack of growth has hampered the growth of the Chilean economy, viz., the export and the agricultural sectors.

The structuralists maintain that inflation has resulted from import-substituting industrialization and strictly speaking they are correct. That is, the programme of import-substituting industrialization which was undertaken was the cause of the inflation although one cannot say that another programme of import substitution which ran a lower level of demand would also have meant inflation. The rising prices have not emerged precisely as structuralists have described--sectors experience rising demand due to the "turn-around" in outlook of the economy, are not able to respond to the pressure and their costs rise. This implies a moderate level of demand over the entire economy and hinges on the assumption of structural bottlenecks but does not correspond to the evidence for Chile. While this explanation cannot be dismissed out-of-hand it does not account for the greatest part of the inflation which has occurred.

In the years in which the rapid inflation began, Chile does not appear to have been caught in the same difficulty as that to which the structuralists refer. Rather the economy was a net exporter of food and Edel states that as late as 1949 Prebisch was complaining that one of Latin America's principal problems was the increasing production of agricultural exports which was tending to depress the terms of trade. (1) Likewise, Chile's exports were being maintained at averages of 35.1% and 36.8% respectively of G.D.P. depending on the estimate of G.D.P. employed. (2)

Year	Exports	GDP A	GDP B	Exports as a Percentage of GDP A	Exports as a Percentage of GDP B
1925	435	1242	1052	35.0	42.4
1926	382	1322	1078	21.4	35.4
1927	452	1118	1144	40.4	40.0
1928	550	1328	1422	41.4	37.6
1929	562	1494	1569	37.2	36.8
				Aver. 35.1	Aver. 36.8

But a variety of forces combined to give rise to a drive towards industrialization. The most significant single force was the Great Depression; the decline of 88% in Chile's ex port receipts was greater than that suffered by any other country in the world. The feeling throughout all Latin America was that no longer could the export markets be relied upon to generate sufficient foreign exchange to allow these countries to purchase a satisfactory volume of

(1) Edel, op. cit., p. 5.

(2) Markos Mamalakis and Clark Winton Reynolds, Essays on the Chilean Economy, (Homewood, Richard D. Irwin, 1965), pp. 384-85. This compares with an average of 11.1% for the period 1950-60. International Financial Statistics, 1966-67 Supplement. GDP_A is an estimate of G.D.P. made by Bitrán and Vivèras in a thesis done at the University of Chile and is based on government statistics. GDP_B represents estimates made by Tom Davis and Marto A. Ballasteros in a study done at the Universidad Católica de Chile.

manufactured goods relative to G.N.P. in exchange for their primary product exports. Even then some policy makers had begun to feel that the terms of trade had begun to decline secularly and that the pattern of development followed by the present-day industrialized countries in the nineteenth century--wherein their exports of primary products were sufficient to enable them to purchase the capital goods required for development--could not be employed in the twentieth century. The "solution" seized upon by the Latin American countries was industrialization.

In Chile, industrialization had begun during World War I, a period in which foreign markets were disrupted, and Chile was unable to import the manufactured items it required. During this initial stage of import substitution, the economy encountered few bottlenecks and industrialization left a feeling of moderate success. During the War, the rate of growth of industrial production per annum reached nine per cent but fell back to three to four per cent during the 1920s as external conditions returned to a degree of normalcy. (3)

With the arrival of the Depression, the nitrate industry was dealt a final blow. Up to this time, it had been the most important industry in Chile, although the copper industry had been gaining in significance. But after the disaster of the early 1930s a choice had to be made as to which sector to promote. Clearly, copper was becoming more important but the uncertainty of the future of its markets combined

(3) Oscar Munoz, "An Essay on the Process of Industrialization in Chile since 1914", Yale Economic Essays, 1969, p. 144.

with the pleasant memories of the World War I import-substitution experiment produced something of a reluctance to rely again on an ex port as the leading sector and recommended the choice of an internally-directed activity to take the foreground. Therefore an internally-directed activity, manufacturing, would replace an externally-directed activity, mining, as the leading sector in the Chilean economy. Manufacturing had proved itself in the past and now was called upon to lead the economy and to generate its share of "practically beneficial effects". (4) Some of these practical benefits would be the stimulating effect it would have on the rest of the economy through its forward linkages, something which primary product exports had failed to do. What this ignored was that off-setting forward linkages would be backward "leakages"--the primary one being capital-goods imports which would be required in the industrialization programme. But the overall impression was that industry could serve as the lever "capable of lifting the economy from stagnation to independent growth". (5) To have manufacturing become the leading sector would require considerable government

(4) Ibid., p. 148.

(5) Markos Mamalakis, "Public Policy and Sectoral Development. A Case Study of Chile, 1940-58", in Mamalakis and Reynolds, op. cit., p. 15. Munoz tends to discount the theory that the Great Depression had, as a direct result, the commencement of the industrialization process. He maintains that events were too interrelated to choose one event to ex plain a complex phenomenon. In this he is probably correct, and one must take note of the left-wing government and the rise of Keynesianism with its emphasis on government intervention. However, I should say that the Depression is the most important single event, albeit only one among many.

support for, as Munoz points out, had not assistance, direct or indirect, been provided to industry its prospect would be several years of stagnation and it could not become the leading sector of the economy until the economy had matured sufficiently. (6)

On the domestic scene the feeling was that the landowning classes should not be the ones to benefit from a government-sponsored programme. Food supply at the time was sufficient, even though the tenure system was badly out-of-date. Also the economy could not grow forever with agriculture leading the way, for in time there would be a decline in the share of national income devoted to agricultural goods--according to Engel's Law. Of course, food exports could allow the economy to continue to grow with agriculture as the leading sector but this would mean reliance once again on international markets. Therefore, an accord was reached between the government and the landlords: if the former would abstain from an interference in or reform of the

(6) Some observers have maintained that the choice of industrialization as a policy tool reflected a Latin American desire for panaceas; Victor Alba has gone so far as to see this as part of the "Latin American style of development". "The Latin American Style and the New Social Forces", in Albert O. Hirschman, Latin American Issues. In the earlier discussion, Hirschman claimed that Chile was characterized by a search for the ready-made cure for its "diseases". Industrialization, the theory goes, was seen as the cure-all coming in a long series of panaceas, from elimination of Spanish rule, through foreign investment and protectionism. The newest panacea is land reform and Alba speculates that monetary stabilization might be one of the panaceas of the future. That is a hopeful sign. Although one might disagree with this thesis in its entirety, industrialization does seem to have been chosen without much thought being given to possible consequences and costs.

agriculture sector, the latter would raise no objections to resources being directed to industry. (7)

The middle class was also pushing for industrialization in the hope that this would permit its would-be entrepreneurs to flower. The Schumpeterian pioneering qualities had, up to this point, been latent. (8)

But while this series of explanations is important in allowing one to understand how industrialization began, one must look to the economic policies followed during the 1930s and early 1940s in order to comprehend how the higher rates of inflation were generated--i.e., how industrialization and inflation were linked up.

The first policy step taken to encourage industry was to erect artificial barriers to manufactured imports--barriers such as tariffs, quotas, special exchange rates, and import licenses. These devices were in vogue from 1931 to 1936 and assisted in encouraging industrial growth at a rate of approximately 3.5%. (9) In 1938, the Popular Front was elected and the policy changed from one under which

(7) One explanation for the lack of desire of the government to interfere in the agrarian sector is that the power and intransigence of the landowning class was seen to be so great that the wisest course to take would be to build up a strong industrial base until it is sufficiently strong to allow a realistic challenge to be made to the agrarian sector. To challenge the agrarian sector at the time might rend society's fabric and bring about repression. See Frederico G. Gil, The Political System of Chile, (Boston, Houghton Mifflin Co., 1966), p. 152.

(8) See Albert Bréton, "The Economics of Nationalism", Journal of Political Economy, 1964.

(9) Munoz, op. cit., p. 144.

the government encouraged industry by negative devices to one where direct assistance was provided to new firms. Both policies were designed to raise the rate of return in the industrial sector, but Alessandri's choice of method reflected his laissez-faire leanings while Aguirre's actions from 1938 onwards reflected a desire for greater participation on the part of the government.

The distinction between the two approaches was made in another way as well. Alessandri's government was more inclined to balanced budgets and believed that voluntary saving and taxation were the "fulcrum to economic growth"; (10) hence the taxation would be employed to siphon off the inflationary pressures which were emerging in the drive for industrialization. Aguirre, on the other hand, turned to the Central Bank to finance the industrialization. He and his associates saw this as the way to "supplement and strengthen the 'natural fulcrum'" (11) which had been inherited from the Alessandri regime. Earlier the point was made that the Popular Front did not greatly fear inflation since it believed that such policy devices as price controls were sufficient to control rising prices.

The tool employed for the industrialization effort was CORFO. While initially an attempt was made to finance the activities of CORFO through taxation, this was stymied by the low tax base in the agricultural sector, by the difficulty in taxing the services sector, and by the desire to stimulate, not to tax , the industrial (including

(10) Mamalakis, op. cit., p. 16.

(11) Ibid., p. 16.

construction) sector. The only other source of tax was the export sector--primarily the foreign-owned mining companies--but much of the revenue from this source went for purposes of government other than development. The "solution" was to allow CORFO to borrow from the Central Bank. This served to end the relatively-short life of the Central Bank as a quasi-independent institution responsible for monetary policy.

The commercial banks were allowed to subscribe thirty per cent of their liquid assets in loans to CORFO; these loans were made rediscountable by the Central Bank for the commercial banks. The Central Bank, was, in effect, compelled by law to make direct credit advances to CORFO. Thus the Bank's function was changed from one of a money manager acting to promote price stability to one wherein it became "an active promoter and the second key pole of industrialization" (12) (the first pole being CORFO) which would provide funds for industry, funds which industry could not (or would not) obtain from other sources. But the shift towards the government-sponsored industrialization effort was clear. Mamalakis states that during the period 1940 to 1954 government-sponsored investment averaged 45% of the total, exceeding 50% in six years of this period. (13)

The credit extended to CORFO and to private industry by the Central Bank was not by itself in pushing up the rate of inflation;

(12) Ibid., p. 21.

(13) Markos Mamalakis, "An Analysis of the Financial and Investment Activities of the Chilean Development Corporation: 1939-64, Journal of Development Studies, January, 1969, p. 121.

while it was substantial, it was not sufficient to explain the average inflation for the 1940s of 18%. However, when combined with Bank credit to the Treasury, which was high initially, the inflation becomes easier to understand. And when one adds in the extra credit supplied to the commercial banks, the likely result is obvious.

Increases in Central Bank Credit to Different Economic Sectors (14)
1937-50
(1937 = 100)

		1937	1941	1945	1948	1950
Credit to:	Banks	100	1760	1860	6850	11,000
	Treasury	100	93	157	206	280
	Development Institutions	100	558	548	1480	2,360
	Public	100	450	658	2790	4,520

Clearly, inflation would have been next to impossible to avoid given this tremendous increase in credit. The higher rate of inflation caused the Central Bank to begin to sustain various sectors of the economy when their real supply of credit and liquid assets began to decline. By 1949, although Central Bank credit to the Treasury had been in 1937 approximately thirty-three times that provided to the commercial banks, in 1949 it was only 65% as much; commercial bank borrowing accounted for only five per cent of total borrowing in 1937 but was up to 40% in 1949. (15) Therefore a substantial shift away from the public sector occurred. As noted earlier, Harberger saw a reverse of this trend in the 1950s and 1960s.

(14) Jorge Marshall Silva, Inflation and Economic Development. (A Case Study: the Chilean Experience). Unpublished Ph.D. Thesis, Harvard University, 1957.

(15) Silva, as cited in Mamalakis, "Public Policy and Sectoral Development".

But if one argues that the industrial sector was favoured in government policy, other sectors must either be discriminated against or neglected. Some investigation along this line is now in order.

(a) Exports and Industry

Declining export receipts have been cited by the structuralists as resulting from a declining terms of trade for Latin American countries. While this may or may not be the case, the government policy in Chile has been to discriminate against the mining sector, the sector which accounts for the greatest proportion of the exports.

Before the Depression, from about 1880, the export sector had been the dominant one. Because of its contacts with the Western nations, this sector was the most modern and most technologically advanced sector in the economy. It was able to provide much of the investment and as a tax base accounted for much of the government revenue. However, it was by no means the largest single sector, either in terms of income generated or in employment. What is significant is that the productivity of labour was highest in this sector: four per cent of the total employment was found in exports, but it produced twenty per cent of national income. This compares with services which from 1907 to 1930 accounted for 36% of total employment, and with agriculture in which labour productivity was one-twentieth that of the productivity in the mining sector. (16) Such differences are accounted for by the higher capital-intensity of the mining sector. Therefore,

(16) Mamalakis, ibid., p. 53.

while services and agriculture had higher percentages of total employment, mining was the strategic and most important sector because of its high productivity and because it earned most of the foreign exchange for the economy.

In exchange for its substantial contributions to the economy, the export sector was allowed to proceed unhindered by the government. No restrictions were placed on foreign ownership or on repatriation of profits to foreign countries and no attempts were made by the government to diversify the sector. But the export sector concentrated in nitrates even then had its disadvantages. As world prices fluctuated so did its profits and with them government tax receipts and domestic investment. Reform of this sector was necessary in order to eliminate this problem but reform was a risky business. One difficulty was that fluctuations caused taxes on the nitrate mines to be lower than they might have been: as the domestically-owned mines were less efficient than those that were foreign-controlled, taxes on all mines had to be lower in order to prevent downturns in world prices from eliminating the domestically-owned producers due to an inability to pay the higher taxes. Should this occur, the result would be to leave only foreign-owned firms in the industry.

After World War I, the importance of nitrates fell off, but their place in the economy was taken by copper. A feature of this new industry was that the greatest percentage by far of the output was accounted for by U.S. firms. After the disaster of 1929-30 the copper mines began to lose their favoured status, which was similar to that which had been enjoyed by the nitrate industry. The copper mines were the first to be required to sell their foreign exchange to the government at a special rate which gave them fewer pesos per dollar than was the case for other firms; this was in effect an implicit tax on the copper companies. In the latter part of the 1930s additional taxes were placed on the copper mines with the returns from this taxation going to promote manufacturing industries and later to subsidize food imports. This trend continued during the 1940s. Taxes on the mining sector rose and came to be increasingly important in government revenue: in 1933-34, they equalled three per cent of total revenue but in the period 1940-44 the figure was 22%. (17)

The effect of the penalties combined with difficulties in world markets was to create stagnation in the mining sector, as demonstrated in this table. (18)

Index Numbers of Mining Production

(1950 = 100)

	1940	1946	1948	1953	1955	1956
Mining Production	98.2	101.5	116.2	97.4	109.9	113.5
Copper Production	100.0	99.5	122.6	100.0	118.9	126.7
Nitrate Production	92.3	121.2	114.4	88.4	95.7	95.7
Coal Production	87.5	88.7	93.5	105.4	102.3	100.1

One cannot attribute, as does Mamalakis, this stagnation solely to discrimination against the copper producers for purposes of releasing resources for industry, since the situation in the world market for copper was not favourable. Table I of the Appendix presents

(17) Ibid., p. 55.

(18) Ibid., p. 56.

the price index for copper on world markets for the years 1925 to 1959. Although the price index for 1959 is high compared with that for 1925, the price level attained in 1929 was not regained until 1947. During the first years of industrialization, from around 1931 to 1945, the price level was below that of 1925.

However, one must not overlook the fact that additional burdens were placed upon the sector by government policy and these may have served to make a potential bottleneck into a real bottleneck. In addition Chile came to rely more upon copper sales as a percentage of total exports rather than less as one would expect from a developing economy over a period of thirty-five years, from 1925 to 1960. See Table II of the Appendix. The increased reliance on copper exports may signify a decreased reliance on exports of agricultural products and nitrates but part of the blame must be attributed to the failure of the government to engage in a programme of diversification of the export sector.

In conjunction with this, total copper production as a percentage of G.D.P. has remained relatively unchanged although a slight rise has occurred in the past few years. See Table III of the Appendix. This would suggest that other exports have grown less rapidly than has G.D.P. and this is a good reflection of the foreign exchange gap which has emerged over time.

While the price index for copper may not have risen substantially in the crucial period of industrialization, other exports have not been bearing their fair share of the load. What Mamalakis fails to point out in his analysis is that the terms of trade for copper--the price index for copper divided by the import price index--were generally higher than the net barter terms of trade. This would suggest that the low net barter terms of trade were the result of low prices for other exports rather than simply for copper. See Tables IV and V of the Appendix.

(b) Agriculture and Industry

The other sector which came to bear the burden of the industrialization effort was agriculture. Obvious differences exist between agriculture and mining: the former is mostly domestically controlled and home-market oriented while the latter is largely foreign-controlled and most of its production is directed abroad.

Whereas mining suffered from penalties placed upon it by government, agriculture was subject more to neglect than penalty.

> Agriculture did not grow, or did not grow as rapidly as it could have grown, because government deliberately avoided changing its structure although aware of its backwardness, mainly because government was involved in the major effort of promoting industry. (19)

See Table XIX of the Appendix for figures on growth of agricultural output per capita.

The backwardness of agriculture must be seen as part of the reason behind the desire for industrialization. As pointed out earlier, there is a school of thought which maintains that industrialization was seen as preceding agricultural development because of the intransigence of the agricultural sector. In the early years of the industrialization

(19) Ibid., p. 58.

drive, the feeling was that agriculture had to release some of its resources in order to allow industry to grow. Schultz sees the industrialization drives in Latin America generally as being based on the theory that the marginal product of labour in agriculture was zero. He maintains, however, that there is no factual basis for this assertion. (20)

General agreement exists among economists that in a developing economy agriculture must supply much of the capital required to develop an industrial sector. The resources which are required can be released in two ways: either by making the agricultural sector much more productive or by reducing the incentive to invest in agriculture. The former policy is obviously the wiser, but also of much longer duration in its execution.

Chile appears to have employed both methods. However, the main government effort was directed to reducing the rate of return in agriculture, while raising the rate of return in industry. One way of doing this was to hold down food prices and to allow subsidized imports of food to fill the gap in supply which emerged. The government failed to invest sufficiently in irrigation facilities, agricultural extension, and transportation facilities, all responsibilities of the public sector. Alternatively, manufacturing was subsidized in the expectation that new investment would go to that sector--which it did.

In its desire to make industry more attractive, government

(20) Theodore W. Schultz, "Latin American Economic Policy Issues", American Economic Review, papers and proceedings, 1956, p. 427.

policy went too far and penalized agriculture more severely than was required in order to release resources to permit industry to become dominant. The need for a balance between the two sectors was forgotten. A study carried out by the International Bank for Reconstruction and Development (I.B.R.D.) and the Food and Agriculture Organization of the United Nations (F.A.O.) echoes this claim. The study maintains that the import policy had hindered agricultural development by placing controls on imports of agricultural inputs and that price controls have prevented "sufficient expansion of production". (21) The report continues:

> Emphasis on the expansion of industry has been so great as to bring about a condition of serious imbalance, a condition which has been aggravated by continuous inflation. Agriculture, the productive partner of industry, has been allowed to lag so far behind that it cannot do its job properly. Positive action is needed to stimulate food production and so to restore balance to the economy. (22)

(21) The Agricultural Economy of Chile, (New York (?), 1952), pp. 4-5. The Report also hints that inflation itself may have discouraged investment.

(22) Ibid., p. 10. James Bray has disputed the assertion that food shortages have actually existed in Chile. In "Demand, and the Supply of Food in Chile", Journal of Farm Economics, 1962, he claims that the actual supply, including imports of food, has been satisfactory and has not induced post-1950 inflation by itself. While he is correct in saying that food shortages in the post-1950 period did not cause inflation by themselves, the imports of food that were required aggravated the balance of payments situation. Foreign exchange was employed for purposes other than purchases of capital goods and this may have slowed down the rate of economic growth and added to inflation if consumer goods were also prevented from being imported. See Table XIII of the Appendix for data on imports of food as percentages of total imports.

The desire to free resources from agriculture was inappropriate, since employment for all the labour forced off the farms could not be found in the industrial sector: the capital required to match the labour supply simply was not available. This labour has flowed into the services sector where it has been less productive than it might have been in agriculture.

Often the argument has been put forward that the terms of trade between the agricultural and industrial sectors (as measured by relative prices between the two) have been favourable to agriculture. Mamalakis attempts to disprove this notion. He points out that over the period 1928 to 1959 the relative price index between the wholesale price index of agricultural goods and the overall wholesale price index did not regain the pre-Depression level until 1946. From 1947 to 1948 the terms of exchange turned in favour of agriculture but fell from 1949 to 1951; they rose again from 1952 to 1954. See Table VI of the Appendix.

With respect to the relative prices of agricultural and industrial products, the terms of exchange favoured agriculture from 1949 to 1954. See Table VII of the Appendix. From 1955 to 1960 industrial prices gained, for the most part, with any recovery by agriculture being only temporary. Nevertheless, for the period 1946 to 1954 the terms of exchange improved for agriculture, according to Table VI. For the years 1946, 1947, and 1951, there were negative real profits in agriculture. (23) While no comparative data are available for the

(23) CORFO research, cited by Mamalakis, "Public Policy and Sectoral Development", p. 137.

years in which the terms of trade were unfavourable to agriculture, one might suspect that if profits were sometimes negative in years when the terms of trade were favourable to agriculture, they would also be negative in those years in which the agricultural sector was at a disadvantage compared to the industrial sector.

One might also postulate that while profits were sometimes positive, a period of positive profits has not been of sufficiently long duration to encourage investment in agriculture at a satisfactory rate. This is not to say that the attitudes of the landowners are characterized by an energetic entrepreneurial spirit, although instances have been discovered where farmers on medium-sized acreages responded quite eagerly to financial incentives; however, the concentration of land ownership limits the number of cases in which this is possible. These figures do suggest that even if this spirit were present, a satisfactory rate of return could not be achieved, and the entrepreneur would direct his energies elsewhere. This is one of the weaknesses of Chilean agricultural policy pointed out by the I.B.R.D.-F.A.O. report.

Considerable difference of opinion still exists on the matter. Mamalakis maintains that the low rates of return in agriculture, which he regards as the reason for the poor agricultural production because of low investment, have been the direct result of government policies. Edel tends to discount this theory and instead suggests that low rates of return may have arisen from inadequate technical progress and this has, in turn, resulted in the failure to adopt innovations capable of lowering costs.

Mamalakis' conclusion is clear:

> No reason appears to exist why agriculture could not duplicate the spectacular gains of Chilean industry if treated, subsidized, and protected in similar fashion. To the extent that this backwardness is explained by price controls and import competition and other variables that were instruments of (government policy)...and induced inflation, these latter forces are responsible for it. (24)

Edel is less direct. He admits that the possibility exists that the stagnation of Chilean agriculture may have been due to price distortions engendered by government policy, but also sees forces within the Chilean agricultural sector as being responsible, at least partly, for lack of growth.

Both of the above factors are, I feel, responsible for the low growth in output of Chilean agriculture. Food shortages do not appear to have been a structural factor in generating the inflation, for the shortages emerged after the inflation had been under way for some time. But they may have contributed to the inflation. (25) But any policy steps that were taken which had the effect of suppressing agricultural output, whether these steps were designed to release resources for industry or to control inflation, were misguided for they aggravated an already bad situation. A parallel can be drawn between agriculture and mining on this count at least.

(24) Ibid., p. 143.

(25) Edel sees a pattern in Latin American experience. In all the countries with inadequate expansion of agricultural production, cases were found in which food price increases had been the first indicators to begin advancing more rapidly during an acceleration of inflation; also they had served to disrupt stabilization programmes. On the other hand, in the countries with adequately expanding production, this pattern did not prevail. Op. cit., p. 137.

The above explanation is more than simply a monetarist analysis. The monetarists claim that the structural bottlenecks arise largely from the desire to control the inflation through price and exchange controls without attacking it at its roots--the too-high level of demand. As a general explanation for inflations in Latin America this is a safe assertion. However, this practice was employed in Chile during the first few years of the industrialization effort for purposes not solely of controlling inflation but also for purposes of discouraging investment in the sectors which had been chosen to finance the industrialization programme in the hope that investment that would have gone to them would move to the industrial sector. Policy measures other than price and exchange controls were utilized in an attempt to divert resources to chosen sectors--for instance the special taxes on the export sector. One cannot overlook the errors of omission, such as the failure of the authorities to make needed investments in the agricultural sector, as well as the errors of commission, such as extra taxes and price controls. The procedures employed in the early years were certainly employed in later years in attempts to control the rising price level, but to suggest that this was their purpose at first is to miss the point.

3. Stabilization Methods

As stated earlier, my explanation for the failure of the efforts to control Chile's inflation is that one cannot expect rapid results from a stabilization programme that attempts to bring under control an inflation which has been continuing for many decades. To be sure, rising prices in the economy can be halted, but only at a terrible price calculated in terms of unemployment and lost production. There exists no guarantee that once the brakes are released the economy will not return to its previous path. It may not have made any turn-about, any change of direction, which is essential if the economy is to enjoy growth with moderate (at least) price stability.

The structuralists have maintained that the 1955 stabilization attempt did not focus on the structural bottlenecks in the economy. Sunkel claims that up to 1955 Chile had been suffering from inflation without economic development; in 1956-57, the situation changed to one of "relative monetary stability, depressed economic activity, and stagnation". (26) These results of the Klein-Saks period cannot be disputed. However, the lesson which Sunkel draws from the facts is certainly open to question.

He maintains that the public sector plays the most dynamic role in Chilean society, or for that matter, in any underdeveloped country. With that there is little quarrel. He contends that to attempt to restrict the public sector by curtailing the budget deficit will cause growth to slow down: as evidence of this he points to the facts that despite favourable external conditions in 1956, economic activity declined more than two per cent and a substantial shift occurred in income distribution in the years 1956-57 away from the labouring class towards what he calls the "entrepreneurial group" (probably the managerial class, or the upper middle-class). His

(26) "Inflation in Chile: An Unorthodox Approach", p. 126.

complaint is, in short, that "the methods that are being used to stabilize the Chilean economy are jeopardizing the country's possibilities of long-term economic progress". (27)

However, what he fails to recognize is that inflation itself was doing a very good job of "jeopardizing the country's possibilities of long-term economic progress". Sunkel points out, himself, that as far back as 1947 Chile was suffering from economic stagnation in combination with inflation. In his major essay on the Chilean inflation (28) Sunkel presents many arguments that seem to favour the monetarist school of thought despite the fact that he is a confirmed structuralist. He points out the price controls that have proved necessary and which have distorted investment, the expectations of continued inflation which have been aroused, the negative effects on productivity which have arisen from the inflation, and the lack of export incentives.

He also admits that inflation has engendered propagation mechanisms, such as the budget deficit. This results, he says, from the necessity of the public sector (and the services sector also) to absorb the excess labour that cannot be employed in manufacturing. Also it is generated by the necessity of public expenditure to be "expansionist", since this constitutes the main stimulus for economic development.

(27) Ibid., p. 125.

(28) "Inflation in Chile: An Unorthodox Approach".

Part of his programme for stabilization includes an elimination of the budget deficit, not by cutting expenditures but by raising revenues: for instance, the deficit "would be virtually eliminated if the tax reform included a flexible, progressive revenue system". To achieve this, he recommends greater employment in manufacturing, diversified exports, widening of the domestic tax base, and expansion of the international markets for primary products.

But how can this be achieved if no steps are taken to lower inflation from an annual rate of more than 70%? No one can quarrel with the desirability of the achievement of such goals, but serious doubts arise that they can be attained in any economy suffering from rapid inflation. Concerns such as a widening of the tax base are long run in nature and are usually shunted aside when a government is attempting to lower the rate of inflation from 70%: short-run problems have highest priority at such a time. Besides, expansion of the international markets for primary products is not open to the Chilean government as a policy measure. Such utopian goals as these are so "Good" as to be meaningless for short-term policy designed to stop accelerating inflation, for their "Goodness" puts them out of reach.

While the structuralists fail to recognize the problems associated with inflation, the monetarists often assume away the very real difficulties that exist in trying to slow down inflation. Many of them suggest simply a reduction in the budget deficit, an elimination of automatic wage-salary adjustments, a removal of price controls, and a unification of exchange rates. This approach is unrealistic and reminds one of the worst of ivory-tower theorizing. One of the main reasons the monetarists have come to be disliked in Latin America is that too often they do not appreciate the very real political difficulties that are present in policy steps of the type suggested. As with Sunkel's recommendation of tax reform, these goals will eventually have to be achieved; but they are no more easily attained in a short period of time than is his goal. Of course, the monetarists, when charged with formulating policy, cannot undertake to make the day-to-day decisions on inflation policy: nevertheless, their policy recommendations should recognize the difficulties faced by governments of less developed countries in a programme of stabilization.

One must, I feel, return to the fact that the duration of the inflation has been the primary factor preventing the stabilization programmes from succeeding. But this implies adjustment to the inflation on the part of various groups in the society.

One adjustment made was the guaranteed minimum salary. This applied primarily to the public employees, but the salary adjustments they enjoyed tended to be transmitted to the other wage and salary earners. As a result, this group could expect that its payments would rise each year, usually at one point in time, by enough to offset the inflation of the previous year.

Harberger says that Chile has some financial institutions which readjust deposits according to the rate of inflation and this serves to encourage savings. If that is so, then those individuals depositing their savings in these institutions will not be made to suffer from the rising prices. This may have succeeded, to some extent, in preventing the voluntary savings of some groups in the society from falling. The same purpose could be effected by paying a positive real rate of interest.

Some provisions have been made to allow private industrial firms to receive more credit from the Central Bank as the general price level rises. Felix (29) says that a survey of Chilean corporations from 1950 to 1957 showed that only three per cent of their total assets were held in cash and deposits. In addition, working-capital ratios for these firms (short-term assets divided by short-term liabilities) declined from 2.26 in 1950 to 1.44 in 1955. His inference from these statistics is that corporations in Chile had adjusted to the inflation by reducing their liquidity and relying for their liquid funds on credit from the Central Bank and the commercial banks. Of course, low rediscount rates must not be forgotten, for these would serve to change the composition of corporation assets. See Table VIII of the Appendix. Even in the 1940s, bank credit was a prime source of investment funds. Grove (30) says that in Chile an expansion of bank credit could be expected to lead to an expansion of investment, and a contraction of credit would mean a reduction in investment. However, during this period, the inflation had not reached the rate of the 1950s, and the economy might not have become as well-adjusted to inflation as it was later to become.

But the main way in which inflation has been "institutionalized"

(29) David Felix, "Structural Imbalances, Social Conflict and Inflation", pp. 139-40.

(30) <u>Op. cit.</u>

has been in the expectations it has generated. Everything else can be thought to stem from this. The expectations that have been generated have been, says Arthur Lewis, not expectations of continuously rising standards of living but rather expectations that if prices are to move in any direction at all they will rise. Lewis does not see Latin Americans in general as being any more anxious to achieve a high standard of living than a resident of Africa or Asia. However, the resident of Africa or Asia has known falling prices while in Latin America "no person under forty years of age can remember any time when prices fell continuously over a period of two years". (31)

Lewis attributes a great deal of significance to expectations. He continues:

> A country's expectations depend on its history and the intensity of the spiral depends on its expectations. Prices rise much faster in Chile or Brazil than they do in Nigeria or Ceylon mainly because Chileans and Brazilians expect prices to rise much faster. (32)

After many years of high inflation, one cannot expect that the workers of a society will be willing to settle in one year for an increase in money wages far below what the average rate of inflation has been for the past several years. They will not be willing to do so without some guarantee that others will also be willing to accept a reduction in money incomes, and that the possibility exists that the rate of inflation will be lowered or will accelerate more slowly. This

(31) W. Arthur Lewis, "Closing Remarks", in Baer and Kerstenetzky, op. cit., pp. 22-23.

(32) Ibid., p. 23.

phenomenon was demonstrated in the 1955 to 1957 period. The initial success achieved at controlling the price-wage increases was permitted by a favourable external sector, which permitted fairly substantial imports of consumer goods--which served to slow the rise in prices--but when pressure came onto this part of the economy in 1957, the old suspicions were revived and the result was that neither the Left nor the Right was willing to take a gamble that the rise in the general price level would be low enough to permit them to hold down their increases in prices or wages.

While criticism of either school is not difficult, and arguing why an inflation cannot be arrested within the space of a year is similarly easy, the very real question still exists as to what steps to take to slow down the inflation or, in fact, to stop it. One can hardly take refuge in the suggestions made by Sunkel for they imply simply allowing the inflation to continue and hoping that long-term policy measures will in time set things right. Conversely, one cannot freeze all prices for a couple of years and eliminate the budget deficit, and then hope that the economy will realign itself in the deflation which is bound to result.

Harberger recognizes the dilemma facing the inflationary economy. He is aware of the fact that a rapid reduction of the budget deficit is impossible if one works only from the revenue side. But, at the same time, the pressures on the government to assist in economic growth are strong: "It is difficult to imagine a reduction in government outlay as a fraction of national income in any Latin American country over the next decade". (33) Therefore, while the budget deficit is acknowledged to be the source of inflation it is not easily reduced.

Harberger's recommendation is that the economy find ways of living with inflation while it is attempting to achieve stabilization. This approach recognizes the fact that a stabilization programme which attempts to achieve its results quickly need pay little attention to improving the way in which the economy adapts to inflation. If the stabilization programme is long-term in nature, then some attempt should be made to eliminate some of the undesirable features bound to accompany an inflation as a first step in the effort towards stability. Working towards stability involves elimination of the deficit both by increasing revenue and lowering expenditure financed by borrowing from the central bank--and that is most certainly a long-term endeavour.

Harberger lists three effects of inflation which plague Latin American countries:

(a) Disincentives to voluntary saving by individuals;

(b) Distortions of the pattern of investment;

(c) Distortions of the allocation of resources within the economy.

These effects, he claims, have emerged in Latin American inflationary countries. He wonders whether they must accompany inflation and suggests that ways be found to allow the country to live with the inflation. Such steps could help to "avoid entirely or at

(33) The Inflation Problem in Latin America, p. 17.

least substantially ameliorate that type of detrimental consequence of inflation". (34)

Voluntary savings by households are not likely to be a substantial source of capital, says Harberger, if the real interest rate is low or negative. (35) While large firms or wealthy individuals can usually find some way to invest their savings in order that the funds will not be eroded through inflation, the small absolute amount of savings of a household usually precludes it from making such investments. The solution therefore is to make available to these small savers outlets for their savings in which the money will not be eroded by the inflation. Naturally, if this is to succeed, the institutions making their deposits adjustable must have adjustable assets.

Harberger also points out that the negative interest rates have meant that a borrower from a bank could profit from a loan by investing in inventories of goods. When rising prices are combined with interest-rate ceilings, investments which would not be profitable normally are made attractive. As the demand for bank credit exceeds the supply, due to the artificially-low rate of interest, rationing must take place, and this does not allow credit to be put to its most productive uses. The solution proposed is to allow for readjustments of medium- and long-term loans and to require high interest rates on short-term loans--counterpart proposals to those designed to stimulate savings.

(34) Ibid., p. 19.

(35) Real rates of interest for the 1950s and early 1960s can be found in Table XIV of the Appendix.

Resource misallocation is virtually inevitable in any inflation, if for no other reason than that the inflationary process is not perfectly smooth and some prices lag behind others. In addition, decision makers find determination of relative prices difficult during an inflation and the uncertainty already present in any decision is compounded. This problem is not easily remedied so long as an inflation is continuing, but distortions produced by artificially-suppressed prices are more easily remedied. Prices that are easily controlled such as those in the public sector should not, says Harberger, be allowed to fall below ten per cent of their proper value.

The assumption upon which Harberger bases these recommendations is, clearly, that this sort of action is politically feasible and that the really difficult problem is the budget deficit. One could dispute this by pointing to the Chilean experience, where utility prices were often maintained unchanged in an attempt to manage the inflation. His most direct criticism is against the exchange rate policies of Latin American governments--a topic discussed earlier--and while an overvalued exchange rate might have been regarded as desirable at one time (in that it subsidized capital goods imports), by the 1950s and 1960s it was being maintained in an attempt to postpone the inflationary impulse which would result from devaluation. By the period of the 1950s and 1960s the decision on devaluation was a political and not strictly an economic decision. Thus Harberger may be underestimating the difficulty involved in making a change.

Despite this criticism, Harberger's approach seems to be the most useful and far-sighted. On the one hand it recognizes the fact that inflation hinders growth and on the other keeps in mind the fact that inflation cannot be stopped in a short period of time. Recommendations such as his have been utilized in the stabilization attempts of Chile and therefore a question arises as to whether or not the period chosen for reform was too short.

How long-run can a programme become before its effects on today's inflation prove too small? If too long-run in nature, it becomes almost meaningless. But only the long-run programme can take into account the processes of adjustment to and compensation for inflation. If too short-run in perspective, the effects it produces may not be tolerable and any support the programme had may be lost. On the other hand a "shock treatment" for inflation permits more drastic action by the authorities since the public is able to see more clearly the need for stabilization. These are two distinct schools of thought and each has merit. However the shock treatment has not worked for Chile in the past twenty years and the long-term approach is probably the better one to employ.

To attempt to evaluate the stabilization efforts in detail is not the purpose here: the task is far too large. What can be said is that any stabilization plan can prepare for only a certain number of things. The Chilean stabilization attempt of 1955 and 1958 was in part hindered by the fall in world copper prices, a factor that could probably not have been forecast in 1955. When external events impinge upon the programme, little can be done. If the programme is ill-conceived initially, then blame can be placed on an individual or group. But the programme cannot generally forecast exogenous events.

And one can seldom build into the plans for stabilization instructions on how to maintain social harmony in the society attempting stabilization. For instance, Felix says of the Klein-Saks Mission:

> The Mission was unable to reconcile the incongruities of mercantilist effort to promote economic development, primarily through industrialization in the context of a stagnant agriculture, an aggressive white-collar professional class with welfare state aspirations, and an increasingly militant non-agricultural working class. (36)

If one excludes agriculture, all factors present in this statement can be classed as social and political, rather than as strictly economic items. One could dismiss the attempts as stabilization on the grounds that they were not properly designed to bring about the changes that were required in the economy. But the economic problems that will emerge during stabilization will be manifested in social difficulties and they cannot be resolved easily.

4. Inflation in Chile: Effects

Up to now, the only evidence presented in the case against the Chilean inflation in general is that it has been associated with social tensions and a low rate of growth. These must now be elaborated upon.

(a) Its effects upon the society

Chile has clearly suffered from the inflation in terms of social divisions. Stabilization attempts were frustrated by the inability of various interest groups to agree and to work for the common good of the country. As far back as 1938 the inflation was described as

(36) "Structural Imbalances, Social Conflict and Inflation", p. 146.

"Chile's social problem". (37) It has hampered social change which likely would have occurred under stable conditions; some have speculated that the land tenure situation would probably have resolved itself had not the inflation and its accompanying controls been a factor in the economy.

One possible explanation for the social clashes that have emerged is that there appears to have taken place a distribution of income away from skilled and unskilled workers during the period 1950 to 1966.

Real Wages of Skilled and Unskilled Workers (38)

(Index 1950 = 100)

1950	100	1951	90	1952	95
1953	86	1954	63	1955	63
1956	64	1957	64	1958	90
1959	79	1960	77	1961	82
1962	85	1963	79	1964	82
1965	89	1966	105		

The real wage did not regain its 1950 level until 1966 and during the very rapid inflation between 1953 and 1955 a substantial drop occurred. This would suggest that those on the Left representing the working classes were justified in being reluctant, in 1957, to agree to voluntary restraint of wages.

(37) Fortune, "South America III: Chile", May, 1938, p. 148.

(38) N. Georgescu-Roegen, "Structural Inflation-Lock and Balanced Growth", Economies et Sociétés, mars, 1970. The real wage is the nominal wage of the workers divided by the cost of living. Data for nominal wages is qualified by Georgescu-Roegen on the grounds that it has been calculated from "partial information".

In something of a contrast to the view that inflation has aggravated social divisions, Hirschman has submitted that the Chilean inflation has prevented a revolution or a civil war. He feels that the inflation may have diverted attention of the society from "other less immediately harassing, but perhaps more fundamental problems". (39) The inflation has produced a search for the underlying problems in the society and because they become obvious, action to correct the problems could be taken earlier than it otherwise would be. In contrast to Chile, he offers the example of Cuba where stability tended to contribute to a false sense of security.

But the fact that these problems are brought to the surface and frequently left uncorrected would make one think that civil war might result partly because of such a process of their being brought to public attention. To this Hirschman counters:

> This should not keep us from realizing that through the device of inflation, society gains precious time for resolving social tensions that might otherwise reach the breaking point right away. (40)

Whatever one's conclusions on the matter, certainly any extra social tension generated by inflation is inimical to development. No society is ever free of latent or manifest class conflicts or disputes, but inflation may make these worse than they otherwise would be.

(b) <u>The effects of inflation upon the economy</u>

Considerable uncertainty exists as to precisely what effect

(39) "Inflation in Chile", p. 221.

(40) <u>Ibid</u>., p. 222.

the inflation has had. The growth rate of per capita income has been low, but this is not unique to Chile. As to the actual distortion of investment, or the ways in which resource allocation has been affected, an equal amount of uncertainty exists. While the assertion that "more research needs to be done" can be used to relieve one of the burdens of serious economic analysis, in this instance I believe it justified. This is true not only for Chile but for all less developed countries: any analysis and study that has been carried out usually arrives at very tentative and hesitating conclusions.

(i) Inflation and Investment

A variety of opinions exists on the effect inflation has had on investment. Shalaan (41) points out that isolation of the effects of inflation on inventory investment is difficult due to the wide variety of forces determining inventories. He does find, however, that data for the period 1953 to 1959 suggest that less developed countries as a group are more prone to inventory investment than are the developed countries. The average for the less developed countries was ten per cent of gross domestic investment in inventories compared with five per cent for the developed countries. (42) One possible explanation for this fact is that production in the less developed countries is characterized by a relatively small amount of fixed capital used by a relatively large amount of labour, and these two are applied to a

(41) A.S. Shalâan, "The Impact of Inflation on the Composition of Private Domestic Investment", International Monetary Fund Staff Papers, 1962.

(42) Ibid., p. 253.

relatively large amount of raw material. Therefore, the proportion of inventory investment in total investment is higher for the less developed countries.

He lists a number of less developed countries for the period 1951 to 1959 with their average annual rates of inflation ranging from 40% for Chile to 1% for the Philippines. He discovers that only 1.6% of Chile's investment went to inventories, the lowest rate among the group, except for Argentina which had negative investment in inventories over the period. He also points out that Chile and Brazil, two countries with long histories of inflation, had the second and third lowest rates of investment in inventories in the group.

This is the opposite of what one would expect to discover. But what is masked by the averages is that a close association exists between inventory investment and the annual rate of inflation. For Chile, this meant that the increases in the rates of inflation in 1953 and 1954 were accompanied by sharp increases in inventory investment. His conclusion is that

> long periods of continuous inflation were not associated with unduly large investment in inventories, but that short periods of inflation tended to bias the composition of investment towards inventories. (43)

The standard deviation of Chile's inflation over the period 1951 to 1959 was 22.8, for Brazil 7.9, and for Mexico 6.5. See Table IX of the Appendix for the data. The average rates of inflation for this period were: Chile, 41.8%, Brazil, 20.5%, and Mexico, 7.9%. The coefficients of variation were 54.8% for Chile, 38.7% for Brazil and 82.3% for Mexico. The Chilean rate of investment in inventories was,

(43) Ibid., p. 255.

as mentioned, 1.6%, while Brazil's was 6.2% and Mexico's was 13.7%. (44) Therefore, Mexico's high investment in inventories corresponds to its higher coefficient of variation but one would expect that Brazil's coefficient of variation which was lower than Chile's would signify a lower investment in inventories for Brazil, which it does not. But this does not necessarily conflict with Shalaan's assertion, for his conclusion was based upon the changes in inventory investment in one country as its rate of inflation varied. The analysis comparing the three countries looks at the standard deviation of inflation on an intra-country rather than inter-country basis, as does Shalaan. However, the conclusion which is reached here, admittedly based on the experience of only three countries, suggests that the variability in investment due to inflation may not be as significant as often implied.

Bosman (45) cites an unpublished study by one of his students on investment in Chile. The student discovered that in Brazil an increase of one per cent in the rate of inflation would induce a 1.6-2.0% increase in gross private investment. In Chile, the influence was negative although not significant. However, when other elements were added to the study, he found that on the whole inflation in Chile had a negative effect on the "preparedness to invest". Given that the average annual inflation in Chile was higher than that in Brazil, Bosman concludes that while a positive influence may have been generated by mild inflation, the influence becomes negative as price increases

(44) <u>Ibid</u>., p. 254.

(45) H.W.J. Bosman, <u>Monetary and Financial Aspects of the Problems of Developing Countries</u>, (The Hague, Mouton and Co., 1965), p. 152.

become more rapid. Thus the inflation has been detrimental to investment in Chile. Admittedly, this analysis is only tentative, but it is suggestive of undesirable effects of inflation.

Mamalakis has also analyzed the effect of the Chilean inflation upon investment. He demonstrates that over the period 1950 to 1958, investment as a percentage of G.D.P. was much lower in Chile than in other countries of Latin America. See Table X of the Appendix. In addition, he demonstrates that when the period 1953 to 1955 is compared with that of 1928 to 1930, the data suggest that investment is negatively associated with inflation. See Table XI of the Appendix.

His conclusion from these two sets of figures is that inflation and what he calls sectoral clashes (the struggles referred to above between the agricultural, the industrial, and the export sectors) have had either a negative effect on investment or no effect. But he attempts also to demonstrate that the low rate of investment has been due not so much to low savings as to other causes; low savings are usually regarded as resulting from inflation.

He says that if profits are high relative to investment, then they are not being saved, and hence not invested, because no potential for further profits exists. But if, on the other hand, profits are only a fraction of investment, then savings will set a limit on the level of investment, in contrast to the first situation wherein they do not set the upper limit. In Chile, for the period 1940 to 1952 at least, profits were higher than investment in fixed assets, with the measures expressed as percentages of domestic nominal income and G.D.P. respectively. See Table XII of the Appendix. Very little of the profits generated were left undistributed by corporations, most going in dividends.

With respect to the years of accelerated inflation, 1953 to 1956, the trend continued. The ratio of profits as percentage of G.D.P. to gross fixed capital formation as a percentage of G.D.P. were:

1953: 159   1954: 271   1955: 200   1956: 212 (46)

Mamalakis dismisses the thesis which maintains that the entrepreneurial class in Chile is characterized by people not interested in risk-taking, but who wish rather to spend their incomes on luxuries. In the first place, he notes that no large-scale luxury imports have been made and secondly that negative interest rates may well have discouraged savings. Instead, he claims that the low level of investment reflects the shortage of capital goods which makes difficult the exploitation of opportunities for investment which are open. (47)

The small percentage of imports that is available for capital goods imports means that the entrepreneurs cannot make use of the savings they have. He calculates that over the period 1940 to 1952, exports averaged 14.5% of G.N.P. After deducting from this total in

(46) Mamalakis, "Public Policy and Sectoral Development", p. 74.

(47) This opinion is not shared by David Grove. He concludes, from his analysis of the period prior to 1950, that "the volume of planned savings is small relative to investment opportunities and investment needs". (Op. cit., pp. 52-53.) This he attributes to low income and to the fact that very little of the funds goes through organized financial markets with the result that those investors able to make use of the savings in the best way do not always have access to them. For this reason, bank credit expansion does not involve savings from previous years but rather "newly-created" money.

order to cover profit repatriation, imports of raw materials and fuels for existing industries, and imports of food and other consumer goods, all that remains is about five and one-half per cent of G.N.P. to be devoted to capital goods imports. This approximates the value of undistributed profits over the period. As Chile imports 90% of the producers' durables it requires, outlets for savings do not exist to any great extent above the five and one-half percent level. There is always the possibility of borrowing from abroad in order to finance capital goods imports but this has not been done by Chile. The economy became increasingly inward-looking after the Depression and may have been reluctant to undertake substantial obligations to foreigners as had been done in the 1920s and 1930s and which resulted in large-scale defaulting on borrowings following the first few years of the Depression.

Another cause of low investment, according to Mamalakis, has been the low returns available in investments that are open in such sectors as agriculture, utilities, and the export industries. Had rates of return been higher here, investment would have been higher for the demands of agriculture and construction for investment goods could largely be satisfied by domestic production and mining was, he says, not subject to difficulties in the availability of capital goods. The rate of return was high in industry, but as noted earlier, the bottleneck there was in the availability of producer durables.

Therefore, Mamalakis would say that to attempt to link investment with inflation is not altogether useful for that implies that decision-makers in the economy can choose between investment and consumption and that their choice turns on expectations and the desire for a safe return on their funds. Of course, the two elements are linked together in that the inflation has caused controls to be placed upon various parts of the economy and some of these have caused declines in investment but the two are not related in such a way that high inflation one year would, for instance, mean lower investment that same year or perhaps the following year. In Mamalakis' theory the upper limit on investment was not altered according to the rate of inflation but was set by the capacity-to-import. That in turn stemmed from government policy.

Mamalakis does not touch upon the effect inflation has had upon exports. However, if one can assume that low exports have been caused at least partly by inflation then this inflation, by limiting the amount of foreign exchange available for imports of capital goods, has also discouraged investment. What he does appear to be saying is that inflation has not discouraged investment in the way the monetarists understand inflation to discourage investment--i.e., by creating uncertainty and a desire for a quick return on investment.

Mamalakis bases his theory on an assumption that is tenuous; that is that because firms are distributing their profits in dividends rather than re-investing them in the businesses, the recipients of the dividends are likewise not saving their receipts. Kaldor has submitted that low savings are characteristic of the upper classes, but he focussed on the classes that receive their incomes from land and not on the capitalist class. However, the inflation may have served to discourage some saving and if the recipients of dividends are not able to find outlets for savings more easily than firms can find them then the capacity to import may likewise have discouraged savings from this source as well as from the business firms.

(ii) Inflation and exports

The most obvious feature of Chile's export situation is that the economy has only one major export--copper--and the result of this is that the foreign exchange receipts will fluctuate as the world price of copper fluctuates. In this area also uncertainty on the relationship between inflation and exports is to be found. However, what does seem clear is that exports of less developed countries suffering from strong inflation have tended not to grow as rapidly as the exports of those countries enjoying a degree of stability. Gertrud Lovasy (48) points out that over the period 1953 to 1959 the exports of high-inflation underdeveloped countries remained unchanged while those of stable underdeveloped countries grew by 35% and those of mild-inflation countries registered a 27% rate of growth.

While she does not focus on Chile in her analysis, Lovasy does indicate at one point that Chile was one of the few countries experiencing inflation but at the same time enjoying an increase in both major (copper and nitrates) and minor (iron ore) exports. She attributes this partly to the fact that foreign-owned companies account for most of the exports and are not as affected by the internal price level as are other parts of the Chilean economy and partly to the

(48) "Inflation and Exports in Primary Producing Countries", International Monetary Fund Staff Papers, 1962.

fact that its other exports, after falling off around 1953, were able to recover late in the period thanks to devaluation and some stabilization measures.

Chile had the highest growth in exports over the period 1953 to 1959 of the strong inflation countries listed by Lovasy. See Table XV of the Appendix. The same was not the case in the period 1948-49 to 1953-54. See Table XVI of the Appendix. The growth in exports was less than in the later periods. When considered over the period 1948 to 1959, exports of Chile have fluctuated but have not risen substantially. See Table XVII of the Appendix.

Once again the relationships are blurred. The point made by Lovasy that the export firms are foreign-controlled is significant and has not always been recognized by other writers. This, in combination with large fluctuations in the world copper prices, is perhaps strategic in explaining export growth or the lack of it. But the point made by Harberger in the previous section--that the exchange rate has been consistently overvalued--must not be forgotten. While the performance of exports may not have been totally unsatisfactory, inflation and the uncertainty over devaluation have likely contributed to the failure to diversify exports and may have been instrumental in Chile's only mediocre export performance when a strong one might have been achieved. One must also recognize that the same effect could have resulted from discrimination against this sector, as posited by Mamalakis.

(iii) <u>Inflation and growth</u>

Very often the literature provides little guidance in one's attempts to determine how inflation has been associated with growth. Many of the studies survey a wide range of countries and reach inconclusive results or at best results that are subject to many qualifications.

Graeme Dorrance (49) concludes from his statistical study that inflation tends to hamper growth. He lists Chile as a "poor" country in an arrangement of five categories: very wealthy (those with G.D.P. per capita at factor cost greater than $1,250 (U.S. in 1958)), wealthy (a range of per capita income of $1,000-1,250), average ($500-1,000), poor($250-500), and very poor (less than $250). Among the poor countries are those with relative price stability, those with mild inflation and those with strong inflation. Relative stability means inflation of less than 5%, mild inflation means 5-10%, and strong inflation is greater than 10% per annum.

The average rate of inflation for the relatively stable countries was 2.1% and the average rate of growth in per capita G.D.P. was 4.5%. His averages are taken over seven- or eight-year periods. For the poor countries with mild inflation, the figures were 7% and 2.5% respectively. For the strong inflationary countries, the average price increase was 25% and the average growth rate was 1.3%. For the entire group of "poor" countries the average inflation rate was 9% and the average growth rate was 3.4%. Chile's inflation rate was 33% and its growth rate 0.6%.

Dorrance qualifies the conclusions he reaches by noting that

(49) "Inflation and Growth: The Statistical Evidence", International Monetary Fund Staff Papers, Volume VII, 1959-60.

inflation represents only one variable among several--including natural resources, tradition, wealth, and education--which influence growth. The fact, however, that Chile ranked among those with the slowest economic progress and those with the highest rate of inflation cannot be ignored. To be certain exceptions to this rule can be found: Canada's growth rate of per capita G.D.P. was not much higher than Chile's at 1.0%, although the average rate of inflation was 1.3%. Conversely, Brazil's rate of inflation was also "strong" at 18% but its rate of growth of per capita G.D.P. was 2.8%.

U Tun Wai (50) found that for less developed countries in general the relationship between inflation and growth was inconclusive. Although he does not focus on Chile specifically, he does suggest this:

> For most of the small number of individual countries for which available statistics cover periods in which the rates of price increase differ significantly, the evidence suggests that the rate of growth was higher when the rate of inflation was lower. (51)

His comment leads into another area: that of the fluctuations in the rate of inflation. Other studies have suggested that fluctuating prices are more likely to cause slow growth rates than are smoothly rising prices. If inflation is smooth then it can be anticipated and accommodated in decisions on such things as the level of investment and in wage bargaining. An erratic rate on the other hand does not allow this same type of planning. While not as difficult to anticipate as a

(50) "The Relation Between Inflation and Economic Development. A Statistical Inductive Study", International Monetary Fund Staff Papers, Volume VII, 1959-60.

(51) Ibid., p. 302.

rate which fluctuates up and down, a smoothly accelerating rate of inflation is more difficult to plan for than a constant rate of inflation; in addition, in time the smoothly accelerating rate of inflation will turn into a hyperinflation. Any earlier advantages of smoothness would be lost.

A comparison of three countries, Chile, Brazil, and Mexico can be made in order to determine how the growth rates of G.N.P. per capita relate to fluctuations in the rate of inflation. Table IX provides the data.

The average rate of inflation for the period 1951-62 for Chile was 33.3%, for Brazil 25.8%, and for Mexico 6.6%. The coefficients of variation were: Chile, 69.4%; Brazil, 48.4%; and Mexico, 93.9%. The average annual growth rate of G.N.P. per capita for Chile during the period was 1.3%, for Brazil, 2.7%, and for Mexico, 2.6%. (52)

Once again there is uncertainty. If the thesis about fluctuating rates of inflation and growth of per capita income were to hold, then Mexico should have the lowest rate of growth of G.N.P. per capita. In fact, this is not so. Brazil has a lower coefficient of variation than Chile and Mexico and a higher rate of growth than both. But Mexico has a higher rate of economic growth than Chile while its coefficient of variation is also higher. An hypothesis for this may be that the higher average rate of inflation (in absolute terms) for Chile had a bearing on the growth rate which was not manifested in this calculation on fluctuations. However, the rate of inflation for Brazil is closer to that of Chile than to that of Mexico and yet its growth rate of per capita income is closer to that of Mexico.

(52) Pierre Uri, A Monetary Policy for Latin America, (New York, Frederick A. Praeger, 1968).

In a short comment on the inflation, Munoz states that industrial output in Chile has not been satisfactory compared with the industrial growth in other less developed countries. And this is in light of the fact that the Chilean industrial sector received a great amount of public assistance. (53) One must be justified in attributing at least part of this poor performance to the inflation.

Martin Brofenbrenner has suggested the "optimum" rate of inflation for an underdeveloped country to be four per cent per annum. (54) This, presumably, allows the economy to make better use of the resources available while not suffering too much from the distortions generated and problems produced by inflation. This "optimum" rate is probably not meant to be a rigid guideline for those responsible for economic policy. Rather it serves to set a "tone" for the economy that is striving to develop and to make the most efficient use possible of all of its resources. Such an economy--in our case an underdeveloped one--cannot be expected to maintain absolute price stability for the pressure of demand is bound to be high.

However, this 4% rate does not provide much guidance to those responsible for policy in Chile. If they were to attempt to reduce the rate of inflation to four per cent by, say, 1977, they would likely create an intolerable level of unemployment; for them in the near future

(53) Munoz, op. cit., p. 175.

(54) "The High Cost of Economic Development", Land Economics, 1953, p. 210, as cited in A.K. Poddar, "Inflation and Economic Growth", Indian Journal of Economics, 1963-64, p. 161.

four per cent is not the optimum rate. One must take into consideration the past history. In addition, Brofenbrenner's idea of an optimum rate implies that an underdeveloped economy can be controlled sufficiently to keep the inflation rate within a range of $4\% \pm 1\%$. While the optimum rate may be theoretically meaningful, in practice it is not very useful.

Andrew Shonfield favours a certain amount of inflation, claiming that the Western countries have become "obsessed" with price stability and that they have transferred this concern, without justification, to the underdeveloped countries. He contends that for the countries of Asia a certain amount of price inflation should be welcomed "as a healthy and normal accompaniment of growth". He continues:

> They should see it as an element in the tactical planning of development and deliberately choose the points in the system where they _want_ to see price inflation. (55)

He attributes Latin American inflations to the "traditionally happy-go-lucky attitude of many of these governments towards the whole business of the finance of central government" and to the fact that the banking system is quite well-developed and is thus "a powerful engine for speeding up the inflationary process". (56) He doubts that inflation, even at Latin American rates, has the effect of stopping development altogether. Instead, a strong inflation has the major

(55) Andrew Shonfield, "Inflation and Economic Growth", _The Listener_, 1961, p. 271.

(56) _Ibid._, p. 271.

drawback of being "an enormous nuisance". He claims that governments of other less developed countries have drawn the wrong lesson from the experience of Latin America: that the desire now is to maintain complete financial stability.

Granted, a blind adherence to price stability may hinder growth as much as rapid inflation does. But Shonfield, I feel, does not recognize the very real problems of inflation for development or the difficulty of controlling an inflation. The inflation in Chile has been much more than simply a nuisance, even an enormous nuisance. If the policy makers in an economy are sufficiently skillful and have the proper tools to "choose the points in the system where they want to see price inflation" they likely also possess the ability to encourage growth without having to resort to inflation. This is reminiscent of what Myrdal had to say in Chapter II: the difference is that he seemed to have more respect for the dangers of inflation than does Shonfield. But in addition, such an attitude assumes that the economy is similar to a finely-tooled machine which can be controlled by pushing a few buttons; by programming into the economy the various degrees of inflation desired for different sectors can be achieved. When all the sectors are aggregated, the result may be Brofenbrenner's "optimum" rate of inflation.

In addition, one cannot expect that the growth generated through high inflation can be evaluated simply through measurement of G.N.P. Such a method of evaluation ignores most considerations of welfare--e.g., the effects of forced savings. One source has raised the issue of the "quality" of economic growth in this way:

> Mere quantitative additions to an economy's total output of goods and services may signify little over the long run if they are accomplished largely at the cost of exhausting international reserves, mortgaging future production to repay sizable international obligations, or fostering an increasingly unequal distribution of income. Economic growth on that basis is not likely to be lasting and, therefore, cannot be regarded as satisfactory. (57)

What does seem to be a legitimate observation on inflation in Chile is that it may not have actually prevented growth from being higher than it was but it has probably not assisted growth either. One cannot be dogmatic on this, for Chile did not suffer greatly in her ex ports, and investment was slowed for reasons other than inflation itself. But to the extent that various policies that are deleterious to the economy have been instituted as a result of inflation and to the extent that the low growth has been the result of stabilization efforts designed to stop an accelerating inflation in the range of 70%, the inflation may be seen as having hindered Chilean economic growth in an indirect fashion. Of course, whether or not the inflation has hindered growth directly--by causing savings and investment to decline and by discouraging the country's exports--or indirectly in the ways postulated above is a not too significant distinction: the result is the same.

While countries other than Chile have suffered from low growth, theirs may be due to genuinely autonomous forces making growth difficult. A case has been made attempting to demonstrate that many of Chile's problems have resulted from misguided policies and not entirely from outside forces. One cannot legitimately attempt to

(57) Federal Reserve Bank of New York, "Inflation and Economic Development", Monthly Review, August, 1959, p. 125.

attribute all of Chile's problems to inflation for that would make one a structuralist of a sort. But what can be said is that inflation has made growth much more difficult than it needed to be.

Chapter V

Conclusions

Many of the conclusions reached as a result of the research are found in the previous chapter; however, it deals only with the Chilean case while matters raised throughout the thesis apply to issues beyond Chile alone.

While there are a considerable number of reasons for doubting the approaches taken by and the theory of each of the two schools, the monetarists probably have more to offer to the individual or group interested in understanding and/or formulating policy on inflation in an underdeveloped country. That is not to suggest that the structuralists have no contribution to make, but the ideas of the monetarists seem more reasonable both in their own right and in light of the Chilean experience with inflation.

For instance, the structuralists have employed the declining terms of trade argument in their attempt to demonstrate why inflation will occur in a country attempting to develop: such a use of this argument enables one to understand much of the policy that has been put into effect in Latin American countries for although the theory of declining terms of trade may be somewhat in doubt the fact remains that the terms of trade were often <u>thought</u> to be declining and the policy carried out sometimes reflected such an assumption. As a result of this analysis by the structuralists, understanding of the reasons for the inflations which have occurred has been broadened.

But when one comes to decide what to do about inflation--to let it continue or to try to slow it down--the monetarist approach seems much more appropriate. As noted several times in the previous chapters, the structuralists seldom take into consideration the disadvantages of inflation--or, for that matter, some of the advantages that have been seen in it, such as forced savings. And, the balance of the advantages offset by the disadvantages is what must sway the decision on policy in the end. The structuralists indicate that a level of demand in an economy "high enough" to give rise to a satisfactory growth rate will mean inflation.

What is also certain is that the monetarist theory and policy must be handled carefully. Monetarists tend to become carried away with the "rightness" of their theory and often think it can be applied without qualification. This perhaps reflects their position of disinterested observers charged with pointing up the problems and distortions in an economy suffering from inflation, indicating the cause of the inflation, and then making a recommendation as to how the inflation is to be stopped and the distortions corrected. Their responsibility is not to pilot the legislation for reform through the Parliament or Congress, or to strike a compromise among rival groups, each of which is being called upon to make sacrifices, or to endure the pressures that will emerge during the transition from instability to stability. Nevertheless, these problems are precisely the problems faced by those responsible for stabilization. If policy on inflation does not recognize these difficulties, then it is poor policy. One might claim that the structuralists, being largely indigenous to Latin America, have recognized these problems only too well and as a result have not come forth with substantive policy on inflation.

Despite their faults, each approach has important insights to offer to the observer, and to attempt to make a choice between the two is perhaps unnecessary. The optimum policy on inflation will include elements of both monetarist and structuralist thought.

An issue which was raised in the introduction and which has been behind all that has been said is that of the place of economic theory, as a Western economist knows it, in the study of the economics of less developed countries. This is a very broad issue which contains two elements, each of which was dileneated in Chapter I.

The first aspect of this issue is that of the applicability of "conventional" economic theory to the economics of underdeveloped countries. One can recognize that much that is taught in North American and Western European universities is based on implicit assumptions of institutions generally found in developed countries. Such features of a developed country as a highly-developed banking system, security markets, and a wide range of fiscal and monetary tools will not usually be found in the less developed country and much of the economics to be found in Western textbooks is based upon the assumption of the existence and the smooth functioning of these institutions. Likewise, such concepts as "unemployment" and "full employment" are inappropriate to the underdeveloped country, especially the over-populated one: the conditions of labour and of labourers in the less developed country do not match those obtaining in the developed country and one cannot always understand the employment situation in the poor country if he attempts to use concepts developed and found applicable in the rich country.

However, to the extent that this material is referred to as "theory" that may be an inappropriate use of the term. If it is so named, then the complaint is justified that conventional economic theory is not applicable. But also included in conventional economic theory are such concepts as marginal cost being equated to marginal revenue at the output yielding maximum profit, comparative advantage in international trade, the theory of consumer utility or satisfaction, and the (ex post) equality of the sum of exports plus government expenditures plus investment and the sum of savings plus imports plus tax receipts.

This defence of Western "theory" does not ignore the very real problems encountered by a Western economist in understanding and assisting the less developed country; many Westerners have returned from the Third World disillusioned by the fact that they could not be of as much assistance as they had hoped. Nonetheless, what is asserted is that Western theory, properly defined, and that definition understood, is as applicable to the economics of less developed countries as it is to the economics of developed countries and for that very reason it is not Western theory but, more appropriately, economic theory.

The second issue is that of whether economics can stand "alone" as a social science in a less developed country: that is, whether one can engage in strictly economic analysis or whether he must incorporate into his approach a variety of other disciplines such as sociology, anthropology, and politics. In a sense, this question is parallel to the first one: if Western economic theory is not meaningful to the underdeveloped countries, then the analysis which must take its place must incorporate other factors. But there are distinctions between these two questions.

The latter question could be raised just as validly in a developed country as in the underdeveloped country and the answer which is given is the same in both instances. No economist who wishes to make his study useful can afford to take only a narrow approach but he must keep in mind the underlying philosophy of the society. One might eliminate a government budget deficit which was proving inflationary by cutting off all welfare payments. In an extremely narrow sense that is the solution an economist might propose. But it would mean that he had not come to appreciate the framework of society in which economic considerations play only one part, albeit an important one.

The economist in a less developed country must likewise have an appreciation for the framework in which he is working. If he does not understand the traditions of his society, the forces motivating its people, and the standards which it sets (on a philosophical plane) then he cannot provide useful and meaningful economic advice. For instance, a very high level of saving will help the economy to grow much more rapidly than it would were consumption to absorb most of the resources of the society. This might be the "narrow" economic answer to the question of how to develop. However, it ignores the possibly tremendous cost in human suffering if consumption were to be reduced drastically.

By incorporating a wide range of other disciplines into the social science of economics one can easily avoid this sort of difficulty. However, that procedure runs the risk of ignoring the benefits which can be derived from an approach to economics which tends to treat outside factors as "given". That is, in a sense, the foundation of the scientific method and the progress that economics has made, I feel, has come from the ability and desire to study economics as economics: through that process, we have come to be able to understand more clearly the economic aspects of social life, but we have not been required to ignore the non-economic aspects of social life.

To consider the structuralist-monetarist controversy in light of this matter, the monetarists would likely claim that the structuralists have failed to study sufficiently the economic aspects of inflation while the structuralists would charge the monetarists with being pre-occupied with economics in the abstract. To be sure there is truth in both assertions, but again these are the polar extremes.

This issue of Western economics in less developed countries in general is not easily resolved; the issue very likely needed to be raised, given the relative novelty of the study of underdeveloped countries as a special branch of economics. It remains open to a wide range of interpretation and opinion.

Finally, the monetarist-structuralist debate sheds some light on the Canadian inflation. During the past few years, issues similar to those raised in Chile have been raised in Canada. The question of the method of stabilization has been significant in Canada, as it is and was in Chile: what tools should be employed?; will stabilization efforts hinder growth to too great a degree?; should the economy attempt to adjust to and live with inflation?; what rate of inflation must be tolerated as a minimum, given inflations occurring in other countries? The history of the two countries is markedly different and the present situation is different in ways other than simply the level of per capita income and the rate of inflation.

But the fact that the same or similar questions are being and have been asked suggests that Canada can learn something from the experience of Chile. This is not to imply that Canada should expect its inflation to escalate to 75% in three or four years if no action is taken on it now. But the questions raised when an economy is faced with the alternatives of stabilization or of allowing the inflation to continue have very serious implications with respect to the public interest. The matter of what is the public interest becomes dominant and encompasses the other questions.

The way in which a society attempts to resolve the issue gives us a clue as to the nature of that society. The economic aspects of a society cannot be understood without understanding the entire society.

Table I

Copper Price Index

(1925 = 100)

1925	100	1943	83
1926	98	1944	85
1927	91	1945	85
1928	104	1946	99
1929	130	1947	150
1930	96	1948	163
1931	52	1949	150
1932	42	1950	156
1933	46	1951	187
1934	55	1952	183
1935	54	1953	177
1936	66	1954	177
1937	94	1955	254
1938	72	1956	298
1939	77	1957	203
1940	84	1958	182
1941	74	1959	221
1942	83		

Source: Mamalakis and Reynolds, op. cit., Appendix, p. 381.

Table II

Copper Sales

as a
Percentage of
Total Exports.

1925	20	1943	34
1926	25	1944	34
1927	25	1945	28
1928	28	1946	28
1929	38	1947	32
1930	31	1948	40
1931	22	1949	32
1932	23	1950	39
1933	20	1951	38
1934	19	1952	41
1935	23	1953	29
1936	22	1954	48
1937	37	1955	57
1938	31	1956	71
1939	33	1957	53
1940	37	1958	41
1941	36	1959	51
1942	36		

Source: Mämalakis and Reynolds, op. cit., Appendix, p. 385.

Table III

Total Value of Copper Production

as Percentage of G.D.P.

1925	7.1	1943	11.8
1926	7.3	1944	11.3
1927	10.1	1945	9.8
1928	11.7	1946	7.8
1929	14.2	1947	11.1
1930	8.6	1948	10.7
1931	7.5	1949	9.2
1932	2.9	1950	8.6
1933	4.7	1951	9.3
1934	6.6	1952	9.0
1935	6.3	1953	7.3
1936	6.8	1954	7.2
1937	14.7	1955	12.4
1938	10.6	1956	15.9
1939	10.3	1957	9.5
1940	11.8	1958	7.9
1941	11.7	1959	11.3
1942	12.4		

Source: Mämalakis and Reynolds, op. cit., Appendix, p. 385.

Table IV

Copper Terms of Trade

Copper Price Index
Import Price Index

(1925-58)

1925 = 100

1925	100	1942	100
1926	126	1943	86
1927	103	1944	88
1928	106	1945	84
1929	124	1946	92
1930	97	1947	114
1931	55	1948	121
1932	53	1949	115
1933	74	1950	111
1934	102	1951	115
1935	106	1952	101
1936	124	1953	103
1937	159	1954	102
1938	114	1955	143
1939	135	1956	167
1940	138	1957	117
1941	112	1958	106

Source: Mamalakis and Reynolds, op. cit., p. 381.

Table V

Chile: Net Barter

Terms of Trade
(1925 = 100)

1915	86	1930	78	1945	45
1916	100	1931	62	1946	50
1917	104	1932	53	1947	46
1918	71	1933	48	1948	57
1919	64	1934	49	1949	59
1920	66	1935	52	1950	54
1921	69	1936	57	1951	60
1922	73	1937	59	1952	62
1923	84	1938	50	1953	68
1924	82	1939	54	1954	58
1925	100	1940	52	1955	65
1926	118	1941	52	1956	71
1927	91	1942	56	1957	58
1928	84	1943	48	1958	51
1929	75	1944	50		

Source: Mamalakis and Reynolds, *op. cit.*, Appendix, p. 385.

Table VI

Relative Agricultural Prices

(1934-38 = 100)

Year	Agricultural Index Wholesale (A)	Overall Index Wholesale (B)	Relative Prices (A)/(B)
1928	56.1	49.3	113.8
1929	57.4	49.3	116.4
1930	45.7	42.9	106.5
1931	36.2	39.1	92.6
1932	54.9	58.8	93.4
1933	73.6	88.4	83.3
1934	74.4	88.1	84.4
1935	81.9	87.8	93.3
1936	98.9	97.3	101.6
1937	126.4	116.3	108.7
1938	118.5	110.5	107.0
1939	106.4	107.8	98.7
1940	130.1	118.7	109.6
1941	155.4	138.8	112.0
1942	196.6	188.4	104.4
1943	213.2	207.8	102.6
1944	232.2	214.6	108.2
1945	255.2	228.6	111.6
1946	302.6	263.6	114.8
1947	415.6	340.1	122.2
1948	490.9	390.4	125.7
1949	559.0	445.2	125.6
1950	638.4	522.4	122.2
1951	815.0	638.0	119.3
1952	1116.4	847.3	131.8
1953	1407.3	1042.3	135.0
1954	2325.0	1635.4	142.2

Source: Markos Mamalakis, "Public Policy and Sectoral Development", p. 131.

Table VII

Index of Wholesale Prices

(1949 = 100)

Year	General	Agricultural Production (A)	Industrial Products (B)	Relative Prices (A)/(B)
1949	100.0	100.0	100.0	100.0
1950	117.3	114.2	112.1	101.9
1951	153.4	145.8	145.2	100.4
1952	190.3	199.7	172.3	115.9
1953	234.1	251.5	217.0	115.8
1954	367.3	416.1	334.1	124.5
1955	647.4	722.5	612.9	117.9
1956	1061.9	1026.2	989.2	103.8
1957	1512.2	1379.8	1297.2	106.4
1958	1897.2	1514.6	1706.4	88.7
1959	2464.5	1936.1	2371.9	81.6
1960	2641.9	2424.0	2433.6	99.6

Source: Markos Mamalakis, "Public Policy and Sectoral Development", p. 132.

Table VIII

Chile: Discount Rate

End of Period
(in percentages)

1950	4.50	1958	6.00*
1951	4.50	1959	16.25
1952	4.50	1960	16.55
1953	4.50	1961	15.88
1954	4.50	1962	14.62
1955	4.50	1963	14.21
1956	4.50	1964	14.63
1957	6.00	1965	15.30

* Before April 1, 1959, this was the basic rate to which a penal rate was added when a bank's total rediscounts exceeded 50% of its capital and reserves.

Source: International Financial Statistics, 1966-67 Supplement.

Table IX

Inflationary Data

for
Chile, Brazil and Mexico

1951-62
(Rate of Increase in Cost of Living)

Year	Chile	Brazil	Mexico
1951	22.2	7.7	13.4
1952	26.7	25.0	15.3
1953	18.1	20.0	-2.9
1954	76.9	19.0	6.1
1955	73.9	20.0	15.7
1956	57.5	21.6	3.7
1957	25.4	19.2	6.0
1958	26.6	14.9	12.4
1959	39.0	37.0	2.0
1960	11.5	35.0	5.9
1961	7.8	38.8	0.9
1962	13.7	52.3	0.9

Source: International Monetary Fund, International Financial Statistics, 1965-66 and 1966-67 Supplements.

Standard Deviations

	1951-62	1951-59
Chile	23.1	22.8
Brazil	12.5	7.9
Mexico	6.2	6.5

Table X

Rate of Gross Domestic Fixed Capital Formation in Chile (as percentage of G.D.P.)

Year	Chile	Latin American Total
1950	8.9	16.5
1951	9.1	18.1
1952	9.2	17.9
1953	9.7	15.9
1954	9.2	15.8
1955	10.9	16.9
1956	9.7	17.3
1957	9.9	18.4
1958	8.3	17.4

Source: "Public Policy and Sectoral Development", p. 69.

Table XI

Investment as a Percentage of G.N.P.,

and Price Changes in Selected Years.

Year	Coefficient of Capital Formation*	Cost of Living Index in Santiago (Annual Percentage Change)
1928	17.6	0.0
1929	21.0	0.3
1930	20.5	-2.5
1953	9.7	25.3
1954	9.2	72.2
1955	10.9	75.2

* For the period 1928-30, these figures reflect the total value of imports of capital goods plus the domestic production of iron, steel, and cement as a percentage of the total value of available goods. Mamalakis admits that these figures were not strictly comparable with the figures of gross investment as a percentage of G.N.P. for 1953 to 1955. He uses them both for he found that the values of the two estimates of the coefficient of capital formation for a series of overlapping years were almost identical and consequently the error involved in the comparison is very small.

Source: Markos Mamalakis, "Public Policy and Sectoral Development", p.71.

Table XII

Profits and Gross Fixed Investment

as a Percentage of National Income 1940-52.

Year	(1) Profits as Percentage of Domestic Nominal Income	(2) Gross Domestic Investment in Fixed Capital as Percentage of Gross Real Domestic Product	(1) as % of (2)
1940	12.9	11.1	116.0
1941	21.6	10.1	214.0
1942	19.2	8.9	216.0
1943	17.4	8.8	198.0
1944	17.2	9.2	187.0
1945	19.1	8.8	217.0
1946	21.6	12.0	180.0
1947	21.5	13.3	162.0
1948	23.5	11.4	207.0
1949	15.8	13.0	122.0
1950	17.0	11.7	145.0
1951	14.2	12.5	114.0
1952	14.3	11.5	124.0

Source: Markos Mamalakis, "Public Policy and Sectoral Development", p. 72.

Table XIII

Food Imports as a Percentage of

Total Imports

(1951-65)

1951	7.5%
1954	11.7
1955	12.1
1956	6.2
1957	17.3
1958	15.3
1959	14.9
1960	20.1
1961	17.7
1962	19.0
1963	21.9
1964	20.8
1965	18.0

Source: Matthew Edel, Food Supply and Inflation in Latin America, p. 21.

Table XIV

Real Rates of Bank Interest

1951-65

Year	
1951	-11.5
1952	0.0
1953	-43.6
1954	-57.9
1955	-69.6
1956	-23.8
1957	-2.9
1958	-16.8
1959	-17.0
1960	+11.3
1961	+5.9
1962	-13.3
1963	-31.1
1964	-23.5
1965	-10.3

Source: Charles T. Nisbet, A Model for Analyzing Some Effects of Discriminatory Credit in Chile, University of Wisconsin, Land Tenure Centre, Publication No. 34, May, 1967.

Table XV

Countries with Strong Inflation:

Changes in Domestic Prices (Cost of Living) 1953-58, and in the Volume of Exports, 1953-54 to 1958-59.

	Cost of Living: Annual Rate of Change 1953-58	1958-59 Average of Indices of Volume of Exports (1953-54 = 100)
Turkey	11.4	86
Uruguay	11.9	65
Argentina	16.8	116
Paraguay	17.1	110
Brazil	19.0	114
Indonesia	20.9	90
Chile	49.7	125
Bolivia	90.4	67

Source: Gertrud Lovasy, "Inflation and Exports in Primary Producing Countries, p. 61.

Table XVI

Countries with Strong Inflation:

Changes in Domestic Prices (Cost of Living), 1948-53, and in the Volume of Exports, 1948-49 to 1953-54.

	Cost of Living: Annual Rate of Change 1948-53	1953-54 Average of Indices of Volume of Exports (1948-49 = 100)
Brazil	10.1	76
Peru	10.5	157
Iceland	11.4	128
Australia	12.1	106
Indonesia	16.3	192
Chile	20.7	92
Argentina	26.4	91
Bolivia	34.4	96
Paraguay	63.9	93

Source: Gertrud Lovasy, "Inflation and Ex ports in Primary Producing Countries", p. 62.

Table XVII

Chile: Index of Volume of Total Exports 1948-59

(1953 = 100)

1948	122	1954	113
1949	110	1955	118
1950	106	1956	122
1951	111	1957	130
1952	116	1958	126
1953	100	1959	140

Source: Gertrud Lovasy, "Inflation and Exports in Primary Producing Countries", p. 64.

Table XVIII

<u>Chile: Money Supply</u>

(Millions of Escudos)

1950	14.5	1959	294
1951	18.4	1960	384
1952	25.3	1961	432
1953	38.6	1962	556
1954	56.6	1963	747
1955	93.0	1964	1129
1956	130.0	1965	1867
1957	165.0	1966	2594
1958	222.0		

<u>Source</u>: <u>International Financial Statistics</u>, various issues.

Table XIX

Food Production Index
Per Capita

1952-66

F.A.O. Statistics (1961 = 100)

1952	96
1953	99
1954	99
1955	102
1956	102
1957	97
1958	107
1959	98
1960	98
1961	100
1962	97
1963	103
1964	99
1965	94
1966	93

Source: Matthew Edel, *op. cit.*, p. 148.

Table XX

Chile: Exchange Rate

Pesos/Escudos per U.S. dollar
End of period figures

Year	Official Market Rate (Trade)	Free Market Rate (Non-trade)
1950	31.1	72.5
1951	31.1	92.6
1952	31.1	128.5
1953	110.2	220.0
1954	110.2	315.0
1955	110.2	630.0
1956	547.0	773.0
1957	690.0	1120.0
1958	993.0	
1959	1,053.0	
1960	1.053	
1961	1.053	
1962	1.64	2.42
1963	2.15	3.04
1964	2.70	3.26
1965	3.47	4.22

In 1960, the new monetary unit, the escudo, was issued:
1 escudo = 1,000 pesos.

Source: International Financial Statistics, 1966-67, Supplement.

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