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Structural models of inflation and balance of payments disequilibria in semi-industrialized economies: some implications for stabilization and growth policies

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TEXTO PARA DISCUSSÃO

Nº 29

‘Structural’ Models of Inflation and
Balance of Payments Disequilibria in
Semi-Industrialized Economies: Some
Implications for Stabilization and
Growth Policies

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- IV – The Endogenous Cycle and the Role of Changes in Relative Prices.
- V – The General Policy Prescriptions of ‘Structural’ Models.

Paper presented at the International Economic Association Conference on “Problems of Changes in Relative Prices”, August 31 – September 5, 1981. Athens. Pedro S. Malan and John R. Wells are respectively from the Department of Economics of the Catholic University of Rio de Janeiro, Brazil, and from the Faculty of Economics and Politics of Cambridge University, England.

I – The essential Features of “Structural” Models

Structural modes of thought about inflation, growth and balance of payments disequilibria consider these phenomena as interrelated political economy problems, having to do with short and long-term conflicts in national economic objectives which could only be meaningfully understood or analysed in terms of historical perspective and in relation to changing world economic Conditions¹.

Generally, structuralist models² usually display six distinctive features, namely:

- a) sectoral disaggregation of the productive structure of the economy and a careful consideration of its supply conditions, specifically supply elasticities, elasticities of substitution in production and the nature of technological progress in each sector.
- b) concern with the relevant *relative* price changes of terms of trade (say agriculture/industry, tradeable/non-tradeable, consumer/investment goods, exports/imports) and its associated income and output effects, especially its distributional implications.
- c) concern with different mechanisms of price determination (and wage reaction) in different sectors, emphasizing the fact that not only prices respond to excess demand or excess supply in widely different speeds (allowing for quantity adjustments), but that in some relevant sectors, such as manufacturing, prices are essentially cost-determined through a mark-up on relevant unit-production costs.
- d) concern, not so much with the “original sin” (such as a supply or a demand shock) which caused inflation in an otherwise non-inflation-prone economy, but rather with the propagation mechanisms and the wider dispersion of relative prices associated with higher rates of inflation.
- e) assumption of a relative “endogeneity” of the money supply because of its close linkages with the balance of payments (under conditions of high international capital mobility) and/or with chronic financial disequilibrium of the public sector (which requires *interpretation*, both in developing and in advanced countries).
- f) consideration of a structure of assets which includes money, goods, financial assets, real productive assets and real unproductive assets, such as urban and rural land held as a preferred hedge against inflation. Therefore, although domestic savings might be increased by rising interest rates, this does not imply necessarily higher or more productive real investment.

¹ This observation is perhaps too general and somewhat obvious to be reasserted here, if it were not for the fact that orthodox economics derives a good deal of its claim to “scientific status” from its a-historical and a-institutional character.

² By structural models we mean those related to Latin American structuralist tradition, to Cambridge (England) policy-oriented theorizing on the subject (along the lines set by Kaldor) and to a lesser extent, to the so-called Scandinavian models of inflation in open economies. See references.

Of course, models constructed upon the above elements, or ‘stylized facts’ do not constitute a structuralist *theory* in any meaningful sense of the word. They are a method rather than a doctrine, a way of looking at and going into the world’s real relevant problems through meaningful hypotheses and testable propositions, which has proved – and is proving – to be extremely fertile, not only for so-called semi-industrialized economies but also for an analysis of some advanced countries and post-OPEC world economic problems³.

Indeed, we would argue that a general interpretation and some general policy prescriptions both for the short and specially for the long run, do follow from a proper integration of some of the essential features underlying the structuralist approach. The analysis and general policy prescriptions are non-conventional by the very nature of the heterodox interpretations of inflation and payments imbalances in semi-industrialized economies. However, world events after the collapse of the Bretton Woods system and the rise of OPEP, especially the irksome combination of inflation, unemployment and balance-of-payments disequilibria, have made the advanced world realize that these were not merely uninteresting characteristics of exotic and badly-run Latin American-type economies

This paper is organized as follows; sections II and III deal with the nature and analytical meaning of the external constraint cum inflation *conundrum* which many semi-industrialized economies historically have faced. Section IV deals with the nature of the *endogenous* cycle which an advanced semi-industrialized economy is able to generate and with the crucial role of inflation and of changing relative prices in it. Section V attempts to derive the general policy prescriptions for stabilization *cum* growth in a semi-industrialized economy that, we do believe, follow from a ‘structuralist’ interpretation.

II – The External Constraint in Semi-Industrialized Economies

By open, semi-industrialized economies, we mean economies which have been experiencing a secular reduction in the share of their labour force employed in agriculture and which have built – through import substitution – a sizeable domestic industrial sector which now exports part of its production. Nevertheless, they are still highly dependent on non-competitive imports of capital goods and crucial raw materials for industrial use. This relatively high import content of a unit of investment and output constitutes a distinctive feature of a semi-industrialized economy. Historically⁴ faced with

³ See N. Kaldor “Inflation and Recession in the World Economy”, *Economic Journal*, December, 1976.

⁴ By ‘historically’ we do not mean any economic determinism but rather the conscious transfer of real resources to industry which, in the absence of capital markets and adequate tax systems, used intervention in the foreign exchange system as a transfer mechanism usually implying a wide differential between the import and the export exchange rates, the latter being generally overvalued. Up to the early sixties, this was probably an adequate response to rather unfavourable international conditions, especially lack of convertibility among the major currencies. Subsequent events have demonstrated export-promotion policies as a feasible mean of external adjustment. Indeed, all the so-called success

an inelastic supply of foreign exchange (earned-through-exports), these economies had few alternatives: either to accept that trade be balanced at a lower rate of growth (or at a higher rate of growth by reducing the import-coefficient through import-substitution industrialization) or to rely upon foreign capital inflows so as to relieve the balance of payments constraint. Where these inflows were in the form of loans, they led to cumulative financial indebtedness, where they assumed the form of direct investments, they usually led to a partial de-nationalization of the semi-industrialized economy.

For conventional theorizing, as we know, there is no substantive analytical meaning in the notion of a foreign exchange constrained economy. Partly because it assumes a foreign exchange shortage to be simply a sign of an overvalued exchange rate (mainly due to domestic inflation) of unwarranted government intervention in foreign trade, or merely of inconsistencies between the targets of income and export growth. Latin American ‘wrongdoers’ for example, have been told *ad-nauseam* that they have historically failed to perceive the need to adopt export-promotion policies designed to make available the foreign exchange required by the higher level of imports of capital goods, raw materials, and semi-manufactures implicit in their desired growth rate.

Therefore, the conventional interpretation has always emphasized “faulty or inconsistent policies”, especially in allowing for an excess of expenditures over domestic output, which not only lead to inflation but also ‘spilled over’ through the balance of payments, leading to an excess of imports over exports, which was only aggravated by an exchange rate progressively overvalued due to rising domestic prices. The policy prescriptions emerging from this analysis were clear-cut and supposed to have a universal validity; ‘curb your excess-demand’ and ‘have your prices right’ (especially the wage-rate/exchange-rate relationship). The refusal to observe these prescriptions was for years considered an imbecility as well as an outrage.

Latin American economists of the structuralist tradition, even when feeling reluctant to defend or justify specific policies in favour of import-substitution industrialization, have provided a sensible interpretation for inflation and balance-of-payments disequilibria associated with it. By doing so, they displayed a much deeper sense of historical developments and a deeper perception of international conditions than most academic economists, and experts of International organizations, with orthodox inclinations.

For Latin American economists have always emphasized the fact that (accommodating monetary policies notwithstanding) it was the *changes in the productive structure of their economies* which were at the root and caused the bias for protracted, high rates of inflation. These changes had originated in the way in which industrialization and associated urbanization proceeded in major Latin

stories were written *after* the early sixties.

American countries: somewhat unintentionally during what Sir Arthur Lewis called “The Greatest Depression of 1913-1948” and much more intentionally during the post-war period when it became definitely clear that the kind of economic growth that involves the use of modern technology and results in sustained higher real income per head is inconceivable without the development of modern manufacturing.

This fact had been clearly recognized by Continental Europe North-America and Japanese elites in the second half of the XIX century. Indeed, Britain excepted, *all* the presently advanced or industrialized countries established their industries through consciously designed policies of industrial promotion through import-substitution by means of protective tariffs and/or subsidies, on the basis of some variant of the famous infant industry argument.

Latin American countries, for instance, obviously, did not follow a planned and suitably designed policy for industrial promotion in which protection and subsidies were carefully monitored, firstly, to allow for the establishment of light industry made of homogenous tradeable goods and, secondly, to develop an export potential as they get over their infancy.

In Latin America, import-substitution industrialization came essentially as a by-product of generalized and severe import restrictions which were imposed, historically, by WWI, by the Depression of the 1930's, by the shortages of WWII and by the limited convertibility world of the fifties.

As noted by several authors, this long period of import restrictions substantially raised the prices of industrial goods in terms of agricultural products, making profitable the production for the home market even when the cost – in terms of primary products – was several times higher than the external (world) price of similar products. Though many goods previously imported were replaced by domestic production, the process itself generated an additional demand for imports, partly due to the high import content of a unit of investment and current output and partly due to the fact that industrialization meant additional incomes (profits, wages) which generated additional consumption, thereby creating a higher demand for imported goods and Services. Thus the pressure for imports in excess of current earnings becomes greater, and not less. The balance-of-payments constraint reasserted itself at the higher levels of output, given the limits to continued reduction in the import coefficient.

Would a greater attention to exportable production have eased or relieved this constraint, as repeatedly maintained by orthodoxy? The structuralist answer to this counterfactual has been to point out, first, that, exports (and the allocation of real resources to exportable production) depend on world demand conditions, admittedly not very favourable from the late 1920's to the early 1950's.

Second, that in the case of manufactures, experience had demonstrated that no country had ever become an exporter without some previous experience in providing for its own domestic market.

Thirdly, that most primary exports usually face a price and income-inelastic demand. Fourth, that, under these unfavourable external conditions and in the absence of a domestic adequate tax system or an adequate capital market, government industrialization policies had to alter relative profitability to the benefit of industry through intervention in the exchange market. As is well known, some other activity must be relatively penalized through the operation of this special mechanism of real resource transfer. This indirectly penalized activity used to be the primary export sector, through an overvalued exchange rate for its products. Structuralists would have agreed that perhaps one could have hoped for a greater balance between the production of exportables, importables and home goods in the course of the historical development process of their economies. But they would rightly insist, today as in the past, that this balance would not be achieved solely through reliance on market-induced relative price changes, due to the non-marginal character of the real resource transfer required to relieve the foreign exchange bottleneck.

It is important to note, at this point, that the structuralist tradition has never asserted that growth would *for ever* be foreign-exchange-constrained. The tradition just insists upon the crucial importance of this constraint and suggests that the only long-run way out lies in industrialization and in changing the nature of the dependence on imported goods. Albert Hirschman has summarized the whole argument for industrialization, while at the same time, criticizing the naïve version of the “long- term deterioration of the terms of trade”:

"As is known, such authors as Singer, Prebisch, and Lewis have argued that gains in productivity tend to result in lower prices in the underdeveloped countries and in higher factor incomes in the industrial countries. Hence it is concluded that the gains from technical progress tend to accrue primarily to the industrial countries. Let us assume for the sake of the argument that average increases in productivity are reflected in rising factor incomes rather than in declining prices in the developed countries. Yet in these countries productivity gains are much faster in some lines than in others and therefore some prices will fall while others will rise. Now, when the underdeveloped countries industrialize, they are likely to pick first those industries whose technical progress has become stabilized. The foreign exchange thus released will then be shifted toward other industries. Developing latecomers will thus be able constantly to redirect their foreign purchases toward the most rapidly progressing industries of the advanced countries. In this way, they will concentrate their imports on those goods that, despite a stable general price level in the advanced countries, will show price declines or quality improvements. *This is of course an argument in favour of industrialization, but/it shows that the exchange of primary Products against manufactures, even on the basis of the special Singer-Prebisch-Lewis assumptions, need not be a losing proposition for the primary producing countries provided they industrialize and are thus enabled to shift the composition of their purchases of manufactures*"⁵. (Our emphasis).

Other distinctive contribution of structuralist thought was made by establishing the relationship between these developments and the prolonged and protracted phenomenon of inflation. To this issue

⁵ A. Hirshman, “The Strategy of Economic Development”, Yale University Press, 1958, p. 159.

we now turn.

III – Inflation, Relative Prices and The Balance of Payments

For a closed economy, primary production (agriculture and mining) and industrial production are obviously complementary to each other: primary prices enter both directly into the cost function of industrial goods (as raw material inputs) and indirectly through their influence on wages (food being a crucial element in the reproduction costs of the urban labour force in most developing countries). Industry, in its turn, provides inputs to primary production and partly depends upon agricultural incomes as a source of demand for its products.

For this closed economy, or for the *world* economy as a whole, as Kaldor noted “continued and stable economic progress requires that the growth of output in these two sectors should be at the required relationship with each other – that is to say, the growth of the saleable output of agriculture and mining should be in line with the growth of demand, which in turn reflects the growth of the secondary (and tertiary) sectors ... to ensure that it does is the function of ... relative prices or the terms of trade between primary commodities and manufactured goods”⁶.

Now, by the very nature of the interdependence described above, the terms of trade cannot change *systematically* in favour of either primary or secondary production. Namely, “primary” prices cannot go on rising in terms of industrial products because they enter industry’s cost function both directly and indirectly through wages. Since industrial wages in terms of food cannot fall below a certain point – due to real wage resistance – this sets a limit to the extent to which agricultural prices can rise in terms of industrial prices.

Conversely, industrial prices cannot go on rising indefinitely in terms of agricultural prices: not only industrial goods affect agricultural costs but also higher “primary” incomes are important for the realization of industrial profits (barring industry’s *net* exports abroad or permanent government deficits).

However, and this is the crucial point, the limited range for long-term fluctuation in the terms of trade between agriculture and industry implies adjustment mechanisms that may – and did – imply a rising general price level linked with the balance of payments disequilibria.

At the root of structuralist interpretations is the idea that manufacturing industry built through import substitution and behind protective barriers is essentially a fix-price sector in which oligopolistic competition prevails so that prices are determined, not by demand, but through a mark-up on relevant ‘prime’ costs, essentially labour and imported raw materials.

⁶ See N. Kaldor, *Further Essays on Applied Economics*. Duckworth, London, 1978.

Formally:

$$P_I = (1 + z)[w(P_A)a_{LQ} + P_{MW}e_M(1 + t)a_{MQ}]$$

where:

P_I : prices of industrial goods

z : percentage mark-up over direct production costs

w : wage-rate in industry (a function of agricultural prices P_A)

a_{LQ} : labor coefficient in industry $\frac{L}{Q}$ at “normal” levels of capacity utilization

P_{MW} : Price of imports of raw materials in foreign currency

e_M : the average exchange rate for imports, in domestic currency per unit of foreign currency

t : the average ad-valorem tariff on imports

a_{MQ} : import coefficient in industry

In agriculture (and mining) however, we have both a trade-in domestic currency through the exchange rate (e_A) and, eventually, a tax or subsidy on exports ($1 + s$).

$$P_{AT} = P_{WA}e_A(1 + s)$$

The agricultural non-tradeable sector (A_H) has its price changes (\hat{P}_{AH}) determined by domestic demand and supply conditions and rises according to excess demand, in familiar terms:

$$\hat{P}_{AH} = f \frac{D_{AH} - S_{AH}}{S_{AH}} \quad f(0) = 0; f' > 0$$

Workers consume both agricultural tradeable and non-tradeable albeit in different proportions, and money wages react to rises in the average agricultural price index (P_A), presumably with a lag.

On the basis of this sectoral breakdown of the economy and of these assumptions about the mechanisms of price determination in each sector, the structuralist story goes as follows: the inflationary spiral develops because industrialization and associated urbanization led to a demand-induced rise in agricultural prices which in turn led to a cost-induced rise in industrial prices (mainly through wage earners' attempt to avoid a reduction in the purchasing power of money wages over food). This cost-induced rise in industrial prices does not allow for a significant shift of the terms of trade in favour of agriculture so as to move real resources and increase agricultural supplies. As it could easily be seen, this situation might lead to a permanently rising aggregate price level, even though the terms of trade between agriculture and industry do not show wide fluctuations. It is true that inflation partly expresses the adjustment mechanism allowing these fluctuations to take place. But market and non-market responses to inflation paradoxically prevent excessive fluctuations to take place except for short periods of time.

It has been rightly pointed out by several critics of structuralism that this interpretation depends

crucially on the assumption of a relatively inelastic agricultural supply. The same critics have denied this inelasticity by showing – rightly – that in several Latin America countries agricultural output not only was price-responsive but it also did rise above the rate of urban population growth.

The structuralist interpretation, when properly understood, was not dependent upon the assumption of rigid agricultural output which were relevant for the reproduction costs of the urban labour force. It was with respect to these products that the idea of a relatively inelastic supply makes sense for explaining the possibility of a permanent inflationary pressure if and where wage earners react to the erosion in their real wages.

The importance of the tradeable – non-tradeable dichotomy for the agricultural sector is clear in this context, since we could have observed – as we did in several countries – rising agricultural output in response to higher prices *but with a different tradeable – non-tradeable composition*. In particular, if the tradeable output increased partly at the expense of the non-tradeable one (due to competition for resources such as better quality land, subsidized credit or unskilled labour) one could observe a higher total agricultural output coexisting with higher relative prices for non-traded agricultural goods due to lower supply relatively to demand. If non-traded agricultural goods were important in the urban worker's consumption basket, the structuralist hypothesis would still hold.

Anyway, what is suggested is that the countries which have *not* faced highly inflationary pressures were those which either:

- a) have not tried to industrialize farther under adverse external conditions, accepting the balance of payments constraint operating through a lower growth rate.
- b) had an elastic supply of foreign exchange earned through current account transactions (net exports, tourism etc.). This relieved the foreign exchange constraint and allowed for the importation of food to feed the urban working class.
- c) had an elastic supply of the agricultural products relevant to the urban working population.
- d) had a working class for some time entirely unable to resist the erosion of its purchasing power over food (over a long period of time this would have required a rather repressive political regime – as indeed happened in several developing countries).

This approach, points out the relationship between the interpretation of inflation and balance of payments disequilibria underlying the structuralist tradition as applied to Latin America up to the early sixties. Indeed, the balance of payments (B) in, say, dollars could be written as:

$$B = P_{MW}M - P_{AW}X = P_{MW}M - P_{AW}(S_{AT} - D_{AT})$$

where:

S_{AT} : domestic exportable production

D_{AT} : domestic consumption of exportables

X : $S_{AT} - D_{AT}$ total exports (neglecting changes in stocks)

M : non-competitive imports of raw materials and capital goods

Now, imports are supposed to be a (rising) function of domestic output and investment, the domestic consumption of exportables is supposed to be a (rising) function of income (for a given exchange rate). It would appear then, that the crucial element would be domestic exportable production (S_{AT}) or, the rate of growth of output of the tradeable sector. However, as we mentioned before, even when this rate is satisfactory, and even when we assume no imports of consumer goods, inflation could be accelerated if a higher output of A_T implies a reduction in the supply of non-tradeable agricultural goods. Inflation will appreciate the exchange rate and aggravate balance of payments problems. A devaluation will not do if urban workers react to the high prices of agricultural tradeables (the higher the share of their expenditures made up of exportables the more they will react). As L. Taylor noted, devaluation analysis have always been, in the Latin American structuralist tradition, a macroeconomic issue of a distinctive distributional character⁷. It will continue to be so, as long as the exchange rate is taken to be a proxy for the price of tradeable goods and the wage rate (with constant mark-up) as a proxy for the price of non-traded goods.

IV – The Endogenous Cycle and the Role of Changes in Relative Prices

As we know, the process of capital accumulation in industry and productive infrastructure in semi-industrialized economies has never been a smooth process of expansion. Unbalanced growth and sectoral disequilibria has been the norm, due to disproportionalities, bottlenecks and indivisibilities typically associated with the investment process.

As a result of some decades of unbalanced industrialization, however, some advanced semi-industrialized economies came to be able to generate endogenously their own cycles of economic activity, that is to say, to experience upswings (or downswings) which typically characterize the working of a capitalist economy and which were not, as in the past, simply originated by positive (or adverse) external shocks.

This was an outstanding historical development, for which, in our view, the structuralist tradition provides a basic, general interpretation, which is both non-mechanical – *et pour cause* – extremely rich, as a hypothesis for starting the analysis of historically specific situations, since it allows for the role of financial and political factors, known to be associated with major downswings in semi-industrialized economies, together with high and variable rates of inflation due to increased variance in relative prices.

⁷ See L. Taylor, “Short-Run Macroeconomic Policy in Open Economies: The Narrow Limits of the Possible”, in *Journal of Development Studies*, Vol. 1, N° 1, 1974.

The argument would run as follows: in the uneven process of capital accumulation, some leading activities or sub-sectors of the economy would normally experience a certain over-accumulation, in the sense that they build capacity ahead of demand and therefore the prospective rate of profit associated with new additions to capacity is temporarily reduced. This would pose a problem if it were not for the fact that *exactly because* an effort of over-accumulation (in the sense above) did materialize in some activities, bottlenecks appear in some other activities and subsectors, signalling new investment opportunities.

The process of capitalist development, everywhere, would have been a rather smooth one if – as in many economic textbooks – either:

- a) ‘capital’ were a sort of jelly which could be easily and costless shifted in part from some of the sectors (activities) with idle capacity to some of the bottleneck sectors which would constitute the new investment outlets in the economy;
- b) a perfectly functioning capital market allowed the quick shifting of financial resources from the sectors with excess capacity to the – presumably more profitable to explore – bottleneck sectors, or;
- c) the system of relative prices functioned as a perfect signalling device, raising relative prices in the bottleneck sectors and reducing relative prices in the excess capacity sectors, thereby making it profitable for entrepreneurs to invest in ‘eliminating’ the bottlenecks.

However, as we all know – with the exception of some professors of economics – this is not the way the ‘system’ functions, especially in semi-industrialized economies: capital (in the sense of physical equipment and construction) is a fixed asset usually made for a given technical structure of production and not easily redeployed. Capital markets are far from perfect and *not* oriented towards long-term investment. Lastly, relative price changes, as Hirschman suggested, must be extremely large to serve as effective signalling devices and to induce investment to flow to the new opportunities expressed by the bottleneck sectors.

This implies not only that the process of dealing with cyclical fluctuations in semi-industrialized economies takes time to be sorted out. It also requires a substantial change in the financing schemes which have allowed the over accumulation in the sectors now with excess capacity. This usually takes time *and*, more important, is often a rather complicated political process since vested interests have been formed in the previous phase, and these could be rather entrenched ones.

However, perhaps much more important is the fact that it is not always true that the bottlenecks or investment opportunities are clearly perceived or recognized as such by a general consent. Very often, the process of identifying a bottleneck or the sectors which ought to be expanded involves value judgements and legitimate divergence of opinion among different groups or classes in society (usually backed by ‘technical’ arguments). The process may well evolve and/or contribute to a sort

of institutional and political crisis very familiar in semi-industrialized economies.

This is because some may perceive the bottleneck sectors as being located, say, in the provision of public goods and social Services, and push for higher government investment in these areas. Others may perceive the bottleneck as being situated in, say, energy, private construction or agriculture. Others may consider the foreign exchange bottleneck as signalling the need to invest in the tradeable sector (either exportable or import-competing activities, or both). Different lobbies would emerge in a downswing each pressing for priority attention, subsidized credits, selective government support and so forth.

Inflation appears as a sort of defence mechanism of the economic system against all these conflicting demands, allowing the economy to avoid a sharp reduction in activity while a 'solution' (however temporary and cyclical in character in itself) is not found. Hirschman's price-price spiral develops partly to accommodate these conflicting demands, partly because some prices have to increase a lot – and for long – in order to function effectively as signalling devices for new investment opportunities. Inflation may therefore temporarily accelerate in a crisis, and stagflation, which causes so discomfort appears as part and parcel of a structuralist interpretation of the cyclical development under capitalism in semi-industrialized economies.

It is important to recognize the nature of the pressures on both the public finances and the balance of payments, associated with this 'disequilibria' between excess capacity and bottleneck areas, which do not get smoothly solved by the *normal* working of the price mechanism.

This is because the 'solution' involves usually higher public deficits in order to break the bottlenecks, either directly through government investment or indirectly through subsidies to the private sector *and* associated higher balance of payments deficit in current account. Note that the endogenously generated cycle in advanced semi-industrialized economies does not imply that the foreign sector is unimportant. Quite on the contrary the foreign sector can be extremely important in making an upswing outlive its usefulness (by generating what Hirschman called the foreign exchange illusion), or in making a downswing worse (or better) depending on the specific country's degree of integration with international trade and capital markets at the time of a downswing. Indeed, the foreign sector situation may affect the *timing* and the *intensity* of the cycle, but not its fundamentals character in an economy with a relatively broad industrial base.

The crucial point which we would like to emphasize here is that the 'crisis' associated with the downswing has important institutional and political overtones, because its 'solution' requires a movement towards meeting four conditions: (a) the 'priority' bottlenecks to be tackled by public policy and private investment must be more or less clearly recognized (politically) as such; (b) the financing schemes for overcoming these bottlenecks must be organized, which usually means a significant overhaul in previous financial arrangements and even institutions which have presided

over the former cycle, (c) the political composition of the several lobbies involved must be reached in order to support the new structure of public and private investment of the next upswing and (d) the structure or relative prices *must* sanction and evolve so as to accommodate, *through the market* the new pattern of investment – and the new product mix of the economy.

In our view, this is the distinctive feature underlying the structuralist's general approach to cycles and crises in semi-industrialized economies. In this 'tradition' (as in Marx, as in Schumpeter) the process of development under capitalism is *never* a smooth and linear process, but rather a movement marked by discontinuities associated with the very nature of the investment process and of technological change, which in semi-industrialized economies, implies a wider dispersion of relative prices, only accommodated through high rates of inflation – due to wage and price sickness for long familiar to advanced economies.

V – The General Policy Prescriptions of 'Structural' Models

General and impressionistic as it may see, the structuralist tradition do provide, in our view, “*a foundation for the analysis of long-term anti-inflationary policies*”⁸ and for the analysis of long-term balance of payments policies in a semi- industrialized economy committed to growth.

Indeed, if the basic thrust of the structuralist argument is correct, any meaningful long-term anti-inflation and balance of payments policy will have to involve not only special Government programs but also some degree of explicit investment planning in three crucial areas.

The *first* is increasing productivity, thereby reducing relative prices in agriculture, more specifically non-tradeable agriculture with a very special concern with the products which are relevant in the consumption basket of urban workers. Indeed, there is no hope of eliminating upward pressures on prices (and urban wages) while non-tradeable agriculture remains a low productivity sector, as Sir Arthur Lewis has been forcefully reminding us for long, albeit in another context. The frequently observed increase in productivity in the agricultural tradeable sector alone will not do. In fact, in Scandinavian models, 'Structural inflation' is higher the higher the difference in productivity growth between the tradeable and the non-tradeable sector⁹. What is perhaps more important is that very often the expansion and productivity growth of the agricultural tradeable sector is obtained at the expense of the agricultural non-tradeable sector due to competition for scarce resources, such as better quality land, labour and subsidized government credit.

The *second* crucial area is the export sector, very especially manufacturing exports, since, as

⁸ The expression comes from A. Lindbeck. He refers to the Scandinavian models as providing this foundation. These models, concerned with relative prices and the productive structure of the economy emphasizing the fact that the inflation problems, balance-of-payments disequilibria and technological progress are all inter-connected in a small open economy.

⁹ See A. Lindbeck, *Op. Cit.*

we have just suggested, one cannot count solely on exports of primary products, due to the potential domestic inflation effect. As Hirschman pointed out long ago, “The only secure way in which a country can finance the imports it needs to exploit the growth potential of its industrial activities is by being able to sell abroad a portion of the output of these same activities: only then will the spurts in imports caused by the growth pattern of industry be systematically off- set (save for lags) by spurts in exports. Any offsetting by other exports is, to a considerable extent, a matter of luck”¹⁰. Choosing the “proper” vector of crucial relative prices, through the adoption of the “right” exchange rate, the “right” wage rate and the “right” interest rate, will not be enough. *Changes* in the domestic and foreign levels of income – and structures of production – seem to be as important a cause of changes in exports and imports as changes in relative prices. The focus is on a process in which the rate of change in imports adjusts to the change in exports through induced variation in the rate of change and structure of domestic output and employment. Thereby, trade is also kept in balance (or not) also by variations of production and incomes rather than solely by price variations¹¹. If this is true, government programs *and* selective investment planning in fostering *specific* export promotion and/or import-substitution activities are part and parcel of any structuralist-oriented policy with respect to the balance of payments in a long term perspective.

The *third* crucial area to be tackled by any long term anti-inflation and balance of payments policy is related to the need to assure investment (and its financing) in the priority bottleneck sectors and activities in the economy, to avoid excessive adjustment costs in terms of downswings (*cum* inflation) in the endogenously generated cycle we have described in section IV. This is admittedly a very difficult task and requires a deep understanding of structural and institutional characteristics of an economy and – necessarily – a long term perspective of both domestic and world conditions and trends.

This is not meant to deny the importance of short-term economy policy and analysis in semi-industrialized economies. Unfortunately, however, several of the conventional short-term stabilization packages, still being sold worldwide, are remarkably oblivious of the questions raised by the structuralist tradition. No wonder the failures beat by far the successful stabilization-cum-growth stories.

¹⁰ See A. Hirschman, *Op. Cit.*, pp. 171-172. Chapter 9 of this book, although independently developed, is one of the best succinct accounts of the structuralist approach to the joint problems of inflation and balance of payments disequilibria in growing semi-industrialized economies.

¹¹ See N. Kaldor, “The Effect of Devaluations on Trade in Manufactures”, in *Further Essays in Applied Economics*, 1978.

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