Industrial Policy Research in Latin America*

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Recent research by Latin American economists on policies to promote industrial development suggests a number of areas of broad consensus and others in which further research would be valuable. Five areas of investigation are discussed below.

1. Selective Use of Incentive Packages

Although some authors continue to recommend across the board liberalization, involving non-discriminating or zero levels of effective protection, there is broad support for strategies that rely on the selective use of multiple incentives. Such a strategy combines fiscal, trade, exchange rate and other policies to selectively promote industries of high potential or high priority. The latter approach reflects a structuralist view that rigidities in Latin American economies impede a smooth

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response to market signals and can even result in perverse results. Neo-liberal and structuralist approaches may not be conceptually incompatible; one could propose that an optimal industrial strategy is one that permits the transmission of market signals, particularly from the rest of the world, but intervenes selectively to remove or compensate for rigidities that prevent an appropriate supply response. Some would also argue for interventions that would modify or supplement market signals with those conducive to desired patterns of income distribution, preservation of national culture, environmental sustainability, and others. The latter concerns are voiced less frequently during the current situation period of macroeconomic crisis.

While there is broad interest in the selective use of incentive packages, neither experience nor theory provide much guidance about the design of packages that are effective, internally consistent and not excessively costly. The development of methodologies for the design and evaluation of alternative policy packages is an area to which researchers and research funding agencies should give high priority. While such studies may be difficult, it is certain that policy makers will continue to manipulate these instruments, with or without information about the relationships among them or their effects. It is clearly desirable to make such decisions based on reliable information.

Research on the design of policy packages could proceed in four stages:

a) the selection of criteria by which to evaluate policy instruments and policy packages.

b) analysis of the effects of existing policies and simulation of the effects of alternatives, according to the criteria established in (a).

c) estimation of values for the criteria in (a).

d) design of policy packages that include both incentives and mechanisms to compensate groups negatively affected.

Each of these elements is discussed below.

a) <u>Selection of criteria</u>

Two types of criteria are suggested. Abril and Urriola (1987) suggest a series of broad objectives for industrial policy; packages can be evaluated by the degree to which the objectives are met. These include export performance, generation of net foreign exchange earnings/savings, employment generation, and use of domestic resources.

A narrower type of criterion is that applied to the selection of individual instruments to achieve these objectives. Policy instruments should have, inter alia, the following characteristics:

i) transparency: the existence and cost of a policy measure should be clearly visible.

ii) administrative feasibility: the measure should not be so complex as to overtax the administrative capacity of the agency responsible; nor should the sum of measures adopted require excessive co-ordination.

iii) flexibility: the policy measures should not "freeze" a given structure of production; they should permit adaptation to external shocks and new opportunities and be themselves susceptible to modification or repeal.

b) Analysis of existing and potential policies

This aspect of research is of such scope that an adequate treatment is not possible here. Much valuable methodological work in this area is being carried out by CIEPLAN in Chile. Suffice it to say that a combination of techniques is desirable, including macro, sectoral and micro (firm level) models, input/output tables, surveys and interviews at the firm level. Much will depend on the extent of existing information, the skills of the researcher team and the resources available to it.

c) Estimation of values for criteria

Assigning values to the criteria by which policy packages are evaluated is important in that most policy alternatives will not be fully satisfactory - they will fall short with respect to one or more criteria. How can policy makers evaluate and compare an alternative which performs well in category A but poorly in B, with one that does the reverse. Assigning prices or values to the variables would permit objective comparison.

For many criteria, standard techniques exist. For example, it is not difficult to estimate the cost of creating an additional job in a particular industry, thus permitting a comparison of performance in revenue generation vs. employment generation. Domestic resource cost (DRC) is another broadly applicable technique. Depending on the criteria selected, some development of new techniques may be required. In any case, the weighting given to each criteria by policy makers will be influenced by the political process. Economic analysis can provide a standard against which outcomes can be measured, but realistically one cannot expect it to be decisive.

d) Design of compensatory mechanisms

This task is likely to require more conceptual work than the previous and will involve political economy research rather than a poorly economic approach. The purpose and importance of such work is discussed below.

Altering the current mix of industrial policy incentives will obviously affect more that the pattern of production; it will also affect the distribution of income to capital and labour in different industries, as their relative profitability changes. One can logically expect the groups affected to react through the political process, including direct pressure on the relevant government agencies.

It is likely, in fact, that this political process explains much of the complexity of the incentive structure in Latin America*. While the use of multiple incentives no doubt reflects in part the structuralist orientation of technicians in the state apparatus, this is insufficient explanation in itself. The baroque complexity and frequent lack of internal consistency probably reflects in part a lack of coordination among the agencies responsible for fiscal policy, trade policy, exchange rates and the like; in part the differing interests among semi-autonomous agencies; and in part the process by which economic agents react politically to changes in policy.

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* For example, in Ecuador between 1972 and 1981 the number of lines of credit provided to industry by the public sector increased from 26 to 58, with nominal interest rates covering a range of 2%-15%(Abril and Urriola, 1987).

Imagine a scenario in which the Central Bank devalues the local currency. Firms whose profits may be negatively affected by devaluation then petition the Central Bank to revoke the decision or, depending on where they can most effectively exert their influence, petition for a change in taxation or tariffs that will compensate for the damage done by the change in the exchange rate. The next step will be for firms which favoured the devaluation to counter-react through a similar variety of channels. In this way, a complex structure of incentives is established and expanded. If the reaction process is effective, the net effect of these "incentives" packages may be nil or impossible to identify.

In other words, industrial and related macro policy measures are simultaneously incentives and mechanisms of compensation. This process highlights the importance of an approach to the design of compensatory mechanisms based more on objective economic analysis and less on the political process.

As in the application of multiple incentives *per se*, policy makers will continue to manipulate these instruments as part of daily life, whether they have a precise awareness of their impact or not. It would clearly be preferable to consciously design mechanisms based on an accurate analysis of their cost and effects. In theory, the results should be superior in terms of efficiency (e.g. Pareto optimality) while accomplishing the necessary tasks of overcoming political resistance and providing legitimate compensation for the costs borne by particular groups. While researchers should continue to persuade politicians to think more like economists, economists might from time to time be persuaded to think more like politicians.

Similarly, attention should be given to the appropriate sequencing of changes in a given policy package. There is considerable interest in the literature in optimal sequencing from a technical point of view (e.g. Foxley, 1980)*. More attention could also be given to the relative merits of alternative sequences in terms of political feasibility. It may be that a particular series of changes may successively neutralize opponents and strengthen supporters in such a way as to permit the implementation of the overall package.

There are some indications that the kind of political process described above has diminished in importance in Latin America during the macroeconomic crisis of the 1980's, as sectoral and specialized state agencies lose their relative autonomy to macro policy makers in the Central Bank and Planning Ministry. At least, this appears to have occurred in small countries such as Ecuador and Uruguay. Whether this is a general phenomenon that diminishes the importance of political economy approaches is a question that merits investigation.

A final comment relevant to the use of multiple incentives has to do with legal constraints on policy changes (e.g. licensing, regulation, incorporation of enterprises, labour legislation). These legal structures are often built up in the same way as economic incentives and can rival the latter in terms of

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* It is now recognized, for example, that the import response to devaluation is generally more rapid than the export response and that import controls should best be maintained until export revenue comes onstream.

complexity and internal inconsistency. They tend to be even more difficult to alter.

2. Dynamic Comparative Advantage

While controversy still exists over the desirability of the selective use of multiple incentives, there appears to be a consensus that considerations of dynamic comparative advantage (DCA) rather than static comparative advantage (SCA) should guide trade and industrial policy*. However, unless economists can insert some analytical content into this concept and provide guidance about how to achieve it, there is a danger that DCA will become a mere slogan, used indiscriminately to justify protectionist policies.

In fact, economists have never developed an effective methodology to identify SCA , *a priori* or even *ex post*. Today we are all apostles of something infinitely more subtle -DCA- without ever having resolved the methodological problems associated with its ideological predecessor.

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*It is interesting to note, for example, the relative lack of current interest in a subject that provided the material for countless PhD theses in the 1960's and 70's: regional integration. This lack of interest may reflect the tendency of such agreements as the Andean Pact to "freeze" the pattern of industrial production, impeding flexible response to changing opportunities. Once country A agrees to produce refrigerators and country B computers, it is difficult to change the agreement without long and difficult negotiations.

This is not so much a criticism as an indication of where increased effort could be put. For example, there is considerable opportunity for cross-fertilization between those who study industrial organization and firm behaviour and the incipient literature on strategic trade theory and DCA. What, precisely, is DCA? What determines it? Can it be created, encouraged, controlled? If so, how, at what cost, and with what implications for macro policy?

The management of a development strategy based on DCA is important because, while the approach presents many opportunities it also has dangers. DCA is by definition temporary: international markets contain many short term opportunities which can disappear rapidly with changes in demand and technology and the entry of new competitors. Unless the revenue from DCA-based industries is well managed, the result could be cycles of boom and bust equal in severity to those derived from reliance on the export of raw materials.

In other words, an industrial strategy based on the promotion of DCA should not focus exclusively on technology policy. It also requires careful management of revenue, public sector employment, fiscal policy and other measures relevant to export orientation.

3. The Services Sector

Empirical studies (Abril and Urriola, 1987; Schydlowsky, 1987) suggest that exchange rate policy may be less important to potential exporters or import substituters than other factors. For example, devaluation frequently does not induce local manufacturers to increase their use of local inputs, because of problems of quality, timely delivery, or awareness of suppliers. Similarly, potential exporters may be hampered by lack of market information, poor communications media, insufficient lines of credit, and the like, more than by overvalued exchange rates. These traditional structuralist arguments are increasingly being supported by empirical, firm level data.

At the same time, even a casual observer notes the dramatic difference between the size and efficiency of the services sector in SE Asia and that of Latin America (banks, telephone, telex, postal service, airports, frequency and reliability of flights, etc.). There appears to be a correlation between a strong services sector and a strong export-orientated manufacturing sector. Which of these is the chicken and which the egg is harder to say. Research may support the hypothesis that strengthening services and ancillary industries is a more effective way of supporting manufacturing than heavy reliance on manipulation of macro prices. If so, governments could look for ways to improve the flow of information within the economy and to link firms in the formal and informal sector. The experience of the Philippines in establishing "clearing houses" for industrial subcontracting would be worth investigating.

4. Income Distribution and Employment

Some recent experiments in reorienting production tend to undermine traditional arguments from both the left and right with respect to the relationship between employment and income distribution.

The Alan Garcia government in Peru redistributed income through a change in relative prices, including a significant increase in agricultural prices, in an attempt to promote a demand-driven reactivation, However, the consumption effect was for greater than the short term effect on domestic supply, resulting in a resurgence of inflation and a flood of food imports.

In Uruguay, liberalization resulted in a dramatic improvement in export performance (Macadar, 1987). Exports increased from 5% of GDP in 1982 to 45% at present. However, in spite of the labour-intensive nature of these manufactured exports, and a persistently high rate of out-migration, employment dropped severely rather than increasing. At the same, economic analysis undermines the traditional argument of the left, that redistribution of income would generate an increase in demand for locally produced goods and an upward spiral of production and consumption. This appears highly unlikely, since products consumed by low income groups (e.g. food and clothing) are produced by capital intensive methods in Uruguay; an increase in their production would generate little employment. While the Peruvian problem was short term, that of Uruguay is longer term.

The Uruguayan situation in particular seems to support the call for increased research on the relationship between income distribution and employment, centered on product/employment elasticities and the demand characteristics of labour intensive products and particular types of firms (e.g. small/medium/large enterprise) (Berry, 1987; Little, et al 1987).

5. Transnational Corporations (TNC's)

TNC's, a fashionable subject during the 1970's, have all but disappeared from the literature during the macro crisis of the 80's. This may not be entirely appropriate. A reappraisal of the potential contribution of TNC's is called for - perhaps in providing access to export markets, rather than capital or technology. It is also worth examining how these firms are affected by the system of incentives: perhaps quite differently from local firms.

Summary

Understandably, considerable attention has been devoted to macroeconomic policy in Latin America, particularly with respect to short term adjustment. The depth and persistence of the crisis indicates that short term policies are unlikely to provide a solution. Furthermore, the effect of combinations of macro policies on the pattern of production cannot be easily predicted on the basis of current information. More research is needed at less aggregate levels about the effects of the multiplicity of macro and sectoral policies on the industrial sector, with a view to longer term issues of production, employment and income distribution.

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