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Microeconomic Interventions After the Washington Consensus

by

Andrés Rodríguez-Clare

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Inter-American Development Bank
1300 New York Avenue, N.W.
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Abstract[*]

This paper examines the microeconomic interventions used to complement Washington Consensus reforms in Latin America. It maintains that the kind of interventions currently in vogue in most countries lack a sound theoretical and empirical foundation or are applied in a manner likely to prove ineffective. Arguing that the countries of the region should engage in selective interventions aimed at discovering new profitable activities (horizontal policies) and at creating innovation clusters (vertical policies), the paper discusses how such a strategy could be implemented. Both horizontal and vertical policies are important, although the appropriate mix depends on a country's stage of development. Pessimism about Latin American economies' ability to undertake this more sophisticated set of microeconomic interventions is an exaggerated reaction to the problems of corruption and capture encountered by import-substitution policies. At least in some countries, there is scope for a carefully executed strategy of the type discussed here.

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1. Introduction

It is now broadly acknowledged that the results of the market-oriented reforms implemented throughout Latin America in the 1990s failed to meet expectations. In the words of John Williamson: "…when all is said and done, Latin Americans are entitled to feel disappointed that the past decade did not live up to the hopes that were kindled at the start of the 1990s, when it was widely expected that reforms would get the region back on a growth path that would allow living standards to start catching up with those in industrial countries" (Williamson, 2003, p. 2).

It is also acknowledged, however, that such poor performance warrants neither the reversal of those reforms nor the adoption of completely different policies in the years ahead. Several studies (for example, Lora and Panizza, 2002) show that market-oriented reforms (that is, Washington Consensus reforms) *did* generate economic benefits in terms of both lower inflation and higher growth. The problem is that the increase in growth was smaller and less enduring than had been expected. Hence most commentators (such as Williamson, 2003) have reacted to these developments by calling for *additional* reforms and policies to complement the original set of reforms. Even Joseph Stiglitz, who has been severely critical of the Washington Consensus reforms, has not called for them to be reversed or abandoned. Rather, he has argued for the agenda to be broadened in terms of both objectives and policies (Stiglitz, 1998).

A distinction may be drawn among three (perhaps complementary, but conceptually different) strategies to complement the Washington Consensus reforms: first, macroeconomic policies to reduce the region's marked vulnerability to crises; second, institutional reforms to provide more solid foundations for the market economy to generate growth (often referred to as "second generation" reforms); and third, microeconomic or "competitiveness" policies that include a broad range of government interventions to allow markets, sectors and companies to take advantage of the opportunities afforded by market-oriented reforms. This paper focuses on the third strategy, hereinafter termed "microeconomic interventions." It argues that the set of such interventions currently in vogue in most countries, and promoted by multilateral development institutions, either lacks a sound theoretical and empirical foundation or is applied in a manner that is likely to prove ineffective. The paper then argues that the region should embrace a set of interventions based on a more conceptually and empirically sound footing, with selective interventions aimed at discovering new profitable activities (horizontal policies) and at creating innovation clusters (vertical policies). Finally, this paper briefly discusses whether and

to what extent Latin American countries meet the conditions required to successfully implement these ideas in the near future.

The current public dialogue on development issues is quite different from that prevailing up to the late 1980s. At that time there was a general consensus that market-oriented reforms offered the solution to the region's high poverty rates, lack of growth and marked macroeconomic vulnerability, and the discussion revolved around the timing and political economy of reform. Today, things are quite different. True, there is a certain consensus on the need to improve macroeconomic policy so as to reduce volatility and strengthen "institutions," such as those associated with property and creditor rights. There is no consensus, however, on what else needs to be done to restart growth. Some believe that good macroeconomic policies, together with better institutions, are all that is required. Others argue that "something else" is needed, but there is little agreement about what that "something else" would be.

To be fair, there is now some agreement on a set of specific microeconomic interventions deemed appropriate and even necessary to increase growth. Perhaps the most widespread of these are policies to attract foreign direct investment (FDI), promote exports, support small and medium-sized enterprises (SMEs), and encourage innovation. Most countries in the world engage in these policies, which are even encouraged by international institutions such as the World Bank and the Inter-American Development Bank (IDB). As is argued in the next section, however, the conceptual and empirical foundation of these interventions, with the exception of innovation policy, is not as solid as most believe.

A more effective set of microeconomic interventions should specifically address the market failures that are important in the development process. Recent theoretical and empirical research suggests that two sets of market failures may seriously hamper development. The first is related to externalities in the entrepreneurial process of discovering new and profitable investment opportunities (Hausmann and Rodrik, 2002). The second is associated with coordination failures in taking the necessary steps to increase sector-wide productivity. Sections 4 and 5 discuss this second set of market failures. The paper argues that, at least in some stages of development, growth is related to the realization of economies of agglomeration that lead to rising productivity in a few clusters. An effective set of microeconomic interventions should strive to foster the creation of such clusters.

The last section discusses how such a strategy could be implemented. The argument here is that both horizontal and vertical policies are important, although the appropriate mix depends on a country's stage of development. This paper further maintains that pessimism about Latin American economies' ability to undertake this more sophisticated set of microeconomic interventions is an exaggerated reaction to the problems of corruption and capture encountered by import-substitution policies. At least in some countries, there is scope for a carefully executed strategy of the type discussed here.

Before embarking on this discussion, it is important to stress that Latin American countries should resist the temptation to take any of these "development strategies" as a magic formula for growth. Indeed, the region seems prone to undue excitement about such strategies, as happened in the 1960s with import substitution, in the 1970s with state entrepreneurial ventures in what were thought of as "strategic sectors," and more recently with market-oriented reforms. This must be avoided in the future, since it should be clear that little is yet known about the qualitative and quantitative dimensions of the market failures that lie at the heart of these strategies. It must also be recognized that several decades of excessive and often corrupt government intervention, followed by many years in which myopic fiscal policies led to a progressively weakened executive, have left governments in no condition to handle complex interventions. In these circumstances the right approach centers on careful experimentation with methods that allow proper lessons to be learned, together with a patient program of strengthening government capacity to adopt more complex policies.

2. Mainstream Microeconomic Interventions

Several types of microeconomic intervention are regularly applied in Latin American countries (and elsewhere) as complements to orthodox policies. The most common are policies and programs geared to attracting FDI, increasing exports, supporting SMEs and promoting innovation. It is apparent, however, that the conceptual and empirical foundation for these interventions is not as solid as is often maintained. Moreover, the manner in which the interventions are executed is likely to have modest results at best.

This discussion begins with interventions that seek to increase FDI and exports. The arguments advanced in favor of these policies sometimes get the basic economics wrong. A popular argument in favor of export promotion, for example, is based on the belief that exports

are more valuable than other activities because they generate foreign exchange. This argument fails to recognize that an economy's need for foreign exchange is reflected in the exchange rate, which (in the absence of market failures and macroeconomic imbalances) transmits the correct signal about the social benefits of exports. Export promotion would create more foreign exchange (which would then be used to pay for additional imports, or to accumulate international reserves), but would lead to an inferior allocation of resources and a lower level of welfare.[1]

Another common argument is that countries should promote FDI to create jobs. This appears reasonable for an economy suffering from unemployment, but an even better approach would be to tackle the causes of the phenomenon rather than its consequences. If labor market rigidities or other distortions causing unemployment are too difficult to remove, perhaps an appropriate second-best policy would be to focus on stimulating investment. Even if this argument were accepted, however, it does not follow that policy should discriminate in favor of foreign relative to domestic investment. Moreover, it would be better to stimulate investment by pursuing policies to increase productivity, rather than providing artificial incentives.

One conceptually valid argument for providing fiscal incentives to FDI is that such investment is more "footloose" than domestic investment. Indeed, a basic proposition of optimal tax theory is that taxes should be lower for activities that have a higher tax rate-elasticity. Thus it makes some sense for a particular country to levy a lower tax on foreign investment. The problem, of course, is that this would be optimal for a particular country but it would lead to a suboptimal tax structure if many countries were to engage in the same practice. In other words, "tax competition" causes a "race to the bottom" that leads to a distorted tax structure without benefiting any of the (host) countries involved. This policy is hard to enforce, moreover, since it is relatively easy for domestic investors to "disguise" themselves as foreign. This is precisely what has happened in China, where a significant share of what is regarded as FDI in fact reflects a practice called "round tripping," whereby Chinese investors set up companies in Hong Kong and other neighboring countries so that they can invest in China as foreign investors and benefit from the associated tax breaks. The export processing zone (EPZ) system, which confers significant tax breaks on firms that export most of their production, can be regarded as a way of

[1] Formally, in the absence of market failures, the equilibrium exchange rate is such that the marginal social benefit generated through exports would be equal to the marginal social benefit generated by the same resources in other activities, even if they do not generate foreign exchange.

engaging in tax discrimination in favor of footloose investment that does not suffer from this problem.[2] Independently of the problems created by tax competition, however, EPZs create a host of other distortions, such as limiting economic transactions or "linkages" between EPZ firms and the rest of the economy. Those distortions make EPZs a poor development policy, except perhaps for countries just beginning to implement outward-oriented growth strategies. In those countries, EPZs may help lessen uncertainty about the country's commitment to private investment and to the proposed export-oriented strategy, particularly since they entail the signing of a contract between the investor and the state, a contract that fixes the "rules of the game" for a considerable period. This was perhaps the main role of EPZs in Central American countries that were just emerging from civil wars and launching market-oriented reforms in the early 1990s.

A more robust argument in favor of policies to promote FDI and exports is that these activities generate positive externalities for the rest of the economy. Specifically, it has been suggested that foreign companies bring with them new ideas that spill over to their domestic suppliers or competitors. As regards exports, it is generally argued that exporters benefit from faster learning that spills over to other domestic firms. But do these spillovers really take place?

Several studies have explored this difficult empirical question in recent years. Many observers might find it surprising, but most of these studies have failed to find evidence of positive externalities from FDI or exports. Studies of FDI have appeared in two waves. The first looked for externalities from foreign firms to domestic firms in the same industry. The conclusion has been that such externalities have not taken place in countries or industries with low levels of human capital and know-how.[3] The second set of studies looked for evidence of positive externalities from multinationals to their domestic suppliers. The findings here are more positive, but it is unclear what policy lessons should be drawn. Should governments carry out programs to attract FDI, or should they focus on programs to create backward linkages? Should they offer FDI subsidies? A cautious conclusion is that the appropriate policy response entails a

[2] The agreement to prohibit export subsidies reached in the Uruguay Round, which is set to take effect for less developed countries (LDCs) in 2009, will make this practice illegal and can thus be seen as a positive coordination device to avoid harmful tax competition.

[3] The evidence shows that foreign firms are more productive than domestic firms, and that they share their higher productivity with their employees through higher than market wages. The associated externality, however, is likely to be much smaller than the subsidies and tax breaks granted to foreign firms. Moreover, it is hard to see how generating higher wages for a small group of workers could be a significant part of a development strategy.

mix of attracting FDI and creating linkages, although the scale of the possible externalities probably fails to justify the high FDI subsidies that many countries grant.[4]

As to exports, here too the conclusions reached in recent empirical research are not particularly encouraging. The literature has explored the hypothesis that exporting allows a firm to achieve a higher rate of productivity growth than it would attain by selling only in the domestic market. A common finding is that exporting firms do grow faster, but that the causality runs in the opposite direction. In other words, it is not that exporting spurs faster productivity growth, but that faster productivity growth leads firms to export (see Rodrik, 1995; and Tybout, 2000). From there it is only a small conceptual step to the conclusion that the strong export growth that has often accompanied high-growth performance should be seen as one of the effects of growth rather than its cause.

Ricardo Hausmann and Dani Rodrik recently made a different argument in favor of export subsidies, one that does not rely on productivity externalities.[5] They maintain that there is incomplete information on the activities in which a country has a comparative advantage. Investing in the discovery of such activities (a process they call "self-discovery"), however, suffers from significant externalities: the investor does not capture the full associated benefit because the activity would be rapidly imitated as soon as success was achieved. Hence equilibrium investment in self-discovery is suboptimal. Although clearly not a first-best policy, export subsidies (as well as a depreciated real exchange rate) could increase efficiency by stimulating self-discovery. As Hausmann and Rodrik point out, however, this is a very indirect approach. Clearly, much better policies to promote self-discovery can be implemented (see below).

The lack of empirical support for the assertion that FDI and exports generate significant *productivity* externalities makes it hard to defend a policy of subsidies and tax breaks for such activities, but it does not imply that "light" programs of FDI-attraction and export promotion should be discontinued. There is econometric evidence that exporting gives rise to spillovers of *information* on profitable markets abroad (Aitken et al., 1997), and thus programs to subsidize and coordinate the exploration of foreign markets are entirely justified. It also makes sense to invest in "marketing a country" as a profitable location for investment, and to ensure that

[4] See Alfaro and Rodríguez-Clare (2004) for a more detailed discussion of these points and for references.
[5] Hausmann and Rodrik (2002).

potential investors have relevant information about a country's suitability as a possible investment target. This may be particularly important for countries that are just starting to implement outward-oriented development strategies.

Irrespective of their income levels, most countries devote much attention and resources to SME promotion policies. How can such policies be justified? To some extent they involve non-economic objectives. Societies seem to prefer an economic structure dominated by many small firms to one in which a few large firms predominate. Clearly, however, this is not the whole story: SME policies are typically justified as means of attaining higher levels of innovation, competitiveness and growth.[6]

One approach associates SMEs with new firms. In this case, SME promotion is tantamount to the implementation of policies and programs that facilitate the creation of new firms. Hausmann and Rodrik's argument on the externalities associated with "self-discovery" is also relevant here, since it is likely that the creation of firms is closely related to the entrepreneurial activity of discovering new and profitable opportunities. Without policies to stimulate it, firm creation in equilibrium is probably suboptimal. It should be noted, however, that this argument does not provide a rationale for a general policy of supporting SMEs, but rather for one centered on innovative projects that can generate new knowledge about the country's comparative advantage.

What about more general programs that target both new and old SMEs? One frequent rationale for programs to support SMEs invokes credit constraints. Because of credit market imperfections, even in developed countries, an entrepreneur's wealth places an upper limit on the size of the firm that he or she can establish. This is because banks, for good reason, are reluctant to lend large sums to firms with low equity; in other words, banks place limits on the leverage that firms can carry (see Rodríguez-Clare and Stein, 2004). Such leverage ceilings are likely to be lower in Latin American countries because of weaker creditor rights and other deficiencies in the way credit markets operate. Because of leverage ceilings, low-wealth entrepreneurs tend to

[6] The following discussion relates to small and medium-sized firms, as opposed to microenterprises. Policies to support the latter are more directly based on sociopolitical objectives rather than on considerations of efficiency and growth.

establish small firms that are beset by severe credit constraints, in the sense that they operate on a scale that is far below the efficient size.[7]

This argument warrants two comments. First, under normal conditions (see Albuquerque and Hopenhayn, 2003), firms that start small because of low equity levels and credit constraints will naturally earn a higher rate of return on their equity, allowing them to grow faster. Hence firm size and productivity differentials arising only from differences in levels of start-up capital should disappear a few years after start-up. If a firm remains small and unproductive many years after its creation, this is probably because of intrinsically low productivity (perhaps a result of the entrepreneur's limited ability) rather than credit constraints. To the extent that they are motivated by credit constraints, therefore, SME support programs should focus on new or young firms. Putting it more dramatically, attention should be focused on young firms, which can grow to be large and highly productive, rather than on "dwarves," which are likely to remain small until they close.

The second comment is that, if the problems with SMEs arise from credit market imperfections, then interventions (in line with standard optimal-policy theory) should first focus on credit markets. There are a number of appropriate interventions in this regard, ranging from strengthening creditor rights to credit guarantees and interest rate subsidies.[8] Unfortunately, such credit market policies are unlikely to eliminate the distortions that cause young SMEs to experience credit constraints. Does this justify additional (non-credit) policies to support SMEs? It could be argued that young SMEs have a higher rate of return on capital than larger and well-established firms, and therefore that policies to support such SMEs would increase efficiency. According to this argument, however, the best the government could do is offer grants to young SMEs rather than engage in the kind of programs, now common in the region, that provide SMEs with labor training, technology transfer and export support services.

The rationale for such SME programs must lie elsewhere. If there are failures in the markets for these services, then government interventions in these areas may enhance efficiency. What is not entirely clear, however, is why such programs should be confined to SMEs. It would have to be argued that market failures are particularly strong in the case of small firms. This is

[7] Of course, there are other sources of financing besides bank credit, such as loans and equity injections from "friends, family and fools." Nonetheless, lack of bank credit is likely to retard the process by which firms grow to their optimal size.

[8] Interested readers can consult Rodríguez-Clare and Stein (2004).

possible, but the argument does not seem to have been developed formally in the literature. Moreover, if small firms find it harder to access certain services because of their size (an argument often made for SME support programs), this simply implies that there are higher returns to scale. With no credit constraints, this would lead firms to choose to be bigger. With credit constraints, the foregoing arguments for credit market policies or grants apply in this case too.

There are at least two other reasons why SME support programs are unlikely to promote growth. First, small firms tend to be less productive than larger firms. This is true in developed countries and is even more likely to be the case in Latin America, where the lack of job creation in the formal sector leads many people to start their own firms as a way of generating subsistence income for their families. As ECLAC points out (CEPAL, 2001), this process is not conducive to the creation of high-productivity or high-growth firms, but rather to the establishment of a large number of small, stagnant and inefficient firms. In any case, since small firms are less productive than large ones, policies and programs that promote small firms may reduce average productivity.

The second reason why SME support programs are unlikely to promote growth is that such programs invariably fall short of expectations for the simple reason that their target group is too large. It is well documented that SMEs constitute most of the business sector in less developed countries (LDCs) and developed countries alike. Is it realistic, then, to expect a government to implement programs with significant effects on SME productivity? How many SMEs can be affected? What conclusions can be drawn in this regard from the evidence on SME support programs?

In sum, a policy of investing resources to support SMEs is lacking in solid conceptual foundations and is likely to prove ineffective in practice. A large mass of small firms is a consequence of high income inequality, poorly functioning credit systems and a lack of job creation in the formal sector. Addressing this consequence directly might not be the right approach, since it might be unrealistic to expect a government to achieve much in terms of improving the productivity of SMEs. Instead of devising policies to support SMEs, it is better to focus on stimulating the creation of firms, nurturing young firms and entrepreneurship, and implementing policies to deal directly with the most significant market failures (generating knowledge spillovers, for example, and agglomeration economies).

As regards innovation policy, the last type of intervention reviewed in this section, the general goal is to increase investment in research and development (R&D) and in innovation activities more generally. A common criticism of this kind of policy is that developing countries should leave innovation to richer countries and devote their attention to adopting technology. This argument misses the point that "innovation" generally refers to all the activities that increase the knowledge available to a firm so that it can produce more or better goods at lower cost. It is not really essential that this knowledge be "new to the world." What is important, as in the cases discussed above, is whether there are market failures that justify some kind of intervention. There is plenty of econometric evidence that R&D and other innovation activities do indeed entail significant positive externalities (see Audretsch and Feldman, 2003). Those externalities, which arise because of knowledge spillovers across firms and individuals, are attenuated by geographic distance and by differences in the type of activities undertaken (in other words, knowledge spillovers are stronger across firms in similar and related industries). Hence, as discussed further below, they give rise to the clustering of industries engaged in knowledge-intensive activities.

There are several ways of promoting innovation, including R&D subsidies, grants for innovation projects and support for research in universities. Interested readers can consult IDB (2001) and de Ferranti et al. (2003). This matter is addressed again in Section 4, which argues that instead of pursuing a general (and usually timid) policy of promoting innovation, governments should encourage the development of "innovation clusters" around areas of comparative advantage.

3. Clusters and Competitiveness

It is clear that a firm's productivity depends on its own efforts and abilities, as well as on key characteristics of the country in which it is located, such as the quality of infrastructure and the legal system. A firm's productivity, however, also depends on the actions of other firms with which it has significant economic relationships. For example, the productivity of a manufacturer of microelectronic devices depends on the quality of the intermediate goods produced by its suppliers. The general idea is that a firm's productivity is higher if it belongs to a "cluster." The latter, according to Michael Porter, is a geographic concentration of "interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other

entities important to competition. They include, for example, suppliers of specialized inputs such as components, machinery, and services, and providers of specialized infrastructure. Often, clusters also extend downstream to channels and customers, as well as laterally to manufacturers of complementary products and to companies in industries related by skills, technologies or common inputs. Finally, many clusters include governmental and other institutions—such as universities, standards-setting agencies, think tanks, vocational training providers and trade associations—that provide specialized training, education, information, research, and technical support" (Porter, 1998a, p. 78). The most prominent example of a cluster is Silicon Valley, where thousands of high-tech firms compete and cooperate with each other to achieve extraordinarily high rates of productivity and innovation. Other examples of clusters are the fashion industry in Milan and the information technology sector in Bangalore, India.

The key notion here is that of industry-specific local externalities (ISLE). To understand why externalities must satisfy these two characteristics (industry-specific and local) in order to give rise to clusters, imagine that either of these conditions were not met. If externalities were location-specific but *not* industry-specific, they would lead to higher productivity across the board but not to higher competitiveness in any single industry. This is because productivity would increase for all sectors equally, and hence would not lead to a strong *comparative advantage* in one sector. Clearly, this does not correspond to the notion of a cluster.[9] If externalities were industry-specific but *not* location-specific, then all firms would benefit independently of their location. Again, this would not give rise to clusters.[10]

[9] To give rise to a cluster, of course, it is unnecessary for externalities to emerge only within a single industry. It is natural to expect that externalities generated in a particular industry also reach industries that are in some sense related to the originating industry. The relationship could arise from input-output linkages, or it could be because of the use of similar knowledge and technology. In fact, the concept of "cluster" clearly goes beyond agglomeration in a single industry, since it stresses the importance of different but related activities locating together.

[10] Although a cluster leads to a higher productivity in the relevant industry or group of industries, it does not necessarily lead to a higher income level for the country. Imagine, for example, that there is a sector that derives the productivity advantages of clustering, but that world demand is so low that the country will not specialize completely in the sector. Since factor prices are determined at the margin, then wages will not be higher as a consequence of the country's "capturing" the cluster. Of course, if the country were small, world demand would be expected to be high enough for all the *relevant factors* to be employed in the cluster, in which case wages would indeed be higher in the country capturing the cluster. For larger countries, it is important that clusters create general externalities that benefit other sectors, so that wages can be higher.

Box 1. Sources of Agglomeration Economies

Alfred Marshall pointed to three sources of externalities that could give rise to industry-level agglomeration economies: knowledge spillovers, input sharing, and labor market pooling (Marshall, 1920). There follows a brief discussion of each of these sources. Knowledge that spills over from one firm to another could have been accumulated as a result of learning by doing or deliberate R&D. What matters is that such spillovers are likely to arise between firms in related sectors and located close to each other, since this allows easier interaction between workers of different firms, as well as the flow of workers across firms. Clearly, knowledge spillovers are likely to satisfy the two conditions mentioned above for externalities to give rise to clusters.

Input sharing leads to ISLE in the presence of three conditions: benefits from specialization or "division of labor" among input suppliers; increasing returns in the production of intermediate goods; and gains from the proximity of such goods' suppliers and users (see Fujita et al., 1999). Consider the extreme case of non-tradable intermediate goods (for example, producer services such as consulting, machine repair, accounting, insurance, and so forth) that are produced with increasing returns. Given benefits from specialization, such that firms using these intermediate goods benefit when the goods become more specialized, there will be economies of scale at the aggregate, industry-wide level.[11] This is because, as the industry expands, there will be room for more specialization among intermediate good producers, and this will lead to higher productivity in the industry. This corresponds closely to Porter's emphasis on the benefits of "related and supporting industries" (one of the corners of his "competitiveness diamond") and to his descriptions of several clusters.

It is important to understand the role of the last two conditions mentioned above. First, if intermediate goods could be traded at no cost, then firms that rely on such inputs would be equally competitive irrespective of their location: there would be no clusters. Hence a key assumption is that there are significant transportation costs or other costs associated with having to rely on suppliers that are far away.[12] Second, if intermediate goods were not produced with increasing returns, then there would be no limits to specialization: all input varieties could be produced irrespective of demand. Increasing returns are therefore crucial to the realization of Adam Smith's proposition that "the division of labour is limited by the extent of the market."

Finally, labor pooling, as elaborated further by Krugman (1991), entails externalities because a larger industry concentrated in one location allows workers to specialize in the skills that are specific to that industry, thus allowing for a "greater division of labor" and higher productivity.

A final issue worth mentioning is that externalities could be either static or dynamic. The difference is that static economies are realized instantaneously (for example, thanks to the productivity benefits of having a large variety of specialized inputs produced in the region), whereas the benefits of dynamic economies arise only through time, as agglomeration allows a higher rate of productivity growth. In turn, this could be due to a higher rate of external learning by doing, or a more effective process of innovation and R&D.

Economists have long been aware of the powerful consequences of ISLE for development, international trade and economic geography (see Krugman, 1991; Fujita et al., 1999; and Hanson, 2001 for recent analyses). Indeed, the concept was explored by Alfred Marshall almost a century ago (see Box 1), but it was only with Porter's publication of *The Competitive Advantage of Nations* that the idea was expressed in a manner that was convincing

[11] The presence of such benefits of specialization is usually captured formally by assuming a production function that exhibits "love of variety" for inputs. See Ethier (1982) and Romer (1990).

[12] The relevance of high transportation costs is clear for producer services (see Rodríguez-Clare, 1998). For other inputs, Steinberg (2002) shows that even in a very open and small economy such as Singapore, domestic demand drives domestic production even for tradable inputs, which is at odds with a frictionless world. Michael Porter's 1990 book presents many arguments as to why transportation costs, broadly conceived, may be high for intermediate goods.

and attractive to development practitioners. One of Porter's most important contributions was the careful documentation of several examples that bear out the existence and nature of ISLE.

If ISLE is to serve as the main conceptual foundation for a set of microeconomic interventions, more than anecdotal evidence is required. Is there sound econometric evidence for the significance of ISLE? What does the evidence reveal about its main sources?

A map is the first place to look for evidence of the existence of industry-level agglomeration economies, since industries that exhibit ISLE should be geographically concentrated. Is this consistent with the data? An influential paper by Ellison and Glaeser answers in the affirmative, at least for the United States.[13] About 28 percent of narrowly-defined industries have a level of concentration that is significantly above the level that would be expected from three factors: the concentration of overall manufacturing activity, the concentration of industry in a few plants, and pure randomness. Finding geographic concentration, however, is not conclusive evidence of the presence of ISLE: an alternative explanation is that some other natural element that is important for an industry is geographically concentrated. For instance, good weather for vineyards is concentrated in northern California, so one would expect the wine industry to be located there.

Is it possible to identify ISLE from data on the geographic concentration of industries? Ellison and Glaeser attempt to do this in a second paper.[14] Their approach is to determine the extent to which they can explain geographic concentration by observable factors related to what they call "natural advantage." In broad terms, what they do is identify certain observable factors (such as the weather and the availability of various natural resources) that could explain the concentration of specific industries above the level of concentration for the whole manufacturing sector. They find that 21 percent of industries exhibit levels of geographic concentration that are significantly higher than would be expected from natural advantage. They claim that with more data and more time they could probably reduce this number a little more, so that half of the geographic concentration they find in their 1997 paper would come from natural advantage and half from ISLE.[15]

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[13] Ellison and Glaeser (1997).
[14] Ellison and Glaeser (1999).
[15] A particularly interesting finding is that of Holmes (1999), who shows that, as implied by theory, manufacturing establishments located near other establishments within the same industry use purchased inputs more intensively than do relatively isolated establishments. Holmes also finds that industries that are geographically dispersed

In his 2001 survey on agglomeration economies, Hanson reaches a similar conclusion and states: "the body of empirical results suggest that location-specific externalities exist and influence the spatial distribution of economic activity" (Hanson, 2001, p. 28). Rosenthal and Strange (2003) agree with this conclusion and move on to explore some additional issues that are of interest for the purposes of this paper. In particular, they survey the recent empirical literature to determine what can be concluded about the nature and source of ISLE. Four conclusions are worth highlighting. First, they find that a significant share of the externalities that lead to clusters are dynamic, most likely related to knowledge spillovers. Second, they find evidence in favor of the reasonable assumption that externalities are stronger between industries that are "closer," in the sense that they use similar technologies or inputs, or are related through input-output linkages. Third, regarding the source of ISLE, they conclude that all three of the sources described by Marshall are relevant in practice.[16] Finally, Rosenthal and Strange find that, controlling for other factors, industries that are more "knowledge intensive" (measured by their spending on R&D and their employment of skilled workers) are more concentrated geographically.

Policy Implications

The conclusion that knowledge-intensive industries are more concentrated geographically seems particularly relevant to the discussion herein. There is a temptation to infer that ISLE is stronger for these industries, but this is not necessarily the case. As stressed by Hanson (2001), concentration stems from the interplay of economies of agglomeration and diseconomies of congestion. Thus an industry could be more concentrated geographically because of weaker diseconomies of congestion, rather than because of stronger externalities. This is highly relevant to a discussion of industrial policy: if an industry is highly concentrated geographically because

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according to the Glaeser-Ellison criteria do not exhibit this pattern—the importance of input purchases for firms in such industries is not affected by their location. This finding suggests that geographic concentration is connected to the division of labor, as it enlarges the local industrial scale and permits the production of more varieties of non-tradable inputs.

[16] Head and Mayer's survey of recent empirical work on the relevance of theories of agglomeration based on input-sharing does not share such positive conclusions (Head and Mayer, 2003). Indeed, in contrast to the implications that most people have derived from the theory, these authors find that "there is little persuasive evidence that the degree of increasing returns raises spatial concentration" (p. 34). Moreover, "trade costs have a highly mixed impact on geographic concentration" (p. 34). Head and Mayer go on to argue that such negative findings should be interpreted with caution, given the shortcomings in the empirical and theoretical literature to date.

of weaker diseconomies of congestion (rather than because of stronger externalities), it does not follow that there should be a policy to promote it.

There are three other reasons why it would not be right to conclude that industrial policy should promote "knowledge-intensive" industries. First, the idea that ISLE strength increases with the knowledge intensity of the industry is the basis for a series of theoretical papers arguing that development is marked by a process of industrial evolution towards industries of progressively higher knowledge intensity.[17] There is little empirical work on this hypothesis, however. The only analysis to date is that by Hunt and Tybout (1998), who looked carefully at data from several LDCs and found little supporting evidence. In particular, knowledge-intensive industries do not experience faster productivity growth or increases in market shares.

Second, knowledge intensity is not an immutable characteristic of an industry. The same good could be produced with a backward, unskilled-intensive technology in an LDC and a modern, skilled-intensive technology with high R&D in a developed country. According to the popular "product cycle" hypothesis, this is precisely what happens when goods are introduced in the "North" and then, after progressive standardization and simplification, are produced in the "South." More generally, an industry can exhibit ISLE in one place but not in another; it can additionally exhibit ISLE at a certain stage in its development but not later. In other words, as Michael Porter has stated, "what matters is not what a nation (location) competes in, but how" (Porter, 1998b, p. 249).[18] In the same vein, the World Bank's Latin America and the Caribbean department has convincingly argued that countries have secured clusters, high productivity and high growth in sectors that are intensive in natural resources, which traditionally have been regarded as sectors with low ISLE.

Finally, and setting aside the previous remark, it is true that if an industry exhibited stronger ISLE than another then, all else equal, industrial policy should favor the first industry. But "all else" is *not* likely to be equal. It is natural to expect industries with stronger ISLE to have higher productivity and hence a lower international price. Under some conditions, this could precisely offset the higher productivity. Thus, from a small economy's viewpoint, specializing in an industry with strong ISLE and a low international price is the same as

[17] See Stokey (1991) and Young (1991).
[18] See also de Ferranti et al. (2002).

specializing in an industry with weak ISLE and a high international price (see Rodríguez-Clare, 2004).

The conclusion to be drawn from this line of argument is that differences in ISLE intensity across sectors are not particularly relevant for thinking about industrial policy. A more useful approach to a cluster-based industrial policy should build on two features of agglomeration economies that seem consistent with recent evidence and the experience of development policy over recent decades: first, all sectors have clustering potential (although to different degrees); and second, all sectors can exist with or without clusters. As shown in Rodríguez-Clare (2004), these two features have significant implications.

Start with the standard infant-industry argument in favor of import substitution in the presence of ISLE. This argument is usually made in the context of a model featuring two sectors that differ only inasmuch as one sector (call it the "advanced" sector) exhibits ISLE, while the other (call it the "traditional" sector) does not. Under these circumstances, an economy may exhibit dual equilibria: a low-income equilibrium with specialization in the traditional sector, and a high-income equilibrium with specialization in the advanced sector. To understand this, note that if the economy specializes in a traditional sector, the absence of any resources devoted to the advanced sector prevents the economy from realizing ISLE in that sector. The low productivity in the production of the advanced good would then lead to a comparative advantage in the traditional sector, "trapping" the economy into specialization in this sector. This is often described as a "vicious circle" in which the lack of investment in the advanced sector prevents the economy from benefiting from ISLE, which in turn leads to low productivity in that sector, thereby justifying the lack of investment. The other equilibrium, in which the economy is specialized in the advanced good, is associated with a "virtuous circle" in which investment in the advanced sector leads to ISLE-induced high productivity that leads to additional investment, higher productivity, and so on.

In this context, an import-substitution policy could lead an economy trapped in the low-income equilibrium towards the high-income equilibrium. This is because import substitution encourages a reallocation of resources from the traditional to the advanced sector, allowing the economy to benefit from the higher productivity associated with clustering in this sector. The problem with this reasoning is that it assumes that production in the advanced sector *always* leads to clustering. This does not seem to be consistent with the experience of many countries

that implemented import substitution and expanded their modern sectors without benefiting from agglomeration economies.[19] Once it is accepted that production in the advanced sector can take place using backward technologies or modes of production, then it becomes clear that import substitution does not necessarily lead to externalities and clustering. Instead, it could simply push resources towards what are regarded in rich countries as "advanced" sectors but which, once they are present in LDCs, could be organized in ways that do not generate any externalities.

This reasoning has broader implications. Not only import substitution, but also any policy (even export promotion) that distorts prices so as to push resources into "advanced" sectors would face the same problem.[20] Instead of policies to reallocate resources across sectors, it would be better to implement policies that promote clustering in sectors that already reveal some comparative advantage. One implication, generally accepted by proponents of cluster-based policies, is that governments should not try to create clusters from scratch but should focus on pre-existing sectors in which there is a chance to benefit from clustering. Another implication is that industrial policy is not about "creating comparative advantage," but about achieving the high productivity that comes from clustering in sectors in which the country has comparative advantage.[21]

4. Innovation Clusters

Section 3 pointed out that there is plenty of evidence that innovation activities generate positive (local) externalities. Hence, as is well known, the market will lead to a lower than optimal investment level in this area and thus there is a sound rationale for policies geared to promoting innovation. The problem, however, is that the standard approach to innovation policy is too timid and too diffuse to have a significant effect. This section argues that it would be more effective to use innovation policies as part of a series of interventions designed to promote the development

[19] An alternative explanation is that protection failed because it was not accompanied by other policies to increase domestic competition (and thereby avoid complacency among protected companies) and encourage factor markets to respond to the needs of the protected sectors (see Lall, 2004).

[20] In fact, distorting prices so as to have a cluster in a sector where the country does not have a comparative advantage could even lead to a lower welfare level than an allocation whereby there is specialization in a non-clustered sector that exhibits comparative advantage (see Rodríguez-Clare, 2004).

[21] Some readers may be taken aback by the statement that industrial policy is not about creating comparative advantage, since it is often said that this was precisely what East Asian countries did (Wade, 1990; and Amsden, 1989). As argued in Rodríguez-Clare (2004), however, such policies are better interpreted as promoting clustering in those sectors in which the country has a natural comparative advantage. Alternatively, Hausmann and Rodrik (2002) argue that industrial policy is about discovering rather than creating a country's comparative advantage.

of clusters of innovation activity, or "innovation clusters," around areas of comparative advantage.

Audretsch and Feldman (2003) argue that effective interventions in this area require moving beyond the simple idea that innovation activities generate positive spillovers. In particular, there is a need for greater understanding of the types of innovation activities that generate such spillovers and the mechanisms through which they arise. Research on these issues is still in its infancy, but a few conclusions seem to be robust (see Audretsch and Feldman, 2003). The policy implications of each of those conclusions are discussed briefly below.

First, knowledge spillovers are attenuated by distance. Firms that are close to each other benefit more from spillovers than firms that are distant. In large countries, therefore, it does not make sense to promote innovation in firms that are located in remote or isolated regions. Second, spillovers are stronger for firms engaged in similar or related activities. In a sense, knowledge spillovers are attenuated by "economic distance" between firms. A reasonable conjecture is that it is more effective to concentrate innovation policies in a few sectors in which innovation activities appear relevant and feasible. Finally, spillovers depend on how and in which context innovation activities are undertaken. In other words, innovation can occur in a way that leads to only small spillovers. For example, spillovers are smaller when research is conducted in corporations rather than universities or specialized research centers.[22] A comparison of innovation clusters in Silicon Valley and on Boston's Route 128 offers another interesting example. According to Saxenian (1994), the open and interactive way in which innovation takes place in Silicon Valley is more conducive to spillovers than innovation on Route 128, which is carried out in large corporations' R&D departments. Clearly, a policy to support innovation should strive to induce the kind of innovation that takes place in Silicon Valley rather than the kind that takes place on Route 128.

In sum, it would be more effective to focus on nurturing the development of innovation clusters around sectors in which a country has a comparative advantage than to pursue a general policy of increasing innovation across the board. The former approach requires a more sophisticated policy characterized by *selective* support for innovation in certain areas,

[22] As stated by Audretsch and Feldman (2003), "the ability of research universities to create benefits for their local economies has created a new mission for research universities and a developing literature examines the mechanism and the process of technology transfer from research universities" (p. 19).

coordinating innovation projects with private sector organizations, and support for those institutions (such as universities and research centers) that seem to be essential components of innovation clusters. Thus, for example, it is better to subsidize applied university research requested by groups of firms than to provide R&D tax breaks or general support to research in universities. It would be better still if such subsidies were focused on a few clusters benefiting from other measures, such as grants to universities so that they can improve their education and research programs, promoting organization among the private sector, and collaborating with the organized private sector in the design of innovation strategies.

5. From Theory to Practice

The previous sections argued that the interventionist microeconomic or "competitiveness" policies commonly applied in LDCs rest on weak empirical or theoretical foundations. Other microeconomic interventions, such as policies to promote innovation, have more solid theoretical and empirical bases but are effected in a way that is too timid and diffuse to have a significant impact. One conclusion to be drawn from this analysis is that development strategies in middle-income countries should abandon such diffuse interventions in favor of a set of policies geared to discovering new and profitable investment opportunities, and to creating innovation clusters in sectors in which countries have a comparative advantage. This policy advice is less radical than the more typical, heterodox mantra that countries should strive to create comparative advantage in advanced sectors, but it is more interventionist and selective than the standard approach to competitiveness policies currently in fashion.

The mix of policies to induce discovery (horizontal policies) and promote clustering (vertical policies) should vary across countries according to their stage of development. Evidence presented by Imbs and Wacziarg (2003) reveals that growth is first associated with export diversification and later with increasing concentration. This finding suggests that growth in the poorest countries is related to the discovery of activities in which the country has a strong comparative advantage (Hausmann and Rodrik, 2002). Hence such countries should focus their attention on inducing self-discovery. In contrast, growth in more advanced countries is associated with rising productivity, a process that is likely to be related to the development of innovation clusters, as argued by Porter (1990). These countries should focus on vertical policies. Readers interested in policies for inducing self-discovery should consult Hausmann and Rodrik

(2002). The rest of this section focuses mostly on policies to induce clustering, although many of the arguments also apply to horizontal policies.

A useful way of visualizing policies that induce the development of innovation clusters is a matrix, wherein different types of intervention (FDI, linkages, exports, innovation) are aligned in rows, while sectors subject to clustering support are aligned in columns. The traditional approach entails focusing only on the rows. The proposed approach would focus more on the columns, leaving the rows to represent the key inputs used to promote clustering in the chosen sectors.[23] Although the different row policies would not necessarily be confined solely to the defined clusters (columns), they would make attention to those clusters a priority. One advantage of this approach is that cluster programs would serve to foster better coordination among the different horizontal policies and allow for constant evaluation (see below).

Besides the policies mentioned so far, two others should occupy important positions in the rows of the matrix. These two policies are infrastructure investment and sector-specific regulatory reforms. Given the significant indivisibilities (or lumpiness) in infrastructure projects, as well as the complementarities between public and private investments, it is impossible for a government to determine infrastructure investment in a way that is neutral relative to the different sectors in the economy. It does not make sense, for example, to build an airport to serve a thousand tourists a year. The construction of a regional airport is thus likely to stem from the expectation (or vision) of strong growth in tourism. Realizing this vision, moreover, would require additional investment in basic infrastructure such as water, electricity, hospitals, and so forth. In other words, government investments in infrastructure inevitably affect the economy's development path and should be seen as a row policy, one that must necessarily be selective and that should be consistent with the sectors selected for priority attention.

Similarly, sector-specific regulatory reforms (such as streamlining regulation so that tourism concessions can be used as collateral, and improving the regulation of quality control in the food industry) require significant effort in time and leadership, which are always scarce. As with infrastructure, therefore, microeconomic reform efforts will always be selective and should be directed mainly towards areas chosen for special support.

[23] The reader may wonder at this point how the sectors would be chosen in practice. This important issue is taken up below.

The Case of Costa Rica

Costa Rica is a useful case for the further exploration of these ideas. In recent years the country has followed a development strategy whereby the government, in addition to the basic Washington Consensus policies and reforms, has engaged in an aggressive policy of export promotion and FDI attraction.[24] This strategy has been effective in inducing self-discovery, as evidenced by the decline in traditional exports' share of total export value from 80 percent to 24 percent in just 15 years after the country abandoned the import-substitution model. By 2003, Costa Rica had developed significant new exporting activities both in agriculture (cut flowers and exotic plants, melons, fruit pulp, pineapples, and so on) and manufacturing (textiles and clothing, medical devices, microelectronic products, and so forth) although the latter arise mainly from FDI associated with the EPZ system.

The problem is that Costa Rica has evolved but the strategy has not. Although export diversification has played an important role in the country's growth in the last two decades, it is hard to imagine that this can continue in the coming years. Future growth now hinges on increasing productivity, a process that in turn depends on the emergence of a few innovation clusters. In that light, the current mix of microeconomic interventions is unlikely to have much of an effect. It would seem to be more effective to reorganize these efforts around a few sectors in which several simultaneous interventions at different key points could have a significant effect in helping to induce clustering.[25]

Imagine that the food sector is one of the sectors chosen for this kind of focused and multi-faceted policy. This is the largest manufacturing subsector in the country, with yearly value-added growth of 4.6 percent in the 1991-2000 period, the second highest rate among all

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[24] The mix of microeconomic interventions applied in the country includes several other policies, including a general (and somewhat weak and unstable) policy of SME support, and scattered programs such as one to develop linkages between SMEs and high-tech multinationals and another that subsidizes applied R&D performed by universities in areas of manifest interest to the private sector.

[25] In truth, Costa Rica also engages in sector-based policies towards agriculture and tourism. Agricultural policy is not emphasized here since it is part of any country's normal "policy package," perhaps because the market failures in this sector (such as knowledge spillovers related to new activities and technologies, and reputation effects) are very obvious, and because of the typically strong political organization and influence of agricultural interests. Thus the fact that the country engages in a sector-based policy towards agriculture does not indicate a broader sector-based strategy. As to tourism, although public policy is mainly focused on tourism promotion (that is, marketing Costa Rica as an attractive tourism destination), there is at least a better understanding of the importance of encouraging the development of a cluster, and some cluster-based initiatives have been implemented in the past. Perhaps some valuable lessons can be learned from this experience.

two-digit manufacturing subsectors.[26] A significant share of this growth has stemmed from rising exports, which grew by an average annual rate of 9.7 percent in the 1994-2001 period. Clearly, this is a sector in which the country enjoys a significant comparative advantage. This positive performance is partly explained by the high standards at the University of Costa Rica (UCR), both in generating the required human resources and in conducting the applied research (through its food research center, the Centro Nacional de Ciencia y Tecnología de Alimentos, or CITA), which has allowed some of the most important companies in the country to achieve the quality levels needed for exports in this sector. The productivity and diversification of the agricultural sector has clearly been another strength. Finally, an important factor in the sector's positive performance has been the effectiveness of its business organization, the Cámara Costarricense de la Industria Alimentaria (CACIA), which has allowed it to coordinate with the government in the interests of securing better access to foreign markets, improved regulation, and superior institutions in the crucial areas of training and quality control.

What policies would induce more clustering in the Costa Rican food sector? The goal is to induce the formation of a true innovation cluster in this sector. It is beyond the scope of this paper to devise a detailed strategy in this regard, but some ideas can be advanced. First, the sector's association, CACIA, should be actively involved in designing and subsequently implementing the strategy. Second, the strategy should strive to improve the (already high) standards at the UCR, both in terms of education and research. It is particularly important to provide funding to CITA, the UCR's food technology research institution, which needs to make a significant investment to upgrade its plant and equipment. Third, to obviate dependence on a single institution, there should be a policy of raising other universities and research centers to the higher standards needed to support an innovation cluster in this sector. Fourth, there should be a program of scholarships for studies abroad in areas deemed important for the sector's future growth. Fifth, technical education and training, which are currently provided at good quality levels at the national training institution, the Instituto Nacional de Aprendizaje (INA), should be strengthened further in line with the sector's strategic needs. Sixth, there should be a program of grants to entrepreneurs and firms with new ventures. Finally, links should be forged with the

[26] These data, as well as most of what follows relating to the food sector in Costa Rica, rely heavily on Rodríguez-Clare (2003).

policies pursued in the agricultural sector, so that efforts to develop new food products are consistent with efforts to induce the production of the primary inputs needed for those products.

The medical sector is another natural candidate for this kind of strategy. In recent years Costa Rica has received significant amounts of FDI in pharmaceuticals (Merck, Sharp and Dohme Corporation, Pfizer) and medical devices (Abbott Laboratories, Baxter). The country also exports medical services, such as cosmetic and reconstructive surgery (including dental surgery and ophthalmology); it engages in clinical trials (with a leading company in the field, CSS Biogen Científica de Costa Rica) and bioprospection projects for multinational pharmaceutical companies.[27] Exports are not as high as in the food sector, however, and a few multinational corporations established in the country account for most exports. Nonetheless, the country has a comparative advantage in this sector because of its relative abundance of skills, the high quality of higher education, the existence of several international-level hospitals and clinics, and abundant biodiversity.

The main problem in devising and implementing a strategy to encourage clustering in this sector is the absence of a true umbrella organization that can assess and encourage the multiple interdependencies among the various subsectors. This absence reflects the fact that the subsectors have developed independently of each other. Hence, for example, there is no interaction between services such as bioprospecting, on the one hand, and medical trials with local pharmaceutical companies, on the other; there is no collaboration between the leading exporters of medical devices and the wide variety of sophisticated clinics in the country. Clearly, the first line of action in creating a true cluster in this sector is to develop linkages among all these different actors and areas within the (broadly conceived) medical sector. This is no easy task, because the government has no clear expertise in the sector and some of the main actors are foreign corporations without strong roots in the country. With the right leadership and sufficient investment, however, the government could develop the necessary expertise and promote organization in the sector, so that a focused strategy could be implemented in the near future.

In addition to the significant issue discussed above, several other lines of action are relevant in this regard. First, unlike the food sector, the medical sector does rely heavily on FDI. Thus it is important to engage in targeted FDI attraction, together with a program geared toward

[27] Bioprospection is the systematic search for new sources of chemical compounds, genes, proteins, microorganisms and other products that have economic potential and can be found in biodiversity.

promoting linkages between multinationals and local firms. Second, just as the quantity and quality of human resources has been a key advantage in the sector, it seems essential to invest further in universities so that they can continue to produce well-trained professionals in this field. Third, although the UCR conducts some research in this area, it is clearly insufficient in view of the medical sector's significant needs. It is advisable to launch a program of competitive grants for collaborative research between universities and the private sector in this field. Such a program should strive to forge close links between multinationals and universities, both for the purposes of producing human resources (for example, through a program whereby students could write their dissertations on topics of interest to private firms, which in turn would provide some financing and allow the use of their facilities) as well for research purposes. Finally, the strategy should include a program of fellowships for studies abroad in areas deemed critical to the future development of the cluster, and a program of grants for new ventures as suggested by Hausmann and Rodrik.

Letting Sectors Choose Themselves

A natural question at this point is which sectors would be chosen for the implementation of this type of focused strategy. There is a longstanding debate about whether such a strategy would entail "picking winners" and how this would be done. As argued above, however, neither picking nor creating winners is necessary. Rather, the policy calls for picking sectors that are revealed winners in the sense of having comparative advantage. Thus any sector with a strong export performance would be a good candidate for support.

This is a good place to make an important clarification. Although the proposed approach calls for some sectors to be chosen for the implementation of clustering strategies, this does not mean that the government should distort prices so as to reallocate resources towards certain sectors. Since the sectors in which the strategy would be implemented are those that display comparative advantage, it is unnecessary to distort prices. Moreover, as shown in Rodríguez-Clare (2004), even in the presence of externalities and clustering, distorting prices is likely to reduce welfare. Instead of import tariffs, export subsidies, or other tax breaks and fiscal incentives, the proposal calls for the implementation of other policies consisting mainly of fixed grants, infrastructure investments and sector-specific regulatory reforms aimed at promoting clustering. If the current proposal is to be termed a kind of industrial policy, therefore, it is a

"soft" industrial policy rather than the "hard" policy implemented in previous decades, which entailed distorting prices so as to reallocate resources to certain sectors as a means of creating a new pattern of comparative advantage. This is important not only because today's international rules—under the World Trade Organization (WTO) and through bilateral and regional trade agreements—do not permit many of these hard policies, but also because soft policies are likely to be more transparent and less costly.[28]

Unfortunately, the criterion just mentioned (that the chosen sectors be those in which the country has comparative advantage) is not enough. Since this type of policy requires the mobilization of a significant measure of leadership and substantial human and financial resources, and since many sectors would satisfy the criterion of strong export performance, there is a need for further selection. Some criteria seem reasonable for this purpose. First, sectors dominated by a few firms should not be supported, since significant coordination failures are not to be expected in those cases. That is, if there were investments that could increase sector-wide productivity, it is likely that the few firms in the sector would find ways of making those investments jointly, even without public support. Second, other things being equal, it is better to support large sectors that interact closely with the rest of the economy, since the development of a cluster in those sectors would have a more positive aggregate effect. Third, sectors should be chosen so as to minimize the cost of implementing the strategy and maximize the probability of achieving results. The best way to accomplish this would be to choose among proposals presented by the organized private sector. This would reveal different sectors' levels of commitment and organization. Clearly, a more committed and organized private sector would make it easier to achieve results: even the best-intentioned government cannot succeed without a motivated and collaborative private sector (where the rents that are sought are market-based and not politically based). Furthermore, this approach obviates the need for the government to choose the sectors receiving support, a process that would invite all kinds of trouble.

In the long run, this approach would provide private sectors with incentives to organize in ways that are consistent with the kind of demands made by this strategy, rather than in the

[28] An interesting point here is that this policy advice implies doing away with the main "hard" industrial policy of the last two decades in many Latin America countries (mainly Mexico, Central America and the Caribbean), namely export-processing zones. This is something that countries have to do anyway as part of their commitments under the WTO.

traditional, rent-seeking way.[29] The government could also provide support to different sectors that want to start organizing or improve their level of organization. This would be the first line of action in countries whose private sector organizations are weak, or are designed for rent-seeking or confrontation rather than constructive work. Three levels of support may thus be envisaged: for starting or strengthening sector organizations; for the design of clustering strategies that would then be subject to competition; and for strategy implementation (in the event that the strategy was chosen for support).

Making it Work

Following the modern approach to public management, and to the extent possible, certain principles should be followed in implementing a strategy like that proposed here. First, instead of creating bureaucracies with their own guaranteed funding, the government should retain the ability to direct funds towards agencies (public or private) that are achieving results. This injects a measure of competition into the system. Second, all programs should be evaluated continuously and subject to elimination if they fail to meet some minimum standard. Third, programs that require public financing should start small and increase only to the extent that evaluations reveal their performance to be satisfactory. Fourth, the whole strategy should be designed in a way that allows both state and private sector organizations to accumulate expertise and thereby pursue more sophisticated policies. Finally, the private sector should be closely involved in both policy design and implementation. This would have the additional benefit of increasing the likelihood that the programs will continue despite changes in government.[30]

Apart from these general principles, other suggestions arise from past experience with "competitiveness programs." In particular, there should be a Coordination Council (CC) with strong political authority (ideally with presidential involvement) and participation from civil society and well-known public figures (in order to provide credibility and continuity). The CC would ensure that the above principles were adhered to whenever possible, review evaluations, decide on strategy revisions and allocate funding to different agencies and programs. Although the CC would be in charge of the overall program, a steering committee for each sector or cluster

[29] Perhaps this is already happening as a result of the end of the era of import substitution and other significant tax and price distortions.

[30] See Hausmann and Rodrik (2003) for an excellent discussion of the organization of a sophisticated development strategy.

would be responsible for more specific strategy design and supervision of the policy's implementation.

An important comment on this latter recommendation is that the private sector's involvement is important but that it cannot substitute for the role of the state. This has been perhaps one of the most significant weaknesses of the "competitiveness programs" promoted in several countries of the region. They have fallen prey to the illusion that well-organized private sector organizations can compensate for weak states by taking the lead in such efforts. In matters of public policy, however, the state's weaknesses cannot and should not be offset by the private sector's strengths. Just as a strong state with a weak private sector can produce misguided policies, a strong private sector with a weak state can lead to corruption and capture. An effective development strategy clearly depends on both a strong state and a strong private sector.

Is This Strategy Realistic for Latin America?

There is a natural question as to whether Latin America countries can successfully engage in the kind of development strategy described above. The general presumption is that most countries in the region suffer from a weak state, one that "has little capability of transforming the economy and social structure over which it presides" (Evans, 1995, p. 45). In other words, government policy is very hard to implement even when it is correctly designed, in part because of a weak bureaucracy wherein "rule-governed behavior immersed in a larger structure of careers that creates commitments to corporate goals is notable by its absence" (Evans, 1995, p. 46). As an illustration, a "strong state" is one that could carry out an import-substitution policy without being captured by the entrepreneurs it creates. According to Evans, this is a good description of what happened in East Asia.

Although the absence of a strong state is clearly a problem in the region, it is not true that all countries suffer from it. It is plain, for example, that Chile has a strong state. The same applies, albeit to a lesser extent, to Mexico, Costa Rica, Uruguay and Brazil. At the other extreme are countries like Haiti, where it is obvious that the conditions needed for a sophisticated set of microeconomic interventions such as those discussed above are not in place. It is clearly

wrong to generalize about Latin America as a whole. Some countries can follow a sophisticated, cluster-oriented strategy; others cannot in the present circumstances.[31]

The widespread concern about the dangers of microeconomic interventions in Latin America springs in large part from the import-substitution experience. In most countries this policy was captured by the protected firms, which pushed for wider and lengthier protection without taking the necessary steps to raise productivity and curb their dependence on high tariffs. A full understanding of the conditions necessary to stop this recurring requires more research, but the set of microeconomic interventions advocated in the previous sections seem much less likely to provoke capture. This is because those interventions do not entail protection or tax breaks, which can easily become permanent and whose costs are usually hidden. Rather, the interventions involve one-time grants whose cost is harder to hide. Moreover, the import-substitution experience taught valuable lessons, such as the importance of open dialogue, transparency, accountability and constant evaluation. Adherence to these principles should minimize corruption and capture in future efforts.

In any case, at least in the short run, possible action depends on government capacities. Usually there are "islands of efficiency"—government agencies or NGOs that have a successful track record of designing and implementing policies. Governments should ensure that these agencies are properly funded, and should try to develop synergies among them. In the medium term, countries should strive to improve government capacities in key areas, such as the main rows of the policy matrix described earlier and policy coordination at higher levels of government. Additionally, countries should devise a development strategy in which the ideas discussed above are combined in a way that is consistent with the country's capabilities and development opportunities.

Is this strategy realistic for Latin America? It may be tempting to play it safe and answer in the negative: perhaps we are being too impatient, perhaps with more time the current set of policies will deliver higher returns. The findings of recent theoretical and empirical analysis, however, together with a non-ideological review of recent experience, suggests that there are important reasons why the market alone will not deliver strong growth, even if undistorted and

[31] Another issue that could be seen as a problem for the implementation of a strategy like the one recommended here is the associated fiscal cost. In my view, this should not be a significant problem because the associated cost is not likely to be large and, more importantly, because most countries already spend significant amounts on microeconomic interventions, so that only a reshuffling of existing spending is probably needed.

well-supported by strong institutions. It would be a pity if our knowledge of economics could not serve as a guide as to whether and how to conduct microeconomic interventions. As argued above, the interventions currently in vogue lack sound theoretical and empirical bases. Clearly, they can be improved upon.

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