Microeconomic Interventions After the Washington Consensus

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Introduction

It is by now well accepted that the market-oriented reforms implemented across Latin American countries during the 1990s failed to deliver results matching 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 well accepted, however, that such poor performance does not provide a reason for countries to reverse those reforms or adopt completely different policies in the years ahead. As shown by several studies (e.g., Lora and Panizza, 2002) market-oriented reforms (i.e., Washington Consensus reforms) *did* generate economic benefits both in terms of lower inflation and enhanced growth. The problem is that the increase in growth was smaller and of shorter duration than expected. Thus, 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 such a strong critic of the Washington Consensus reforms as Joseph Stiglitz has not called for their reversal or abandonment, but rather for a broader agenda both in terms of objectives and policies (Stiglitz, 1998).

One may distinguish among three (perhaps complementary, but conceptually different) strategies to complement the Washington Consensus reforms: first, macroeconomic policies to reduce the region's high vulnerability to crises; second, institutional reforms to provide better 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, which I shall henceforth refer to as "microeconomic interventions." I will argue that the set of such interventions currently in vogue in most countries, and promoted by multilateral development institutions, either lack a sound theoretical and empirical foundation or are

applied in a manner that is likely to prove ineffective. I will then argue that the region should embrace a set of interventions based on a more conceptually and empirically solid footing, with selective interventions aimed at discovering new profitable activities (horizontal policies) and at creating innovation clusters (vertical policies). Finally, I will offer a brief discussion on whether and to what extent Latin American countries meet the conditions required to successfully implement these ideas in the near future.

The public dialogue on development issues today is quite different from that which prevailed toward 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 high macroeconomic vulnerability, and the discussion revolved around sequencing and the political economy of reform. Today things are quite different. True, there is a certain consensus on the need to improve macroeconomic policy to reduce volatility and to strengthen "institutions" such as those associated with property and creditor rights. But there is no consensus on what else needs to be done to restart growth. Some think that good macroeconomic policies together with better institutions are all that is required, whereas others think that "something else" is needed. And 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 that are regarded as appropriate and even necessary to increase growth. Perhaps the most prevalent of these are policies to attract foreign direct investment, promote exports, support small and medium-sized firms, and promote innovation. Indeed, 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. As I argue in the next section, however, the conceptual and empirical foundation for 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 two sets of market failures that may seriously hamper development: the first is related to externalities in the entrepreneurial process of

discovering new profitable investment opportunities (Hausmann and Rodrik, 2002), and the second is associated with coordination failures in taking the necessary actions to increase sector-wide productivity. In Sections III and IV I will discuss this second set of market failures. I will argue 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 turns to a discussion about how such a strategy could be implemented. I will argue that both horizontal and vertical policies are important, although the appropriate mix depends on the stage of development. I will further argue 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 the policies of Import Substitution. At least in some countries, there is some scope for a carefully executed strategy of the type that will be discussed here.

Before engaging in 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 becoming overly excited about such strategies, as happened in the 60s with Import Substitution, in the 70s with State entrepreneurial ventures in what were thought of as "strategic sectors," or even recently with market-oriented reforms. This must be avoided in the future, as it should be clear that we still know little 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 the Government in no condition to handle complex interventions. Under such circumstances, the appropriate approach is centered on careful experimentation in ways that allow proper lessons to be drawn, together with a patient program of strengthening Government capability to adopt more complex policies.

I – Mainstream microeconomic interventions

There are several types of microeconomic intervention that are regularly applied in Latin American countries (and elsewhere) as complements to orthodox policies. The most common are policies and programs for attracting foreign direct investment (FDI), increasing exports, supporting Small and Medium-Sized Enterprises (SMEs), and promoting innovation. It turns out, however, that the conceptual and empirical foundation for these interventions is not as solid as often portrayed. Moreover, the manner in which these interventions are executed is likely to lead to modest results, at best.

We begin with interventions aimed at increasing FDI and exports. The arguments put forward to motivate these policies sometimes get the basic economics wrong. For example, a popular argument in favor of export promotion is based on the belief that exports are more valuable than other activities because they generate foreign exchange. This argument fails to recognize that the 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. Although this appears reasonable for an economy suffering from unemployment, an even better approach would be to tackle the causes of this phenomenon rather than its consequences. If labor market rigidities or other distortions causing unemployment were too difficult to remove, perhaps an appropriate second-best policy would focus on stimulating investment. Even if this argument is 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 undertaking policies to increase productivity rather than providing artificial incentives.

[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.

One conceptually valid argument for providing fiscal incentives to FDI is that such investment is more "footloose" than domestic investment. Indeed, a basic result of optimal tax theory is that taxes should be lower for activities that are more elastic with respect to the tax rate. Thus, it makes some sense for a particular country to impose a lower tax on foreign investment. The problem, of course, is that although this would be optimal for a particular country, it would lead to a suboptimal tax structure if many countries engaged in the same practice. In other words, "tax competition" causes a sort of "race to the bottom" that ends up in a distorted tax structure without benefiting any of the (host) countries involved. Moreover, this policy is hard to enforce, as it is relatively easy for domestic investors to "disguise" themselves as foreign investors. This is precisely what has happened in China, where a significant share of what is regarded as FDI is actually a reflection of a practice called "round tripping," which entails Chinese investors setting up companies in Hong Kong and other neighboring countries to invest in China as foreign investors to benefit from the associated tax breaks. One could interpret the Export Processing Zone (EPZ) system, which confers significant tax breaks to firms that export most of their production, as a way to engage in tax discrimination in favor of footloose investment that does not suffer from this problem.[2] Still, even putting aside the problems created by tax competition, EPZs create a host of other distortions, such as limiting economic transactions or "linkages" between EPZ firms and the rest of the economy, that make them a poor development policy except perhaps for countries just beginning to implement outward growth strategies. In the case of such countries, EPZs may help to reduce 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 of time. This was perhaps the main role of EPZs in Central American countries that in the early 1990s were just emerging from civil wars and launching market-oriented reforms.

A more solid argument in favor of policies to promote FDI and exports is that these activities generate positive externalities to the rest of the economy. Specifically, it

[2] The agreement against 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.

has been suggested that foreign companies bring with them new ideas that spill over to their domestic suppliers or competitors. As for exports, it is generally argued that exporters benefit from faster learning that spills over to other domestic firms. But do these spillovers really exist?

In recent years, several studies have explored this difficult empirical question. Although it may be surprising to many, the majority of these studies have not found positive evidence regarding the existence of positive externalities from FDI or exports. In the case of FDI, there have been two waves of studies. The first studies looked for externalities from foreign firms to domestic firms in the same industry. The conclusion that has emerged is that such externalities have not taken place in countries/industries with low levels of human capital and know-how.[3] The second wave of studies looked for evidence of positive externalities from multinationals to their domestic suppliers. The results here have been more positive, but it is not clear what policy lessons should be drawn from this literature. Should Governments carry out programs to attract FDI, or should they focus their attention on programs to generate backward linkages? Should there be FDI subsidies? A cautious conclusion is that the appropriate policy response entails a mix of both FDI attraction and linkage generation, although the size of the possible externalities probably does not justify the high subsidies to FDI that exist in many countries.[4]

In the case of exports, the conclusions emerging from recent empirical research are not very encouraging either. The hypothesis that has been explored is that exporting allows a firm to achieve a higher rate of productivity growth as compared to just selling in the domestic market. The common result is that although it is true that exporting firms grow more rapidly, causality runs in the opposite direction. That is, it is not that exporting leads to faster productivity growth, but that faster productivity growth leads firms to export (see Rodrik, 1995, Tybout, 2000). It takes only a small conceptual step to go from here to the conclusion that the strong export growth that has often accompanied high

[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 that are 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.

[4] See Alfaro and Rodríguez-Clare (2004) for an elaboration of these points and for references.

growth performance across countries should not be seen as the cause of growth but rather as one of its effects.

Ricardo Hausmann and Dani Rodrik have recently presented a different argument in favor of export subsidies that does not rely on productivity externalities.[5] They argue that there is incomplete information regarding 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 since the investor does not capture the full associated benefit, as the activity would be rapidly imitated as soon as success was achieved. Thus, equilibrium investment in self-discovery is lower than optimal. Although clearly not a first-best policy, export subsidies (as well as a depreciated real exchange rate) could increase efficiency by stimulating self-discovery. Still, as Hausmann and Rodrik point out, 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 does not imply that "light" programs of FDI and export promotion should be discontinued. There is econometric evidence that exporting generates *information* spillovers related to profitable markets abroad (Aitken et al., 1997), so 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 in making sure that potential investors have the relevant information about a country as a possible investment site. This may be particularly important for countries just starting to implement outward development strategies

Let us now turn to policies promoting SMEs. Independently of their income levels, most countries devote much attention and resources to these policies. How can they be justified? To a certain extent, there are non-economic objectives involved. It seems that societies prefer an economic structure dominated by many small firms than by

[5] Hausmann and Rodrik (2002).

a few large firms. But clearly this is not the whole story: SME policies are typically justified as ways to achieve 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 to facilitate the creation of new firms. Hausmann and Rodrik's argument about the externalities associated with "self-discovery" is also relevant here, as it is likely that firm creation is strongly associated with the entrepreneurial activity of discovering new profitable opportunities. Hence, without policies to stimulate it, firm creation in equilibrium is probably lower than optimal. It should be noted, however, that this argument does not provide a rationale for a general policy of supporting SMEs, only for one focused on innovative projects that can generate new knowledge about the country's comparative advantage.

What about more general programs, targeting both new and old SMEs? One rationale often given for programs supporting SMEs has to do with credit constraints. Given credit market imperfections that exist even in developed countries, an entrepreneur's wealth establishes an upper limit to the size of the firm he or she can establish. This happens because, for good reasons, banks do not like to lend large amounts 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 due to weaker creditor rights and other deficiencies in the way credit markets operate. Leverage ceilings imply that low-wealth entrepreneurs will establish small firms that will be severely credit constrained, in the sense that they will be operating at firm sizes that will be far below the efficient size.[7]

There are two comments to make in relation to this argument. First, under regular conditions (see Alburquerque and Hopenhayn, 2003), firms that start up small because of low equity levels and credit constraints will naturally earn a higher rate of return on their equity, allowing them to experience a higher rate of growth. Thus, differences in firm

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

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

size and productivity 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 due to intrinsically low productivity (perhaps because of low ability of the entrepreneur) rather than credit constraints. This suggests that – to the extent that they are motivated by credit constraints – SME support programs should focus on new or young firms. Putting it more dramatically, attention should be focused on young firms, which can grow up to be large and highly productive, rather than "dwarfs," which are likely to remain small until they eventually exit.

The second comment is that, if the problems with SMEs arise from credit-market imperfections, standard optimal-policy theory suggests that interventions should first focus on credit markets. There is a list of appropriate interventions here, ranging from strengthening creditor rights all the way to credit guarantees and interest rate subsidies.[8] Unfortunately, it is unlikely that such credit-market policies would eliminate the distortions that lead 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 to capital than well-established larger firms, and hence policies that support such SMEs would increase efficiency. According to this argument, however, the best the Government could do is to provide grants to young SMEs, rather than engage in programs, such as are presently common in the region, that target labor training, technology transfer and exporting support services to SMEs.

The rationale for this kind of SME programs must lie elsewhere. If there are market 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 these market failures are particularly strong in the case of small firms. While this is possible, I have not seen this argument formalized anywhere. Moreover, if small firms have more difficulty in accessing certain services because of their size (an argument often made for SME support programs), then this just implies that there are higher returns to scale. With no credit constraints, this would lead firms to choose a larger size. With credit constraints, the arguments made above for credit-market policies or grants apply in this case as well.

[8] The interested reader can consult Rodríguez-Clare and Stein (2004).

There are at least two additional reasons why SME support programs are likely to fail in promoting growth. The first is that small firms tend to have lower productivity levels than larger firms. This is true in developed countries and is even more likely to be true in Latin America, where the lack of job creation in the formal sector leads many people to start their own firms as a way to generate subsistence income for their families. As pointed out by ECLAC (CEPAL, 2001) this is not a process conducive to the creation of high-productivity or high-growth firms, but rather to a large quantity of small, stagnant and inefficient firms. In any case, the fact that small firms are less productive than large firms implies that policies and programs that promote small firms may reduce average productivity.

The second reason is that SME support programs invariably fall short of expectations for the simple reason that their target group is too large. As documented in many publications, SMEs constitute most of the business sector in Less-Developed Countries (LDCs), and even in developed countries. Is it realistic, then, to expect a Government to implement programs with significant effects on the productivity of SMEs? How many SMEs can be reached? What does the evidence on SME support programs tell us about these questions?

In sum, investing resources to support SMEs is a policy that does not enjoy solid conceptual foundations and is likely to prove ineffective in practice. The existence of a large mass of small firms is a consequence of high-income inequality, poorly functioning credit systems, and lack of job creation in the formal sector. Dealing *directly* with this consequence may not be the right approach, as it may be unrealistic to expect the Government to achieve much in terms of improving the productivity of SMEs. Instead of policies to support SMEs, it is better to focus on stimulating firm creation, nurturing young firms and entrepreneurship, and implementing policies to deal directly with the market failures (e.g., knowledge spillovers and agglomeration economies) that appear more relevant.

The last type of intervention that I review in this section is innovation policy. The general goal of this policy is to increase R&D investment and innovation activities in general. One common criticism of this type of policy is that developing countries should

leave innovation to richer countries and devote their attention instead to technology adoption. But this misses the point that "innovation" generally refers to all activities that entail increasing effective knowledge available to the firm in order to produce more or better goods at lower cost. Whether this knowledge is "new to the world" or not is not really essential. In any case, as for the cases discussed above, what is really important here is whether there are market failures that justify some kind of intervention. In fact, there is plenty of econometric evidence showing that there are indeed significant positive externalities associated with R&D and other innovation activities (see Audretsch and Feldman, 2003). Such externalities arise because of knowledge spillovers that occur across firms and individuals and are attenuated by geographic distance and by differences in the type of activities undertaken (i.e., knowledge spillovers are stronger across firms in similar and related industries). Thus, as will be discussed further below, they give rise to clustering of industries engaged in knowledge-intensive activities.

There are several ways to promote innovation activities, ranging from R&D subsidies to grants for innovation projects and support of research in universities. The interested reader can consult IADB (2001) and De Ferranti et al. (2003). In section III I will return to this topic and argue that rather than a general (and usually timid) policy of promoting innovation, Governments should focus on promoting the development of "innovation clusters" around areas of comparative advantage.

II- Clusters and Competitiveness

It is clear that a firm's productivity depends on its own efforts and abilities, and on certain key country characteristics, such as the quality of its infrastructure and its legal system. But a firm's productivity also depends on the actions of 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," which 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. Clusters also often extend downstream to channels and customers and 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, Italy, and the Information Technology sector in Bangalore, India.

The key notion here is that of industry-specific local externalities (ISLE). To see why externalities must satisfy these two characteristics (industry-specific and local) to give rise to clusters imagine that any of these conditions were not satisfied. If externalities were location-specific but *not* industry-specific, they would lead to higher productivity across the board but not 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] Of course, it is not necessary for externalities to arise only within a single industry to give rise to cluster. 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 be due to 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. To see this, imagine that there is a sector that derives the productivity advantages of clustering, but that world demand is small enough 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 "capturing" the cluster. Of course, if the country were small, we would expect world demand to be large enough that all the *relevant factors* would be employed in the cluster, in which case wages would indeed be higher in the country capturing the cluster. For larger

Economists have been aware of the powerful consequences of ISLE for development, international trade and economic geography for a long time (see Krugman, 1991, Fujita et al., 1999 and Hanson, 2001 for recent treatments). 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 articulated in a manner that was convincing and attractive to development practitioners. Indeed, one of the more important contributions of Porter was the careful documentation of several examples that bear on the existence and nature of ISLE.

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 labour market pooling (Marshall, 1920). I now discuss each of these sources briefly. Knowledge that spills over from one firm to another could have been accumulated as a result of learning by doing or purposeful R&D. What matters is that such spillovers are likely to arise between firms in related sectors and located near 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 labour" among input suppliers, increasing returns in the production of intermediate goods and gains from the proximity of suppliers and users of such goods (see Fujita et al., 1999). Consider the extreme case of non-tradable intermediate goods (e.g., producer services such as consulting, machine repair, accounting, insurance, etc.) that are produced with increasing returns. Given benefits from specialization, so that firms using these intermediate goods benefit when such goods become more specialized, there will be economies of scale at the aggregate industry-wide level.[11] This is because as the industry expands, then 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

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countries, it is important that clusters generate general externalities that benefit other sectors, so that wages can be higher.

[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).

be equally competitive irrespective of their location: there would be no clusters. Thus, 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. Thus, increasing returns are crucial to obtain Adam Smith's proposition that "the division of labour is limited by the extent of the market."

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

A final issue that is worth mentioning here is that externalities could be either static or dynamic. The difference is that whereas static economies are realized instantaneously (for example, thanks to the productivity benefits of having a large variety of specialized inputs produced in the region), 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.

If ISLE is to serve as the main conceptual foundation for a set of microeconomic interventions, we clearly need to move beyond anecdotal evidence. Is there good econometric evidence for the significance of ISLE? What does the evidence tell us regarding its main sources?

The first place to look for evidence of the existence of industry-level agglomeration economies is on a map. Industries that exhibit ISLE should be geographically concentrated. Is this consistent with the data? An influential paper by Ellison and Glaeser provides a positive, at least for the case of the United States.[13] Approximately 28% of narrowly defined industries have a level of concentration that is significantly superior to the level we would expect from three factors: concentration of overall manufacturing activity, concentration of industry in a few plants, and pure randomness. But finding geographic concentration is not conclusive for the existence of ISLE: an alternative explanation is that some other natural element that is important for

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

[13] Ellison and Glaeser (1997).

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 of geographic concentration of industries? Ellison and Glaeser have a second paper in which they attempt to do this.[14] Their approach is to see how much of geographic concentration they can explain by observable factors related to what they call "natural advantage." Roughly, what they do is to identify certain observable factors (e.g., weather, availability of different natural resources) that would explain concentration of specific industries above concentration for the whole manufacturing sector. They find that 21% of industries exhibit levels of geographic concentration that are significantly higher than what one would expect from natural advantage. They claim that with more data and more time, they could probably reduce this number a bit more, so that half of the geographic concentration that they find in their 1997 paper would come from natural advantage and half from ISLE.[15]

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 our purposes. In particular, they survey the recent empirical literature to see what can concluded regarding the nature and source of ISLE. Four conclusions are worth highlighting here. First, they find that an important part of the externalities that lead to clusters are dynamic in nature, most likely related to knowledge spillovers. Second, they also find evidence in favor of the reasonable presumption that externalities are stronger between industries that are "closer," in the sense that they use similar technologies or inputs, or are related through

[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 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 with the division of labor as it enlarges the local industrial scale and permits the production of more varieties of non-tradable inputs.

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 our discussion. One is tempted to draw the implication that ISLE is stronger for these industries, but this is not necessarily the case. As stressed by Hanson (2001), concentration results from the interplay of economies of agglomeration and diseconomies of congestion. Thus, an industry could be more concentrated geographically not because of stronger externalities but rather because of weaker diseconomies of congestion. This is highly relevant for a discussion of industrial policy: if an industry is highly concentrated geographically because 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 additional reasons why it would not be right to draw the conclusion 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 that argue that development is marked by a process of industrial evolution towards industries of progressively higher knowledge intensity.[17] There is little empirical work exploring the relevance of this hypothesis. The only work to date is by Hunt and Tybout (1998), who looked carefully at data from several LDCs

[16] Head and Mayer's survey of recent empirical work exploring 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.

[17] See Stokey (1991) and Young (1991).

and found little supporting evidence. In particular, it is not the case that knowledge-intensive industries 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. In fact, this is precisely what happens according to the popular "product cycle" hypothesis, where 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 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] Along the same lines, the World Bank's Latin America and Caribbean office has convincingly pushed the argument that countries have achieved 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, putting the previous remark aside, 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 exactly compensate the higher productivity. Thus, from the point of view of a small economy, it is the same to be specialized in an industry with strong ISLE and a low international price, or weak ISLE and a high international price (see Rodríguez-Clare, 2004).

The conclusion we should draw from this line of argument is that differences in ISLE intensity across sectors are not highly relevant for thinking about industrial policy. A more useful approach to a cluster-based industrial policy should build upon two features of agglomeration economies that seem consistent with the recent evidence and the experience of development policy over the last decades: first, all sectors have clustering potential (although to different degrees), and second, all sectors can exist with

[18] See also de De Ferranti et al. (2002).

or without clusters. As shown in Rodríguez-Clare (2004), these two features have important implications.

Start with the standard infant-industry argument in favour of import substitution (IS) in the presence of ISLE. This argument is usually formulated in the context of a model where there are two sectors that differ only by the fact that one sector (let's call it the "advanced" sector) exhibits ISLE, while the other (let's call it the "traditional" sector) does not. In these circumstances, an economy may exhibit multiple 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 reaping any ISLE there. 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, hence justifying the lack of investment. The other equilibrium, in which the economy is specialized in the advanced good, is associated with a "virtuous circle" where investment in the advanced sector leads to ISLE-induced high productivity that leads to additional investment, higher productivity, and so on.

In this context, a policy of IS could lead an economy stuck in the low-income equilibrium towards the high-income equilibrium. This happens because IS 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 story is that it assumes that production in the advanced sector *always* leads to clustering. This does not seem consistent with the experience of many countries that implemented IS and achieved expansions of their modern sectors without benefiting from agglomeration economies.[19] Once we accept that production in the advanced sector can take place using backward technologies or modes of production,

[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).

then it becomes clear that IS does not necessarily lead to externalities and clustering. Instead, IS could simply push resources towards what are regarded in rich countries as "advanced" sectors, but that once in LDCs could be organized in ways that do not generate any externalities.

This reasoning has broader implications. Not only IS, but also any other 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 to promote clustering in sectors that already show some comparative advantage. This implies that, as generally accepted by proponents of cluster-based policies, Governments should not try to create clusters from scratch, but rather focus on sectors that already exist and where there is the opportunity to benefit from clustering. It also implies that industrial policy is not about "creating comparative advantage," but rather about achieving the high productivity that comes from clustering in sectors where the country has comparative advantage.[21]

III – Innovation Clusters

As stated in Section II, there is plenty of evidence showing the existence of positive (local) externalities generated by innovation activities. As is well known, this implies that the market will lead to a lower than optimal investment level in this area. Hence, there is a good rationale for policies aimed at increasing innovation. The problem, however, is that the standard approach to innovation policy is too timid and too diffuse to generate a significant effect. In this section I will argue that it would be more effective to use innovation policies as part of a group of interventions designed to promote the

[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 generate a lower welfare level than an allocation where 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 stated that this was precisely what East Asian countries did (Wade, 1990, Amsden, 1989). As I argue in Rodríguez-Clare (2004), however, such policies are better interpreted as promoting clustering in sectors where the country has a natural comparative advantage. Alternatively, Hausmann and Rodrik (2002) would argue that industrial policy is about discovering rather than creating a country's comparative advantage.

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

As argued by Audretsch and Feldman (2003), it is necessary to move beyond the simple idea that innovation activities generate positive spillovers if we are to design effective interventions in this area. In particular, we need to understand better the types of innovation activities that generate such spillovers, and the mechanisms through which they arise. Even though research on these issues is still in its infancy, there are a few conclusions that appear robust (see Audretsch and Feldman, 2003). I now list such conclusions and for each one briefly discuss the related policy implications.

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

[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).

In sum, rather than a general policy aiming at increasing innovation across the board, it would be more effective to focus on nurturing the development of innovation clusters around sectors where the country has a comparative advantage. This requires a more sophisticated policy characterized by the *selective* support of innovation in certain areas, coordinating innovation projects with private sector organizations, and support of the institutions such as universities and research centers that appear to be essential components of innovation clusters. Thus, for example, instead of R&D tax breaks or general support of research in universities, it would be better to subsidize applied university research solicited by groups of firms. And it would be better still if such subsidies were focused on a few clusters benefiting from other measures, such as grants to universities to improve their education and research programs, promotion of organization efforts by the private sector, and collaboration with the organized private sector in the design of innovation strategies.

IV – From Theory to Practice

In the previous sections I have argued that the interventionist microeconomic or "competitiveness" policies that are commonly applied in LDCs rest on weak empirical or theoretical foundations. Other microeconomic interventions, such as policies to promote innovation, stand on more solid theoretical and empirical foundations but suffer from an approach that is too timid and diffuse to have a major effect. The conclusion that I wish to draw from this analysis is that development strategies in middle-income countries should abandon such scattered interventions in favour of a set of policies aiming at discovering new profitable investment opportunities and at creating innovation clusters in sectors where countries enjoy 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 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 on with increasing concentration. This finding suggests that growth in the poorest countries is related to the discovery of activities where the country has a strong comparative advantage (Hausmann and Rodrik, 2002). Such countries should thus focus their attention on inducing self-discovery. In contrast, growth in more advanced countries is related to rising productivity, a process that is likely to be related to the development of innovation clusters, as argued by Porter (1990). These countries should thus focus on vertical policies. The reader interested in policies to induce self-discovery should consult Hausmann and Rodrik (2002). In the rest of this section I focus mostly on policies to induce clustering, although many of the arguments are equally relevant for horizontal policies.

One useful way to visualize policies to induce the development of innovation clusters is through a matrix, where different types of intervention (FDI, linkages, exports, innovation) are aligned in rows and sectors subject to clustering support are aligned in columns. The traditional approach entails focussing only on the rows. The proposed approach would focus more on the columns, but think of the rows as the key inputs with which the clustering in the chosen sectors will be promoted.[23] Even though the different row policies would not necessarily be constrained exclusively to the defined clusters (columns), they would define the attention of these clusters as a priority. One advantage of this approach is that cluster programs would serve to articulate a better coordination of the different horizontal policies and also allow for a constant evaluation (see below).

Besides the ones mentioned so far, there are two policies that should occupy important positions in the rows of this matrix. These two policies are infrastructure investment and sector-specific regulatory reforms. Given significant indivisibilities (or lumpiness) in infrastructure projects and complementarities between public and private investments, it is impossible for the Government to determine infrastructure investment in a way that is neutral regarding the different sectors in the economy. It does not make sense, for example, to build an airport to serve a thousand tourists a year. Building a regional airport is thus likely to rest on the expectation (or vision) of strong growth in tourism. Moreover, materializing this vision would require additional investments in

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

basic infrastructure such as water, electricity, hospitals, etc. In other words, Government investments in infrastructure necessarily affect the economy's development path and should be seen as a row policy that necessarily must be selective and that should be consistent with the sectors selected for priority attention.

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

The Case of Costa Rica

The case of Costa Rica offers a useful setting to explore these ideas further. In recent years, the country has followed a development strategy where – in addition to the basic Washington-Consensus policies and reforms – the Government has engaged in an aggressive policy of export promotion and attraction of FDI.[24] This development strategy has been effective in inducing self-discovery, as one can verify simply by noting that the share of traditional exports in total export value declined from 80% to 24% in just 15 years after the country abandoned the import substitution model. By the year 2003, the country had already developed significant new exporting activities both in agriculture (cut flowers and exotic plants, melons, fruit pulp, pineapples, etc.) and in manufacturing (textiles and clothing, medical devices, microelectronic products, etc.), although the later are mainly related to FDI associated with the EPZ system.

The problem is that as the country has evolved, the strategy has not. Although export diversification has played an important role in the country's growth over the last two decades, it is hard to imagine that this can continue over the following years. Future growth now hinges on increasing productivity, a process that in turn depends on the emergence of a few innovation clusters. Seen in this light, the current mix of

[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.

microeconomic interventions is not likely to have much of an effect. It would seem more effective to reorganize these efforts around a few sectors where several simultaneous interventions in different key points could have a significant effect in helping to induce clustering.[25]

Let's imagine that one of the sectors chosen for this kind of focussed and multi-faceted policy was the food sector. This is the largest manufacturing sub-sector in the country, with a yearly value-added growth rate of 4.6% over the 91-2000 period, the second highest growth rate among all two-digit manufacturing sub-sectors.[26] An important part of this growth has occurred thanks to rising exports, which experienced an average annual growth rate over the 1994-2001 period of 9.7%. Clearly, this is a sector where the country enjoys a significant comparative advantage. One of the reasons for this good performance is 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, CITA) that 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 agriculture sector has clearly been another strength. Finally, an important factor in the sector's good performance has been its effective organization (CACIA), which has allowed it to coordinate with the Government to achieve better access to foreign markets, improved regulation, and superior institutions related to the key issues of training and quality control.

What policies could the country follow to induce more clustering in the food sector in Costa Rica? The goal would be to induce the formation of a true innovation cluster in this sector. It is clearly outside the scope of this paper to formalize a detailed

[25] In truth, Costa Rica also engages in sector-based policies regarding agriculture and tourism. I have not emphasized agriculture policy here because it is part of the normal "policy package" of any country, perhaps because the market failures in this sector (e.g., knowledge spillovers regarding new activities and technologies, 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 is not indicative of a broader sector-based strategy. Regarding tourism, although public policy is mainly focused on tourism promotion (i.e., 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 there are some valuable lessons that can be extracted from this experience.

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

strategy in this regard, but some ideas can be noted. First, the sector's association, CACIA, should be actively involved in the design of the strategy and its later implementation. Second, the strategy should strive to improve the (already high) standards at the UCR, both in terms of education and research. It would be particularly important to provide funding to the UCR's food technology research institution (CITA), which needs to undertake a significant investment to bring its plant and equipment up to date. Third, to avoid depending on a single institution, there should also be a policy to bring other universities and research centers to the higher standards necessary for the support of an innovation cluster in this sector. Fourth, there should be a program to provide scholarships for studies abroad in areas that are 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 (INA), should be further strengthened according to the sector's strategic needs. Fifth, there should be a program of grants to entrepreneurs and firms with new ventures. Sixth, there should be ways to generate linkages with the policies pursued towards the agricultural sector, so that the efforts to develop new food products are consistent with the efforts of inducing the production of the required primary inputs for those products.

Another sector that would be a natural candidate for this kind of strategy is the medical sector. Over the last years, Costa Rica has received significant amounts of FDI in pharmaceuticals (Merck, Sharp & Dhome Corporation, Pfizer) and medical devices (Abbot Laboratories, Baxter). The country also exports medical services, such as cosmetic and reconstructive surgery (including dental and ophthalmology), and 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] It is true that exports are not as high as in the case of the food sector described above and that a few multinational corporations established in the country account for most of these exports. Still, I would argue that the relative abundance of skills and the high quality of higher education, the existence of several of international-level hospitals and clinics, and the abundant biodiversity, give the country a comparative advantage in this sector.

[27] Bioprospection is the systematic search of new sources of chemical compounds, genes, proteins, microorganisms and other products that have economic potential and can be found in 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 evaluate and encourage the multiple interdependencies between the different subsectors. This reflects the fact that the different subsectors have developed independently of each other. Hence, for example, there is no interaction between services such as bioprospecting and medical trials with the pharmaceutical companies located in the country, and 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, since the Government has no clear expertise in this sector and since some of the main actors are foreign corporations without strong roots in the country. Still, with the right leadership and sufficient investment, the Government could develop the expertise and promote the organization of the sector, so that in the near future a focused strategy could be implemented.

In addition to this major issue just discussed, there are several other lines of action that would be relevant here. First, in contrast to the food sector, the medical sector does rely heavily on FDI. Hence, it would be important to engage in targeted FDI attraction together with a program aimed at promoting linkages between multinationals and local firms. Second, just as the quantity and quality of human resources has been a key advantage in this sector, the further investment in universities so that they can continue to generate well-trained professionals in this field seems essential. Third, although there is some research done by the UCR in this area, it is clearly insufficient given the intensive needs of the medical sector. It would be 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 generate close links between multinationals and universities, both in terms of the generation of human resources (for example, through a program where students can undertake their dissertations in topics of interest to private firms, who would in turn provide some financing and allow the use of their facilities) as well as in research. Finally, the strategy should include a program of fellowships for

studies abroad in areas deemed critical for the future development of the cluster, and a program of grants for new ventures *a la* Hausmann-Rodrik.

Letting Sectors Choose Themselves

A natural question at this point is what sectors would be chosen for the implementation of this type of focussed strategy. There is a long controversy about whether such a strategy would entail "picking winners," and how this would be done. But as I have argued above, it is not necessary to pick winners, and it is not necessary to create winners either. Instead, the policy calls for picking sectors that are revealed winners in the sense of having comparative advantage. Thus, any sector with 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 in no way implies that the Government should distort prices so as to reallocate resources towards certain sectors. Since the sectors where the strategy would be implemented are those exhibiting comparative advantage, it is not necessary 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, and 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. Thus, if one wanted to call the current proposal a sort of industrial policy, it would be a "soft" industrial policy, rather than the "hard" industrial policy implemented in previous decades, which entailed distorting prices so as to reallocate resources to certain sectors as a way to generate a new pattern of comparative advantage. This is important not only because today's international rules (WTO, 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]

[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

Unfortunately, the criterion just mentioned, that the chosen sectors be ones where the country has comparative advantage, is not enough. This is because, since this type of policy requires mobilization of significant sums of leadership, human resources, and financial resources, and since there are many sectors that would satisfy the criterion of showing strong export performance, there is a need for further selectivity. There are some criteria that appear reasonable. First, sectors that are dominated by a few firms should not be supported, since one would not expect significant coordination failures to arise in such a case. That is, one would expect that if there were investments that could increase sector-wide productivity, the few firms in the sector would find ways to make these investments jointly, even without public support. Second, other things equal, it would be better to support sectors that are large and that have strong interactions with the rest of the economy, since the development of a cluster in such 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 obtaining results. The best way to accomplish this would be to choose among proposals presented by the organized private sector. This would reveal the level of commitment and organization of the different sectors. 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 saves the Government the need to select sectors for support, something that would clearly invite all kinds of trouble.

In the long run, this would provide incentives to private sectors to organize in ways that are consistent with the kind of demands made by this strategy, rather than the traditional organization aimed at rent seeking.[29] The Government could also provide support to different sectors that want to start or improve their level of organization. This would be the first line of action in countries where the private sector organizations are weak or are designed for rent seeking or confrontation rather than constructive work. Thus, one could think of having three levels of support: for starting or strengthening

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Caribbean), namely Export-Processing Zones. In any case, this is something that countries have to do anyway as part of their commitments under the WTO.

[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.

sector organizations, for the design of clustering strategies that would then be subject to competition, and for strategy implementation (in case the strategy was chosen for support).

Making it Work

Following the modern approach to public management, there are certain principles that should be followed to the extent possible in the implementation of a strategy like the one 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 accomplishing results. This injects a measure of competition into the system. Second, all programs should be continuously evaluated and subject to elimination if they fail to perform according to some minimum standard. Third, programs that require public financing should start small and increase only to the extent that evaluations reveal their good performance. Fourth, the whole strategy should be designed in a way that allows both the State and private sector organizations to accumulate expertise and thereby carry out more sophisticated policies. Finally, there should be strong participation from the private sector, both in the design and implementation of the policies. This would have the additional benefit of increasing the probability that the programs will be continued in spite of changes in Government.[30]

Apart from these general principles, there are other suggestions based on 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). This CC would make sure 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 program in general, there would be a steering committee for each sector or cluster,

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

which would be in charge of more specific strategy design and supervision of policy implementation.

An important comment regarding this last recommendation is that although the involvement of the private sector is important, it cannot substitute for the role of the State. Perhaps this has been one of the most significant weaknesses of the "competitiveness programs" that have been promoted in several countries of the region. They have fallen to the illusion that to compensate for weak states, well-organized private sector organizations can take the lead in such efforts. When we deal with public policy, however, the weaknesses of the State cannot and should not be compensated by the strengths of the private sector. Just as a strong State with a weak private sector can lead to misguided policies, a strong private sector with a weak State can lead to corruption and capture. An effective development strategy clearly rests on the strength of both State and the 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 just described. The general presumption is that most countries in the region suffer from a weak State, a State that "has little capability of transforming the economy and social structure over which it presides" (Evans, 1995, p. 45). In other words, even when Government policy is correctly designed, it is very difficult to implement due in part to a weak bureaucracy, where "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 this problem. It is clear, for example, that Chile has a strong State. The same applies, although with less force, to other countries such as Mexico, Costa Rica, Uruguay and Brazil. On the other end, there are countries such as

Haiti, where one would not even imagine that the conditions are in place for a sophisticated set of microeconomic interventions like the ones discussed above. It is clearly incorrect to generalize for the Latin American region. There are countries that can follow a sophisticated cluster-oriented strategy, and others that under present conditions cannot.[31]

The widespread concern about the dangers of implementing microeconomic interventions in Latin America derives in large part from the experience of Import Substitution. In most countries this policy was captured by the protected firms, which pushed for wider and lengthier protection without taking the necessary actions to improve productivity and stop their dependence on high tariffs. Although more research is necessary to fully understand the conditions necessary to prevent this from happening again, it seems that the set of microeconomic interventions advocated in the previous sections are not nearly as likely to provoke capture. This is because these interventions do not entail protection or tax breaks, which can easily become permanent, and whose costs are usually hidden; instead, these interventions involve one-time grants whose cost is harder to hide. Moreover, the experience with Import Substitution has taught us 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 capabilities. Usually, there are "islands of efficiency" – Government agencies or NGOs that have a proven record of being able to design and implement policies. Governments should make sure that these agencies are properly funded and try to develop synergies among them. In the medium run, countries should work on improving Government capabilities in key areas, such as the main rows of the policy matrix described above and policy coordination at higher levels of Government. Moreover, countries should put

[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 in microeconomic interventions, so that only a reshuffling of existing spending is probably needed.

together a development strategy in which the ideas above are combined according to the country's capabilities and development opportunities.

Is this strategy realistic for Latin America? It may be tempting to play it safe and answer negatively: perhaps we are being too impatient, perhaps with more time the current set of policies will deliver higher returns. But the findings of recent theoretical and empirical analysis, together with a non-ideological review of recent experience, suggests that there are important reasons why, even if undistorted and well supported by strong institutions, the market alone will not deliver strong growth. It would be a pity if our knowledge of economics could not serve as a guide into whether and how to conduct microeconomic interventions. As I have argued, the set of microeconomic interventions currently in vogue are not well based on theory and evidence. We can clearly do much better.

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