

Melo, Alberto

**Working Paper**

## Industrial Policy in Latin America and the Caribbean at the Turn of the Century

Working Paper, No. 459

**Provided in Cooperation with:**

Inter-American Development Bank (IDB), Washington, DC

*Suggested Citation:* Melo, Alberto (2001) : Industrial Policy in Latin America and the Caribbean at the Turn of the Century, Working Paper, No. 459, Inter-American Development Bank, Research Department, Washington, DC

This Version is available at:

<https://hdl.handle.net/10419/88070>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



*Inter-American Development Bank*  
*Banco Interamericano de Desarrollo (BID)*  
*Research department*  
*Departamento de investigación*  
*Working Paper #459*

# Industrial Policy in Latin America and the Caribbean at the Turn of the Century

By  
Alberto Melo\*

**\*Inter-American Development Bank**

August 2001

**Cataloging-in-Publication data provided by the  
Inter-American Development Bank  
Felipe Herrera Library**

Melo, Alberto.

Industrial policy in Latin America and the Caribbean at the turn of the century / by  
Alberto Melo.

p. cm. (Research Department Working paper series ; 459)

Includes bibliographical references.

1. Industrial policy--Latin America. 2. Latin America--Economic policy. 3. Latin  
America--Economic conditions--1982-. 4. Industrial policy--Caribbean Area. 5. Caribbean  
Area--Economic policy. 3. Caribbean Area--Economic conditions--1945-. I. Inter-American  
Development Bank. Research Dept. II. Title. III. Series.

322.3 M519-dc21

©2001

Inter-American Development Bank  
1300 New York Avenue, N.W.  
Washington, D.C. 20577

The views and interpretations in this document are those of the authors and should not be  
attributed to the Inter-American Development Bank, or to any individual acting on its behalf.

The Research Department (RES) produces the *Latin American Economic Policies Newsletter*, as  
well as working papers and books, on diverse economic issues.

To obtain a complete list of RES publications, and read or download them please visit our web  
site at: <http://www.iadb.org/res>

## 1. Introduction<sup>1</sup>

This survey of industrial policies in Latin American and the Caribbean makes two basic claims, namely: 1) that the late 1980s and the entire decade of the 1990s represented a transition from the industrial policies of the import substitution model to industrial policies suitable for open national economies in a more integrated world economy; and 2) that this transition period has not concluded and, consequently, it is premature to pass judgment on the effectiveness of the still-emerging set of policies.

Before proceeding to the description of the prevailing industrial policies, it is necessary to clarify the basic concepts that will be utilized. First, industrial policy is defined as any decision by the public authorities of a national economy that systematically affects the vector of goods and services produced in that economy. Second, a distinction can be made between explicit and implicit industrial policies. The former are decisions by the authorities that aim, in a clearly expressed manner, at stimulating the allocation of productive resources to particular sectors while discouraging investment and production in other sectors and either neglecting or intending to be neutral on still other sectors. The latter are, in principle, all other policies, to the extent that, at least in principle, they have measurable and relevant effects on the vector of goods and services produced by the economy, favorably affecting some sectors and hurting others, even if those consequences are not part of their stated purpose.

The paper is organized as follows. The next section documents a turning point in industrial policies in the Latin American and Caribbean countries during the mid-1990s<sup>2</sup> and attempts to characterize the emerging trend in business promotion policies in the region. An empirical survey of industrial policies follows. It is a *qualitative* survey in that it is limited to identifying and describing the types of policy rules, policy measures, (and, in some cases, the institutions) through which governments in the region have sought either to adapt to, or to take advantage of, the worldwide trend towards open and competitive markets.<sup>3</sup> As suggested above, no attempt is made to measure these policies' impact quantitatively. However, as a contribution

---

<sup>1</sup> The author is an economist at Regional Department 3 of the Inter-American Development Bank. He would like to thank Eduardo Lora, Alberto Chong, and Ernesto Stein for their comments. The views expressed in this document are the author's and do not necessarily reflect those of the Inter-American Development Bank.

<sup>2</sup> This claim takes as its point of departure Peres' (1997) analysis of what he calls the resurgence of industrial policies in Latin America and the Caribbean.

<sup>3</sup> The survey is based on primary sources in that most of the information was gathered from the web sites of the governmental institutions in charge of industrial policies in the region.

to a qualitative judgment of the emerging policy approaches, the paper closes with a brief review of Latin American businessmen's and other experts' opinions on one important subset of these policies, export promotion policies.<sup>4</sup>

## **2. The Origin and Nature of the Emerging Policies**

### **2.1 *The 1990s: A Turning Point for Industrial Policies in Latin America and the Caribbean***

The first round of comprehensive structural reforms undertaken in the 1980s was largely completed in the early 1990s. The key components of this reform effort, trade liberalization, privatization, and domestic market liberalization and deregulation, represented major industrial policy decisions of the implicit type, which inevitably reshaped the vector of goods and services produced by the national economies. In fact, they brought about profound changes in the productive structure of the region's economy. For instance, Peres' claims<sup>5</sup> there were five important changes in the productive structure of Latin America's manufacturing sector in the 1990s: 1) strong growth of capital-intensive, raw material-processing industries such as steel, petrochemical products, and cellulose; 2) a boom in the type of assembly industries epitomized by the Mexican *maquiladoras*; 3) a renewed leadership of the automotive industry in the three biggest countries (Argentina, Brazil, and Mexico), in spite of a generalized retrogression of the metal-mechanic sector; 4) scant development of high-technology sectors such as electronics, semiconductors, computers and informatics; and 5) a loss of relative weight for traditional labor-intensive industries such as textiles, apparel, and footwear. If this is an accurate description of what happened, it seems plausible that, while the second and third trends may have much to do with deliberate, explicit industrial policies,<sup>6</sup> the other three are, for the most part, the outcome of the implicit industrial policies embedded in the liberalizing thrust of the structural reforms.

As stated in the introduction, the 1990s were a decade of transition in explicit industrial policies. In the late 1980s and early 1990s, the generalized adoption of market-oriented reforms

---

<sup>4</sup> Businessmen's opinions are based on a set of surveys conducted in the late 1990s in four Latin American countries in the context of the Regional Project on Policies to Promote Innovation and Competitiveness carried out by the Economic Commission for Latin America and the Caribbean (ECLAC). The results are discussed in Macario *et al.* (2000). Experts' opinions are based on a few relevant pieces of the secondary literature available on this issue.

<sup>5</sup> See Peres (1997).

<sup>6</sup> In fact, the hypothesis that the renewed leadership of the automotive industry in the major countries of Latin America is attributable to industrial policies of the explicit variety is supported by the empirical studies of Bonelli

and reduction in state intervention in the economy prompted Latin American policymakers to abandon import-substitution industrial policies such as tariff protection and subsidies. Due to the understandable tendency for processes of radical change to overshoot the mark, however, the dominant impulse in the late 1980s and early 1990s was to scrap every type of explicit industrial policy.<sup>7</sup> Underlying this policy shift was the assumption that market forces would spontaneously lead to an optimal reallocation of resources.

Nonetheless, by the mid-1990s there was a noticeable change in the policy atmosphere. In both the public and the private sector there was a growing feeling that the reforms were not delivering the promised results. Moreover, the strains, imbalances, and difficulties of the industrial restructuring process and the unintended, undesirable outcomes of the reforms created conditions favorable to the emergence of explicit industrial policies congruent with the new, market-oriented, development strategy adopted by most countries in the region.

The ensuing turn in the direction of industrial policies has several remarkable features. First, the adoption of the new industrial policies was almost simultaneous in a significant number of countries and can roughly be dated to the three-year period 1994-1996. Second, in most leading countries this took the form of explicit, medium-to-long-term plans, programs, and/or strategies for the industrial sector. Third, the policy turn was generally the outcome of (or, at the very least, was broadly related to) a public debate about the effects of the structural reforms and the need to improve the domestic industry's competitiveness in the new context of a more open national economy.

This policy shift took several forms. In Colombia, a study on the determinants of the country's competitiveness<sup>8</sup> was published in 1994 in the midst of a national debate on the impact of trade liberalization and real exchange rate appreciation. According to Martínez Ortiz (1997), the study's publication shifted the national discussion towards competitiveness and contributed

---

(1997), and da Motta Veiga and Bonelli (1998), for the case of Brazil; Kosacoff *et al.* (1998), for the case of Argentina; and Hernández Laos and ten Kate (1998) for the case of Mexico.

<sup>7</sup> This does not, of course, mean that all industrial policy rules and institutions of the old type were actually discontinued. Some survived, and it is fair to say that at no point were they completely overhauled. Mexico, for instance, began to undertake external and internal liberalization in 1984, in the aftermath of the country's debt crisis. The National Program for Industrial and External Trade Promotion nonetheless included, along with policy measures in keeping with the reforms' liberalizing thrust, policies to promote particular sectors such as autos, pharmaceuticals, petrochemicals, and computers. In Argentina, even at the height of the structural reform process under Minister Cavallo's first tenure, a special regime for the automotive industry was maintained which, according to Sirlin (1999), included "heavy protection through import quotas."

<sup>8</sup> See Cámara de Comercio de Bogotá (1994).

to create a common language between policymakers in the public sector and entrepreneurs in the private sector. During the 1994 presidential campaign, an influential group of entrepreneurs pressed for the adoption as government policy of the study's main conclusions. After one month of being installed, the new government created the National Competitiveness Council, which, in turn, formulated, in 1995, a National Competitiveness Strategy.<sup>9</sup>

While the Colombian government was creating the National Competitiveness Council, the Costa Rican government approved the Strategy for the Industrial Modernization of Costa Rica. The Strategy's main goal<sup>10</sup> was "to foster and support the industrial modernization of the small- and medium-size enterprises to enable them to acquire and maintain a dynamic competitive advantage." In 1995 the government created the National Competitiveness Council and charged it with coordinating actions to promote sustained export and productivity growth.

Also in 1994, the government of Jamaica published a "green paper" titled "Towards a National Industrial Policy." According to van Riel (1997), this document sparked a national debate in which government, the private sector, academia, and international financial institutions all participated. The debate culminated in the adoption, in 1996, of the National Industrial Policy proposed in the green paper.<sup>11</sup> The strategy is based on export promotion in sectors selected according to their competitive advantage.

In 1995, the Cardoso government in Brazil issued a policy document entitled "Industrial, Technological, and External Trade Policy." The policy statement identifies as the main goal the consolidation of a new pattern of expansion for Brazilian industry. A major objective is to create the conditions that will enable Brazilian firms to make the transition from the defensive strategies dominant in the initial phase of trade liberalization to more assertive strategies based on increased productivity and technological innovation.

In Mexico, the turning point was the launching of the Industrial Policy and External Trade Program (PROPICE in its Spanish acronym) by the Zedillo administration in 1996, in the aftermath of the severe economic and political crisis of 1995. The Program is based on a diagnosis according to which the fundamental challenges the Mexican economy faced were: 1) the need to shift the emphasis from being competitive in the markets for labor-intensive goods to being competitive in the markets for advanced-technology goods and services; 2) the need to

---

<sup>9</sup> For this strategy, see Presidencia de la República de Colombia (1995).

<sup>10</sup> See Labarca and Peres (1997).

<sup>11</sup> See Government of Jamaica (1996).

continue attracting foreign direct investment; 3) the need to rebuild production chains that were dislocated as a consequence of trade liberalization; 4) the need to overcome the obstacles faced by small-, medium-size and micro-enterprises in the areas of technology and management; and 5) the need to decentralize the manufacturing industry.

In contrast to the other cases, in Argentina the government did not produce a systematic policy or strategy document formalizing, as it were, the policy shift. But a policy shift occurred nonetheless. Kosacoff *et al.* (1998) point out that in the two-year period 1994-1995, numerous measures affecting industrial development were implemented, including changes in trade policy (e.g., import quotas and specific tariffs), and changes in specific policies regulating the automotive sector.

From these countries' experiences it can be concluded that towards in the mid-1990s there was a general tendency in Latin American and the Caribbean to revisit the issue of explicit industrial policies. This led to a reformulation from which a new set of policies started to emerge.

## **2.2    *Towards a Characterization of the Emerging Policies***

In order to understand the emerging policies it is as important to characterize them negatively (i.e., for what they are *not*, for what they do *not* propose) as it is to characterize them positively (i.e., for what they *are*). First, it must be pointed out that the emerging policies do *not* seek to return to the import substitution model. *Nor* do these policies aim at interfering with the market mechanism through a systematic and generalized use of arbitrary subsidies. In contrast to many policymakers of the import substitution era, their proponents do *not* overlook the importance of macroeconomic stability and sound macroeconomic policies. On the contrary, macroeconomic stability is explicitly and even forcefully prescribed as a prerequisite for investment growth and industrial modernization.

In positive terms, the defining feature of the new industrial policies is that they aim to improve the competitiveness of domestic producers in a new, increasingly integrated and open world economy. Instead of being designed to circumvent market outcomes, they seek to redress market failures through the provision of public goods and government intervention to stimulate the supply of goods with positive externalities.



In this vein, it is instructive briefly to examine three explicit policy statements—in Brazil, Colombia, and Mexico—where the new trends seem to take a more definite shape.<sup>12</sup> These statements are institutionally significant in that they are an integral part of the national development plans the governments are legally (and, in the case of Brazil, even constitutionally) compelled to formulate and submit to their legislatures as the basic documents guiding government action and the allocation of budgetary resources during a given presidential period.

The Colombian policy statement is particularly illustrative in that it makes explicit the assumptions underlying its proposals. The Colombian authorities define their strategy toward the productive sectors as an “ambitious competitiveness strategy for internationalization [of the Colombian economy] that ought to be the outcome of a concerted effort by the public and private sectors aimed at outlining joint technological, productive, trade, and infrastructure strategies that shall make it possible to increase and efficiently utilize productive resources and generate sustainable comparative advantages.” The document further states a view of competitiveness as a particular society’s ability to face the challenges posed by the global economy while at the same time increasing its welfare.

This approach is based on four points: 1) in the modern world, competitive advantages are, to a large extent, created—that is to say, emerge from factors that are themselves the result of the development process and hence can be shaped by the economic agents (both private and public), and not simply from the availability of natural resources or unskilled labor; 2) the effort to create a more competitive economy must be approached in an integrated manner because competitiveness is not merely the product of the enterprises’ individual actions but also the result of the sector and global settings which provide a framework for those actions; 3) the efforts to promote competition and overcome the constraints to free factor mobility must be completed with active sector policies aimed at surmounting the obstacles to higher productivity levels; that, consequently, sector policies and actions are needed to enable the different productive sectors better to get integrated into the new development model; and that this must be done through “strategic plans directed to remove institutional or regulatory restraints; redefine the scope of credit policies, or export promotion policies, in term of sector-level objectives; design strategies of industrial re-conversion; induce processes of technological transfer and innovation; and

---

<sup>12</sup> See Ministério do Planejamento, Orçamento e Gestão do Brasil (1995), Secretaría de Comercio y Fomento Industrial de México (1995) and Departamento Nacional de Planeación de Colombia (1994) and RedeGoverno (2001).

generate a greater integration of production chains so as to increase productivity”; and 4) implementation of this vision requires a special effort to combine public and private actions on the basis of dialogue and negotiation.

The document then proceeds to state that, in the circumstances then faced by the Colombian economy, the competitiveness strategy took concrete shape in five programs: 1) the national science and technology policy; 2) the strategic export plan; 3) the agricultural and rural modernization policy; 4) the industrial modernization policy; and 5) the “infrastructure-for-competitiveness” strategy. The document also acknowledged that this set of policies was permeated by a strategy towards human capital development.

Several themes in the Colombian policy statement are echoed in the 1995-2000 Mexican Industrial and External Trade Policy Program (PICE in its Spanish acronym).<sup>13</sup> The program’s point of departure was the general consideration that, while trade liberalization sowed the seeds of competitiveness in the Mexican economy, major modernization challenges remained, such as the need to overcome the limitations faced by the micro-, small-, and -medium enterprises; to re-articulate a number of production chains; and foster regional development. The program went on to contend that, in order both to face these challenges and take advantage of the opportunities opened up by trade liberalization, the Mexican government must “adopt an industrial policy willing to acknowledge its own fundamental role.” Employing a formulation closely resembling that of the Colombian policy statement, Mexico’s PICE maintains “competitiveness does not simply depend on availability of a limited number of cheap productive factors, nor can it be the outcome of the isolated effort of firms or industries either, or simply of the action of market forces. Individual efforts to reach competitiveness must be complemented with the organization and coordination of state action.”

Building on those premises, PICE’s policy statement unambiguously declared that the central objective of Mexico’s industrial policy was to promote competitiveness in the domestic manufacturing sector. This industrial policy would be implemented along three major strategic lines, namely: 1) creating conditions for permanent and high profitability in the export sector; 2) creating mechanisms to accelerate the development of highly competitive industrial clusters, both at the regional and at the sector level, and integrating into them micro- small- and medium-

---

<sup>13</sup> See Secretaría de Comercio y Fomento Industrial de México (1995).

size enterprises; and 3) promoting domestic market development and efficient import substitution.<sup>14</sup>

The Brazilian Multi-Annual Plan 1996-1999 begins by pointing out three main obstacles (as of late 1995) to further modernization:<sup>15</sup> inflation, backwardness (of the state, firms, and society), and the “corporate spirit.”<sup>16</sup> The document then went on to propose three basic strategies for the period 1996-1999: 1) construction of a modern and efficient state; 2) reduction of regional and social disequilibria; and 3) competitive insertion into the world economy and productive modernization. The latter strategy, the most relevant for the present purpose, includes the following guidelines: 1) modernization and expansion of infrastructure; 2) greater private sector participation in total investment; 3) strengthening of productive sectors having the potential for international insertion, and incentives to technological innovation and productive restructuring; 4) improvement of education (with emphasis on basic education); and 5) modernization of labor-market relations.

The Brazilian Multi-Annual Plan additionally tackled industrial and external trade policy, first stating “it is necessary to overcome the economic, technological, and institutional inefficiencies derived from the distortions of the preceding industrialization model, characterized by excessive protection to domestic production and restrictions to the workings of the market.” The plan also pointed out that Brazilian industrial and external trade policy must make productive restructuring its main goal; the plan particularly stressed the need for efficiency and competitiveness.<sup>17</sup>

---

<sup>14</sup> These strategic lines were to be implemented through eight policies: i) macroeconomic stability and financial development; ii) expansion of physical infrastructure and creation of the human and institutional base needed for a complex, modern industry; iii) strengthening the integration of production chains; iv) improvement of the “technological infrastructure”, including technological modernization and quality promotion; v) economic deregulation; vi) export promotion; vii) a policy of international trade negotiations capable of opening up new markets; and viii) promotion of competition.

<sup>15</sup> See Ministério de Planejamento, Orçamento e Gestao do Brasil (1995).

<sup>16</sup> Corporate spirit is the translation for the Portuguese (and Spanish) word *corporativismo*. To avoid any misunderstanding, it must be pointed out that in the broad Latin cultural tradition (i.e., the common thread that arguably unifies the cultures of the Latin countries of Europe and the Latin countries of the Americas), *corporativismo* is defined as the social attitude bent on seeking the satisfaction of narrow, particular interests. It roughly corresponds to the meaning conveyed by the expression “special interests” in the North American cultural tradition.

<sup>17</sup> In accordance with these criteria, the Multi-Annual Plan’s industrial policy defined the main policy actions to be carried out in the 1996-1999 period as follows: i) reduction of the so-called “Brazil-cost,” that is to say, the extra labor and fiscal costs producers (both foreign and domestic) have to bear when producing in Brazil as opposed to producing in foreign countries; ii) improving the instruments for defending Brazilian producers from predatory practices, unfair competition, and protectionist practices in the international market and fostering domestic competition; iii) reducing the financial costs of investment; iii) improving the existing export credit insurance

A second noteworthy Brazilian policy document is the 2000-2001 Government Agenda statement.<sup>18</sup> The document's industrial policy section reiterates the Multi-Annual Plan's statement, declaring "the central objective of development policies is to insert the Brazilian economy into the world economy in a competitive manner." Showing a continuity from the last decade in policy formulation, the agenda subsequently proposes intermediate, operational objectives very much along the lines of the Multi-Annual Plan. A remarkable new element, though, is worth highlighting. The list of policy guidelines and actions begins with a warning and a call to action. The warning is that the growth of Internet-based technologies entails the risk of bringing about a new form of economic exclusion, the digital exclusion both of less developed societies and of the poor in all societies. The call is, consequently, to strive to make Brazil an information society where communication and information technologies serve as an instrument of inclusion.

These recent industrial policy pronouncements allow us to venture some conclusions. First, the explicit content of these statements suggests that what is developing before our eyes is an effort on the part of an important segment of Latin American policymakers to redefine the role and content of industrial policies in an era of greater worldwide commercial and financial integration. It is not an attempt to go back to the past.

Second, while the effort builds on both own past experiences and lessons from other countries, it is in many ways unprecedented and involves a modicum of breaking new ground, experimentation, and charting of unfamiliar territory. To that extent, it can be said that the new policies are still in the stage of taking shape and gaining an identity of their own.

Third, as intimated above, a remarkable feature of these and similar formulations is that they strive to address issues (such as productivity, efficiency, product-quality, etc.) revolving around the central question of to how to raise the countries' competitiveness. The underlying assumptions are that trade liberalization was necessary; that it is here to stay; that, on the other hand, it is not only desirable but also possible to change the prevailing world distribution of comparative advantage so as to increase the region's exports of manufacturing goods (and even

---

mechanisms; iv) deregulation of external trade; v) promoting recovery of the ship-building sector; vi) stepping up activities in the areas of quality and productivity; vii) modernization of technical regulations; viii) further development of Brazilian design; ix) providing support to small-scale producers and crafts; and x) promotion of micro- and small-enterprises in the Northeast.

<sup>18</sup> See RedeGoverno (2001).

of high-technology goods and services) and decrease the dependence on primary-sector-related exports; and that the government has a role to play in this pursuit.

### **2.3    *The Theoretical Background of the Emerging Policies***

The most explicit policy statements demonstrate that the emerging industrial policies move away from a pure *laissez faire* approach in that they explicitly advocate government intervention in the economy. They also differ from the import-substitution approach, as the forms of government intervention they advocate differ from those championed by that approach. In theoretical background as well as practice, then, one should expect these policies to depart from these two policymaking traditions.

The central problem posed by the new approach is how to increase the competitiveness of a small, open economy through a welfare-enhancing time path. When the question is posed this way, several underlying assumptions are worth stating. Perhaps the main assumption is that policy interventions can help an otherwise market-based economy, both constrained and spurred by the forces of international competition, to transit from a state characterized by a vector of goods produced where many (or most) of the goods characteristic of the advanced stages of industrial and/or knowledge-based production are deficient to a new vector where a big enough (and/or good enough) subset of those goods is produced by a nation's economy. An apparently major normative criterion for this effort is that the transition should be made in a reasonable time-frame so as to mobilize the hopes and energies of the current generation. Such a transition is, furthermore, assumed to be welfare-enhancing for the bulk of the population, as it would entail an increasing adoption of gradually more productive technologies that would raise the real wages of the working class and increase the size of the professional and business classes.

The most pertinent theoretical arguments for state intervention aimed at changing the vector of goods produced can be conveniently grouped in five classes: 1) arguments that seek to justify intervention to promote the production of particular goods on the basis of the latter's exhibiting economies of scale 2) arguments that support intervention to promote the production of goods when the production process is associated with learning by doing, whether within the firm or outside the firm; 3) arguments that seek to justify subsidizing research and development activities of private firms, as these activities generate positive externalities; 4) arguments that seek to justify state intervention to stimulate investment in human capital by both private firms

and households on account of the externalities characteristic of that activity; and 5) arguments that rely on the presence of imperfections in the capital and product markets due to asymmetries of information.<sup>19</sup> This arsenal of arguments, taken from the field of Welfare Economics, has been deployed by advocates of active industrial policies all over the world, particularly in Europe and North America.

In Latin America these arguments have been supplemented with empirical and historical arguments in favor of an active policy. The main arguments can be found in ECLAC (1995) and are conveniently summarized by Kosacoff and Ramos (1999). These arguments appeal to the fact that, in most late-developing countries, the government has played an active role in completing or perfecting markets, providing substitutes for them when necessary and generating an environment that stimulates investment and innovation.<sup>20</sup> They also contend that the experience of successful countries sheds light on general criteria for industry-promotion policy. For example, public policy is effective when it seeks to facilitate the operation of the market rather than trying to take its place and when it acts in a selective and transparent manner with an awareness of its own limitations and tries to frustrate rent-seeking activities. In addition, competitive advantages can be acquired through industrial policy if the incentives provided are only transitory; scales of production in the promoted industries are sufficiently large; and the use of either outdated technologies or those still in an experimental stage is avoided.

### **3. The Anatomy of Current Industrial Policies in Latin America and the Caribbean**

Understood in the broadest sense of the term, industrial policies include a wide variety of elements, traditionally divided into six subsets: 1) trade policies; 2) investment policies; 3) science and technology policies; 4) policies aimed at promoting micro-, small-, and medium-size enterprises; 5) human-resource training and upgrading policies; and 6) regional development

---

<sup>19</sup> For a critical review of these arguments by a leading economist, see Grossman (1990).

<sup>20</sup> These arguments also point out that the available historical evidence suggests that there is a wide range of alternatives with regard to intervention: development led by conglomerates (South Korea) or by small and medium-size enterprises (Taiwan); growth led by local firms, or by public, or transnational enterprises; development based on natural resources *cum* forward linkages to activities with higher value added (Denmark, Sweden and Finland in the past; Thailand, Malaysia and Indonesia at present) or on a direct initial push in manufacturing (Japan, South Korea, Taiwan); initial openness based on export promotion with limited import liberalization (most South East Asian countries) or free trade almost from the start (Hong-Kong, Singapore).

policies.<sup>21</sup> However, for the purposes of this survey a simpler taxonomy will be used. Leaving aside for the moment policies to promote small- and medium-size enterprises, the entire industrial-policy set is divided into three different (although not mutually excluding) standpoints resulting in three classes of policy areas, namely: a) export promotion policies; b) policies to promote output growth and investment; and c) policies to promote higher productivity and competitiveness.

The rationale behind this simpler classification is twofold. First, given the obvious importance of exports for any industrial policy in the current era of increasing trade and financial integration, it seems appropriate to consider export promotion policies as constituting a category of their own. Second, as for the remaining elements in the policy set, a reasonable principle of classification is to distinguish between, on one hand, policies whose main effect is to increase present and future output and, on the other, policies that change the way output is produced, presumably in the sense of increasing technical and economic efficiency. The first set of policies provides incentives to producers to “do more of the same.” By contrast, policies in the second set aim at encouraging them “to change their ways,” i.e., to produce more efficiently. In other words, while in its pure form the first set of policies leads to sheer increases in output and investment, leaving firms’ production functions unchanged, the second set deliberately intend to alter firms’ production functions.<sup>22</sup>

It should be noted that this survey of current industrial policies in the region excludes two areas: regional development policies and specific policies to promote the agricultural sector. These are subjects that merit an extensive treatment that goes beyond the scope of this paper.

### **3.1 *Export Promotion Policies***

Export promotion policies in Latin American and the Caribbean can be classified into three broad categories: 1) policies that affect the availability and/or cost of credit; 2) fiscal incentives; and 3) provision of non-financial services to exporters. Although we readily admit that the latter

---

<sup>21</sup> Some also include environmental policies as a subset of industrial policies. While we do not resist the general idea that environmental policies do affect the vector of goods and services produced in the economy we shall refrain from discussing them in this survey.

<sup>22</sup> It should go without saying that this distinction is purely analytical. One would be hard pressed to find pure real-world examples of the two type of policies in question. However, it is not unreasonable to assert that horizontal lines of credit to finance working capital are essentially a policy of the first type and incentives to technological innovation are a policy of the second type.

type of services are important for the success of an export promotion strategy, and may even be decisive, the present analysis is restricted to the first two categories.

### *3.1.1 Financial Incentives*

#### *A. Credit Provision*

Table 1 shows that fourteen countries in the region have devised institutional schemes to provide credit to their exporters. While only five countries have established specialized export credit agencies, another six countries have special credit lines for exporters in their main public-sector development banks, and the remaining three countries provide credit to exporters through credit lines open to all producers regardless of the destination of their products.

There is a rough correlation between size of the economy and institutional provision of credit: most of the smaller economies (particularly in the Caribbean) do not provide nationally-based, institutional credit facilities to their exporters. The Caribbean countries, for instance, rely instead on outright grants from the Caribbean Export Development Agency.

Some general features of these credit schemes are worth mentioning as they characterize the market-oriented and open-economy thrust of the emerging industrial policies in the Region. First, in most countries the governmental agencies in charge of financing exports are second-tier financial institutions.



**Table 1. Main Financial Incentives to Exports**

COUNTRY	Credit Export Agency	Export credit lines in dev. Bank	Loans working capital	Loans discrete capital goods	Finance for entire investment projects	Buyers' credit	Finance for Marketing Activities	Export credit insurance
Argentina	YES		X		X	X	X	X
Bahamas	NO	NO						
Barbados	NO	NO					X	
Belize	NO	NO						
Bolivia	NO	NO						
Brazil	NO	YES	X	X		X		X
Chile	NO	YES	X	X		X <sup>23</sup>	X	
Colombia	YES		X	X		X	X	X
Costa Rica	NO	NO	X	X				
Dominican Republic	NO	NO						
Ecuador	NO <sup>24</sup>	NO	X	X				X
El Salvador	NO	YES	X	X	X		X	
Guatemala	NO	NO	X	X				
Guyana	NO	NO						
Haiti	NO	NO						
Honduras	YES		X	X				
Jamaica	NO	NO						
Mexico	YES	YES	X	X	X	X	X <sup>25</sup>	X
Nicaragua	NO	NO	X	X				
Panama	NO	NO						
Paraguay	NO	NO						
Peru	NO	YES	X			X		
Surinam	NO	NO						
Trinidad and Tobago	NO	NO						
Uruguay	NO	YES	X					X
Venezuela	YES		X			X		X

Second, in practically all cases the pricing of loans follows market principles, with rates that reflect the market cost of money. Interest rates are normally freely negotiated between the first-tier (generally private) financial institution and the individual exporter. Third, in most cases the available credit lines are open only to non-traditional exporters.

<sup>23</sup> Only for foreign buyers of Chilean durable goods and engineering services.

<sup>24</sup> In Ecuador there is neither a specialized export credit agency nor special export credit lines from the public-sector development bank, the *Corporación Financiera Nacional (CFN)*. However, the CFN has the strategic goal of assigning at least 50 percent of its disbursements to "productive investment in international trade."

<sup>25</sup> The Mexican External Trade Bank, Bancomext, gives partial grants (up to 50 percent of costs) to finance market research, image-promotion campaigns, and promotion of Mexican trade fairs.

The support extended by export credit agencies to exporters involves two basic types of loan: 1) loans to finance working capital; and 2) loans to finance fixed investment costs. While fourteen countries limit themselves to providing loans of the first type, ten countries extend to their exporters loans of both types. On the other hand, buyers' credit (loans to foreign buyers of domestic exports) is less frequent, as only seven countries offer this credit facility to their exporters.

Credit facilities in some countries go beyond the types mentioned above. Some export credit agencies have been particularly innovative in developing new financial products and services, such as specific credit facilities for the exporters of capital goods.<sup>26</sup> Another area where innovation has occurred is that of credit to finance entire investment projects. Unlike more traditional credit lines that, at best, finance the purchase of discrete sets of capital goods, these credit lines include financing for plant construction and/or renovation, related public works, and even land purchases.<sup>27</sup> Additional innovations in financial assistance to the commercialization of exports<sup>28</sup> include market-opening activities, defined here as the set of actions which have to be carried out by an exporting firm if it is to pry open a particular foreign market.<sup>29</sup>

Argentina and Colombia are the two countries where financial assistance to exporters covers a wider range of areas than in most other countries of the region. Besides credit lines of the type mentioned above, both countries have credit facilities to finance the subscription of equity capital by domestic producers in order to form corporations whose purpose is to produce goods for the external market.<sup>30</sup>

---

<sup>26</sup> The *Banco de la Nación Argentina*, for instance, offers medium-term (five-year) loans to Argentine exporters of capital goods. In Brazil, financial support to the exporters of capital goods assumes a more sector-oriented shape. Thus, with resources from the Merchant Marine Fund, the *Banco Nacional de Desenvolvimento Economico e Social*, BNDES provides loans to Brazilian shipyards for ship construction to meet orders from foreign buyers.

<sup>27</sup> Brazil, Colombia, and Mexico are the leaders in this area.

<sup>28</sup> Chile's Corporation for the Promotion of Production (CORFO), for instance, has a credit line to finance the construction of commercialization infrastructure (representation offices, stores, warehouses, etc.) in foreign countries by non-traditional domestic exporters.

<sup>29</sup> The most innovative agencies provide financing for such activities as attendance to trade fairs; the carrying out of commercial missions and business trips by domestic exporters; the research and development of new products aimed at satisfying the requirements of consumers in foreign markets; and the technical assistance and training required to implement international quality norms (ISO norms).

<sup>30</sup> The Colombian Bank for External Trade (Bancoldex) also provides liability consolidation loans to exporters in order to alleviate their cash flow problems; loans to finance investment projects in the area of transport infrastructure aimed at improving the country's external competitiveness (and with private sector participation); loans to leasing companies to finance leasing contracts subscribed by Colombian exporters provided that the leasing contracts are about goods utilized in the production or commercialization of exports; loans for the partial or total relocation of export firms' productive plants in coastal zones so that they can reduce costs and be more competitive in the international market. The Colombian export credit agency also has a credit line with incentives to projects that

An interesting innovation is Banco do Brasil's program of export financing with equalization of financial costs. The basic idea is to compensate domestic exporters for the higher interest rates they normally have to pay so as to equalize their financial costs with those of their competitors in the international market.

A few export credit agencies in the region have established credit lines to stimulate exports from particular regions within the given country as part of broader regional development strategies.<sup>31</sup>

### *B. Credit Insurance Schemes*

Learning from their counterparts in the developed countries, credit agencies in the region have evolved export credit insurance schemes that protect the exporter against both the commercial and political risks of a foreign buyer defaulting on payments. Seven countries in the region provide credit insurance services to their exporters.

### *C. Outright Grants*

In a few countries, notably in the Caribbean, the financial promotion of exports is carried out through outright grants to exporters. The Caribbean Export Development Agency<sup>32</sup> provides grants on a cost-sharing basis to enhance export firms' competitiveness. The grants are restricted to enterprises operating in the manufacturing and services sectors; firms in the agricultural sector are not eligible except where the export-related activities they engage in bring with them considerable value added.

---

include in their design important technological innovations or that generate noticeable externalities benefiting a broad industrial sector or an important segment of a production chain. Colombia's Bancoldex is also a pioneer institution in the area of granting loans to exporters for the purpose of enhancing their liquidity. Through two credit facilities, namely, "Liquidex in pesos" and "Liquidex in USD" Bancoldex buys from the Colombian exporter, at a discount, the export purchase contract subscribed by the foreign importer and this with no recourse against the Colombian exporter. Bancoldex buys up to 85 percent in pesos and 90 percent in dollars of the invoiced values.

<sup>31</sup> Thus, in Brazil, the Financial Constitutional Fund for the Center-West, a financial institution created by the Brazilian Federal government to promote the social and economic development of the country's Center-West region, has a credit facility for export promotion, and Colombia's Bancoldex has a multipurpose credit line for exporters of the small islands of San Andrés and Providencia.

<sup>32</sup> The member countries of the Caribbean Export Development Agency are: Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname and Trinidad-Tobago.

### 3.1.2 *Fiscal Incentives*

Regarding fiscal incentives to exports, the emerging industrial policies in the Latin American and Caribbean countries are consistent with external and internal liberalization and reliance on market forces. Thus the main feature of the new pattern of fiscal incentives is the diminishing role of subsidies. While a few subsidies still remain, the dominant trend is towards their complete disappearance.<sup>33</sup>

As shown in Table 2, the main fiscal devices to promote exports are: 1) refunds on payments of “internal” taxes (i.e., taxes other than import duties); 2) drawback schemes; 3) temporary admission schemes; 4) export processing zones; and 5) incentives to the creation and operation of trading companies.

**Table 2. Main Fiscal Incentives to Exports**

Country	Tax refund schemes	Drawback schemes	Temporary admission schemes	Export processing zones	Exemption from import duties	Exemption from internal taxes
Argentina	X	X	X	X		
Bahamas					X	X
Barbados					X	X <sup>34</sup>
Belize				X	X	X <sup>35</sup>
Bolivia	X	X	X	X		
Brazil	X	X	X	X		
Chile	X	X				
Colombia	X	X	X	X		
Costa Rica <sup>36</sup>		X	X	X		
Dominican Republic		X	X	X		
Ecuador		X	X	X		
El Salvador	X	X	X	X		
Guatemala	X	X	X	X		
Guyana						
Haiti					X	X
Honduras				X	X	X <sup>37</sup>
Jamaica				X	X	X <sup>38</sup>

<sup>33</sup> Or, at the very least, of those that are incompatible with WTO rules.

<sup>34</sup> Exemption from both import duties and internal taxes on corporate profits are not limited to export production. All manufacturers benefit from a ten-year tax holiday. However, for exporters in the manufacturing sector the tax holiday is prolonged for an indefinite number of years into the future as they benefit from a very low (2.5 percent) tax rate on corporate profits after the initial ten-year tax holiday is over.

<sup>35</sup> Tax holidays are given to all investors (both foreign and domestic). However, while the typical tax-holiday period is five years, the Fiscal Incentives Act of 1990, allows for extensions of up to twenty additional years if production is strictly for export and highly labor-intensive.

<sup>36</sup> The Costa Rican Active Transformation Regime combines (and in some particular aspects even goes beyond) the attributes of tax refund schemes, drawback schemes, and temporary admission schemes.

<sup>37</sup> A ten-year tax holiday on profits from exports is granted under certain conditions.

<b>Table 2., Continued</b>						
Country	Tax refund schemes	Drawback schemes	Temporary admission schemes	Export processing zones	Exemption from import duties	Exemption from internal taxes
Mexico	X	X	X	X		
Nicaragua		X		X	X <sup>39</sup>	
Panama	X			X		
Paraguay	X	X		X		
Peru	X	X		X		X <sup>40</sup>
Suriname						
Trinidad and Tobago				X		X
Uruguay	X	X	X	X		
Venezuela	X	X	X	X		

#### A. *Tax-Refund Schemes*

The typical tax refund provides a total or partial refund of the indirect taxes and contributions paid in the several stages of production and (internal) commercialization of the exported good. As the principal aim of the tax-refund schemes is to avoid double taxation, the tax payments refunded are typically those related to value-added taxes and other excise taxes but also include exemptions on payroll taxes and similar contributions. In a number of countries, the tax refund instrument is a freely negotiable market instrument, the Tax Refund Certificate (TRC), which can be used for the payment of any kind of taxes, including corporate income taxes and import duties. In some cases, the TRC mechanism includes a subsidy component and therefore it will have to be either modified or (in the case of non-agricultural exports) phased out to comply with WTO rules.

The most innovative country in the area of tax refunds is Mexico, which has set up the Highly Exporting Firms Program (known by its Spanish acronym ALTEX). The program enables firms that make at least 40 percent of their total sales to the export market to benefit from very simplified and expeditious export and import formalities and, most importantly, to quickly recover the *ad valorem* tax on domestic inputs.<sup>41</sup>

<sup>38</sup> In Jamaica the exemption from the income tax is partial. The amount of the rebate depends on export performance.

<sup>39</sup> Some items used in export production (notably machinery and raw materials) are duty-free.

<sup>40</sup> Exports of services are exempted from the General Sales Tax.

<sup>41</sup> Actually, the Mexican government's legal commitment in the context of the Program is to give back the tax payments in five working days!

A variant of tax refund that is used in some countries is the refund regime on turn-key projects. This variant aims at stimulating the sale to foreign buyers of complete production units, including production plants, engineering works and other physical facilities.

### *B. Drawback Schemes*

Drawback schemes are the standard instrument used to enable exporting firms to compensate for the anti-export bias stemming from import tariffs. They allow exporters to recover duties paid on imported inputs utilized in export production. As shown in Table 2, sixteen countries have some type of drawback scheme. In addition, Chile and the Dominican Republic have simplified drawback schemes for non-traditional exports whereby the refund is made without any requirement of documentary support that a given proportion of imported inputs have been used in the case at hand.<sup>42</sup>

In the area of drawback schemes, Mexico is again the most innovative country. It has gone beyond the traditional reimbursement mechanism to an exemption scheme where, instead of refunding duties *ex-post*, an outright exemption allows exporters to avoid paying duties in the first place, thus reducing their working capital needs.<sup>43</sup>

### *C. Temporary Admission Schemes*

Temporary admission schemes involve temporarily allowing exporting firms to introduce into the given country inputs, raw materials, intermediate goods, capital goods and spare parts employed in export production with total or partial exemption from taxes and import duties. As can be seen from Table 2, twelve countries in the region include this type of scheme in their fiscal incentives to exporters. Perhaps the best-known example is the Mexican *Maquiladora* regime, which has been a major factor in that country's successful export performance.<sup>44</sup> In some cases, temporary admission schemes have a built-in subsidy component, which will have to be eliminated to comply with WTO rules.

---

<sup>42</sup> It is, in fact, an export subsidy and, because of this, incompatible with WTO rules. The Chilean government is phasing it out.

<sup>43</sup> The Mexican program allows exemption not only from import duties but also from the value-added tax and any antidumping duties that may apply. However, to be eligible for participation in it, firms must meet minimum requirements as to the amount of exports they carry out. Due to the superiority of this exemption scheme, the traditional drawback mechanism continues to exist but lost relevance and is now utilized almost exclusively by firms that are occasional exporters. Only a tiny percentage of total Mexican exports use this scheme

#### *D. Export Processing Zones and Trading Companies*

Export processing zones (EPZs) are an arrangement whereby exporting firms locate their manufacturing plants inside an in-bond, common physical space and receive a set of fiscal incentives in exchange for the commitment to produce and/or transform goods for the external market.<sup>45</sup> As shown in Table 2, twenty countries offer the EPZ option to both foreign investors and domestic exporters, making this instrument the most widely used fiscal-incentive vehicle. Legislation in a number of countries provides incentives to the creation and growth of firms specializing in external trade operations. The incentives typically include exemption from value-added taxes and from the tax withholding requirements on certain payments to which many ordinary transactions are subjected. Table 2 shows that five countries provide incentives for the creation of trading companies.

### **3.2 Fiscal and Financial Incentives to Production and Investment**

Fiscal and financial incentives to production and investment are incentives that are granted to all producers regardless of whether they produce for the domestic or the external market. They can be broken down into four categories, namely: 1) horizontal provision of credit and other financial services; 2) horizontal fiscal incentives; and 3) credit and/or fiscal incentives to producers of particular sectors, and 4) credit and/or fiscal incentives to producers located in particular geographical (presumably less developed) regions within the country. Table 3 provides an overview of how these types of incentives are being used in the region.

---

<sup>44</sup> According to ten Kate *et al.* (2000), *Maquila* exports grew at an annual average growth rate of 20 percent between 1982 and 1995.

<sup>45</sup> Fiscal incentives to locate in such zones usually include: i) exemption from corporate income taxes for periods of time of up to 20 years; ii) exemption from taxes on dividends and profits; iii) exemption from import and export duties on capital equipment, intermediate goods, and spare parts; iv) exemption from sales, excise, and consumption taxes; v) exemption from taxes on transfers of profits; vi) exemption from restrictions on foreign exchange; and vii) freedom from industrial regulations applying elsewhere in the country. In addition to these incentives, firms in export processing zones usually benefit from simplified and expeditious export procedures (such as customs inspection at the zone); strategic location (e.g., proximity to the ports, airports, or key roads); existence in the zone of a modern physical infrastructure (warehouses, roads, power plants, etc.); and complementarities and economies of scale in the use of such services as security and employee transportation.

**Table 3. Main Financial and Fiscal Incentives to Production and Investment**

Country	Loans for working capital	Loans for fixed assets and/or investment projects <sup>46</sup>	Equity investment	Loans to specific sectors <sup>47</sup>	Credit programs for particular regions	Horizontal tax incentives	Tax incentives to specific sectors	Tax incentives to particular regions
Argentina	X	X(ip)		X	X		Mining, forestry	
Bahamas						X <sup>48</sup>	Hotels, financial services, spirits and beer	
Barbados						X <sup>49</sup>	Financial services, insurance, information technology	
Belize						X	Mining	
Bolivia							Mining	
Brazil	X	X(ip)	X	Oil, natural gas, shipping, power sector, telecom, software, motion picture industry	X <sup>50</sup>			X <sup>51</sup>
Chile	X	X			X	X <sup>52</sup>	Forestry, oil, nuclear materials	X
Colombia	X	X(ip)	X	Motion picture industry	X <sup>53</sup>			X <sup>54</sup>

<sup>46</sup> The notation X(ip) means that there are credit lines for entire investment projects and, a fortiori, for discrete capital goods. The plain X indicates that only loans for discrete sets of fixed assets are available.

<sup>47</sup> Other than agriculture.

<sup>48</sup> Income is tax-free and imports to be used in investment projects are duty-free.

<sup>49</sup> The tax incentive is for foreign investors. Offshore companies are taxed at a rate significantly below the rate for local companies.

<sup>50</sup> The BNDES (through BNDESPAR) contributes with equity capital to two Regional Funds for Emerging Enterprises (in the states of Santa Catarina and Minas Gerais), which, in turn, lend to emerging firms. It also has special credit facilities for the Northeast, the Amazon, the South, and the Center-West regions.

<sup>51</sup> There are federal tax investment incentives for the Northeast and Amazon regions.

<sup>52</sup> There are two main horizontal forms of tax incentive to investment (including re-investment of profits):

i) Accelerated depreciation is granted for new fixed assets acquired domestically and for imported fixed assets; ii) personal income tax and Additional Tax apply only when profits are distributed.

<sup>53</sup> Colombia's *Instituto de Fomento Industrial* (IFI) has a credit line for firms located in border zones; and another for that part of the coffee-producing regions affected by the earthquake of January, 1999.



<b>Table 3, Continued</b>								
<b>Country</b>	Loans for working capital	Loans for fixed assets and/or investment projects	Equity investment	Loans to specific sectors	Credit programs for particular regions	Horizontal tax incentives	Tax incentives to specific sectors	Tax incentives to particular regions
Costa Rica	X						Forestry, tourism	
Dominican Republic							Tourism, agribusiness	
Ecuador	X	X(ip)	X				Mining, tourism	
El Salvador	X	X(ip)		Mining; services sector <sup>55</sup>				
Guatemala								
Guyana							Agribusi-ness	
Haiti						X <sup>56</sup>		
Honduras	X	X		Transport sector, shrimp				
Jamaica							Motion picture industry, tourism, bauxite, aluminum, factory construction	
Mexico	X	X(ip)	X	Motion picture industry		X <sup>57</sup>	Forestry, motion picture industry, air and maritime transportation, publishing industry	
Nicaragua	X	X					Tourism	

<sup>54</sup> There are two special tax regimes that favor particular regions recently affected by natural disasters. They are the Páez Law and the Quimbaya Law. The first is applicable to the zones affected by the flooding of the Páez River in 1995 and the second to the coffee-producing zone affected by the earthquake of January, 1999.

<sup>55</sup> The services industries included with credit lines of their own are: tourism, transportation, software, and other services.

<sup>56</sup> Haiti has a comprehensive tax holiday scheme.

<sup>57</sup> Through the Sector Promotion Program (PROSEC), firms in twenty-two industries in the manufacturing sector can import goods at a preferential rate to be used in the respective manufacturing sector to produce final goods either for the external or the domestic market.

<b>Table 3, Continued</b>								
<b>Country</b>	Loans for working capital	Loans for fixed assets and/or investment projects	Equity investment	Loans to specific sectors	Credit programs for particular regions	Horizontal tax incentives	Tax incentives to specific sectors	Tax incentives to particular regions
Panama	X	X					Tourism, forestry	
Paraguay	X	X				X <sup>58</sup>		X <sup>59</sup>
Peru	X	X					Tourism, mining, oil	X <sup>60</sup>
Suriname						X <sup>61</sup>		
Trinidad and Tobago						X <sup>62</sup>	Hotels, construction,	
Uruguay	X	X(ip)				X <sup>63</sup>	Hydrocarbons, printing , shipping, forestry, military industry, airlines, newspapers, broadcasters , theaters, motion picture industry	
Venezuela	X	X(ip)				X <sup>64</sup>	Hydrocarbons and other primary sectors <sup>65</sup>	

<sup>58</sup> Paraguay has a five-year-duration tax holiday for new investments.

<sup>59</sup> The duration of the tax-holiday mentioned in footnote 15 is longer (ten years) if the company making the investment locates in the Departments of Guairá, Caazapá, Ñeembecú, Concepción, or in the Eastern Region.

<sup>60</sup> Manufacturing enterprises operating in the border provinces and in the Amazon region are exempt from the income tax, the VAT, and the excise taxes.

<sup>61</sup> According to the U.S. State Department, the Surinamese government has the legal power to grant tax holidays on a case-by-case basis. Investors are then “dealt with by the appropriate ministries through a process that can be “very slow (...), and is not immune from patronage and favoritism. Besides the tax holiday, the incentive packages negotiated on that *ad hoc* basis can include long-term land leases (presumably at favorable terms compared to market), factory space, and preferential credit. An investment law is being prepared that will include a ten-year tax holiday as the key investment incentive.

<sup>62</sup> Trinidad and Tobago grants comprehensive tax holidays of up to ten years.

<sup>63</sup> A tax exemption is available on profits reinvested in manufacturing firms, farming, and hotel facilities. In addition, there is a partial relief from capital tax through computing the fiscal value of industrial equipment at fifty percent.

<sup>64</sup> New investments in manufacturing industry, agriculture, fishing, fish farming, livestock, and tourism receive a tax rebate of 20 percent. Furthermore, the capital gains tax is one percent.

<sup>65</sup> New investments in hydrocarbon production enjoy a tax rebate of 8 percent. The purchase of capital equipment and services for new investment in oil, mining, agriculture, and fisheries is exempt from the wholesale tax.

### 3.2.1 Horizontal Provision of Credit

Fifteen countries in the region currently operate public-sector financial corporations<sup>66</sup> or development banks that provide medium-to-long-term loans and related financial services to producers; most operate as second-tier institutions and charge market-determined interest rates. In most countries, credit to producers is usually granted in two basic modalities: 1) medium-term loans to finance working capital; 2) long-term loans to finance investment projects (including the discrete purchase of fixed assets).<sup>67</sup>

As in the case of export credits, the credit institutions granting these loans have, in a number of countries, gone beyond the basic modalities and introduced an array of innovations.<sup>68</sup> An area that is being developed by the leading institutions is equity investment in private firms. The governmental development banks undertake this type investments in order to pursue objectives such as strengthening the capital structure of the beneficiary firms, supporting new investments, fostering the entry of new investment partners (both foreign and domestic) into the firm in question, developing the local capital markets, or assisting restructuring processes that take the shape of mergers or acquisitions. In the typical case, the stated policy is to take equity positions only as a minority shareholder, and on a temporary and selective basis, in profitable companies or projects.<sup>69</sup> The development finance agency's participation in share subscription operations can be direct or indirect. In the latter case, participation is carried out through equity investment funds of different types.<sup>70</sup>

---

<sup>66</sup> In some countries such as Argentina the second-tier financial institution playing the role to be described here is a private sector intermediary with government participation.

<sup>67</sup> In a number of cases, the loans can be denominated in domestic or foreign currency (US dollars). In most cases, credit beneficiaries are given grace periods that vary from one country to the next. Interest rates are usually variable but in some cases they are fixed.

<sup>68</sup> The leading institutions provide, for instance, one or more of the following types of loans or financial services: i) loans to restructure liabilities; ii) loans to pay for consultancy services; iii) loans to finance environmental impact studies; iv) loans to prevent or eliminate the emission of toxic substances into the environment or to refinance the recycling of polluting substances; v) loans for the improvement of commercial practices; vi) loans to finance the leasing of capital goods; vii) loans for civil projects and installations; viii) loans to finance real-estate developments; ix) medium- and long-term US-dollar auctions; and x) provision of guarantees.

<sup>69</sup> For instance, in the case of Brazil, a company must meet several explicit criteria if the *Banco Nacional de Desenvolvimento Economico e Social*, BNDES, is to participate in a share subscription operation: i) it must have competitive advantages in the market where it operates; ii) it must be profitable; iii) the company's management must be apt, professional, and efficient; and iv) the company's shares must be publicly traded or, if that is not the case, it must make a commitment to go public.

<sup>70</sup> The leading institution in equity investments is Brazil's *Banco Nacional de Desenvolvimento Economico e Social* (BNDES). BNDES carries out equity investment operations through a subsidiary, BNDESPAR. As a specialized equity branch, BNDESPAR operates through two main credit facilities (one that organizes its participation in share subscription operations and one specializing in the granting of guarantees), and six special programs. The special

That there is no shortage of inventiveness and creativity is demonstrated not only by the variety of credit facilities mentioned above but also by some remarkable innovations. Chile and El Salvador, for instance, provide long-term loans for undergraduate and graduate university studies (both at home and abroad) to individual Chilean and Salvadoran students as investment loans and, consequently, allocate resources of their finance development corporations (to be lent on through first-tier institutions) to this crucial aspect of capital formation.<sup>71</sup> Another such innovation is Chile's CORFO credit line to promote productive alliances between groups of companies so that they can jointly solve management and commercialization problems in the execution of a shared productive project. The leading thread behind this type of loan is the idea of helping individual companies to attain, through collective action, economies of scale that otherwise would be unavailable to them. A third innovation worth mentioning is Chile's and Mexico's effort to stimulate development of supplier networks. These are loans aimed at strengthening companies that supply unfinished, intermediate goods to a large manufacturing company. These loans are important because rather than just benefiting isolated companies, they strengthen whole production chains involving a set of small- and medium-size firms connected to one large enterprise.

### *3.2.2 Non-Horizontal Credit Policies*

Development finance policies are also being used to favor particular sectors and/or specific regions within a country. As shown in Table 3, development banks in six countries provide lines favoring particular sectors and four countries provide credit lines designed to promote production and investment in particular regions. It would be wrong, however, to interpret the existence of all such credit lines (particularly when they relate to specific productive sectors) as merely remnants of the protectionist and state-interventionist spirit of the import-substitution era. A

---

programs are: i) The Program for the Capitalization of Technologically-Based Companies; ii) the Program for the Capitalization of Small Enterprises; iii) the Mutual Fund for Investment in Emerging Enterprises; iv) The Mutual Fund for Investment in Pre-Market Enterprises (which in BNDES' terminology are medium-size firms that are preparing themselves to issue shares in the stock market); v) the Program to Support New Corporations; and vi) the Investment Program in Quotas of Stock Investment Funds.

<sup>71</sup> What is remarkable about this is not, of course, the existence of the loans as such. Loans for university studies are a decades-old institution in Latin America and the Caribbean. What is remarkable is that, in the Chilean and Salvadoran institutional design, they are conceived as investment loans to be professionally handled by a major second-tier institution specialized in long-term credit. The traditional conception used to be (and still is in some countries) to (mis)conceive these loans as a part of the government's current expenditure and to leave their administration to a non-financial entity ascribed to the Ministry of Education.

later section on policies to enhance productivity and competitiveness will address the meaning of some of these policies.

### 3.2.3 *Fiscal Incentives*

#### A. *Tax Incentives*

In the late 1980s and early 1990s, the structural reform process in Latin American and the Caribbean countries included a general repealing of tax incentives. Tax incentives were rightly seen as both sources of distortion in resource allocation and contributing factors to recurrent fiscal imbalances, with their sequel of macroeconomic destabilization. No attempt has since then been made to resurrect the policy of relying on substantial and numerous tax incentives. More importantly, the search for new industrial policies that began in the mid-1990s is premised, *inter alia*, on the need to leave tax subsidies as a thing of the past.

In light of the policy record in the countries where new trends in industrial-policy thinking are taking shape, it seems safe to conclude that *the emerging set of industrial policies assigns no significant role to tax incentives*. This demonstrates that the advocates of the new industrial policies understand the need to build on the accomplishments of the structural reform process.

Surveying the existing fiscal incentives in LAC countries, Table 3 shows that in practically all Latin American countries, tax incentives are a minor phenomenon.<sup>72</sup> Although there are horizontal tax-incentive schemes in five non-Caribbean countries, their scope is more or less limited, and therefore their existence does not belie the general conclusion that significant tax incentives schemes are conspicuously absent. The only kind of tax incentive mechanism that is found in most countries is that associated with the free trade zones (FTZs) where, typically, producers are exempt from most (if not all) taxes. But, obviously, given the highly specialized and localized nature of FTZ incentives, this fact does not have any special significance.<sup>73</sup>

---

<sup>72</sup> The reader must bear in mind that this conclusion is only valid for the Latin American countries. The issue of tax policies is posed in an altogether different manner for the Caribbean countries (other than Cuba, the Dominican Republic and Haiti) than it is for the Latin American economies.

<sup>73</sup> Other than the facts already highlighted not much more can be gleaned from Table 3. Let us, however, briefly point out, notwithstanding their lesser import, some other findings that were derived from the research that led to the construction of that table: i) in some countries foreign firms are exempted from the tax on profit remittances if the profits are reinvested; ii) in a few countries, investment tax credits are allowed for a specified period of time; iii) in a small number of countries, governments grant tax stability to foreign investors; iv) in still other countries, domestic and foreign companies are allowed to choose to invest part of their tax bill on certain government-approved projects.

As we leave behind the area of tax incentives of general applicability and move to other types of tax incentives, we come across with two other areas where the empirical material is more suggestive. The areas in question are: 1) tax incentives to producers in particular regions, and 2) tax incentives to producers of specific sectors. Table 3 shows that the national governments of five countries have established tax incentives for less developed regions.<sup>74</sup> The table also shows that, in eighteen countries, national governments have designed fiscal incentives to benefit certain productive sectors.<sup>75</sup>

### *B. Subsidies*

Table 3 also shows the subsidies granted by national governments to specific regions and particular sectors. While the use of subsidies is not widespread, it is worth noting that in this policy area, like others, most countries can learn from the region's leaders. In this respect, it is important to note the way Chile handles subsidies to less developed regions. Two aspects of the Chilean approach merit particular attention: 1) the innovative character of the array of subsidies offered and 2) the institutional transparency of the subsidy system.<sup>76</sup>

---

<sup>74</sup> These incentives typically include most or all of the following: i) exemption from all (or part) of central-government income taxes; ii) exemption from import duties on capital goods; and iii) exemption from VAT and excise taxes. Bear in mind that the information in the table and hence the comment in the text refer to regional tax incentives established by the national government. Tax incentives established by the sub-national levels of government (i.e., by the provincial or local governments) are an altogether different matter and the table provides no information about them as they are beyond the scope of the present chapter.

<sup>75</sup> In most cases, the favored sectors are tourism and such primary sectors as oil, mining, and forestry. The most frequent sector-specific tax incentives are: i) exemptions from taxes on profits (these are frequent in the case of mining); ii) lower rates on corporate income taxes; iii) lower rates on VAT and custom duties; and iv) accelerated depreciation. Tourism and hotel construction are a target of generally substantial fiscal incentives in eight countries, including most of the Caribbean countries. In seven countries, prospecting and exploration costs in mining activities are exempted. Five countries grant important fiscal incentives to forestry activities. Oil and other hydrocarbons receive various types of tax exemptions in four countries. It is important to bear in mind that while fiscal incentives to oil exploration and mining are basically incentives to foreign direct investment, fiscal incentives to forestry incorporate ecological considerations as one of their motives. On the other hand, incentives to tourism can equally be seen as incentives to an export activity and could have just as well been mentioned in the section on export promotion policies.

<sup>76</sup> The Chilean national government grants regionally-targeted subsidies: i) for the purchase of land for industrial projects in industrial parks; ii) to the promoters of investment projects; iii) for the training of workers paid by firms; iv) to land development projects for industrial sites; v) to cover part of the cost of credit insurance in the financing of investment projects; vi) for pre-feasibility and feasibility studies; and vii) to provide a partial guarantee for default risk loans granted by financial intermediaries to finance investment projects. In institutional terms, the Chilean practice explicitly identifies subsidies as such, and they are transparently quantified for accounting purposes. Moreover, their administration is professionally and technically handled by the public-sector development finance corporation (CORFO).

### **3.3 *Incentives to Productivity Growth and Competitiveness***

This area includes all policies (other than export-promotion policies) that aim at expanding the economy's production possibilities curve and/or the competitiveness of domestic producers vis-a-vis foreign producers. These policies fall under four main headings: 1) policies to foster the integration and strengthening of production chains; 2) policies to promote technological modernization; 3) policies to promote and protect competition; and 4) explicit policies to promote private-sector (particularly, firms') investment in human capital. Given the nature of the policies proper to this emerging policy area and the fact that only a handful of countries in the region have an explicit, albeit still developing, set of policies or instruments, the discussion is restricted to the leading countries.

#### **3.3.1 *Fostering the Integration of Production Chains***

In this area the coordination role of public policy is more important than its material-incentive-allocating role. Financial and tax incentives continue to be important elements in the battery of instruments used by policymakers. This notwithstanding, government has a unique ability to assume a leadership and orientating role by virtue of its being the social entity with the legitimacy, political and moral authority to summon all sectors of society, the obligation to act in the name of the whole of society, and, last but not least, the ability to put in action a network of institutions capable to act on (or influence) a broad front of social activities. This policy area displays, moreover, the formal property of having an integrating character in that the deliberate effort to consolidate concrete production chains requires (and implies) the coherent and coordinated use of policy instruments belonging to other policy areas (e.g., incentives to technological modernization). The set of instruments used may (or, even, must) vary from one specific production chain to the next and, for a given production chain, from one year to the next, but the integrating character of the policy aimed at strengthening it is an inescapable feature of this sort of policymaking.

As suggested above, the two leading countries in this area are Mexico and Colombia. Both countries have explicit definitions of the specific production chains to be strengthened, the actions to be taken, and the policy instruments to be employed.

Mexico targets the production chains of eight sectors:<sup>77</sup> high-technology industries; the automotive industry; light manufacturing; the petrochemical industry; mining; agribusiness; forestry; and public-sector providers. The Mexican policy document identifies a set of actions to materialize the policy objectives in this area, and these actions share two related features. First, direct economic incentives (financial, fiscal, and the like) do not play a leading role. Second, implicit in the document is the notion that the national government (and the sub-national governments as well) must operate in such a way as to put the public sector coordinating capacity at the service of private-sector efforts.

The actions prescribed are as follows: 1) playing a coordinating role at the regional level to support private-sector efforts toward the formation of clusters of firms around each particular production chain; 2) strengthening of the existing internal “corridors” linking the southern regions of the country to the northern regions whereby the former supply raw materials, intermediate goods, and consumer goods to the latter, where export-oriented production prevails; and 3) implementing an integral industrial information strategy aimed at helping the firms in a precise and timely manner to detect opportunities to act as suppliers to other firms belonging to the same or a related production chain.

The last component deserves further discussion as it nicely illustrates areas where government can be instrumental in supporting the private sector in an era of greater international integration. The two main elements in the Mexican informational strategy are: 1) the further development of the informational resources, mechanisms and infrastructure with the objective of establishing a national network of industrial information;<sup>78</sup> and 2) the realization of business conventions (called Supplier Development and Export Support National Conventions) where large enterprises can advertise their supply needs and meet potential providers.<sup>79</sup>

The Colombian strategy<sup>80</sup> makes a distinction between, on one hand, existing production chains that require further strengthening and development and, on the other hand, new production chains to be promoted in order to make the country a player in markets where, for the

---

<sup>77</sup> See Secretaría de Comercio y Fomento Industrial de México (1995).

<sup>78</sup> The relevant information is, of course, information about the national stock of supplier firms and about the demand for, and the supply of, inputs. The information instruments include the National Industry Directory, the Registry of Enterprises, and the information banks implemented by the so-called Subcontractors’ Stocks.

<sup>79</sup> As is well known to practical businessmen and businesswomen, business conventions are a particularly efficient (cost-minimizing) way of acquiring information and doing business. The Mexican supplier development conventions are major events. The policy document we relied on states that, in the first of those meetings (with an attendance of about 10,000 people), 43 large enterprises requested suppliers for 2,353 inputs.



most part, it is now absent. The first category is, in turn, broken down into two sub-categories. The first consists of significant non-traditional exporters that are threatened by external competition. Here, the targeted production chains are: 1) cotton-fibers-textiles-apparel; 2) leather-leather manufactures-footwear; 3) automotive parts-cars; 4) sugar cane-sugar-confectionery-chocolates; 5) oleaginous seeds-cooking oil-fats-soap; 5) aquaculture; 6) tuna production; 7) toiletries, cleaning products, and cosmetics; and 8) potatoes and their industrial processing. The second sub-category within the class of existing production chains includes those that generate important linkages and are significant in the country's internal trade. These targeted production chains are associated with the following goods (or sectors): petrochemicals and plastics; steel; electric and electronic appliances; forestry, wood products, and furniture; vegetables; fruits and their industrial transformation; cocoa and chocolates; beans; rice; shrimp; fish; cereals; dietetic foods; poultry farming; porcine production; dairy farming; medical services; engineering services; consulting services; software; tourism; jewelry; and crafts. The category of new production chains includes information technology and software; microelectronics; biotechnology and biomedicine; new materials; fine chemistry; capital goods; and communications.

The Colombian strategy sets out the general policy guidelines and some more specific policy actions necessary to strengthen production chains. The general guidelines include such elements as the need to improve both the country's general physical infrastructure and the specialized infrastructure needed to support specific production chains; and the need to maintain legal, policy, and regulatory frameworks favorable to investment, particularly foreign direct investment. On the other hand, the specific policy actions can be classified in two categories, namely: a) general-scope policies, and b) policies to support clusters of firms related to particular production chains at the regional level.

The general-scope policies are: 1) to help develop cooperative relationships between firms in a given production chain that can result in projects of mutual benefit; 2) actions in the field of technological innovation; 3) actions in the area of human capital formation; and 4) implementation of Sector Competitiveness Agreements with firms in the targeted production chains.<sup>81</sup>

---

<sup>80</sup> See Ministerio de Desarrollo Económico de Colombia (2000).

<sup>81</sup> The Sector Competitiveness Agreements are a dialogue and negotiation mechanism through which the government and the firms in a given production chain get together to carry out a diagnosis of the particular

The main regional-scope guidelines have more of a procedural character in that they merely set out the prescription to open lines of communication with the private sector at the regional level through the Provincial Councils for Productive Development<sup>82</sup> in order to reach consensus on Sector Agendas for Regional Dialogue and Sector Competitiveness Agreements at the regional level.

### *3.3.2 Policies to Promote Technological Modernization*

The general policy area known as “science and technology policy” has been for decades a matter of concern in the region, particularly in the larger countries. In this paper we shall focus on just one aspect of science and technology policies, namely, public policies to promote technological modernization and innovation in the productive sector. But even within this already restricted area we will further narrow our focus so as to concentrate only on policies to promote technological innovation in the non-primary sectors of the economy.

Generally speaking, scientific and technological development in Latin America and the Caribbean does not bear comparison with that of the OECD countries. Bluntly put, countries in the region continue to be peripheral to the dominant trends of scientific research and technological innovation in the industrialized world. Within this worldwide context, however, there are substantial differences in the level of scientific and technological capabilities possessed by countries in the region. Whereas the largest countries (particularly Argentina, Brazil, and Mexico) have been able to accumulate a considerable amount of human and institutional resources in their science and technology systems, the smaller countries face a more precarious situation. With this background in mind, it seems more productive to limit our survey of technological modernization policies to the institutionally most advanced countries in the region.

In the leading countries there is a definite preoccupation with, and an explicit policy towards, making science and technology more relevant to the imperative need of increasing competitiveness. As a result, almost every major industrial policy statement in the post-reform period has given a place of honor to technological modernization as one of the major areas where government intervention is critical if the domestic private sector’s ability to compete is to be enhanced.

---

production chain, identify the potential solutions to the diagnosed problems, and make commitments on the specific private-sector actions and public policies needed to address them.

The main areas of action for existing technology policies in the region are: 1) promoting research and development efforts by the private firms themselves; 2) strengthening cooperation between public sector research institutions and private firms; and 3) creating or strengthening (as the case may be) the informational infrastructure necessary for the success of research and development activities by the firms.

There is considerable variation in the way countries go about defining mid-term objectives for their technology policies. Mexico's explicit policy, for instance, defines seven areas where government efforts must be concentrated: 1) fostering technological transfer as one of the key dimensions in the strengthening of production chains; 2) promotion of quality norms and systems in the micro-, small, and medium-size-enterprise sectors; 3) strengthening basic technological capabilities in micro-, small, and medium-size firms; 4) provision of basic information to firms concerning issues such as voluntary normalization and the supply of technology advice and consultancy services; 5) encouraging technology transfer from the more advanced countries; 6) protection of industrial intellectual property; and 7) stepping up efforts to create a culture of technological innovation in the business sector.

Brazilian explicit policy (see Ministério da Ciência e Tecnologia, 1996), by contrast, focuses on a set of specific sectors grouped in two classes. The first class includes those sectors where the country has already developed some technological capabilities but where there is still the need to deepen and further strengthen those capabilities. This class includes information technology and automation; aerospace technology (particularly satellites); nuclear technology; military technology, and agriculture. The second class consists of sectors where Brazil's development ranges from incipient to non-existent. The sectors singled out here for special attention are superconductivity, special materials, optical electronics, biotechnology, application of biotechnology to agriculture, energy conservation and alternative sources of energy.

Promotion of technological research and innovation in the first group is seen as requiring the mobilization of a whole battery of policy instruments to encourage the firms themselves (albeit with the support of government and private, non-profit institutions) to undertake the tasks of technological innovation. Promotion of research and innovation in the second group is seen as revolving around the creation and future expansion of world-quality research centers (called "research centers of excellence" in the policy statements) devoted to basic and applied research.

---

<sup>82</sup> The Councils are the existing organisms to carry on the dialogue with the private sector at the provincial level.

The rationale for tackling these research tasks is that, while they do not respond to short-term market demands, they possess a high medium-to-long-term potential for both productive application by firms and appropriation of their benefits by society at large. In addition, the “research centers of excellence” are not seen as isolated entities. Instead, it is understood that their success depends on private sector interest, and involvement.

#### *A. Policy Instruments*

The policy instruments used by policymakers in the leading countries of the region include: 1) grants to support scientific and technological development through the funding of research projects; 2) credit programs aimed at strengthening technological capabilities of industries and firms; 3) fiscal incentives to technological innovation; 4) programs geared to the needs of specific, targeted industries; 5) and horizontal programs aimed at addressing needs that emerge in some special areas of firms’ technological performance.

##### *A.1 Grants to Support Scientific and Technological Development*

These grants are typically non-reimbursable grants given to projects selected through a competitive process. A distinction is made between, on one hand, scientific research projects carried out by research institutes and university researchers and, on the other, projects aimed at technological development at the industry and firm levels, which for the purposes of this survey are the only category of interest.

For a project to be supported is generally required that it be in accordance with the priorities defined by the governmental agency in charge of science and technology policy.<sup>83</sup> One frequent objective found in the technology policy statements is that of fostering partnerships between firms and academic institutions to pursue research and innovation aimed at solving technological problems faced by the former and thereby enhancing their productivity and competitiveness. In the Brazilian case, there are two appropriate institutional mechanisms through which these partnerships are promoted. One is the so-called “Technological Platforms” which are fora where the relevant stakeholders meet to identify the technological obstacles faced

---

<sup>83</sup> The profile and characteristics of this agency vary with the country considered but typically falls within one of two broad categories. In most countries, science and technology policy is the responsibility of a decentralized institution (the more frequent name for this institution being “National Council for Science and Technology” or a

by a particular productive sector or a specific region in the country and to define the actions to remove them. The expected outcome of these meetings is precisely the formation of partnerships between research institutes, universities and representatives of the particular productive sector (or region) to formulate cooperative research projects. These projects are eligible for funding from the government agencies.

As is customary in the international practice of giving grants, the usual procedure is to demand that private firms participating in cooperative projects and applying for funds contribute matching funds to the project at hand.

## *A.2 Credit Programs*

The government agencies usually operate through trust funds, fiduciary funds, or specialized financial agencies to provide loans to firms, consortia of firms, or consortia of firms and research institutions, to carry out an articulated set of research and technological development activities that are expected to result in the invention of new products, significant improvement of the existing products, improvements in the production processes, strengthening of the infrastructure for innovation, quality-product improvements, or productivity improvements. To these basic core of innovation activities, some of the financial agencies add others such as purchase of technological and scientific services; acquisition of scientific and technical documentation and information; consulting services; adaptation of imported products, processes or technologies to the local conditions; purchase (in the domestic or foreign markets) of product, process and/or service technologies; strengthening of technical teams devoted to technology development or technology adaptation; and creation, implementation, and expansion of technological research centers.

Inspired by the experience of the US. Small Business Administration's Small Business Innovation Research Program, the funding agencies typically provide non-reimbursable loans to technological innovation projects from micro- and small-size enterprises. The two leading countries in this policy area, Brazil and Mexico, have a number of special credit programs to encourage technological innovation by firms. Brazil's initiatives include a first set of credit lines is a part of the Ministry of Science and Technology's Program to Support Scientific and Technological Development, funded by the World Bank and includes two programs, namely: a)

---

variant thereof. In several countries, though, including Brazil and Venezuela, the agency in question has the status

the Program to Support Technological Sector Entities (TSEs), and b) the Program for Technology Management and Competitiveness.

The TSEs are non-profit organizations that perform one or more of the following services to the firms of a particular productive sector: 1) product research and development; 2) provision of technical services; 3) metrology, normalization, and certification services; 4) quality management; 5) training; and 6) organization of technological information banks.

The Program for Technology Management and Competitiveness supports pilot projects in the field of technology management, executed by partnerships of firms and non-profit technical-support entities provided that the projects have among their components: 1) the diagnosis of the current technological situation of the particular industry; 2) the training of senior management in the new concepts and instruments of technology management; and 3) the internal implementation at the firm level of the structure and mechanisms of technology management that will enable them to apply the concepts learned at the training stage.

In addition to these programs and the basic credit line to finance innovation, along the lines described above, FINEP, the Brazilian federal innovation financial agency, has: a) an “integral-support” credit line that finances all the aspects of a business plan for technological innovation from the stage of project formulation all the way through the construction of civil works; the purchase and installation of machinery, equipment and technical instruments; the licensing and/or purchase of technology; to the training, technical assistance, and initial working capital required; b) a pre-investment credit line to finance expenses associated to the payment of engineering consulting services; and c) a credit line to support technology, environmental, and quality-product management.

### *A.3 Fiscal Incentives*

In the leading countries, as well as some others in the region, fiscal incentives to technology innovation typically include: 1) reduction in the corporate income tax; 2) reduction in value-added taxes; 3) accelerated depreciation of capital goods and equipment acquired in the context of an innovation project; and 4) the granting of fiscal credits on expenses and additional investments in research and development. In addition to this basic set, some individual countries grant special incentives. Colombia, for instance, allows a deduction of 125 percent of the costs of

---

of a Ministry and its head that of a cabinet member.

innovation projects and grants exemption from value-added taxes on imports of equipment and instruments for innovation projects by research centers, technological development entities and universities. Brazil grants exemption from the Tax on Industrialized Products to firms producing information technology products provided that the firm spends more than five percent of its gross sales on research and development. It also allows the deduction as operational expenses of payments of royalties and other technical assistance payments made by advanced-technology firms.

#### *A.4 Programs Directed to Specific Industries*

Several countries in the region have special programs for the promotion of technological innovation in sectors designated as strategic. Perhaps the best illustration is the set of incentives given by the Brazilian government to firms in the information technology sector. These incentives include, besides the above-mentioned exemption from the Tax on Industrialized Products, a policy of government purchases of information technology goods based not only on price considerations but also on the price-quality ratio of products offered in competitive bids by information technology firms. In addition, there is a program to support software production that includes loans to companies involved in software development and buyers' credit for their commercial customers.

#### *A.5 Horizontal Programs in Complementary Areas*

This component of technology policies in the leading countries includes programs and institutional efforts in the fields of product quality; product design; participation in, and/or organization of, technical fairs and other events where technological innovations are disseminated; organization of pools of technological consultants; promotion and defense of industrial property; and the formal organization and completion of technology-foresight exercises with implications for policy formulation and design.

#### *3.3.3 Policies to Protect and Promote Competition*

Most countries in the region assign an important role to the prevention, prosecution, and elimination of restrictions on free competition in the domestic market and to the defense of their producers and exporters against restrictive practices in the international trade arena.

The leading countries passed new competition laws in the early-to-mid-1990s. For the most part, the new competition laws broadly resemble<sup>84</sup> the competition laws of the OECD countries in that they proscribe anti-competitive conduct, including single-firm conduct by monopolists or dominant firms, anti-competitive agreements, and anti-competitive mergers. The laws created independent agencies charged with the role of enforcing their provisions.

### *3.3.4 Fostering Private-Sector Investment in Human Capital*

For the purposes of this survey it is of particular interest to illustrate some of the trends in Latin American and Caribbean policymaking where the new understanding of the role of human capital opened up by the theoretical work of Romer (1989) and others is materialized. In some specific policy measures the new approach seems to take shape in the form of explicit subsidies or incentives to human capital investment by firms and households, beyond the general social (and particularly governmental) effort to provide basic elementary, secondary, and general professional university education.

We already mentioned one, perhaps paradigmatic, example of the way the new approaches are taking root in the Region, namely, the modern treatment given by Chile's CORFO and El Salvador's Banco Multilateral de Inversiones to individuals' investment in human capital in the form of university studies, an increasingly conscious and deliberate effort towards designing active government policies of human capital formation seems to be a growing trend in the region. This is expressed in policy actions ranging from more or less general initiatives in helping individual firms to train or retrain their workers to sophisticated attempts to strengthen the human capital stock in areas deemed strategic from the standpoint of the overall economy's modernization and increased competitiveness. Two experiences, Mexican policies on human-resource development and a special Brazilian program aimed at training high-quality personnel for strategic activities, will help to illustrate this point.

The incentive system developed by Mexico to encourage firms to train and/or retrain their workers includes devices such as:

---

<sup>84</sup> In the case of the Mexican Law, an OECD expert pointed out that "(it) adopts many of the most advanced ideas and practices from around the world. (...) The law balances efficient and strong treatment of the most harmful competitive constraints with economically sensitive analysis of others, and it implies an integrated treatment of market power in all relevant situations. The law's elegant logical organization and clear conceptualisation reveal its origin as a product of technical expertise, more than political creativity and compromise." See Wise (1999).



- 1) Scholarships from the Ministry of Labor to carry out in-house training of prospective workers by firms for periods ranging up to three months, provided that the beneficiary firm commit itself to hiring at least 70 percent of the trainees;
- 2) Training services provided by the Ministry of Education to workers and employees of all levels, including the managerial level;
- 3) Demand-driven courses<sup>85</sup> for the training of workers in the technical norms of specific industries.
- 4) Business training for the owners and managers of micro-, small-, and medium- size enterprises, in issues of management, finance, accounting, and investment projects, organized by the governmental development finance corporation, NAFIN.

At the other end of the spectrum, it is worthwhile to mention Brazil's Program for Human Resource Training for Strategic Activities, an effort to train highly qualified professionals linked to technological research, development of productive processes and technology management. The program provides financial support to training projects in the following areas: 1) advanced technologies (biotechnology, computer science, information technology, special materials); 2) basic industrial technology (metrology, standardization, certification, industrial property, technology management, quality and productivity programs); 3) technological innovation and dissemination; 4) infrastructure-related technologies (energy, transportation, telecommunications); and 5) environmental technologies.

### ***3.4 Policies to Promote SME Development***

Governments throughout the region recognize SMEs' contributions to economic growth, social cohesion, employment, and regional and local development. It is also widely recognized that trade liberalization and internal deregulation are pressuring firms of all sizes to improve their competitive position. Unlike large firms, however, SMEs have a more limited internal resource base and hence are at a disadvantage when it comes to devising effective responses to the new challenges. By the same token, though, the opening of the economies and the greater degree of

international economic integration bring new opportunities for SMEs to enter foreign markets and take advantage of new technologies. This section addresses the policy issues involved in helping SMEs to face the challenges and opportunities stemming from the new situation. The section consists of two parts. In the first, the main constraints faced by SMEs are briefly surveyed. In the second part, the main policy issues are discussed. Unlike the other sections of this paper, the present discussion is prescriptive.

### *3.4.1 Constraints Faced by SMEs*

Drawing on the Bank's strategy statement on SMEs,<sup>86</sup> the constraints faced by SMEs can be classified into five groups, namely: 1) factor-market constraints; 2) final-product market constraints; 3) regulatory constraints; 4) management constraints; and 5) institutional constraints.

Factor-market constraints include those associated with the operation of financial markets, labor markets, markets for information and technology, and production-input markets. In the typical country in the region, the supply of finance for working capital to SMEs is more restricted than the supply to large enterprises. The supply of long-term resources for the financing of investment, either through debt or equity, is even more limited. This is due, in part, to the perception of greater risk, informational barriers, and the higher costs of intermediation for smaller firms.

As for the other markets, SMEs frequently face limited supplies of skilled workers, have difficulties in gaining access to appropriate technologies and to technical information, and in the input acquisition front are at a disadvantage vis-à-vis large enterprises and foreign purchasers of raw materials.

In domestic final-product markets, SMEs have limited access to public contracts and suffer from the limitations stemming from the fact that distribution channels are controlled by larger firms, and are frequently inefficient. In the international final-product markets, they are handicapped by their own limited experience in international marketing, poor quality control and product standardization, and by limited access to international partners.

Deficiencies in the regulatory framework for private sector activities bear more heavily on SMEs than on large firms. It is in the nature of the case that, given the lower scale of

---

<sup>85</sup> The courses are demand-driven from the standpoint of the firms, that is to say, it is the firms (not the workers) that determine the type of courses they need.

<sup>86</sup> See Inter-American Development Bank (1995).

operation and the smaller amounts of capital mobilized by SMEs, a whole set of regulatory dispositions that impose fixed costs on firms create a proportionately greater burden on them. Examples of these are licensing and registration requirements and other start-up costs as well as indirect labor costs.

The scarcity of managerial talent, prevalent in most countries of the region, has a magnified impact on SMEs. Moreover, SMEs face particularly difficulties in the market for consulting and other support services. In many instances these services are not price-accessible to SMEs, and sometimes SME personnel do not even have information on these services' existence.

When it comes to the institutional terrain, SMEs face two types of constraints. First, many individual SMEs are uninnovative; lack an entrepreneurial culture, and overlook continuous training of, and lifelong learning in, their managers and workers. Second, as an economic sector in society at large, they lack cohesiveness and tend to have a limited capacity to defend their collective interests vis-à-vis government and other social and economic groups.

### *3.4.2 Policies to Enhance SMEs Competitiveness*

The strategic goal of helping SMEs raise their competitiveness requires that government policy focus on two principal areas: reforming relevant aspects of the general policy, institutional, and regulatory framework, with the aim of creating a level playing field; and ii) providing support services to SMEs under the principle of compensating them for their unfavorable position.

The creation of a level playing field requires a careful examination, at the country level, of the institutional, regulatory and policy framework to identify those particular aspects that work as obstacles to SME development and growth or which in any way are biased against them. These laws and regulations include those in the areas of business creation and incorporation, taxes, tariffs, commercial law, and government procurement of goods and services.

In the area of support service provision, best-practice principles require moving away from supply-driven schemes toward demand-driven initiatives, from emphasis on protection and paternalism to competition, cost-recovery and sustainability. Subsidized access to services should not be ruled out but should be limited in scope, transparent in application and targeted to identified need (IDB, no date). The three main areas where provision of support services is important are well known: 1) financial services; 2) access to technology; and 3) other business

development services such as training, infrastructure, information, and non-financial support for export activities. What may be less known to some readers is that one of the emerging policy trends in both developed and developing countries is the emphasis on support schemes where the direct object of support is not the individual small or medium enterprise but various forms of collective arrangements of SMEs. These include a variety of partly overlapping policies (which, moreover, are not limited to SMEs) such as: 1) policies to support the integration of production chains; 2) policies to support clusters and 3) policies to support networks of enterprises.<sup>87</sup> Issues of synergies created by interaction among enterprises and between groups of enterprises and the surrounding social and economic environment, agglomeration economies, technological learning through interaction, collective efficiency, network economies, and the like are topics that increasingly play a prominent role both in the analytical literature and in practical policymaking. In this connection, Casalet (1997) suggests that policy action aimed at groups of enterprises has a higher probability of effect than action focused on individual entities. We would venture to add that the probability is also higher that the benefit function of such policies is a homogeneous function of degree greater than one in the number of enterprises on the receiving end when these are collective, as opposed to individual, objects of the policies. In what follows, we first discuss the provision of support services in the traditional format, that is to say, under the assumption that the objects of the provision policies are individual enterprises, and thereafter we proceed to discuss two modalities of collective SME service provision policies, namely, cluster promotion and network promotion.

In the provision of financial services to SMEs, it is appropriate to develop credit instruments specifically or predominantly geared to the needs of SMEs, and some countries in the region already have valuable experience in that area. The basic scheme of providing credit lines through second-tier national development banks, leaving the interest rate to be freely determined through negotiations between the first-tier, private bank and the loan beneficiary, seems applicable to most countries in the region. Subsidized lending distorts financial markets and should be avoided. The focus must be on medium- and long-term loans to finance purchases of machinery, equipment, and services, and for plant expansion and modernization projects. In

---

<sup>87</sup> It cannot be emphasized enough that the three sets of policies are not perfectly distinct, mutually excluding categories. Cluster and network promotion can be used as particular forms of strengthening production chains (but there are other forms). On the other hand, clusters could conceivably be seen as a particular type of network.

this general mold, special credit lines for export-oriented SMEs are also necessary and can contribute to enhance SMEs' competitiveness.

Technological innovation by SMEs must be encouraged through 1) fiscal incentives, 2) grants and credit provision and 3) technical assistance services. In the area of grants and credit provision, Brazil's experience with the Technological Support Program for Micro- and Small-Size Enterprises (PATME) and the SEBRAEtec<sup>88</sup> is worth assessing for possible replication in other countries of the Region. PATME finances technological innovation in the form of product or process improvement, upgrading of equipment; training of human resources; implementation or improvement of quality control; and development of new technologies and new products. SEBRAEtec provides grants that cover up to 80 percent of the costs of consulting services received from private business and technical consultants, universities, technological research institutes, and technical schools.

The importance of technical assistance services cannot be overstated. SMEs need to know where to find new technologies and how to adapt the new technologies to their particular situation. Technological advisory services are best provided by the private sector. A way for the government to stimulate both the demand and the supply in this market is through a voucher system where the government would issue vouchers covering an appropriate percentage of consulting costs, with the SMEs covering the remainder.

In the design of business development services (BDS) schemes, some lessons from past experience must be taken into account. An appropriate summary of these lessons can be found in UNDP (1999). First, BDS schemes must be demand-led, reflecting an analysis of genuine need for the support service. Second, they must be businesslike in that the end users must be treated as customers rather than beneficiaries of handouts. Third, the schemes must be sustainable, which implies that cost recovery for services delivered must be actively pursued, although some degree of subsidization may prove necessary.

#### *Collective Service Provision: Supporting the Development of Clusters and Networks of SMEs*

A cluster is an agglomeration of firms, in the same or related lines of business, in a given geographical location.<sup>89</sup> In principle, a cluster can contain firms of all sizes in any combination,

---

<sup>88</sup> SEBRAEtec is a service provided by the Brazilian Support Service of Micro and Small Enterprises (SEBRAE).

<sup>89</sup> This discussion draws on Enright and Ffowcs-Williams (2000).

though some combinations are more frequent than others, and the number of enterprises can be large or small. The promotion of clusters of enterprises is an effective way by means of which governments can create conditions for the private sector to enhance productivity, the rate of innovation, and the competitive performance of firms. This is because the local concentration of industries makes it possible for the participating firms to benefit from economies of scale, economies of agglomeration and supply side externalities that would not otherwise be available to the firms in isolation. Labor pooling, the availability of local input or equipment suppliers, and shared infrastructure are just a few instances of such advantages. More importantly, *clusters are optimal arrangements for the production and internal diffusion of tacit knowledge*, the kind of knowledge that gives a competitive edge to those who possess it.<sup>90</sup> In addition, in the case of small firms, clusters can allow them to combine the advantages of small scale with some of the benefits of large scale.

The question of an exhaustive and convincing typology of clusters has not been as yet solved in the literature. Mytelka and Farinelli (2000) make the distinction between clusters that originate as spontaneous agglomerations of enterprises and those that are induced by public policies.<sup>91</sup> For the spontaneous clusters they propose a three-pronged typology: informal clusters, organized clusters, and innovative clusters.<sup>92</sup> Two groups of authors propose typologies that they each contend are relevant to the Latin American and Caribbean situation. Bortagaray and Tiffin (2000) propose a five-category typology: dependent or truncated clusters; industrial clusters; innovative industrial clusters; proto-innovation clusters; and mature-innovation clusters. Altenburg and Meyer-Stamer (1999) identify three types of clusters: survival clusters; clusters of more advanced and differentiated mass producers that flourished in the import-substitution era

---

<sup>90</sup> For a brief discussion of the concept of tacit knowledge, see Melo (2001). For the importance of tacit knowledge as the principal source of sustainable competitive advantage for an individual firm (or group of firms) in today's rapidly changing economy, see Winter (1987), Hall (1993), Grant (1996), Lam (1998).

<sup>91</sup> Public-policy induced clusters include technopoles, industrial parks, incubators, and Export Processing Zones.

<sup>92</sup> Just to mention the main characteristics of each category, informal clusters generally contain micro and small firms whose technology level is low relative to the industry frontier and whose owner-operators have weak management capabilities; organized clusters are characterized by a process of collective activity, mainly oriented towards the provision of infrastructure and services and the development of organizational structures designed to analyze and provide the channels to face common problems; although most firms in these clusters are small, some have grown to medium size and their competence level has improved through training and apprenticeship; firms also have the capacity to undertake technology adaptation, to design new products and to bring them quickly to the market; innovative clusters are those that are able to maintain processes of sustained innovation and have the greatest potential for dynamic change.

but are under enormous stress with the transition to open economies; and clusters of transnational corporations that are showcases of best-practice manufacturing.<sup>93</sup>

A network is a group of firms using combined resources to cooperate on joint projects.<sup>94</sup> Networks can allow accelerated learning for the participating firms. In the case of small firms, they are conducive to peer-based learning, the learning medium of choice for many small firms. They also can allow the sharing of overhead costs and the exploitation of specific scale economies present in collective action. Networks need not be geographically concentrated; once trust among participants is established, operational dialogue can be carried out through, for example, electronic means. However, networks frequently are key components of clusters, particularly in the case of firms that belong to a production chain.

On the basis of their convoking power, governments can act as external catalysts to facilitate the emergence of clusters and networks. In doing so they will be addressing market failures in the form of *under-provision of public goods* and *co-ordination failures*.<sup>95</sup>

Various types of clusters exist in Latin America and the Caribbean. While no doubt many of them should appropriately be classified as belonging to the less innovative categories (informal clusters in the sense defined by Mytelka and Farinelli and/or survival clusters in the sense of Altenburg' and Meyer Stamer's typology), quite a few reach the innovative-industrial and proto-innovation categories proposed in Bortagaray and Tiffin's very demanding typology. It is noteworthy that some of the clusters these authors studied are in high-technology industries such as microelectronics (Campinas), telecommunications (Campinas, Curitiba), computer science and informatics (Campinas, Sao Leopoldo, Monterrey) software (Curitiba, Espírito Santo, Porto Real, Porto Alegre, Rio de Janeiro, San José); automation engineering (Espírito Santo); biotechnology (Belo Horizonte, La Habana); electronics (Santa Rita de Sapucaí, Cuernavaca, Guadalajara); and aeronautics (Sao José dos Campos).

The policy of promoting clusters is by no means new in the Region. Cluster initiatives have been undertaken in Argentina, Brazil, Chile, Colombia, Costa Rica, Guatemala, Honduras, Jamaica, Nicaragua, Paraguay, Uruguay, and Venezuela. There is already a rich stock of

---

<sup>93</sup> However, the assumption underlying this classification that only clusters revolving around transnational corporations are dynamic clusters seem to be contradicted by Bortagaray's and Tiffin's findings. The latter authors make reference to a number of dynamic clusters (which they happen to classify all as proto-innovation clusters) which are *not* centered on transnational companies.

<sup>94</sup> For discussion on networks we draw from Enright and Ffowcs-Williams (2000).

<sup>95</sup> See on this, Enright and Ffowcs-Williams (2000, p. 13).

experience that space constraints prevent us from examining in detail.<sup>96</sup> Instead, the discussion proceeds to tackle policy principles, policy lessons and best practice issues in cluster promotion.

To begin with policy principles, the most important is the principle that *the focus of cluster promotion policies must be to help small- and medium-size enterprises*. In other words, promotion of clusters must be one of the centerpieces of policies to promote the development and upgrading of small- and medium-size enterprises. That the objects of promotion must be the SMEs does *not* imply that only clusters of SMEs should be promoted. It is perfectly appropriate for public policy to support clusters where, alongside SMEs, large enterprises participate and even have a leading role (as will most likely be the case). The point is that whatever incentives or subsidies are granted (beyond public good provision), they must be focused on the participating SMEs.<sup>97</sup> A second policy principle is that government must play an indirect role in cluster building.<sup>98</sup> The basis for this principle lies in the compelling consideration that it is very difficult for governments to create the system of linkages among companies, between industries, and between firms and supporting institutions on which cluster success critically depends. This means that the private sector must lead cluster-building initiatives and the government must play the role of catalyst. It must help the potential cluster members to overcome specific constraints that prevent the exploitation of inter-firm and firm-institution linkages, and to support the institutions that build skills and capabilities tailored to the needs of the cluster. A third policy principle is that SME cluster policies (and all SME policies for that matter) should be based on building consensus through dialogue and negotiation processes involving firms and workers.<sup>99</sup>

Some lessons from the experiences in the region and in other parts of the world may help illuminate cluster support policies. Drawing from Enright and Ffowcs-Williams (2000), and Schmitz (2000), *inter alia*, the following policy guidelines can be recommended: 1) that policymakers should refrain from seeking to build clusters in industrial sectors that happen to be entirely new for a country. There should be some element of market-test and a critical mass of enterprises and skills before significant public resources are committed to a cluster. Successful clusters cannot be created from scratch. The focus should be on consolidation of established or

---

<sup>96</sup> For some experiences in cluster promotion in Latin America and the Caribbean, see Aragón (no date), Bortagary and Tiffin (2000), Ceglie and Dini (1999), Farinelli and Kluzer (1998), and Nadvi (1995).

<sup>97</sup> It is, of course, perfectly appropriate for public policy to provide public goods to large enterprises. They must be provided to all enterprises independently of their size.

<sup>98</sup> On this point, we draw heavily from Enright and Ffowcs-Williams (2000).

<sup>99</sup> Farinelli and Kluzer (no date) emphasize this principle.



embryonic clusters. In their view “*cluster initiatives should not be used to introduce distortionary industrial policies aimed at targeting ‘national champions’ or ‘sunrise sectors’*”(p. 24, italics are theirs). External support for clusters works best where industrial policy is decentralized and builds on public-private partnership. 3) The focus of public policy must be in building the institutional and support systems for the cluster. This includes building capacity in industry associations, labor groups, financial institutions, research centers, universities and schools, technical extension services, and the relevant government agencies.

#### **4. Toward an Assessment of the Emerging Policies: The Case of Export Promotion**

As stated in the introduction, it is too early to pass judgement on the emerging set of industrial policies in the region. However, as also indicated, a first approximation, however tentative, to an assessment of the policies in the area of export promotion can be attempted. This will be made through recourse to two sources of testimony, namely the business people who are the policies’ putative beneficiaries and some of the leading professional experts on this issue in the region. This part of the paper then consists of two sections. In the first section, the results of a business opinion survey will be used to gauge how entrepreneurs assess export promotion policies in four of the leading countries. In the second, we review what seems to be the overall assessment about the current state of export promotion policies in the region as a whole by one of the most qualified group of experts on the subject.

##### **4.1 Promotion Policies in Four Selected Countries**

In the mid-1990s, the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) conducted case studies on the experience of successful exporters in four countries (Brazil, Chile, Colombia, and Mexico).<sup>100</sup> The purpose was “to learn from the companies that are successful exporters” and to assess the effectiveness of export promotion policies from the standpoint of their final users.<sup>101</sup> The ECLAC researchers surveyed business people’s opinions on such matters as the main factors that push a firm to start exporting; whether

---

<sup>100</sup> The studies were carried out (in 1995-1996) in the context of ECLAC’s Regional Project on Policies to Promote Innovation and Competitiveness in the Latin American and Caribbean Business Sector. The results of this research can be found in Macario (1998a), Macario (1998b), Macario (1998c), and Macario *et al.* (2000).

<sup>101</sup> Macario *et al.* (2000, pp. 3-4).

there is a learning process involved in exporting; whether the particular firm used any export promotion instrument; how the firm evaluated any instrument used; the main obstacles to exporting; and other related issues.

To begin with the Brazilian survey, it is interesting to note that, in the main, the Brazilian exporters seem not to have spoken at length on the several export promotion policy instruments individually considered, let alone on the coherence and efficacy of the set of export promotion policies as a whole.<sup>102</sup> One is hard pressed to find in Bonelli's (2000) account of the research results explicit opinions on particular policy instruments. Exporters in the car parts industry stated that they make little use of the drawback mechanism because of its complexity, and exporters in the pulp and paper industry pointed out that the mechanism is not particularly relevant to their sector as they import few inputs. They also said that the elimination of the state-level merchandise and services sales tax (ICMS) was a boost to exports. Exporters in the textile sector, on the other hand, were of the opinion that "financing arrangements are a potential source of competitiveness."<sup>103</sup> On this matter, exporters in all sectors surveyed were unanimous in their criticism concerning the lack of financing whose terms, amounts and maturities were on a par with those enjoyed by competing imports. According to Bonelli, none of the firms surveyed accorded any importance to the forms of financing offered by the BNDES. None of the firms in the machinery and equipment industry found useful BNDES' credit line for capital goods (FINAMEX) useful. Those surveyed also noted the lack of an authentic export-import bank.

A recurrent theme in the Brazilian survey was the complaint of too much government interference and red tape associated with exporting. There was frequent criticism about the excessive number forms required and about excessive regulation.<sup>104</sup> The proliferation of government bodies involved with exports (and attached, moreover, to different ministries) was seen as an obstacle to an effective export policy. The complexity of the tax system was also mentioned as an obstacle. Those surveyed said that the business promotion policies of the

---

<sup>102</sup> The only exception seems to be a statement by exporters in the pulp and paper industry as to their belief that the "lack of a specific export policy at the federal level is a barrier to exports." See Bonelli (2000, p. 103).

<sup>103</sup> It is implicit in Bonelli (2000, p. 101) and must be pointed out explicitly here that, despite the appearances, the Brazilian exporters in question were not praising the Brazilian system of export credit. They just were just stating a lesson learned, as it were, from their competitors. They mainly had in mind the fact that textile imports into Brazil are supported by foreign-government supplier credit provided under "extremely favorable terms."

<sup>104</sup> For two firms in the machinery and equipment sector, one area where they learned major lessons in the process of exporting was that of how to deal with the bureaucracy.

individual Brazilian states had much more to do with attracting firms to the respective regions than with providing support and incentives to exports.

Bonelli's own assessment was that, given the macroeconomic constraints imposed by the then-appreciating exchange rate, the most feasible way of expanding exports lay in the area of credit. He pointed out that the main difficulties in this area are that: 1) the task of supplying credit is split among a number of government agencies; 2) there was uncertainty about the allocation of budgetary resources for the interest-rate equalization program; 3) the rules governing private-sector operations were not entirely stable; and 4) export credit insurance had never functioned satisfactorily. Bonelli also notes the sizeable amount of resources required for an export credit scheme to be successful in a country the size of Brazil. As fiscal adjustment has been a major challenge for Brazilian macroeconomic policy over the years, he adds that turning to overseas sources of funds may prove an interim solution while the fiscal adjustment works its way through and domestic interest rates decline.

Chilean exporters stated that their country's export promotion system is effective in providing support: information is readily available and export formalities are transparent, streamlined, and expeditious.<sup>105</sup> The instrument most often used by firms in the survey was the Simplified Drawback, and most of the firms had received assistance from the non-financial export promotion agency, Pro-Chile, particularly when taking the first steps at exporting. Nevertheless, the firms were not as optimistic about the effectiveness of export promotion policies in the future. They were concerned that the elimination of the Simplified Drawback and of the scheme that allows tariff reductions on imports of equipment would make it more difficult for them to export.

Macario claims that the Chilean policies of that time are "past their peak"<sup>106</sup> and that new policies are needed for the country to go back to the high export growth rates of the late 1980s and early 1990s. This need will be compounded by the fact that the current instruments will become less effective once the export subsidies are phased out to comply with WTO rules.<sup>107</sup> Macario thus implies that the key to a new export promotion system lies in policies to upgrade productivity. If these policies are horizontal, that is to say, if they are not aimed only at the

---

<sup>105</sup> See Macario *et al.* (2000, p. 66).

<sup>106</sup> Macario *et al.* (2000, p.67).

<sup>107</sup> This has to do with the fact that an important share of the medium-size firms exporting goods other than commodities are heavily dependent on the Simplified Drawback mechanism.

exporters but at all firms regardless of whether their production is oriented to the domestic or the external market, such policies have the additional advantage of being compatible with WTO rules.

According to Macario *et al.* (2000), interviews with Colombian exporters “showed that Colombia has a quite efficient export promotion system when seen from the perspective of individual companies.”<sup>108</sup> Credit from Bancoldex was the export promotion device most frequently used by the exporters in the sample.<sup>109</sup> In addition to its availability, financing provided by Bancoldex has two advantages. First, interest rates (though no longer subsidized) are generally lower than those offered on the domestic market. Second, the loans are available for longer periods than commercial bank loans.<sup>110</sup>

From the standpoint of the exporters surveyed, the second most important export promotion instrument was the drawback mechanism popularly known in Colombia as “Plan Vallejo.” Most corporate managers said that it would be very difficult to export without the assistance provided by this scheme (which, as mentioned above, is not compatible with WTO rules). The Tax Refund Certificates scheme ranks third, in the business executives’ view, among promotion instruments. However, there were complaints about the frequent changes in the amount to be credited to the exporter. In any case, this instrument must also be phased out to comply with WTO rules.

In contrast to their positive opinion of export promotion institutions, entrepreneurs felt that the other government agencies “do all they can to hinder productivity and export growth” and singled out the customs agency as the most significant obstacle in the institutional sphere.

Macario’s own assessment of Colombia’s export promotion system at that time was that, although the country had, for decades, “exemplary export promotion policies,”<sup>111</sup> there is a need to bring up to date the policies required for export assistance. She proposes that reforms must be undertaken along the lines of allowing firms both to have access to competitively priced inputs and to avoid that their goods pay taxes twice, that is, in Colombia and in the country of destination. Accordingly, she suggests adoption of a streamlined drawback scheme and an

---

<sup>108</sup> See Macario (2000, pp. 127-128). She adds that “[E]ighteen of the twenty-one firms included in the survey make use of the export promotion instruments, which was to be expected since the country is a pioneer in this field.”

<sup>109</sup> In Macario’s view, Colombian companies have better access to export financing than those in most other Latin American countries.

<sup>110</sup> Macario *et al.* (2000, p. 128).

<sup>111</sup> Macario *et al.* (2000, p. 133).

exemption from duties for inputs imported to manufacture exports. She recommends Mexico's ALTEX scheme (see above) as a model to set up, in a first stage, a duty exemption system for firms that have a long-standing export record. In a second stage, the system would be extended to the remaining firms.

According to ten Kate *et al.*'s (2000) summary of Mexican exporters' views, Mexico's export promotion programs are very useful for export firms. Companies make extensive use of the instruments available to them, such as the temporary admission scheme, the drawback scheme for high-volume exporters (the ALTEX program), and Bancomext assistance through credit and information provision. For those authors, "the government's ability to set up programs that allow companies to have ready access to a wide range of inputs and to streamline bureaucratic export formalities is outstanding and sets it apart from its counterparts within the region."<sup>112</sup> Moreover, they add, Mexican export promotion programs have the additional advantage of being fully compatible with WTO rules. They also believe that, although there is room for improvement, Bancomext is "an exemplary institution." Its programs play a particularly crucial role in the individual firms' initial stages of export activity when companies in need of information on how to access foreign markets obtain Bancomext financing for participation in trade fairs and similar information-gathering pursuits.

The authors also praise the Mexican export promotion agencies' administrative capability and attribute it to the high professional level of their human resources. In short, the authors believe that, while Mexico's export success is mainly the result of a wide range of economic policies, the size of the country's manufacturing sector, its proximity to the United States, and its export promotion system also makes a valuable contribution.

#### **4.2    *The Experts' Testimony: Elements for an Assessment of Export Promotion Policies in the Region as a Whole***

Macario *et al.* (2000) and related works<sup>113</sup> express a shared view about industrial policy issues and, in particular, about export promotion policies. Given the authors' institutional ties with ECLAC, it does not seem unreasonable to refer their common perspective as the ECLAC view. Since, moreover, this view represents the thinking of one of the most qualified and

---

<sup>112</sup> See ten Kate *et al.* (2000, p. 45).

<sup>113</sup> See, for instance, Peres (1997).

knowledgeable groups of experts on these matters in the region, it is instructive to review their assessment of the current state of export promotion policies.

The main conclusion that can be drawn from the final chapter of Macario *et al.* (2000) is that export promotion systems in Latin America and the Caribbean are insufficient and need to be improved. The elements to support that diagnosis can be found throughout the chapter. As the chapter emphasizes, though, it is necessary to deduce the diagnosis' parts and components from the policy recommendations.

The implicit diagnosis is as follows. First, drawback mechanisms in most countries in the region are deficient in that their use by exporters requires complex, inefficient, and time-consuming procedures. In some cases, the situation is compounded by lack of transparency, and in others the mechanism is not permanent. Some countries try to solve short-term public-sector budget problems by diverting to other uses resources originally allocated to the drawback. In still other countries, the mechanism is more of an export subsidy than a rebate on tariffs, and therefore incompatible with WTO rules. Most countries are also lagging behind in two key areas having to do with the instrument's basic design, namely: a) making the mechanism accessible to indirect exporters; and, even more importantly, b) replacing it (at the very least for frequent exporters) with an outright duty exemption scheme. The first innovation consists of allowing domestic companies that supply inputs to exporters to get a rebate for the duties paid when importing goods used in the production of those inputs. As explained in a previous section of this paper, the second innovation allows exporting firms to decrease the funds needed for working capital vis-a-vis the scenario in which they use the traditional reimbursement scheme.

Second, some Latin American countries provide export firms with direct export financing. On the other hand, several countries fail to provide financing for export companies. But even among the subset of those that provide export-oriented financing there are some where the resources allocated for the purpose are insignificant and go mainly to a few large firms, which makes the impact of export financing on export growth negligible. While some countries have credit lines for foreign buyers of their exports, others do not, thus putting their exporters at a disadvantage. In a number of countries, long-term financing for fixed investment in export activities is all but non-existent. Last but not least, smaller and medium-size firms often have limited access to finance because of their inability to provide adequate collateral.

In the area of credit insurance, two types of risk are relevant, namely commercial risk and political risk. Credit insurance against commercial risk is provided by a number of countries, but still there are some that do not provide this service to their exporters. Political risk insurance, moreover, is still lacking in most countries.

Third, many countries in the region still require exporters to comply with too many regulations, which discourage exporters, particularly first-timers. While many of these formalities were originally set up to deal with short-term contingencies during the period of import substitution, they remain in place long after both those contingencies and the import substitution model itself became a thing of the past.<sup>114</sup>

On the basis of this diagnosis, Macario contends that the export promotion instruments currently used by the region's governments are generally insufficient for sustained growth (or even a sustained level) of exports of highly value added goods. In Macario's view the only exceptions are Mexico and, to a lesser extent, Barbados and Brazil. In her view most countries will have to reform their export promotion policies to make them more effective in light of the new challenges faced by export firms. She goes on to propose a set of policy guidelines to improve the Latin American and Caribbean national systems of export promotion. According to her, the first step that must be taken to reduce anti-export bias is to cut tariff rates as much possible within a range consistent with the other priorities of economic policy. Other areas in which reforms are urgent and important include emphasizing productivity-enhancing policies; improving the instruments to allow access to competitive inputs, by introducing improved drawback mechanisms (including duty rebates for indirect exporters and outright duty exemption schemes); resolving the existing constraints and limitations in the area of export financing; upgrading the market information services provided by export promotion agencies; and streamlining the administrative procedures and formalities involved in exporting.

---

<sup>114</sup> Macario notes that some Caribbean countries require a specific sanitary permit and an authorization by the Ministry of Defense for every single export shipment. Exporting then can require up to ten different steps. Some of these steps entail going to offices in different locations and submitting copies of the forms already presented in another office.

## Bibliography

- Altenburg, T., and J. Meyer-Stamer. 1999. "How to Promote Clusters: Policy Experiences from Latin America." *World Development* 27(9): 1693-1713.
- Aragón, E. No date. *Integradora Clusters and the Global Economy: Promoting Regional Development in Central Mexico*. Ithaca, United States: Cornell University.
- Bonelli, R. 1997. "Política industrial en Brasil: intención y resultados." In: W. Peres, editor. *Políticas de competitividad industrial: América Latina y el Caribe en los años noventa*. Mexico, D.F., Mexico: Siglo Veintiuno Editores.
- Bonelli, R. 2000. "Brazil: The Challenge of Improving Export Performance." In: C. Macario *et al.*, editors. *Export Growth in Latin America: Policies and Performance*. Boulder, United States: Lynne Rienner Publishers.
- Bortagaray, I., and S. Tiffin. 2000. *Innovation Clusters in Latin America*. Paper Presented to the Fourth International Conference on Technology Policy and Innovation, Curitiba, Brazil, August 28-31, 2000.
- Cámara de Comercio de Bogotá. 1994. "Creación de la ventaja competitiva para Colombia: patrones de competitividad y análisis sectorial." Resumen de los estudios realizados por la firma Monitor. Bogota, Colombia: Cámara de Comercio de Bogotá
- Casalet, M. 1997. "La cooperación interempresarial: Una opción para la política industrial." *Comercio Exterior* (Mexico City) 47(1): 8-15.
- Cassiolatto, J.E., and J. Britto. 2001. "Políticas industriais descentralizadas no caso brasileiro: uma breve análise de experiencia recente." Paper presented at the ECLAC-IDB seminar "The Road to Competitiveness: the Meso- and Micro-Economic Levels," Santiago, Chile.
- Ceglie, G., and M. Dini. 1999. *SME Cluster and Network Development in Developing Countries: The Experience of UNIDO*. Paper presented to the International Conference on "Building a Modern and Effective Development Service Industry for Small Enterprises, Rio de Janeiro. [www.ilo.org/publi/english/employment/ent/papers/cluster.htm](http://www.ilo.org/publi/english/employment/ent/papers/cluster.htm)
- Clark, J.W. 2000. *Competition Policy and Regulatory Reform in Brazil*. Paris, France: OECD.
- da Motta Veiga, P., and R. Bonelli 1998. "Brasil: análisis de los factores condicionantes de la competitividad del sector industrial." In: L.J. Garay, editor. *Argentina, Brasil, México, Venezuela: apertura y reestructuración productiva*. Bogota, Colombia: Study Program "La Industria de América Latina ante la Globalización Económica."



- Departamento Nacional de Planeación de Colombia. 1994. *Plan Nacional de Desarrollo 1994-1998*. Bogota, Colombia: Departamento Nacional de Planeación de Colombia.
- ECLAC. 1995. *Latin America and the Caribbean: Policies to Improve Linkages with the Global Economy*. LC/G.1800/Rev.1-P. Santiago, Chile: ECLAC.
- Enright, M.J., and I. Ffowcs-Williams. 2000. *Local Partnership, Clusters and SME Globalisation*. Background Report to the Conference for Ministers responsible for SMEs and Industry Ministers, Workshop 2, Bologna, Italy, June 14-15, OECD.
- Falvey, R.E., and N. Gemmell. 1990. "Compensatory Financial and Fiscal Incentives to Exports." In: C. Milner, editor. *Export Promotion Strategies: Theory and Evidence from Developing Countries*. New York, United States: New York University Press.
- Farinelli, F., and S. Kluzer. 1998. "Industrial and Technical Assistance in Latin America: Lessons from the Field." IPTS Report 21. <http://www.jrc.es/pages/f-report.en.html>
- Government of Jamaica. 1996. *National Industrial Policy: A Strategic Plan for Growth and Development*. Kingston, Jamaica: Government of Jamaica.
- Grant, R.M. 1996. "Toward a Knowledge-Based Theory of the Firm." *Strategic Management Journal* 17: 109-122.
- Grossman, G.M. 1990. "Promoting New Industrial Activities: A Survey of Recent Arguments and Evidence." *OECD Economic Studies* 14: 87-125.
- Hall, R. 1993. "A Framework for Linking Intangible Resources and Capabilities to Sustainable Competitive Advantage." *Strategic Management Journal* 14: 607-618.
- Hernández Laos, E., and A. ten Kate. 1998. "México: fuentes de las ventajas competitivas en la industria." In: L.J. Garay, editor. *Argentina, Brasil, México, Venezuela: apertura y reestructuración productiva*. Bogota, Colombia: Study Program "La Industria de América Latina ante la Globalización Económica."
- Inter-American Development Bank. 1995. *Enterprise Development Strategy: Small- and Medium-Sized Enterprises*. Washington, DC, United States: Inter-American Development Bank, Sustainable Development Department.
- Kosacoff, B., and A. Ramos. 1999. "The Industrial Policy Debate." *CEPAL Review* 68: 35-60.
- Kosacoff, B., C. Bonvecchi, and G. Yoguel. 1998. "Argentina: la economía en los años noventa. Contexto macroeconómico, desempeño industrial e inserción externa." In: L.J. Garay, editor. *Argentina, Brasil, México, Venezuela: apertura y reestructuración productiva*,

- Programa de Estudio. Bogota, Colombia: Study Program “La Industria de América Latina ante la Globalización Económica.”
- Labarca, G., and W. Peres. 1997. “Políticas de Desarrollo Productivo en Costa Rica.” In: W. Peres, editor. *Políticas de competitividad industrial. América Latina y el Caribe en los años noventa*. Mexico, D.F., Mexico: Siglo Veintiuno Editores.
- Lam, A. 1998. *Tacit Knowledge, Organisational Learning and Innovation: A Societal Perspective*. DRUID Working Paper No. 98-22. Copenhagen, Denmark: Danish Research Unit for Industrial Dynamics.
- Macario, C. 1998a. *Learning and Exporting: Evidence from Successful Export Firms in Mexico*. Santiago, Chile: ECLAC, Division of Production, Productivity and Management.
- . 1998b. *Chile: Learning and Economies of Scale in Export Firms Compared to Non-Export Firms*. Santiago, Chile: ECLAC, Division of Production, Productivity and Management.
- . 1998c. *Why and How Do Firms Export? Evidence from Successful Export Firms in Colombia*. Santiago, Chile: ECLAC, Division of Production, Productivity and Management.
- Macario, C., R. Bonelli, A. ten Kate *et al.* 2000. *Export Growth in Latin America. Policies and Performance*. Boulder, United States: Lynne Rienner Publishers.
- Martínez Ortiz, A. 1997. “Colombia: una política nacional de competitividad.” In: W. Peres, editor. *Políticas de competitividad industrial: América Latina y el Caribe en los años noventa*. Mexico, D.F., Mexico: Siglo Veintiuno Editores.
- Melo, A. 2001. “The Innovation Systems of Latin America and the Caribbean.” Research Department Working Paper 460. Washington, DC, United States: Inter-American Development Bank.
- Ministério de Ciência e Tecnologia. 1996. Plano Plurianual de Ciência e Tecnologia do Governo Federal PPA 1996/99. Brasilia, Brazil: Ministério de Ciência e Tecnologia.
- Ministerio de Desarrollo Económico de Colombia. 2000. *Principales Componentes de una Política Industrial Moderna*. <http://www.mindesa.gov.co/publish07.htm>.
- Ministério do Planejamento, Orçamento e Gestao. 1995. *Plano Plurianual para o Período 1996/1999*. Brasilia, Brazil: Ministério do Planejamento, Orçamento e Gestao [www.planejamento.gov.br/planejamento/mp/ppa/pp.../mensagem.htm](http://www.planejamento.gov.br/planejamento/mp/ppa/pp.../mensagem.htm).

- Mytelka, L., and F. Farinelli. 2000. *Local Clusters, Innovation Systems and Sustained Competitiveness*. Discussion Paper Series #2005. Maastricht, The Netherlands: United Nations University, Institute for New Technologies.
- Nadvi, K., 1995. *Industrial Clusters and Networks: Case Studies of SME Growth and Innovation*. Vienna, Austria: UNIDO.
- Peres, W. 1997. "El resurgimiento de las políticas de competitividad industrial." In: W. Peres, editor. *Políticas de competitividad industrial. América Latina y el Caribe en los años noventa*. Mexico, D.F., Mexico: Siglo Veintiuno Editores.
- Presidencia de la República de Colombia. 1995. *La Estrategia Nacional de Competitividad*, Bogota, Colombia: Presidencia de la República de Colombia.
- RedeGoverno. 2001. *Agenda de Governo. Biênio 2001-2002*, Portal da Rede de Governo. [www.redegoverno.gov.br/AgendaPresidente/agenda.htm](http://www.redegoverno.gov.br/AgendaPresidente/agenda.htm)
- Romer, P. 1989. "Capital Accumulation in the Theory of Long Run Growth." In: R.J. Barro, editor. *Modern Business Cycle Theory*. Cambridge, United States: Harvard University Press.
- Schmitz, H. 2000. "Local Upgrading in Global Chains." Technical Note 6. Rio de Janeiro, Brazil: Universidade Federal do Rio de Janeiro, Instituto de Economia, Grupo de Economia da Inovação. [www.ie.ufrj.br/gei/ativid/projetos/gil/public/public3.htm](http://www.ie.ufrj.br/gei/ativid/projetos/gil/public/public3.htm)
- Secretaría de Comercio y Fomento Industrial de México. 1995. *Programa de Política Industrial y Comercio Exterior (PROPICE)*. Mexico, D.F., Mexico: Secretaría de Comercio y Fomento Industrial de México. <http://www.spice.gob.mx/siem2000/propice.Presentacion.asp>
- Sirlin, P. 1999. "Argentina's Industrial Specialization Regime: A New-Generation Industrial Policy, or Merely a Transfer of Resources?" *CEPAL Review* 68: 101-114.
- ten Kate, A., C. Macario and G. Niels. 2000. "Mexico: Export Promotion Policies on the Cutting Edge." In: C. Macario *et al.*, editors. *Export Growth in Latin America: Policies and Performance*. Boulder, United States: Lynne Rienner Publishers.
- UNCTAD Secretariat. 1998. "Promoting and Sustaining SMEs Clusters and Networks for Development." Document TD/B/COM.3/EM.5/2. Geneva, Switzerland: UNCTAD.
- UNDP. 1999. "Small and Medium Enterprise Development." Essentials: Synthesis of Lessons Learned, No. 1. New York, United States: UNDP, Evaluation Office.

- van Riel, W. 1997. "Políticas de Competitividad Industrial en Jamaica." In: W. Peres, editor. *Políticas de competitividad industrial: América Latina y el Caribe en los años noventa*. Mexico, D.F., Mexico: Siglo Veintiuno Editores.
- Winter, S.G. 1987. "Knowledge and Competence as Strategic Assets." In: D.J. Teece, editor. *The Competitive Challenge: Strategies for Industrial Innovation and Renewal*. Cambridge, United States: Ballinger.
- Wise, M. 1999. *Review of Competition Law and Policy in Mexico*. Paris, France: OECD.