

PRODUCTIVE DEVELOPMENT POLICIES IN LATIN AMERICA: PAST AND PRESENT

Manuel R. Agosin

Santiago, Marzo 2013

Productive Development Policies in Latin America: Past and Present

Manuel R. Agosin

Faculty of Economics and Business, Universidad de Chile

Summary

This paper reviews industrial policy in Latin America from the Great Depression to our days. Its purpose is to derive some lessons for what Latin American and Caribbean countries (LAC) should do in this area. It has become clear over the last few years that LAC, if they are to accelerate their growth rates, need more than a good macroeconomic framework and the protection of property rights: they need to be more proactive in transforming their production structures, still too dependent on primary commodity exports or the assembly of final goods from imported components, sectors that are ill-suited to the productive development jumps that have been associated with high growth in the developing world over the past 60 years.

The paper argues that industrial policy Mark I, roughly since the 1940s up to the debt crisis of the early 1980s, which featured import restrictions, the deployment of development banks, and other forms of state activism, was more successful than the credit it receives from the conventional view that has come to dominate academic and policy circles. Nonetheless, it encountered diminishing returns as industrialization proceeded from non-durable consumer goods to more complex products, it did not yield sustained growth in countries with small domestic markets, and it eventually bogged down into a maze of indiscriminate measures with little economic sense. The failure of integration efforts in the region as a whole also accounts for the tendency of the inward-oriented model as a growth engine to stall.

With the rise of the so-called Washington Consensus in the early 1990s, the view became prevalent that governments should not be in the business of determining the sector allocation of resources and that there was no particular value in the diversification of production and little to gain by fostering such diversification from the state. The main tasks of governments were, according to this view, the maintenance of macroeconomic stability and the protection of property rights.

The ascendancy of the new orthodoxy led most governments in LAC to lower tariffs, eliminate non-tariff restrictions on trade, privatize state enterprises, and adopt a welcoming but non-interventionist approach to foreign direct investment (FDI). These efforts were incomplete, and some have argued that the failure of the liberalization drive to raise significantly growth rates across the region was due precisely to the fact that reform didn't go far enough, especially in the liberalization of the labor market. The lesson that others draw, however, is that countries threw out the baby with the bathwater, and that a new approach to industrial policy (industrial policy Mark II) was required.

Be that as it may, efforts to transform the structure of production lived on in many countries, including those whose governments professed the greatest adherence to a non-interventionist development model. In some countries, these efforts were quite successful.

With time, countries began to adopt more pragmatic policies, favoring those that supported activities rather than sectors (e.g., general training subsidies, export promotion, innovation), the constitution of business-government councils to advise on public-sector actions to foster production in specific clusters, and the provision of public goods (infrastructure, regulation specific to individual sectors) rather than interference with the price system. Nonetheless, there have also been cases in recent years of upfront subsidies or tax exemptions to attract FDI into favored sectors. The use of export processing zones (EPZs) to encourage investment both by multinationals and their national subcontractors has proliferated, mostly in Central America and the Caribbean.

In most cases, these policies do not yet constitute an organic whole and have not been endowed with sufficient resources. They do show, however, that efforts to transform the production structure are still important in the mindset of policymakers. Now is the time to outline some of the elements of an industrial policy that is oriented towards moving beyond dependence on the export of a few commodities for growth or of consumer goods assembled from imported components.

The paper is divided into six sections. Section I discusses the main traits of state-led industrialization, as practice between 1940 and the onslaught of the debt crisis in the early 1980s. Section II reviews briefly LAC's generally failed efforts at economic integration. It is argued that effective integration would have made more viable the industrialization model, albeit with quite different characteristics, as there would have arisen substantially greater specialization within the region in the manufacturing sector. Section III recalls the arguments made against the industrialization drive, as its less rational aspects came to the fore beginning in the 1970s. Section IV discusses the advent of the new anti industrial policy view associated with the Washington Consensus and its impact on policy in the region. Section V attempts a recap of where the discussion stands today, while Section VI looks forward.

I. Some history: the era of state-led, inward-oriented (SLIO) industrialization (1940-1980)

Industrial policy has been present in the policies pursued by individual countries in the region since the Great Depression. It has also generated heated debates, either embraced as the single most important policy to reach development, advocated with caveats, or rejected as the reason for the relative backwardness of the region.

Conventional opinion among policymakers, academics, observers, and in international financial institutions in the last three decades has turned against industrial policy on the grounds that "picking winners" is more likely to lead to wasted resources and diminished welfare than to growth and development. It should not be forgotten, however, that during much of the period in which state-led industrialization held sway, such policies

garnered broad intellectual support and attracted financial resources from international financial institutions and individual industrialized countries. There is now some evidence of a more positive assessment of industrial policy, albeit one that is substantially different from the state-led approach of traditional policy and that this change is occurring even within international financial institutions.¹

Contrary to received wisdom, LAC were never paragons of free trade, even before the Great Depression, when growth was powered mostly by demand for raw materials from the industrialized countries. As has come to be documented in recent years, LAC maintained very high rates of nominal protection (indeed, among the highest in the world) from independence until the onset of the Great Depression (see Bértola and Ocampo, 2012, pp. 131-134); and Coatsworth and Williamson, 2004). By and large, protection took the form of specific tariffs. As rates of inflation on imported goods (in domestic currency) varied widely, so did (inversely) the *ad valorem* equivalents of tariffs (tariff revenues as a share of import values). While in some countries and in some periods of time high tariffs did indeed have a protectionist intent (as in Mexico towards the end of the 19th century), by and large the main objective was to raise public finance during times of internal and external conflict and in economies where income or land taxes were technically or politically difficult.

As illustrations, figures 1 through 3 show the long series of average *ad valorem* tariff rates (estimated by dividing tariff revenue by import values) available for Chile since 1817, and calculations with data for Mexico and Brazil. Estimated average tariff rates were quite high throughout the 19th century and in the 20th century prior to the Great Depression. After the onset of the Depression, they rose to considerably higher levels. This pattern was quite typical of many LAC.

[Insert Figures 1 through 3]

The shock of the Great Depression was unprecedented. In the region as a whole (19 largest countries), between 1929 and 1932 the volume of exports shrunk by over 25 percent, the purchasing power of exports by 40 percent, and, owing to the unavailability of international financing, import volumes contracted by over 60 percent (Bértola and Ocampo, 2012, p. 156). Eventually, the shortage of manufactured goods and a variety of measures to economize on imports and balance the external accounts in the face of unprecedented declines in export values (quantitative restrictions, the abandonment of fixed exchange rates and the ensuing nominal depreciations) resulted in a strong process of unintended, and largely welcomed, industrialization. Some relief on imports also came from the only immediate way out of the situation: widespread debt moratoria.

The advent of World War II extended farther into the horizon the scarcity of foreign manufactures. While export earnings recovered, the disruptions to foreign trade and the

¹ For an analysis of recent changes in approaches to development policy at the World Bank, see Rodrik (2006), and World Bank (2005). But, as Rodrik himself notes, the changes that can be evinced at the level of policy research do not yet appear to have percolated down to the lending and technical cooperation levels.

unavailability of imports resulted in large foreign exchange reserve accumulations. And the fillip that domestic manufacturing was given during the Depression continued.

After the War and until the breakdown of the Bretton Woods regime in 1973, trade policy was used more deliberately with protectionist intent. While the economic strategy that willy nilly emerged during this period had a number of elements that went beyond import restrictions, these did figure importantly in the policy package. And those restrictions encompassed not only high tariffs but also quantitative restrictions, import prohibitions, import licensing, and onerous interest-free prior import deposits (which had a particularly protectionist bite in countries with high inflation rates).

It has been argued, even by some of its critics, that import restrictions can encourage productive diversification in a number of ways: (a) it orients resources to new activities, albeit at current welfare costs; (b) in sectors where there are likely to exist static and dynamic economies of scale, declining unit costs may eventually make them internationally competitive²; (c) it reserves the domestic market for those willing to invest in the economy; and (d) the profits derived from those investments provide a source of saving and financing for expansion in the same or in other sectors.³ In fact, in several countries, particularly those with large domestic markets, it was initially highly successful.

As can be seen in table 1, beginning in the 1929-1945 period the rates of growth of real value added in manufacturing in LAC were quite respectable. Indeed, during the 1945-1973 period, which coincided with the “Golden Age” of post World War II growth, manufacturing value added in LAC rose rapidly. This was true of both the larger countries, Mexico and Brazil, and also of many of the smaller ones. During the period from the breakdown of the Bretton Woods system up to the Mexican debt crisis of 1982, manufacturing growth continued to be strong, but at a more subdued rate, and not as widespread as before. Since then, growth rates in the manufacturing sector have been very meager.

[insert Table 1]

For the period 1945-1973, following Bértola and Ocampo (2012) we use the term “state-led, inward-oriented (SLIO)” rather than “import-substitution” industrialization, for various reasons. In the first place, in most countries, particularly the larger ones, the role of import substitution as such in growth was limited, while domestic production to satisfy growing domestic demand was quantitatively more important as a source of growth.⁴ Second, imports did not decline as a share of GDP, but changed their composition toward manufacturing inputs and capital goods. Third, the policy tools used were wide-ranging and were not restricted to tariff and non-tariff measures.

² Rodrik (1992) hammers home this argument on theoretical grounds with the use of a formal model.

³ See Little, Scitovsky and Scott (LSS, 1970, pp. 118-128) for an early exposition of these arguments and its caveats. It should be noted that LSS – and the country studies they summarize – is the first work that fully articulates a position against the high levels of protection that were widespread in developing countries in the 1960s.

⁴ Bértola and Ocampo (2012, p. 152) arrive at this conclusion using a Chenery decomposition of growth into the expansion of domestic demand, import substitution, and export growth.

Beginning in the 1940s, almost all countries adopted deliberate policies of inward-oriented industrialization. These policies were not restricted to the trade sphere but encompassed the setting up of development banks, the use of directed credits from public and private banks, and the entry of the state into the production of private goods and services through public enterprises with the aim of diversifying the structure of production and investing in infrastructure services that the private sector was viewed as not being able to finance (e.g., electricity, telecommunications, roads, ports, and, importantly, basic education).

A particular problem that the state set out to tackle was the need for large amounts of capital in new sectors (which typically had large fixed costs and were subject to economies of scale), in the face of financial markets that were undeveloped and not equipped to lend long term (or invest) in productive sectors, particularly new ones without a track record. This was the task assigned to development banks. In addition, the creation of state enterprises, with the attendant capacity to mobilize financial resources through the state, had partly the same rationale. Paradigmatic examples of development banks set up in the period of SLIO industrialization were CORFO in Chile, BNDES in Brazil, Bancoldex in Colombia, and NAFINSA in Mexico.

[Insert Box I on development banks]

It should be noted that in East Asia governments met with the same kind of coordination problem: the need to provide long-term financing for new sectors with significant economies of scale and large fixed costs. In Korea, the solution to this problem took a somewhat different form, although the initial nationalization of the banking sector and the use of directed credits had some of the flavor of the use of development banks in LAC. When the authorities sought to go beyond light manufacturing and diversify into complex consumer goods, industrial inputs, and capital goods, it also decided to promote the emergence of large conglomerates (the *chaebols*), one of whose objectives was overcoming the restrictions imposed by the paucity of long-term finance. The *chaebols* acted as capital markets internal to single large firms: profits in one sector (assured by protection and export subsidies) could be funneled to investments in new sectors earmarked for development.⁵ In Taiwan, beginning in the 1980s, government policy to solve this problem was centered on fostering the emergence of a venture capital industry (Sabel, 2009).

In the second half of the 1960s, the Latin American development model began to exhibit diminishing returns and growth to decelerate. At the same time, the consensus on SLIO industrialization began to break down as some of the more irrational aspects of the model came to the fore and was eventually replaced by a “new consensus” in favor of free markets and specialization according to comparative advantage.

⁵ Amsden (1989, chapter 1) provides an interesting description of the policy of fostering the emergence of conglomerates.

While the criticism of import substitution had much truth to it, the opprobrium with which it has come to be viewed is not borne out by the data available. In spite of its inefficiencies, during the period from the end of World War II to 1973, and in some cases, up to 1980, several LAC were able to generate solid economic growth that was not matched later on in the period even after the “lost decade” of the 1980s, after which most countries embraced market-oriented policies and claimed to have abandoned industrial policies.⁶ As table 2 shows, in the period 1950-1980 the per capita GDPs (in terms of purchasing power parity, PPP) in countries as diverse as Brazil and Mexico (countries with large domestic markets), on the one hand, and others such as Costa Rica, Dominican Republic, Panama, Paraguay, and Trinidad and Tobago (with small domestic markets) per capita incomes showed robust convergence to the level of that of the United States. Even if one ignores the “lost decade” of the 1980s, in the subsequent period from 1990 to 2010 (the “Washington Consensus” period), this convergence was reversed in all countries with the exception of Panama and Trinidad and Tobago.⁷ The lone addition to the convergence club in Latin America after 1990 was Chile, and its rate of convergence was quite a bit slower than those exhibited by the Asian countries, Ireland or Finland.

[insert Table 2]

The same picture emerges examining the growth record of individual countries, as shown in table 3. Growth rates were considerably higher in LAC during the SLIO period than subsequently. Of course, Asian high performers grew even faster, but growth rates in many LAC were quite respectable up to 1980. These have not been replicated since. While many factors were at work in the earlier and more recent periods, one significant difference is related to the role attributed to the state. After the dismantling of SLIO industrialization, a simple-minded belief in the virtues of the market led to a failure to endow the state with a coordinating role of private sector actions (or foster the appearance of substitutes, such as business associations or public-private councils) without which the diversification of production is very difficult to bring about. As argued cogently by Hausmann (2011), industrial transformation is a high-complexity endeavor that requires multiple inputs from multiple actors, both private and public, *at the same time*. In fact, there is evidence that some of the advances achieved during the period of SLIO were simply reversed and many industrial skills lost (for a discussion of the Chilean experience, see Ffrench-Davis, Leiva and Madrid, 1993).

[insert Table 3]

One of the crucial arguments in favor of industrial policies as practiced in the postwar period is that it would lead to the transformation of basically primary producing economies with a comparative advantage on a narrow range of goods into more diversified and technologically advanced economies. Did this occur? To some extent, it did. But many

⁶ As will be discussed below, the seeds of a “new industrial policy” began to emerge even as leaders proclaimed their adherence to purely market solutions.

⁷ Clearly, Trinidad and Tobago’s GDP depends almost exclusively on oil and gas prices, so it should not be considered a success story on the same footing as those countries whose growth was dependent on diversification efforts.

of the benefits that were supposed to derive from SLIO industrialization failed to materialize. In part, this was due to the fact that in most countries domestic markets were not large enough to support a long-term process of inward-oriented industrialization. Second, protection resulted in many cases in internationally uncompetitive production (or in what Leibenstein aptly called “X-inefficiency”⁸) and did not encourage industries to go down their potential learning curves. In fact, some industries set up behind high tariff walls and other forms of protection to domestic producers (e.g., autos in Argentina and Brazil) were never able to compete with rapidly innovating industries in the international market place. Thirdly, in some industries (e.g., the information technology industry in Brazil), technological change in the main production centers was just too dynamic for infant industries in LAC to keep pace. Without the human capital, accumulated knowledge, and economies of scope that dominate industries such as those for capital goods and information technologies, many such sectors in LAC just simply withered and died.

II. The failure of economic integration

The European example with economic integration beginning in the 1950s with the Steel and Coal Community and culminating in the setting up of the European Economic Community (EEC) in 1957 with the Treaty of Rome had a profound impact on policy makers in LAC. It is well to remember that during this period the world economy had scarcely begun the various rounds of tariff reductions under GATT. So, when six large European countries established the EEC, they emerged as a large and mostly integrated single market for industrial goods with tariffs on imports from non-members which were quite high. At the same time, these countries laid the groundwork for a system of European-wide financial institutions that were to support infrastructure projects crucial to economic integration and, eventually, financial assistance to less developed members.

Latin American integration efforts began a little later and were impelled by the perceived success of European integration and by the need to broaden domestic markets, which in some cases were limited by small populations and, in all countries, by low levels of income. In 1960, ten South American countries⁹ plus Mexico signed the Treaty of Montevideo, creating the Latin American Free Trade Association (LAFTA). At the end of the same year, four countries in Central America (El Salvador, Guatemala, Honduras, and Nicaragua) set up the Central American Common Market (CACM), of which Costa Rica became a party in 1962. In 1969, Chile, Bolivia, Peru, Ecuador, and Colombia established the Andean Group, now Andean Community.¹⁰

⁸ “X-inefficiency” refers to the fact that entrepreneurs may take part of the rents created by protection or monopoly situations not in the form of higher incomes but of lowered effort, or more leisure. In other words, they may locate themselves inside and not on the frontier of their production functions. See Leibenstein (1966).

⁹ Argentina, Bolivia, Brazil, Colombia, Chile, Ecuador, Paraguay, Peru, Uruguay, and Venezuela.

¹⁰ Venezuela joined in 1973. Chile withdrew in 1976 in disagreement with the foreign direct investment policies of the group, which required partnerships with domestic firms retaining the majority of the shares. In 1974, Chile had adopted a very liberal foreign direct investment regime.

While the original conception of LAFTA had been to set up a free-trade area between participating countries, together with a common external tariff toward non-member countries, this soon proved politically infeasible, since some countries had fairly advanced manufacturing sectors, while in others manufacturing was incipient. Thoroughgoing integration would have required a rather drastic reallocation of resources within the region, with many less competitive countries losing large swathes of domestic manufacturing to the more competitive (and usually larger) countries.¹¹ Naturally, vested interests in the countries where production was expected to decline as a result of economic integration resisted the push toward forming a true common market. Soon LAFTA degenerated into the exchange of bilateral lists of “concessions” on imports that did not threaten established industrial sectors.¹² In more modern terms, it probably led to much more trade diversion than trade creation. The duplication of installed capacity and the failure to reap the economies of scale and learning that are essential for industrial development were the result.

The establishment of the Andean Group responded to some extent to this problem. It was felt that the countries comprising this grouping were more homogeneous and could move more rapidly toward regional integration, since their industrial sectors would not be forced to compete with those of the more advanced LAC. This hope turned out to be chimerical, and regional integration even on a more limited basis failed to take place.

The early successes of CACM in the 1960s were slowly eroded and even the semblance of a common tariff and a common external trade policy toward non-members was eventually abandoned. In recent years, each country has seen fit to enter into as many free-trade agreements with third countries as it considers good and appropriate, without even a thought to consulting its partners in CACM.

Caribbean countries have also made several attempts to integrate their economies. While these efforts have stimulated mutual trade, to this day they remain far short of the ideal of a common market.

Perhaps the most egregious failure of all integration efforts was to improve intraregional infrastructure. In the presence of the enormously high transport costs between LAC, even a successful reduction of trade barriers would have been rendered ineffective without large investments in roads, ports, air links, and the like. And these investments have been meager indeed, in spite of potential support from international financial organizations.

It is fair to say that the efforts to achieve economic integration in Latin America has been a major failure, and that this failure probably was one of the causes behind the

¹¹ Of course, this effect would have been transitory, since resource reallocation would have led them to gain market shares in other goods. However, weak national governments in “losing” countries would have been unable to bear the costs.

¹² This sorry state of affairs was recognized formally in 1980 when member countries rewrote the Treaty of Montevideo. The new treaty, which changed the name of the organization to Latin American Integration Association (LAIA), calls for “flexible” modalities of moving gradually toward a common market and abandoned all pretense at establishing a common policy toward non-members.

inability of countries to reap the dynamic benefits of import substitution, which require large economic spaces. As shown in table 4, the share of exports to other countries in the region has remained relatively small, even after five decades of integration attempts.

[insert Table 4]

In some countries, intra regional exports have risen significantly in recent years. This is particularly so in Argentina, whose exports to Brazil rose after the signing in 1986, under the auspices of LAIA, of partial bilateral integration agreements between the two countries. These were replaced by the creation of the Common Market of the South (Mercosur) in 1991 (Treaty of Asunción) between Argentina, Brazil, Paraguay and Uruguay. While Mercosur has spurred intraregional trade, it still remains far short of being a true common market with a common tariff toward third countries and with institutions that promote closer physical and economic links.

In Central America, neighboring El Salvador and Guatemala have been able to increase their mutual trade in recent years. Nicaragua, as well, has experienced a large jump in trade with its regional partners. On the whole, however, intraregional trade remains small, particularly when one takes into account that these countries are in close proximity.

More generally, the share of intraregional trade among LAC, where intraregional exports account for less than 19 percent of total exports, must be considered unsatisfactory from the point of view of creating markets large enough to sustain activity with economies of scale and scope or which may provide the opportunities the thick-market externalities that are essential for most sophisticated modern economic activity. The low level of intraregional trade prevailing in LAC should be compared with intra-European trade, which accounts for about two thirds of total trade for the 27 members of the European Union. And the failure to bring about real economic integration is one of the causes for the less than stellar development results of LAC industrial policies Mark I. As shall be seen below, there were other reasons as well.

III. The weaknesses of SLIO industrialization

The problems with SLIO industrialization and the manner in which it was implemented in LAC became evident as time went on. To begin with, the narrowness of domestic markets was bound to result in declining rates of growth, even had the policy been pursued with technocratic logic. As import substitution progressed from goods with relatively large markets (consumer non-durables) to those with much smaller markets (consumer durables, industrial inputs, and capital goods), the spurts of growth of new bouts of protection could have been foreseen to be ever shorter-lived.¹³

The SLIO model as practiced in LAC had four basic problems. In the first place, protection of individual sectors was not transitory but tended to become permanent. Thus high tariffs and non-tariff measures were not removed after a reasonable period, and were

¹³ For Colombia, this process is documented in Agosin (1976).

granted without any *quid pro quo* (e.g., promises of sustained increases in international competitiveness) from the favored sectors. Rather than removing protection after a certain period of learning, when policy makers shifted their attention to new sectors, new protective measures were piled upon the existing ones. In the end, the intricate set of measures (including high tariffs, prohibitions, non-tariff measures, favored credits, etc.) became increasingly irrational, to the point where outcomes (in terms of sector growth rates) were more the result of happenstance than of explicit policy.

Second, the real exchange rate became increasingly overvalued, intensifying the concentration of exports on a few primary commodities. The anti-export bias of LAC's development model had been widely noticed as far back as the 1970s (see Balassa, 1989). Perhaps as a result of the export successes of Asian countries, beginning in the latter years of the 1960s, policy makers made efforts to take on board this criticism. Policies adopted included crawling peg exchange rate regimes, in some countries multiple exchange rates favoring new exports, and various export subsidies. However, rather than rationalizing the incentive system, these new policies tended to be superimposed on the older ones. In the event, the pro-export policies proved themselves too weak to counter the bias of the incentive system toward inward-oriented growth.

Third, by the early to mid 1960s, nominal tariff rates for manufactures in several countries had risen to levels that could hardly be justified by an argument in favor of diversifying the production structure. As shown in table 5, derived from Little, Scitovsky, and Scott (LSS, 1970) and studies contained in Krueger, Lary, Monson and Akrasanee (KLMA, 1981), nominal tariffs for manufactures exceeded the levels observed in most countries that had industrialized prior to World War I. Of course, real protection rates could not be as high as those implied in nominal tariffs, because imports go to zero at domestic prices that, as a ratio to international prices, are well below nominal tariff rates.¹⁴ Nonetheless, the high unweighted averages shown in table 5 are symptomatic of rates of protection that could not be justified simply by recourse to infant-industry arguments.

[insert Table 5]

Fourth, as it soon became evident, wide tariff dispersion led to even wider (and chaotic) dispersion in the protection to value added in different activities. The notion of "effective rates of protection" exemplifies this contention. The calculation of effective rates of protection was first carried out in a set of studies commissioned by the OECD (see the summary volume, LSS). These studies showed that protection of value added could be quite different from tariff rates applied to imports of a particular good. For final goods benefitting from high tariffs (and quantitative restrictions) and low tariffs on its inputs, effective rates of protection could be stratospheric. On the other hand, intermediate goods with low tariffs on their imports, or exports (which received low or no subsidies) were often discriminated against with negative effective protection. Moreover, effective rates of protection varied widely from one sector to another in ways which were probably unintended by policymakers. Another set of studies directed by Anne Krueger and Jagdish

¹⁴ This is what is called in the literature "water" in the tariff: when a part of the tariff ceases to translate into higher domestic prices.

Bhagwati for the NBER arrived at similar conclusions (see Bhagwati and Krueger, 1973-1976; KLMA, 1981).

Effective protection for a given product can be calculated without the use of tariff rates, since it involves estimating the difference of value added in domestic prices (DVA) and value added in international prices (WVA). It thus incorporates the impact of non-tariff measures. However, as noted by LSS (chapter 5), it does present its own problems, as, for example, what exchange rate will be used to evaluate value added in international prices and the way non-traded inputs are treated. Ignoring these problems, the effective rate of protection in any given sector and for averages of sectors take the following form:

$$ERP_i = \left[\frac{DVA_i}{WVA_i} - 1 \right] 100$$

$$\overline{ERP} = \left[\frac{\sum_i (DVA_i - WVA_i)}{\sum_i WVA_i} \right] 100$$

There are, of course, ways of making the estimates of the ERPs using tariff data (and tariff equivalents of non-tariff restrictions). This involves subtracting from the nominal tariff on a final good j the weighted average of tariffs on inputs i , where the weights are the coefficients of inputs per unit of output of the good in question, all as a share of value added in the output of sector j . This involves the following calculations:

$$ERP_j = \frac{t_j - \sum_i a_{ji} t_i}{1 - \sum_i a_{ji}}$$

where the a_{ji} 's are the coefficients of inputs i per unit of output j , t_j is the ad valorem tariff equivalent of all import restrictions on output j , and the t_i 's the ad valorem tariff equivalents of import restrictions on inputs i .

The calculations made by LSS and the other authors whose estimates for nominal protection are shown in table 5 show that effective rates of protection could be inordinately high and much higher than the rates of nominal protection. Generally, consumer goods exhibited higher levels of effective protection than intermediate goods or capital goods. The calculations of LSS, supplemented by those available in KLMA, are shown on table 6.

[insert Table 6]

It should be noted, however, that calculations made by different authors for the same country and for the same period have tended to yield very different results, as Moreno Brid and Pérez Caldentey (2009) have pointed out. Another important criticism of the causal link between high protection and low growth adduced by many authors beginning with LSS is that successful countries in East Asia also used tariffs and import restrictions to

promote industry and, in these economies, effective protection rates have also been found to have been high.

In economies that are unduly concentrated on the production and export of a few primary commodities, an argument can be made for temporary protection, if such protection is moderate and applies roughly to all imports across the board.¹⁵ Such protection could be advocated on the basis of the need to develop a modern manufacturing sector broadly and as a second-best policy to the more complex measures needed to remove the distortions that keep modern manufacturing from emerging.¹⁶ Of course, a policy to undervalue the exchange rate, as advocated by Rodrik (2008) would be better still, since it would avoid the anti-export bias of the tariff.

One of the major problems of the SLIO strategy, stemming in part from what came to be known as “export pessimism”, was that international competitiveness was not an explicit goal of policy makers. Export pessimism was due to the perceived gap in competitiveness between Latin American producers and those in developed countries and to the fact that tariff barriers on manufactures, up to the 1970s, were still quite high in developed countries. In fact, tariff escalation (low tariffs on unprocessed raw materials, much higher tariffs on processed goods) was an enduring trait of the international economic landscape until recently (and remains in some countries up to this day). If anything, it was assumed that international competitiveness would be acquired spontaneously through a process of learning by doing. This did not necessarily happen, although there is some evidence that on occasion it did.¹⁷

As distinct from the high-growth Asian economies, where export incentives (and punishments for not complying with export goals) compensated for the anti-export bias of protection early on, in LAC export incentives were weak and export diversification did not receive the priority it might have deserved. Thus, except for a few countries (Brazil and Mexico after its entry into NAFTA in 1994, and Argentina, which has had for a long time a more diversified export pattern), exports remained concentrated on a few primary commodities and, in Central America and some Caribbean countries, in the final stages of processing simple manufactures from imported components in EPZs.

Perhaps the deeper question relates to the relationship between the state and the private sector. While in the countries of Asia that applied some of the same policies as in LAC (especially Korea and Taiwan) the state was able to establish temporary incentives and to tie them to performance, in LAC governments granted incentives that tended to become permanent, and no quid pro quo was demanded of those who received them. As shown in Amsden (1989) for Korea and Wade (1990) for Taiwan, governments were able to extract export performance commitments from firms in exchange for protection, and protection, at any rate, was temporary, firms being expected to fend for their own after a

¹⁵ For an argument along these lines see Bruton (1989) and Greenwald and Stiglitz (2006).

¹⁶ These might include the externalities that lead to suboptimal training, the information externalities of introducing new technologies that cannot be patented, and coordination problems that constrain the emergence of new sectors.

¹⁷ See Bonelli and Castelar Pinheiro (2008) for a discussion of the airplane manufacturer EMBRAER in Brazil, a case of industrial promotion that eventually succeeded in creating a world-class producer.

learning period. Effective protection rates tended to be much lower than in Latin America (see Wade, 1990, p. 56), and protection of the domestic market was roughly compensated by export incentives.

The SLIO industrialization model was accompanied by a hostile attitude toward foreign direct investment (FDI). It was thought that countries required the development of indigenous entrepreneurial capabilities rather than relying on FDI. For nationalistic reasons and on the grounds that large profits accruing to multinationals in the natural resource sectors ought to be used as development financing, foreign interests in natural resources were nationalized (copper in Chile, oil in Venezuela). In addition, countries generally adopted a variety of restrictions to FDI. The most draconian were those spelled out in Decision 24 of the Andean Pact, which limited profit remittances and capital repatriations, and required foreign companies to invest alongside domestic partners. Economic nationalism did not deter FDI, which continued to flow to the manufacturing sectors of the largest countries. In fact, foreign companies benefiting from high levels of import protection were instrumental in building the automobile industry (among others) in countries such as Brazil and Argentina.

While in some countries, notably those with more developed human resources, development banks did score important successes, many development banks ended up promoting “white elephants”¹⁸, when they didn’t fritter away resources in corruption. Problems in many countries included unaccountability for bad decisions, soft budget constraints, and the fact that, unless carefully controlled, first-tier institutions of this kind give too much power and money to individuals who may not have social benefits uppermost in their minds.

IV. The Washington Consensus and the reaction against industrial policy

The 1980s were particularly difficult for most LAC. Indeed, they have been dubbed “the lost decade”. The major culprit was the debt crisis. The availability of credit on international markets since the early 1970s stemming from the recycling of the surpluses of oil exporting countries allowed LAC to borrow and run large current account deficits. Both governments and the private sector ran increasing deficits (of saving over investment in the private sector, and of expenditure over tax revenue in the public), financed largely with inflows of credit from the international financial markets. In some countries, poor or non-existent regulation of the financial sector led to a large expansion of domestic credit, abetted by access to cheap international credit, which resulted in housing bubbles, sharp increases in consumption, and binges of acquisitions by local conglomerates, most of which proved unsustainable. After the Mexican crisis, such credit disappeared, in fact forcing most LAC to bring about a huge swing in their balance of payments current accounts from large deficits to large surpluses.

¹⁸ Every country wanted to have its own airline, steel mill, and automobile producer. Some succeeded, many did not. The more successful were able to privatize firms originally started with the assistance of development banks. The examples of Brazil, Chile, and Mexico discussed in Box I are cases in point.

In most countries, incomes stagnated or contracted. The poor growth performance of the majority of countries in the region was wrongly attributed to import-substituting industrial policies. Whereas the latter's objective had been to alter market signals and channel investment resources in new directions, they did not necessarily lead to debt crises. The debt crisis was a macroeconomic phenomenon of excessive public and private spending for a protracted period of time, leading to an accumulation of foreign debt that was eventually viewed as unsustainable by international creditors.

To be sure, to the extent that governments borrowed to sustain their vision of structural transformation and, particularly, to invest in state enterprises that eventually could not pay back the foreign-currency debts incurred, the industrial policies up to 1980s may have been partly to blame for the debt crisis. But there is little evidence that this was its major ingredient. In fact, in almost no country was an investment boom responsible for excess borrowing.

Be that as it may, what emerged at the end of the 1980s was an animus toward industrial policy and an almost universal support for allowing market forces to allocate investment resources. The rejection of industrial policy became intertwined in the minds of observers and policy makers with what came to be known as "the Washington Consensus".

The Washington Consensus, as originally formulated by John Williamson (see Williamson, 1990; and Williamson, 2000), was a set of sensible policy recommendations for macroeconomic management (see Box II). Conspicuously, the original list did not include any reference to industrial policy, but the omission, together with the injunction to liberalize imports, was taken as a call to a return to *laissez faire* approach to development. In most of the economic profession, the point of view that "picking winners" would lead only to low growth if not stagnation had gained strong ground and came to be shared by policy makers. Import liberalization, together with the embrace of World Trade Organization's (WTO) code on subsidies and countervailing measures (after their adoption in 1993 at the conclusion of the Uruguay Round of trade negotiations) certainly limited the extent to which countries could resort to industrial policy.

[Insert Box II]

In fact, later formulations of the Washington Consensus by Williamson himself (see Williamson, 2003) did come out firmly on the side of eschewing industrial policy, on the grounds that business decisions should be left to the private sector, the government concentrating on the framework within which private decisions were made. However, the expanded version of the Washington Consensus, the so-called Washington Consensus II, did include a recommendation that does appear on the list of those who favor policies to bring about structural change: use capital controls when capital inflows are excessive and threaten to derail diversification and growth through real exchange rate appreciation that goes well beyond what fundamental equilibrium would suggest.

Undoubtedly, the slower growth that many countries had been experiencing since before the eruption of the debt crisis was partly the result of a pattern of industrialization based almost exclusively on the domestic market and the inability of policy makers to go

beyond toward productive development policies based on international competitiveness, a considerably more difficult endeavor. While some countries had begun to correct some of the more egregious policy mistakes by adding layers of export subsidies and attempting to avoid long periods of exchange rate overvaluation, the truth is that most countries had not been able to achieve the policy shift toward export diversification that was evident in rapidly growing Asian countries.

International competitiveness had not been achieved solely owing to protection and the learning by doing which it supposedly stimulated. The causes were complex and the record mixed: while some sectors did “grow up”, others never did, sometimes in the same country. The criticism of import substitution and industrial implicit in the Washington Consensus had, therefore, an element of truth. However, the debt crisis justified an attempt at wholesale wiping out of industrial policy by its detractors. In this context, it was natural but erroneous to blame protectionism and industrial policy for the macroeconomic problems that countries were experiencing.

By the early 1990, most countries had modified their trade and industrialization policies very extensively (see Agosin and Ffrench-Davis, 1993). Chile’s military government had already engaged in a thorough trade liberalization beginning in 1974 and by mid 1979 had arrived at a flat ad valorem tariff (then at 10 percent).¹⁹ In addition, during the 1970s and in the second half of the 1980s, it had privatized a large number of state enterprises (and those that fell into state hands as a consequence of the 1982 banking crisis). In Argentina, under Finance Minister Cavallo, trade was extensively liberalized in 1991, and a privatization campaign sold off a large number of state enterprises to the private sector in the remainder of the 1990s. Brazil also went through several bouts of trade liberalization in the 1990s. The entry into effect of NAFTA in 1994 also implied large-scale trade liberalization in Mexico, which had been already under way since the late 1980s.

This doesn’t mean that industrial policy disappeared altogether from the region with the embrace, to varying degrees, of the tenets of the Washington Consensus. As argued in Agosin and Grau (2012), the few attempts at industrial policy in Chile during military rule (1973-1990) were quite successful, with a good proportion of export diversification being due to such policies (pulp and paper, cultivated salmon, and fruit). Brazil continued to use its development bank to promote specific sectors, a policy that has indeed been strengthened in recent years (see Box I).

However, generally, as will be argued below, industrial policy Mark II is quite different from that of the past and relies more on coordination between the private and public sectors, the public sector’s role as a coordination mechanism for private sector decisions, the provision of public goods, and the subsidization of activities rather than sectors. This is quite in line with Rodrik’s (2004) recommendations for the kinds of actions that the state should undertake in framework of an “industrial policy for the 21st century”. Activities, of course, can and do have sector-specificity. Therefore, the choice of activities

¹⁹ However, the tariff level “bound” in GATT negotiations remained at a flat 35 percent, which allowed the authorities to raise tariffs to that level when disaster struck in the 1982 crisis.

in most cases involves selectivity and, in the framework described below, market intervention and vertical policies.

It should be noted that the criticism of industrial policy implicit in the Washington Consensus applies mostly to vertical policies, i.e. to “picking winners”. Horizontal policies that target market imperfections (in education, training, technology acquisition, etc.) are perfectly compatible with the basic principles of the Washington Consensus. In fact, the reorientation of public expenditure that it calls is an implicit support for the use of public spending precisely to provide public goods complementary to private activity and those the market alone would supply in insufficient quantities.

V. Toward an industrial policy Mark II

At the present time, countries are groping toward a second-generation industrial policy. In order to understand the components of such a policy, one can divide industrial policies into four quadrants according to, on the one hand, whether they are delivered through interventions in the price mechanism or through the provision of public goods, and, on the other, whether they are vertical (oriented to specific sectors) or horizontal (oriented to certain activities regardless of the sectors that may benefit from the higher provision of promoted activities). This is done in table 7, which also illustrates the kinds of policies that one can find in each quadrant.

[insert Table 7]

Generally, the new industrial policy that one sees emerging in the region involves more horizontal rather than vertical elements and more provision of public goods than interventions in the price mechanism. Of course, vertical policies have not been absent: witness the Industrial, Technological and Foreign Trade Policy, PITCE, in Brazil, which identifies specific sectors to orient financial resources, specifically by BNDES. As regards subsidies or tariffs, these are tightly constrained by WTO agreements.

The new emphasis has been on competitiveness (that is on creating or improving comparative advantage where the country already has achieved it), rather than on ISI. In no country is ISI respectable. This doesn't mean that import substitution should play no role in future industrial policies. Some of the large countries with large domestic markets (e.g., Brazil, Argentina, and to a lesser extent, Colombia), and even some medium-size countries, still have scope for policies that enable domestic producers to become competitive with imports, but the instruments with which such policies were pursued in the past (high and highly-differentiated tariffs and variegated import controls) are all but dead. A moderate tariff, up to levels bound in the WTO²⁰, clearly defined time sequences for reducing any tariff preference, and slight undervaluation of the exchange rate are better instruments to achieve more rational import substitution that stands the test of allowing new sectors to become competitive.

²⁰ Most LAC have bound their tariff levels in the WTO at levels higher than those they use in practice, giving them some policy space to increase effective tariffs, if they so chose to do so.

In practice, however, in some countries old-style protection continues to be practiced, particularly in agriculture. The use of higher-than-average tariffs and price bands (EU-style), with prices that are stuck at the higher bound of their band, are some ways in which countries still protect agricultural production for social and, allegedly, food-security reasons.

With some notable exceptions (e.g., the Brazilian PITCE), the emphasis on manufacturing is largely gone. Policy makers have become much more respectful of comparative advantage, actual and potential. Much of the new emphasis has gone into moving up the technological ladder in industries that have proven themselves successful (agriculture, food products, and mining). In Central American countries, efforts have gone into transforming the production of finished goods from imported components in EPZs (the so-called *maquilas*) into more integrated production through backward linkages (the “complete package”). The instruments used have been direct technical assistance to national subcontractors, sometimes with the active engagement of the final buyers, the attraction of FDI into specific upstream industries, and the provision of infrastructure and other missing public goods (for the example of El Salvador, see Acevedo and Agosin, 2012; and for the Dominican Republic, Guzmán, Agosin, Lizardo, and Capellán, 2012).

The attraction of FDI has played a prominent role in industrial policy. Whereas during the 1960s and 1970s countries evinced a strong distrust of FDI, now it is welcome. Much of industrial policy revolves around an effort to attract FDI into specific sectors and the actions required from the state to ensure success in this effort. In some cases, state agencies have unwittingly found themselves in a coordinating role, as foreign companies have made known their requirements for investing in the country. The need to increase the supplies of human resources in industry-specific and generic skills (English proficiency, for example) has figured prominently in these efforts.²¹

There has been more willingness to tackle market failure in a horizontal fashion, without pinpointing measures to particular sectors. For example, most countries now have institutions that deal with the problems posed by lack of private incentives to engage in worker training or enterprise-level innovation.

However, the sector dimension of interventions even at the level of activities has not been fully grasped. For example, a government can provide incentives for worker training in general, or for training in specific activities that are likely to pay off in the context of a development strategy, the need for which may have arisen from a structured dialogue between the private and the public sector. There are few skills that are general enough *not* to have sector specificity. And targeted policies are more likely to support growth than more general policies that may lead to the dilution of resources in a large number of

²¹ These efforts are reported in some detail in Agosin and Price (2010) for Chile, and in Acevedo and Agosin (2012) for El Salvador.

endeavors, many of which are of dubious social value.²² The same can be said of innovation.

Interventions have emphasized innovation and entrepreneurship. Most countries now have an agency dedicated to innovation and many support it through tax breaks and outright subsidies. These efforts have not yielded much by way of increasing the participation of R&D in GDP. Production structures in the region are such that the demand for R&D is low or non-existent. It is only when companies compete internationally on the basis of new products or the introduction of innovations in production technologies that innovation becomes a leading issue.

Policymakers have not understood well that, at this stage in their countries' development, efforts to produce domestically at lower costs what already is produced in other countries (i.e., what Hausmann and Rodrik, 2003, call "self-discovery") is the way forward. This, of course, doesn't mean that innovation in the field of agricultural or mining products may not yield results, but the pay-off seems to be in the broadening of the spectrum of goods and services that countries can produce in a way that such production is internationally competitive.

The trick consists in knowing where to put one's efforts. Every country has some emerging sectors. Therefore, a good principle is to begin with those sectors where the economy may have already shown an incipient competitiveness and, therefore, has developed some human and organizational capabilities. From that springboard, it is easier to orient private resources to more sophisticated or similar sectors than to make bets that are too far removed from the real capabilities of the economy.

The creation of new internationally competitive sectors requires a large number of disparate actions by individual actors, both private and public. These actions are not intermediated by the market, and when they are, they are not timely enough. Where there are strong pecuniary external economies, the market does not do a good coordinating job.²³ The coordination problem can be solved in a number of ways: direct government participation through a development agency, private-public competitiveness councils, or business associations of interested producers.

The role of government is inescapable. As Hausmann (2009) notes, most sectors require a detailed and large number of regulations and norms, and coordination between many different government agencies is not easy to achieve in the absence of one entity specifically charged with that task. Moreover, it is not evident a priori what are the regulatory needs of specific new sectors. This calls for some mechanism to elicit that information from the interested parties themselves. This is probably the main role of public-private business councils. In their new book, Devlin and Mogueillansky (2011) show that all

²² Chile has had in place for about 30 years a general training subsidy (given out by the Servicio Nacional de Capacitación y Empleo, SENCE), without great results. A proportion of the resources provided to firms (in the form of tax breaks) has been used for executive training programs.

²³ An example: the development of a new beach resort requires the building of an airport. Neither investment will be profitable without the other. The government can intervene building the airport or offering guarantees to private agencies investing in each.

of the countries that have been successful in diversifying their economies and achieving rapid growth²⁴ have had a mechanism at the government level that has been in charge of the development strategy and have extensively used public-private cooperation to develop and implement the strategy.

VI. Some guidance for the future

Structural change encounters many difficulties, especially in countries whose output is concentrated in goods that do not lend themselves to jumps to other sectors because the capacities and public goods they have already developed are not useful in new sectors that have a potential for development. In Hausmann's (2011) terminology, most LAC – with the exception of Argentina, Brazil, and Mexico – have production structures located in very sparse sections of the world product space. He shows the plausibility of an explanation of growth in terms of the ability of economic agents to jump from existing to new sectors. In other words, economies that are located in dense parts of the world product space are better able to effect diversification of their own production structures. These jumps, accompanied by rapid productivity improvements in these new sectors, have high explanatory power for inter-country differences in growth rates.

Governments have an important role to play. In terms of table 6, vertical industrial policy is indispensable to allow the jumps in productive structure that the market is likely to be too slow to bring about, if at all. There are many examples on how this has been indeed done by governments even since the Washington Consensus has held sway. Some are indicated in the text above or discussed in the literature cited therein.

Subsidies and other interventions in the market mechanism must be used with great care, in order to avoid the problems with these tools that are highlighted in earlier sections of this paper. Governments can provide guidance through undertaking tasks that only the state can: providing infrastructure, or planning its development, if private-sector involvement is desired; issuing sector-specific regulation without which the sector cannot function properly (for example, quality certification of hotels, in the tourist industry); coordinating the actions of various state agencies and between private actors; providing or encouraging sector-specific labor training.

It is important not to lose sight of the fact that private agents will carry out the brunt of the investment to develop any new sector. Therefore, private-public coordination – through, e.g. business councils, development banks dealing with private borrowers, and industrial zones – will be indispensable in order to elicit from the private sector the kinds of information the government needs to orient its actions.

²⁴ They catalogue as “successful” a quite diverse group of countries, each one very different from the others. The key elements of their success, the authors claim, are the roles played by a single “real-sector-oriented” government agency endowed with sufficient powers and resources to implement a development strategy and extensive public-private cooperation. The countries included in their list are Australia, Czech Republic, Finland, Ireland, Republic of Korea, Malaysia, New Zealand, Singapore, Spain, and Sweden.

References

- Acemoglu, D., Johnson, S., and Robinson, J. A. 2001. The colonial origins of comparative advantage: an empirical investigation. *American Economic Review* 91 (5): 1369-1401.
- Acevedo, C. and Agosin, M. R. 2012. Industrial policy in El Salvador: beyond the maquila. Unpublished working paper. Inter-American Development Bank. Washington, D.C.
- Agosin, M. R. 1976. Development patterns and labour absorption in Colombian manufacturing. *Journal of Development Studies*, 12 (4): 351-363.
- Agosin, M. R., and Ffrench-Davis, R. 1993. Trade liberalization in Latin America. *CEPAL Review*, 50 (August): 41-62.
- Agosin, M. R., and Price, J. J. 2010. La inversión extranjera: ¿hacia una política vertical? InvestChile: el programa de atracción de inversiones de alta tecnología. In O. Muñoz, ed. *Desarrollo productivo en Chile: la experiencia de CORFO entre 1990 y 2009*. Catalonia. Santiago.
- Agosin, M. R., and Grau, N. 2012. Industrial policy in Chile. Unpublished working paper. Inter-American Development Bank. Washington, D.C.
- Amsden, A. H. 1989. *Asia's next giant: South Korea and late industrialization*. Oxford University Press. Oxford et al.
- Balassa, B. 1989. Outward orientation. In H. Chenery and T. N. Srinivasan, eds. *Handbook of Development Economics*, Vol. 2. North Holland. Amsterdam, New York, Oxford, and Tokyo.
- Bértola, L., and Ocampo, J. A. 2012. *The economic development of Latin America since independence*. Oxford University Press. Oxford.
- Bhagwati, J. and Krueger, A. O., eds. 1973-1976. *Foreign trade regimes and economic development*. Multiple volumes with varying authorship. Columbia University Press. New York.
- Bonelli, R., and Castelar Pinheiro, A. 2008. New export activities in Brazil: comparative advantage, policy or self-discovery? Research Network Working Paper No. 551. Inter-American Development Bank. Washington, D.C.
- Bruton, H. 1989. Import substitution. *Handbook of Development Economics*, Vol. 2. Ed. H. Chenery and T.N. Srinivasan. North Holland. Amsterdam, New York, Oxford, and Tokyo.
- Coatsworth, J. H., and Williamson, J. 2004. Always protectionist? Latin American tariffs from independence to Great Depression. *Journal of Latin American Studies*, 36 (2): 205-232.

Corbo, V., and Meller, P. (1981). Alternative trade strategies and employment implications: Chile. In KLMA, 1981.

Devlin, R., and Moguillansky, G. 2011. *Breeding Latin American tigers. Operational principals for rehabilitating industrial policies*. World Bank and United Nations Economic Commission for Latin America and the Caribbean. Washington, D.C. and Santiago, Chile.

Díaz, J., and Wagner, G. 2004. Política comercial: instrumentos y antecedentes. Chile en los Siglos XIX y XX. Documentos de Trabajo 223, Instituto de Economía, Pontificia Universidad Católica de Chile. Santiago.

Ffrench-Davis, R., Leiva, P., and Madrid, R. 1993. Trade liberalization and growth: the Chilean experience. Ed. M. R. Agosin and D. Tussie. *Trade and growth: new dilemmas in trade policy*. St. Martin's Press, New York.

Fischer, S. 2012. The Washington Consensus. In C. F. Bergsten and R. Henning, eds. *Global economics in extraordinary times. Essays in honor of John Williamson*. Peterson Institute of International Economics. Washington, D.C.

Greenwald, B., and Stiglitz, J. 2006. Helping infant industries grow: foundations of trade policies for developing countries. *American Economic Review*, 96 (2): 141-146

Guzmán, R., Agosin, M. R., Lizardo, M., and Capellán, R. 2012. Four decades of productive development policies in the Dominican Republic. Unpublished working paper. Inter-American Development Bank. Washington, D.C.

Hausmann, R. 2009. The other invisible hand: high bandwidth development policy. In J. Cohen and W. Earterly, eds. *What works in development? Thinking big and thinking small*. Brookings Institution Press. Washington, D.C.

Hausmann, R. 2011. Structural transformation and economic growth in Latin America. In J. A. Ocampo and J. Ros, eds. *The Oxford handbook of Latin American Economics*. Oxford University Press. Oxford and New York

Hausmann, R., and Rodrik, D. 2003. Development as self-discovery. *Journal of Development Economics* 72: 603-633.

Hermann, J. 2010. Development banks in the financial-liberalization era: the case of BNDES in Brazil. *CEPAL Review*. 100, April: 189-203.

Krueger, A., Lary, H. B., Monson, T., and Akrasanee. K. 1981. *Trade and employment in developing countries, Vol. 1: Individual studies*. University of Chicago Press, for NBER. Chicago (KLMA).

Kuczinski, P. P., and Williamson, J., eds. 2003. *After the Washington Consensus: restarting growth and reform in Latin America*. Institute for International Economics. Washington, D.C.

- Little, I. M. D., Scitovsky, T., and Scott, M. 1970. *Industry and trade in some developing countries*. Oxford University Press, for OECD. Oxford (LSS).
- López, P. J. 2012. Nacional Financiera durante la industrialización vía sustitución de importaciones en México. *América Latina en la Historia Económica*, 19 (3): 129-163.
- Meller, P. 1996. *Un siglo de política económica chilena (1890-1990)*. Editorial Andrés Bello. Santiago.
- Moreno Brid, J. C., and Pérez Caldentey, E. 2009. Trade and economic growth: a Latin American perspective on rhetoric and reality. Serie Estudios y Perspectivas 119. ECLAC Subregional Office in Mexico. México, D.F.
- Rodrik, D. 1992. Closing the productivity gap: does trade liberalization really help? In G. K. Helleiner, ed. *Trade policy, industrialization, and development: new perspectives*. WIDER Studies in Development Economics. Clarendon Press. Oxford.
- Rodrik, D. 2004. Industrial policy for the twenty-first century. Unpublished working paper. John F. Kennedy School of Government. Harvard University. Cambridge, MA.
- Rodrik, D. 2006. Goodbye Washington Consensus, hello Washington confusion? A review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform. *Journal of Economic Literature*, 44: 973-987.
- Rodrik, D. 2008. The real exchange rate and economic growth. *Brookings Papers on Economic Activity*, No. 2:
- Sabel, C. 2009. What industrial policy is becoming: Taiwan, Ireland and Finland as guides to the future of industrial policy. Unpublished working paper. Columbia University Law School. New York
- Thorp, R. 1998. *Progress, poverty and exclusion. An economic history of Latin America in the 20th century*. The Johns Hopkins University Press. Baltimore, MA.
- Thoumi, F. 1981. International trade strategies, employment, and income distribution in Colombia. In KLMA.
- Wade, R. 1990. *Governing the market. Economic theory and the role of government in East Asian industrialization*. Princeton University Press. Princeton, NJ.
- Williamson, J., ed. 1990. What Washington means by policy reform. In J. Williamson, ed. *Latin American adjustment: how much has happened?* Institute for International Economics. Washington, D.C.
- Williamson, J. 2000. What should the World Bank think about the Washington Consensus? *The World Bank Research Observer*, 15 (2): 251-264.

Williamson, J. 2003. Overview: an agenda for restarting growth and reform. In Kuczynski and Williamson.

World Bank. 2005. *Economic growth in the 1990s: learning from a decade of reform*. Washington, D.C.

Williamson, J. 2008. A short history of the Washington Consensus. In N. Serra and J. Stiglitz, eds. *The Washington Consensus reconsidered: towards a new global governance*. Oxford University Press, New York.

Box I

The role of development banks

Between the 1940s and extending in some cases up to the late 1980s, the economic authorities in LAC gave to development banks the role of relaxing three central constraints to the establishment or consolidation of a modern industrial sector. The first related to the need to mobilize large volumes of capital in circumstances that domestic capital markets were undeveloped and international markets were in disarray. Thus, on the one hand, governments attempted to solve a problem of *incomplete markets*.

The second constraint was the need to solve a *coordination problem*: without investments in critical infrastructure (roads, electricity, ports, airports), private investments in manufacturing would not have been forthcoming. Much of the financing for these projects was channeled through development banks. In a large number of cases, they intermediated funds provided by international financial institutions such as the World Bank, IDB, and the US's Exim Bank. In some cases, beginning in the 1970s when international private financial markets opened up to developing country borrowers, development banks also tapped this source of finance.

Finally, development banks acted as an engine of self-discovery, in Hausmann and Rodrik's (2003) sense. They invested in sectors that were new to the domestic economy (large scale electricity generation, steel, chemicals, petroleum and gas, among others) where returns were highly uncertain. This is a role that development banks could continue to play in current circumstances, even in countries where capital markets have become considerably more developed. Of course, the sectors that are likely to receive attention would be quite different, more varied and country-specific (see Hermann, 2010, for a discussion).

Although their rationale was similar, development banks were assigned different roles in different countries: some of them were basically holding companies for state enterprises; others lent directly long-term to private enterprises, others basically to state-owned firms; some acted as first-tier banks, others evolved (particularly after 1990) into second-tier banks providing funds for priority activities that were intermediated by the private banking sector.

Clearly, not all were successful, and even those who were successful during some periods were less so during others. While some played an important social role in the development of a modern industrial sector, others lent themselves to rent seeking and outright corruption.

Below, the experience of three emblematic development banks is briefly discussed: BNDES in Brazil, CORFO in Chile, and NAFINSA in Mexico.

Banco Nacional de Desenvolvimento Economico e Social (BNDES)

The Brazilian Government created BNDES in 1952 during the second administration of Getulio Vargas in order to administer a fund set up by the Brazilian-United States Joint

Commission (CMBEU, its Portuguese acronym) in order to invest directly and promote private investment in the priority sectors identified by the CMBEU.

According to Hermann (2010), from its creation through the 1980s, BNDES played a primary role in financing industrialization, both by state and by private firms. Its priorities changed with the needs of the economy. In its first years, the Bank devoted about 60 percent of its resources to investments in infrastructure and energy, with the rest allocated to industries such as steel and pulp and paper. During the sixties, its emphasis shifted toward the production of industrial inputs. Later, in the seventies, it was a major source of investment funds for import substitution in capital goods. During the 1980s, it expanded its scope of activities to lending to agriculture and small and medium enterprises (SMEs), thus helping them to survive the crisis of the so-called lost decade.

In the 1990s, BNDES was active in lending long term to recently-privatized state enterprises, and, since 2004 in the design and financing of a new competitiveness-oriented development program (Industrial, Technological and Foreign Trade Policy, PITCE in its Portuguese acronym). This program sought to lend (a) for competitiveness improvements in industries that were seen as losing international market share and (b) to lend long-term to new sectors of the economy, with an orientation toward international markets and innovation. In this new phase, the BNDES is being conceived as supporting private investments in favored sectors.

Corporación de Fomento de la Producción (CORFO)

CORFO was created in 1939 during the Presidency of Pedro Aguirre Cerda, who came to power in 1938 as the candidate of a center-left coalition one of whose planks was state-led industrialization. CORFO was initially endowed with a large number of functions: it could invest long term on account of the government, it could provide long-term loans to private firms, it could enter into joint ventures with private firms, it could invest in new firms or contribute financial resources to existing public or private firms, it was allowed to obtain international financing, etc. In the period from its creation up to 1954, CORFO accounted for 30 percent of investment in machinery and equipment, 25 percent of public investment, and 18 percent of private investment. This was the period in which many industrial and utility firms were established: CAP (steel producer), ENAP (oil producer and refiner), IANSA (sugar refiner and financier of small sugar beet producers), ENDESA (hydroelectric power producer), CTC (telephone company). All of these firms subsist until these days, having been privatized during the military regime in the 1970s and 1980s.

With the return to democracy in 1990 and after a period of reorganization, CORFO was entrusted a number of roles, from second-tier bank for long-term lending to SMEs and the promotion of venture capital, the provision of subsidized services for SMEs oriented toward the correction of a number of perceived market failures, promoting innovation within private firms, and granting a variety of upfront subsidies to attract foreign direct investment in information technology and other high technology sectors. Most of its development-banking functions were carried out by CORFO as a second-tier institution, providing funding to firms through commercial banks (see Agosin and Grau, 2012).

Nacional Financiera S. A. (NAFINSA)

The rationale for the creation of NAFINSA, a state-owned financial institution, in 1934 was that “the absence of capital on the part of businessmen in industry, the undeveloped nature of stock markets, and the non-existence of private banks in a position to supply long-term credit” (López, 2012). Initially entrusted with the task of disposing of the many properties nationalized by the state after the 1910 revolution, beginning in 1940 it began supporting the public investment program in infrastructure and electricity, and also in setting up state-owned enterprises in basic industries such as steel, pulp and paper, chemicals, machinery, and transport equipment which were not being developed by private interests owing to their newness to the country and the uncertainty surrounding their returns. NAFINSA continued to play a role in the development of new sectors until the 1980s. In fact, toward the middle of that decade it acted as a large state-owned holding company. Since then, it progressively sold off to the private sector most of its enterprises.

Box II

The Washington Consensus

This box provides a summary of the basic principles contained in Williamson's original formulation (Williamson, 1990) and what has been dubbed Washington Consensus I.

1. **Fiscal discipline.** This is a sound principle no matter whether the government indulges in industrial policy or not. If a government wishes to maintain access to international financial markets, it must avoid situations of unsustainable fiscal deficits. Arguably, this is better achieved inter-temporally and not on a yearly basis: this entails running deficits during the downswing of the business cycle and surpluses in boom periods.
2. **Reorientation of public expenditures.** A corollary of Principle 1. Fiscal discipline requires prioritizing expenditures, increasing those with a positive development impact and reducing those that involve inefficiency and waste.
3. **Tax reform.** Most LAC have a tax burden that is inadequate to meet the needs for socially productive government expenditure. This is also a corollary of Principle 1, if fiscal discipline is not to involve severe cutbacks in the production of public goods.
4. **Financial liberalization.** Basically, this Principle involves the elimination of financial repression, such as directed credits, interest rate caps, etc.
5. **Unified and competitive exchange rates.** This Principle is ambiguous in nature, because it may involve intervention in foreign exchange markets, to the extent that such markets may tend to produce exchange rates that veer away from long-term equilibrium for protracted periods of time.
6. **Trade liberalization.** Straight forward enough, this Principle involved an injunction to lower tariff rates and eliminate non-tariff barriers (where this hadn't already occurred by the time that Williamson set down the Principles).
7. **Openness to FDI.** Again, by 1990, most countries had fundamentally reassessed their views and policies toward FDI, so the Principle was in a sense redundant.
8. **Privatization.** This Principle enshrined into the pantheon of good practice the notion that governments shouldn't be involved in the production of private goods. Nonetheless, many continued to do so to a much more limited extent than before 1990.
9. **Deregulation.** This Principle involved the elimination of the excessive red tape that characterized most LAC (and which, alas, still does).
10. **Secure property rights.** Almost an afterthought to what were recommendations for general policy management, the original set of Principles gave a nod to the notion that institutions were important to growth and development, in particular secure property rights. In a sense, the Washington Consensus was a precursor of the now extensive literature on the subject that began with Acemoglu, Johnson, and Robinson (2001).

Williamson later added new elements to his original list (see Williamson, 2000; Kuczynski and Williamson, 2003; Williamson, 2003; and Williamson, 2008). The first set of ten principles, plus the added components, has been dubbed the Washington Consensus II. Fischer (2012) summarizes these additions in the following way:

New Agenda I: Crisis Proofing. (1) Under this rubric, Principle 1 becomes, indeed, running a countercyclical fiscal policy; (2) using capital controls when capital

inflows threaten to appreciate the exchange rate excessively; (3) preventing dollarization of the financial system; (4) embracing independent central banking and inflation targeting as the basis for monetary policy; (5) strengthening the banking system; and (6) increasing domestic saving.

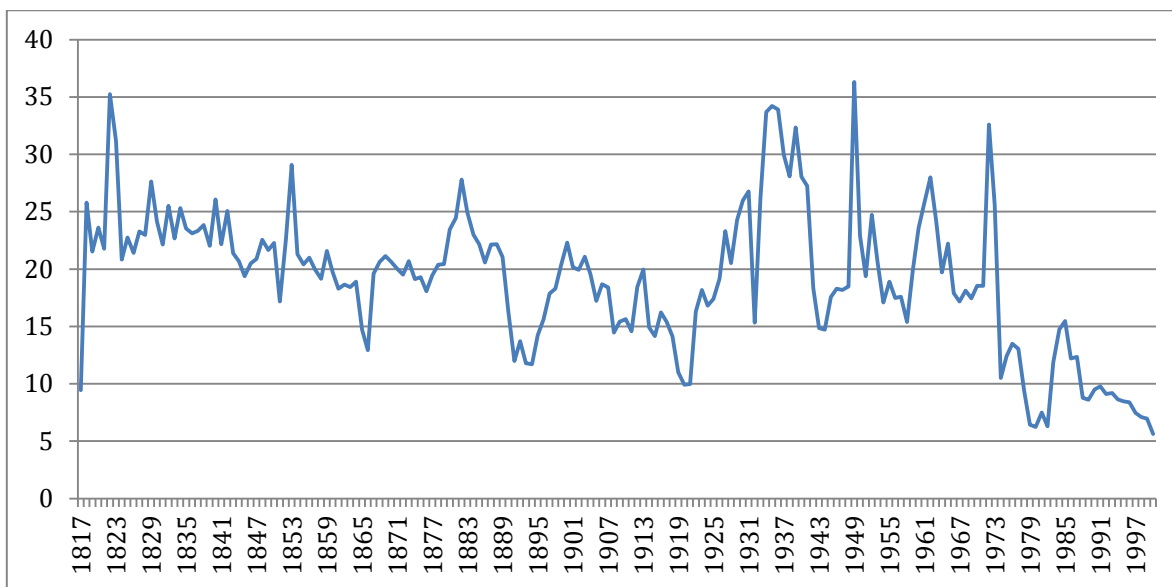
New Agenda II: Completing First-Generation Reforms. These items include (1) the need to make labor markets more flexible; (2) opening up export markets in trade partners; (3) stepping up privatization efforts; and (4) strengthening the prudential supervision of the banking sector.

New Agenda III: Second-Generation Reforms. A large number of issues are included here, and they basically relate to improving the institutions that make a market economy work effectively (e.g., corporate governance rules, adhering to WTO agreements, strengthening property rights and the judiciary), together with some items singled out extensively in the development literature and where governments have a clear role (investment in a strong human resource base, infrastructure). Williamson (2003) argues explicitly against industrial policy, on the basis that governments should not be making decisions that are the domain on the private sector.

New Agenda IV: Income Distribution and the Social Sector. The basic ideas under this heading are improving the poor income distribution of LAC without adversely impacting growth. Williamson (2003) offers a few suggestions under this heading, including the adoption of safety nets, the strengthening of property rights for those with insecure titling, improving education, making greater use of property taxation, and improving tax collection.

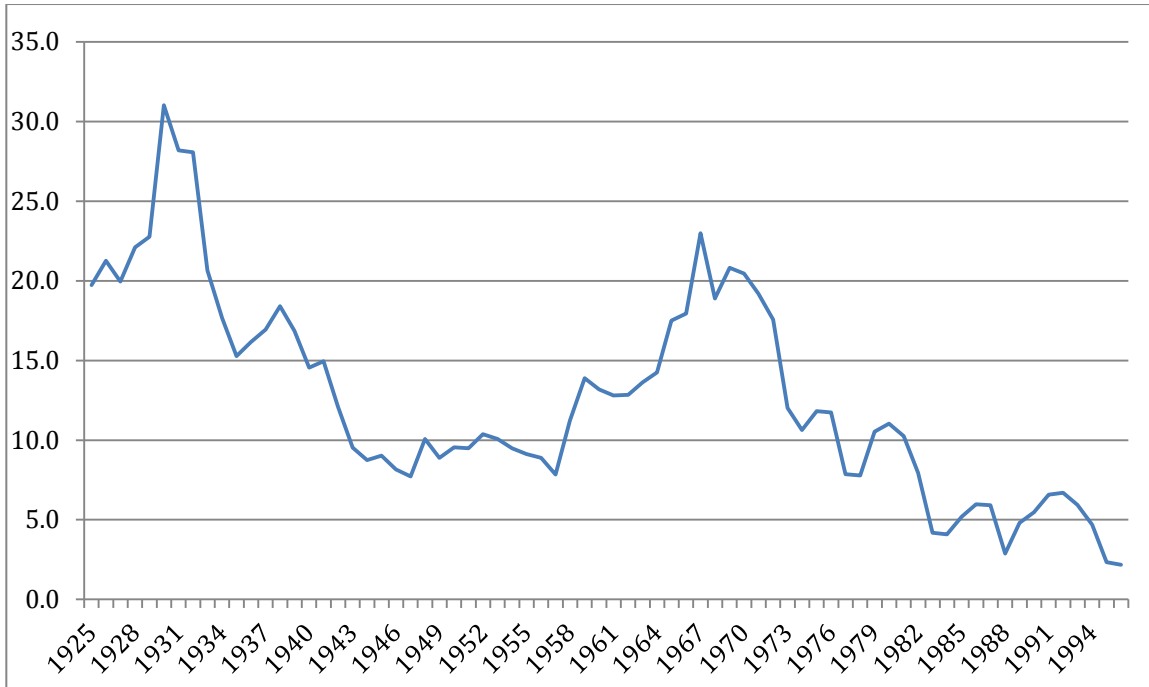
While Washington Consensus I, ambitious enough as it was, could be seen as an effort to improve basic macroeconomic management, Washington Consensus II is a much more comprehensive list of reform objectives and constitutes, in a sense, a complete development agenda. It is open to Rodrik's (2006) critique that it is a laundry list, not a development strategy for governments with little time and limited resources, and that there are a large number of options for countries to choose how to implement every principle in a creative way that respects the constraints of their political economy. In addition, seen as a series of constraints to investment, each principle may in fact not be binding, so that lifting any one of them may raise private investment and growth.

Figure 1
Estimated average ad valorem tariff for Chile, 1817-2000
 (tariff revenue, as a percentage of import value)



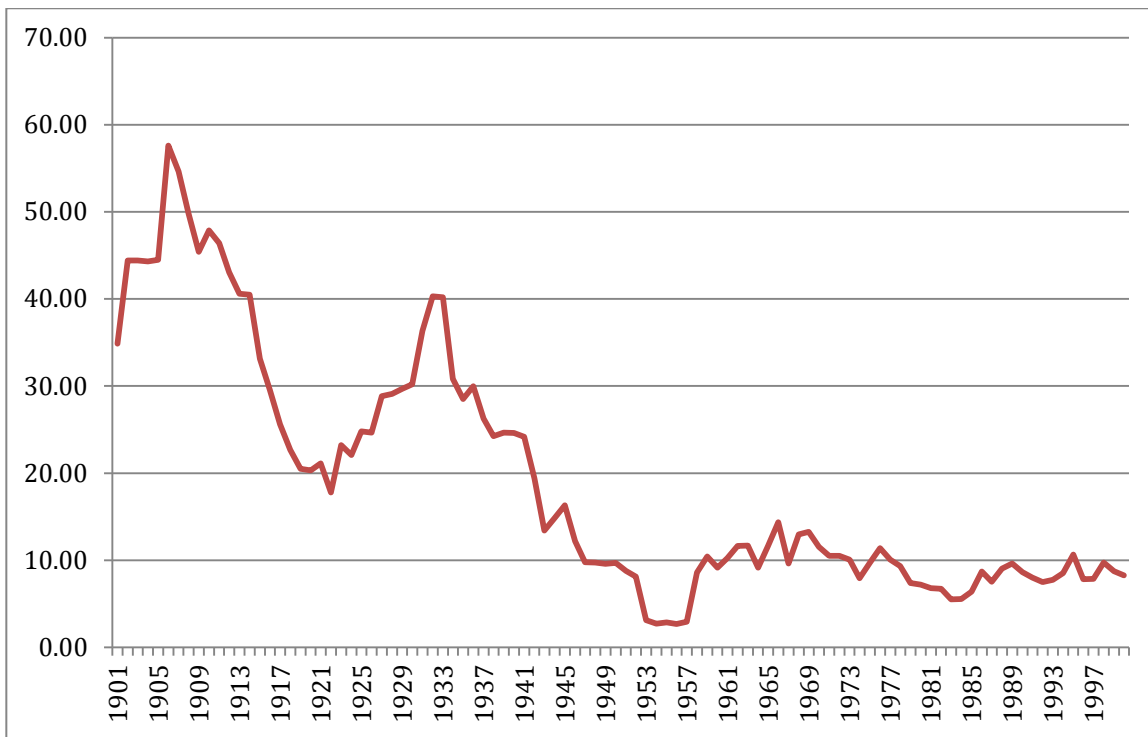
Source: Díaz and Wagner (2004).

Figure 2
Estimated average ad valorem import tariff for Mexico, 1925-1996
 (tariff revenue, as a percentage of import value)



Source: Own calculations, based on data of Instituto Nacional de Estadística y Geología, Government of México. <http://biblioteca.itam.mx/recursos/ehm.html>.

Figure 3
Brazil: Estimated ad valorem tariff, 1901-2000
 (tariff revenue, as a percentage of import value)



Source: Own calculations, based on Instituto Brasileiro de Geografia y Estadística, Government of Brasil, <http://www.ibge.gov.br/seculoxx/economia/economia.shtm>

Table 1					
LAC: Growth rates of value added in manufacturing					
(percentage)					
	1930-1945	1946-1972	1973-1980	1981-1990	1991-2010
Argentina	4.9	4.4	-0.8	-1.8	4.0
Bolivia	...	3.2	9.3	-1.0	3.8
Brazil	6.0	8.4	6.2 ^a	0.3 ^b	2.0
Chile	6.1	5.2	0.4	2.9	3.7
Colombia	8.6	6.6	5.2	3.0	1.0
Costa Rica	4.8	8.3	6.1	2.8	5.2
Cuba	4.3	2.9	6.5	3.7	0.7
Dominican Rep.	...	6.4	5.3	2.2	4.7
Ecuador	...	5.2	9.3	0.5	2.9
El Salvador	2.5	7.3	1.8	-0.7	3.5
Guatemala	1.6	5.8	5.8	-0.1	2.5
Haiti	3.3	1.8	5.0 ^a	-7.7 ^c	0.6 ^d
Honduras	7.4	6.8	5.7	3.0	3.8
Mexico	9.6	7.4	6.2	2.3	2.9
Nicaragua	...	8.6	1.5 ^a	-7.9 ^b	5.0
Panama	...	9.4	6.3 ^a	1.2	1.9
Paraguay	...	3.9	10.0	3.0	1.3
Peru	...	7.3	2.1	-0.9	4.9
Uruguay	-0.1	2.8	3.1 ^a	3.1	1.4
Venezuela	4.3	9.9	5.0	1.1	1.2

Source: 1945-1980, from Thorp (1998); 1980-2010, from World Bank, World Development Indicators (WDI), 2012.

Note: Underlying data from Thorp are in 1970 prices; those from WDI are in 2000 prices.

^a From Thorp (1998), for the period 1972-1981.

^b From Thorp (1998) and WDI (2012).

^c From Thorp (1998), for the period 1981-1995.

^d Beginning in 1998 (WDI, 2012).

Table 2
Convergence club: Per capita GDP, as a percentage of US per capital GDP, PPP

	1950	1973	1980	1990	2010
Latin America and the Caribbean					
Argentina	41.2	34.7	35.1	21.2	31.2
Bolivia	20.7	13.0	13.5	8.5	9.5
Brazil	13.6	22.8	28.7	19.7	20.9
Chile	...	19.5	18.8	16.1	34.3
Colombia	20.0	17.3	20.0	16.8	19.3
Costa Rica	26.1	31.0	34.0	23.7	27.9
Dominican Rep.	...	17.6	19.3	15.0	24.9
Ecuador	...	16.3	23.5	14.6	15.8
El Salvador	25.2	21.1	19.7	12.1	14.7
Guatemala	24.4	20.7	22.4	14.2	15.2
Guyana	15.7	12.1	12.5	6.4	10.9
Haiti	...	5.4	6.6	4.2	3.2
Honduras	17.4	11.4	14.3	10.1	8.2
Jamaica	...	40.5	28.4	27.1	20.8
Mexico	27.9	33.1	42.0	30.0	28.8
Nicaragua	15.6	17.1	13.7	6.9	5.6
Panama	15.1	18.6	19.1	15.1	24.7
Paraguay	...	10.2	14.4	12.5	10.4
Peru	21.7	23.1	22.0	12.3	19.3
Trinidad & Tobago	29.1	46.0	95.1	37.5	54.8
Uruguay	36.1	22.8	28.1	19.5	29.4
Venezuela	38.0	32.8	34.7	22.9	25.3
Asia (exporters of manufactures)					
China	...	1.8	2.3	3.7	17.4
Hong Kong	...	38.0	54.9	75.7	90.0
India	4.5	3.9	4.0	4.5	8.6
Indonesia	...	3.5	6.1	7.0	9.3
Korea, Republic of	...	14.8	20.4	40.0	61.8
Malaysia	...	11.8	17.1	17.3	30.0
Singapore	...	40.3	56.3	75.5	128.0
Thailand	7.6	9.0	10.6	15.2	19.8
Other benchmarks					
Ireland	43.4	56.5	56.5	62.6	82.0
Mauritius	20.7	12.0	12.4	17.6	22.3
Source: Penn World Tables 7.1					

Table 3
Rates of growth of per capita GDP, PPP
 (percentage)

	1950-1973	1974-1980	1981-1990	1991-2010
Latin America and the Caribbean^a	2.3	2.6	-1.2	2.2
Argentina	1.9	1.0	-1.9	3.0
Bolivia	-0.1	1.1	-1.5	1.6
Brazil	4.9	4.5	-1.1	1.5
Chile	1.4	2.5	1.4	4.2
Colombia	2.0	3.0	0.8	1.7
Costa Rica	3.3	2.2	-1.0	2.3
Dominican Republic	3.6	2.2	0.8	4.2
Ecuador	2.9	4.4	-1.4	1.8
El Salvador	1.9	-0.1	-1.0	2.3
Guatemala	2.3	3.1	-1.9	1.3
Guyana	1.5	1.6	-4.1	4.2
Haiti	-1.1	4.4	-2.8	0.4
Honduras	0.7	3.0	-0.4	0.8
Jamaica	4.1	-3.9	1.9	0.1
Mexico	3.4	4.2	-0.7	1.3
Nicaragua	3.0	-0.7	-3.4	0.5
Panama	3.3	4.9	0.7	3.5
Paraguay	1.2	7.1	0.3	0.6
Peru	3.0	0.4	-2.8	3.4
Trinidad & Tobago	4.6	6.9	-5.6	5.8
Uruguay	0.5	5.3	-1.1	3.4
Venezuela	2.7	0.3	-1.8	0.8
Asian exporters of manufactures^a	4.4	5.3	5.3	4.5
China	3.3	4.9	7.7	9.5
Hong Kong	8.0	6.7	5.0	2.9
India	1.9	2.0	3.3	4.6
Indonesia	3.9	4.8	3.8	3.2
Korea, Republic of	4.3	6.4	8.4	4.3
Malaysia	4.6	5.5	3.3	3.8
Singapore	6.3	7.0	4.4	4.5
Thailand	2.6	4.8	6.2	3.2
Developed countries (7)^a	4.5	2.0	2.7	1.2
France	4.2	2.4	1.9	1.0
Germany	3.5	2.5	2.0	1.3
Italy	4.9	3.2	2.4	0.7
Japan	8.0	2.1	4.0	0.7
Spain	6.1	1.2	2.6	1.5
United Kingdom	2.4	0.9	3.4	2.0
United States	2.5	1.4	2.4	1.4
World^a	3.1	1.9	1.3	2.1

Source: Penn World Tables 7.1. ^a Unweighted average.

Table 4
LAC exports to regional trading partners, as a percentage of total exports, 1980-2010
 (percentage)

Country	1980	1990	2000	2010
Argentina	23.6	26.0	48.1	41.8
Bolivia	35.7	44.8	44.5	60.2
Brazil	18.1	11.3	24.7	21.8
Chile	24.3	12.6	21.9	17.1
Colombia	16.6	16.1	28.8	26.6
Costa Rica	33.3	16.5	18.9	28.4
Ecuador	19.2	17.7	31.5	39.4
El Salvador	28.5	34.7	61.1	56.9
Guatemala	32.6	34.6	40.6	55.1
Guyana	21.2	11.6	13.5	19.8
Haiti	1.1	0.9	...	...
Honduras	13.5	6.5	25.8	24.5
Jamaica	7.6	6.0	5.6	5.4
Mexico	6.2	6.0	3.2	7.0
Nicaragua	19.7	21.8	31.9	41.8
Panama	19.2	18.2	23.2	18.6 ^a
Paraguay	45.7	52.4	74.5	67.9
Peru	21.2	14.6	18.1	16.9
Dominican Republic	10.4	3.2	...	23.4
Trinidad and Tobago	15.0	14.4	30.9	26.2
Uruguay	37.3	39.5	54.2	42.3
Venezuela	14.1	8.9	19.5	13.3
Total LAIA	16.4	13	15.5	18.1
Total CACM	27.4	23.1	30.5	40
Total LAC	16.4	13.1	16.1	18.8

Source: ECLAC database.

^a 2009.

Table 5
Nominal rates of protection, industrial countries circa 1900 and LAC circa 1960
(unweighted average for all manufactures, percentage)

Country	1900	1960s (year en parenthesis)
Russia	131	
United States	73	11.5 (1962)
France	34	
Germany	25	
Japan	9	16.2 (1962)
EEC		11.0 (1962)
Argentina		141 (1958)
Brazil		99 (1966)
Chile		83 (1961)
Colombia		33 (1969)
Mexico		22 (1960)
Uruguay		264 (1968)

Sources: Developed countries, Argentina, Brazil, and Mexico, from LSS (pp. 162-163); Chile, from Corbo and Meller (1981, p. 96); Colombia, from Thoumi (1981, pp. 173-174); Uruguay, from Bension and Caumont (1981, p. 513).

Table 6
Selected Latin American countries: Effective rates of protection circa 1960
 (percentage)

Country	Year	All manufactures	Consumer goods	Intermediates	Capital goods
Argentina	1958	162	164	167	133
Brazil	1966	118	230	68	31
Chile	1961	254	...	...	...
Colombia	1969	24	...	...	...
Mexico	1960	27	22	34	55
Uruguay	1968	384	...	...	...

Sources: for Argentina, Brazil and Mexico, LSS (p. 174); Chile, from Corbo and Meller (1981, p. 96); Colombia, from Thoumi (1981, pp. 173-174); Uruguay, from Bension and Caumont (1981, p. 513).

Table 7
Policy intervention matrix

	Horizontal policies	Vertical policies
Public input	Rule of law Pro-investment business climate Sound macroeconomic framework Stability-oriented financial regulation Infrastructure Human resource development	Sanitary and phytosanitary measures Bilateral trade agreements Sector-specific education Sector-specific infrastructure Business-government councils Sector-specific regulation
Market intervention	General export subsidies Subsidies for entering foreign markets FDI subsidies and tax exemptions	Sector-specific subsidies and tariffs Sector-specific FDI subsidies