A political and industrial framework for structural change and growth: the big question mark for the Mexican economy.

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Abstract:
This article describes the central features of an industrial policy to transform the productive and growth structure of the Mexican economy, which is large, open, and semi-industrialized, and has undergone a series of neoliberal reforms. The results indicate that progress has been made in key elements of nominal stabilization and in the export orientation, but that the overall economy is still not on a path to robust and sustained growth. The article concludes by arguing for the need to implement a new industrial policy to advance towards development with equality.
Key Words: Industrial policy, economic reforms, economic growth, productive structure, equality.

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Introduction

In December 2012, President Enrique Peña Nieto and representatives from the three major political parties dazzled the world with the signing of the Pact for Mexico, a top-level political agreement that lays out Mexico's development objectives in the medium and long term, while simultaneously announcing specific reforms and action lines oriented towards achieving these objectives. Practically overnight, with the Pact for Mexico, the so-called Mexican Moment was born and the country became the center of attention for national and foreign investors. It created the perception that Mexico was embarking on fresh changes to its productive structure, whose pillars would be tax reform, the opening up of the oil industry to private interests, financial sector reforms, telecommunications reforms, and more. The signers of the pact believed that this wave of reforms would set the national economy on a path to high and sustained economic growth, preserving macroeconomic stability. Today, three years after the Pact was signed, the benefits promised by the reforms have yet to materialize. Gross Domestic Product (GDP) per capita in the first half of the six-year presidential term (2013-2015) has practically failed to keep up with constant prices. Average annual real GDP growth during the same time period has been lower than the figures recorded in decades prior and even lower than the 3% annual rate that, as this administration argued, would set the pace for the Mexican economy if the reforms were not approved.
This productive lethargy has had adverse repercussions for employment. The number of jobs created annually is far from the 1.2 million positions required to absorb the population

entering the labor market. The makeup of these jobs, moreover, is marked by informality and a disproportionate increase in low-wage jobs (Samaniego, 2015; Foncerrada, 2015). Likewise, poverty has persistently risen over the past six years (Coneval, 2015). Currently, 53% of the population is poor, which means that nearly 20 million people lack sufficient income to cover the basic food basket.

Mexico's poor economic performance is the outcome of the economic strategy that has been implemented, with few deviations, since the mid-1980s. This paper highlights two crucial failings of this strategy. This first is the obstinacy of excluding industrial policy from the government's instruments to promote changes in the productive structure. Once again, the administration is focusing on trade liberalization to achieve these changes, illustrated by the fanfare with which the government announced the future kick-off of the Trans-Pacific Partnership (PTT) (Moreno Brid, 2016). The second, and more serious failing, is the insistence on believing that low inflation and a very limited fiscal deficit are the necessary and sufficient conditions to unleash and guarantee high and sustained economic growth. These two features have marked Mexico's economic policy, standing in the way of breaking down critical barriers to development and in fact raising these barriers in some cases. To these growth limits, which are in some sense intrinsic to the current macroeconomic policy design and implementation, are added the extremely significant and adverse effects of various external shocks that the Mexican economy has faced in recent years, particularly as related to the international oil market or global financial circuits.

Reforms and the weakening of the productive development policy

The macroeconomic reforms of the 1980s entailed an abrupt turn in Mexico's development agenda towards prioritizing stability, eliminating trade protectionism, and reducing State intervention in the economy. The assumption was that these reforms would encourage private investment and bring robust growth, led by exports. The results were patchy. Inflation and the fiscal deficit fell, while the productive apparatus was redirected towards manufacturing exports. This progress in nominal stabilization and the positioning of exports as the motor of growth, however, did not bring with it the much-heralded high GDP growth or employment, both of which have grown at rates lower than the 1955-1980 average, not to mention lower than the rates of many other emerging or developing economies. In 2000-2012, average real GDP growth in Mexico was far below the Latin American average.

Echoing the central concern about flagging economic momentum, President Enrique Peña Nieto, starting in his campaign and also in the pact, committed to launching a series of reforms that would, according to him, guarantee sustained GDP growth at annual rates of 5% or more. The Pact for Mexico, for a time, was promising, labeling its own grand ambitions as a "new political agreement to drive economic growth and create the quality jobs that Mexicans demand" (Pacto por México, 2012). One central point was the inclusion of a series of explicit commitments adopted by the three political parties, with a series of actions or reforms to implement, encompassing the three main realms of national development: political, economic, and social. The legislative body approved the reforms, including the tax and energy reforms, and they were implemented over the first two years of Peña Nieto's administration.

Surprisingly, the pact made no mention of what had been announced during the presidential campaign in terms of applying a new industrial policy, to strengthen both clusters and value added chains in activities with already evident comparative advantages—such as the automobile and aeronautics industries—as well as to create new activities and protect nascent industries with potentially dynamic comparative advantages. At the discourse level, the campaign had asserted that it would apply industrial and technology progress policies in order to incorporate more added value to manufacturing exports, both *maquiladora* and non-*maquiladora*, and expand the range of local suppliers oriented towards both the foreign and domestic markets (Fundación Colosio, 2013). However, the statements made during the campaign did not trickle down to the Pact, and the imminent implementation of a new industrial policy remained pending, on hold. The only reference to this policy in the Pact was made as part of the proposal to create industrial poles of development in the poorest region in the south of Mexico.

This renewed and, in the traditional context of Mexican economic policy dating back to the mid-1980s, audacious vision in the campaign of this policy was limited in the text to declaring the intention of "driving and providing unprecedented articulation for science, technology, and innovation, so that Mexico, besides being a manufacturing power, will become a knowledge economy" (Pacto por México, 2012). This is the only reference to "manufacturing" activities or industrial policy in the entire agreement. A similar absence is notable in the 2013-2018 National Development Plan (PND), which points to industrial policy as a valid tool for the State to impact the allocation of resources as long as it does not involve the use of subsidies, or any other public sector influence that would distort the free signs and play of the market in the realms of investment, production, the functional distribution of income, and price setting resulting from extra-economic criteria. These distortions are seen by the current administration as a source of inefficiencies, non-competitive income, and corruption. As such, it accepts as legitimate the use of a policy to promote strategic sectors, as long as its interventions are explicitly and firmly oriented towards correcting market failings. From this perspective, the resulting policy has focused on regulatory simplifications and policies to promote competition. In this sense, government intervention in the allocation of resources in the economy must be subject to the provision of essential public goods, including providing and guaranteeing compliance with a legal framework that lends security to the respect of ownership rights and the celebration and enforcement of contracts.

This includes the coordination of public-private activities for infrastructure investment projects to strengthen productivity and recognizes that the productive apparatus is lagging in transitioning from a *maquiladora* model to a truly industrial model based on the creation of added value. The official perspective of productive development policy is meant to:

> “resolve market distortions [such as] monopolies or oligopolies, incomplete markets, asymmetrical information, and coordination among agents. [These] actions encourage collaboration between the private sector and the government to develop sectors with a greater impact on economic growth…[Their] objectives are centered around providing information to economic agents; implementing specific actions and instruments such as the promotion of human capital and financing; and coordinating, targeting, and prioritizing joint actions between the private sector and various levels of government” (Secretaría de Economía, 2013).

By setting as part of its directives the strengthening of “nascent activities with comparative advantages,” the office would seem to be echoing the policies of periods prior to foster nascent or infant industries. However, a closer reading reveals that this similarity is not what it seems, because for the current productive development policy, any intervention in this sense is justified only when it seeks to bolster the already apparent competitive advantages of the country, not create new ones. The current framework rejects any public policy intervention that significantly alters the workings of the market in terms of the allocation of productive factors, and considers that in its place, interventions can only be justified insofar as they eliminate obstacles to the free interaction of market forces (see Esquivel, 2010; Moreno-Brid and Ros, 2009).

This position opposes the viewpoint that considers that the new industrial policy must precisely correct distortions—and not merely correct market failings—in order to discover and drive new productive activities with dynamic competitive advantages (see Amsden, 2001; Chang, 2002; Cepal, 2012; Rodrik, 2008; Hausmann, Hwang, and Rodrik, 2005). This new vision is emerging from the recent global debate surrounding the topic. From that perspective, it can be asserted that the lack of an industrial policy, designed in this way, explains why the development agenda pivot, market reforms, and export boom have failed to achieve persistent GDP growth rates of at least 5% annually.

Besides this deficiency of the neoliberal agenda that has prevailed in Mexico for decades, there are others, including the incapacity or lack of political will to undertake profound tax reforms, a tendency to avoid the appreciation of the real exchange rate, and the exclusion of equality as a public policy objective. Although all of these are relevant factors, this paper is concentrated on industrial policy, in order to highlight its advantages, limitations, and risks, from both a theoretical and empirical perspective.

Structural change, manufacturing activity, and economic performance in Mexico

The economic reforms announced in concert in the launch of the Pact for Mexico in December 2012 are aligned with the market reforms implemented 30 years ago to deal with the oil debacle and debt crisis. As mentioned earlier, they set the priority as economic stabilization, understanding that to do so, both inflation and the public deficit must be kept low. The reforms supposed that the productive structure would be modified through the opening of the markets to competition and less state intervention in the economy. The elimination of these distortions, according to the government, would create a business climate conducive to an intense rebound in private investment that would position exports as the new motor of the Mexican economy.

These objectives were achieved, but with major caveats. On the one hand, both inflation and the fiscal deficit were abated. Over the past 20 years, the annual increase in the consumer price index has been in the single digits, generally between 3% and 4%. In fact, 2015 closed at 2.13% annual inflation. The fiscal deficit—excluding investment by Petróleos Mexicanos and contingent liabilities tied to social security pensions—has been maintained at below 3% of GDP for years. However, fiscal adjustments were achieved more due to the contraction of public investment than the reduction of tax evasion, the elimination of special regimes, or the progressive increase of the tax burden on privileged sectors. As a result, public finances continue to be afflicted by outsized weaknesses. Today, the tax burden as a percentage of GDP, excluding oil revenue, is lower than 12%, one of the lowest in Latin America. Until recently, nearly 40% of total fiscal revenue depended on oil resources. The proportion fell significantly in 2015 as international oil prices plummeted over 50%. This drop is notable because for years, the primary fiscal balance has been in the red. Likewise, the capacity to apply a counter-cyclical fiscal policy in light of adverse exogenous shocks is rather limited, if not non-existent.

As noted already, the reforms have served to redirect the productive apparatus abroad. Exports represent more than 30% of GDP as compared to 12% before the reforms. Moreover, in 1980, manufactures contributed less than 15% of the country's total exports. Now, they account for more than 80%. Mexico's performance in the global market is owed in part to the North American Free Trade Agreement (NAFTA), which increased exports to the United States (see López-Córdova, 2002). Between 1994 and 2012, only China and Korea exceeded Mexico in terms of increasing their participation in the global manufacturing export market, while also increasing the technological sophistication of its exports. In 1990, less than one-third were medium or high-technology intensity products as compared to the current 60%.

These advances were not accompanied by high and sustained growth for the Mexican economy. In fact, its growth rate has been lower in the period from the mid-1980s to date than it was in 1960-1981 (see Kehoe, 2010; Moreno-Brid and Ros, 2009; Moreno-Brid, 2016). From 1987 to 2014, the average annual GDP growth rate in real terms was 2.6%, which is far removed from the 1960-1981 average (6.7%). Even more concerning is that growth was even lower in 2013-2015.

The current administration's economic strategy conceives of low productivity as a fundamental cause of the country's slow economic growth. Not to discredit the administration, I disagree with this idea and rather perceive low productivity as a consequence of other factors that have led to the slow growth rate. The first of these factors is related to the structure of the Mexican industrial apparatus and foreign trade, because the export boom was accompanied by an even more intense increase in imports. It produced an increase in the income elasticity of imports, which, combined with the effect of currency appreciation, raised the propensity to import and, with it, contracted the Keynesian multiplier of income, so to speak, by 66%. Such a drop in the multiplier curbed the growth rate of the Mexican economy overall in light of increased public spending, exports, and investment.

The second factor has been the slowness of post-reform investment. Essentially, gross fixed capital formation as a proportion of GDP crashed immediately following the 1982 crisis, and since then has only partially recovered. Nowadays, the quotient is at 22%, less than it was in 1981 and below the 25% minimum estimated by ECLAC, UNCTAD, and others, needed to achieve economic growth above 5% annually (Cepal, 2012). In particular, it is alarming that investment in machinery and equipment has fallen various percentage points as a proportion of GDP. This is hampering modernization and the expansion of productive capacity, undermining the productivity and competitiveness of national industry in both the domestic and foreign markets. It is also contributing to dismantling the industrial structure in response to the breaking of productive chains and the concomitant replacement of local suppliers of intermediate goods and inputs by foreign suppliers. The disappointing evolution of total investment reflects the slow rebound of the private component that has been unable to compensate for the fact that public investment shrunk by eight percentage points of GDP.

It would be naïve to try to raise productivity or rebuild or multiply productive linkages in the industrial structure without constantly driving investment. But expanding investment is not enough. The country needs a new industrial policy to transform the economy and strengthen the generation of added value. It is not sufficient to be concerned only with raising the volume of exports. Many more bridges and trade ties with local suppliers must be built, and investment needs to be redirected towards the sectors that produce marketable goods—most precisely manufactures—that can compete successfully in international and local markets.

In this regard, the empirical evidence for large semi-industrialized economies shows that their economic growth is closely tied to that of the manufacturing industry. The prevalence of increasing returns to scale makes it a crucial driver of productivity for the economy as a whole as this sector absorbs resources from the primary and services sectors. A manufacturing industry whose competitiveness is based on its innovative capacity and generation of added value, rather than low wages, generates virtuous cycles of trade, growth, and equality. In these economies, the domestic market can be a motor for economic growth.

As Moreno-Brid and Sánchez (2016) wrote, there is a series of theoretical arguments and empirical evidence about manufactures as a motor of growth for large economies. These include the following: *1*) in panel studies, a high degree of empirically significant correlation is observed between the level of industrialization and per capita income in developing countries. In this way, a good portion of less advanced economies lack a significant industrial sector. While already developed economies experience a reorganization of employment and production towards services, in successful developing economies, the reorganization is the opposite and deindustrialization occurs; *2*) manufacturing tends to benefit from increasing returns to scale, so its productivity tends to be higher than that of other sectors, and development is accompanied by an absorption of productive factors that come from other sectors, in particular, agriculture; *3*) investment in manufacturing versus in agriculture is very dynamic; *4*) compared with agriculture, the manufacturing sector offers certain advantages of scale economies to investment, reflected in returns or earnings, due to the prevalence of its production in smaller spaces than in the agricultural sector and, finally, the income elasticities of demand are in favor of manufacturing activity products to the detriment of agrifood goods. Put another way, the upward trend in income implies a decrease in the share of spending on agriculture and livestock goods and an increase in the share of spending on manufactured goods. In that sense, the expansion of global trade is likely to have a greater share of manufactured products. The evidence from large emerging economies indicate that a competitive manufacturing sector, capable of generating net exports and absorbing employment, is an essential condition for sustained and sustainable development.

In this regard, Mexico's performance is frustrating. In 1960-1981, manufacturing GDP grew at an annual average rate of 5.4%; in 1982-1986, it collapsed more than total economic activity. Since then, it has grown at an annual average of below 3%, or even lower in recent years. As noted, the paradox to explain is why this slowdown is happening in the framework of booming sales abroad. In Southeast Asian countries (those with successful post-war industrialization), the intense expansion of manufacturing exports ran *pari pasu* with that of their added value. In Mexico, the behavior is precisely the opposite. The explanation for this paradox helps elucidate why non-oil exports, despite enviable momentum worldwide for more than 20 years now, have yet to push the Mexican economy into a high-growth phase.

The first factor to consider in this regard is that manufacturing added value did not grow at the same pace as gross value. This is due, in effect, to the fact that the Mexican manufacturing export boom was accompanied by an even sharper increase in import penetration, both of intermediate goods to be incorporated in manufacturing or, more precisely, assembly, as well as final goods (see Moreno-Brid, 1999). As a statistic, 33% of the increase of aggregate demand in the Mexican economy between the 1980s to the end of 2000 was satisfied by imported products. Such restructuring of the total supply towards imported goods is a sign of the rise in demand when trade barriers came down. However, it also reflects the breaks in the domestic value added chain in the productive structure of Mexico as various linkages that were previously locally generated were replaced by foreign competition. This export and import boom was accompanied by the solidification of a dual structure in which some very large companies managed to successfully pivot and compete in global markets, but did so by resorting primarily to imported intermediate goods rather than national goods. Parallel to this, the vast majority of small and medium-sized enterprises operate outside of the export boom, and therefore serve only the weakened domestic market.

For some, the manufacturing export boom was possible only due to growing dependence on imported intermediate inputs. In this sense, the divergent dynamics seen between added value and gross value of manufacturing exports are a consequence of the fact that manufacturing has become more of a *maquiladora* activity, intensive in imported inputs, which in a true transformation industry would generated added value, woven into the national fabric of production. Such a structural transformation is due to the removal of trade barriers, the persistent real appreciation of the exchange rate, and weak investment in tradable goods which caused competitiveness and productivity to lag behind in Mexico. It is no wonder that for more than two decades the manufacturing trade deficit—despite the export boom—has been the gravitational axis of the entire trade deficit; both have tended to rise even in times of slow or decelerated growth in activity levels.

An additional omission of the Mexican export model is that labor productivity is lagging farther and farther behind the United States, having lost around 20 percentage points in just a few years. This poor performance of the Mexican manufacturing industry prevents the country from absorbing the "surplus" labor from the rural and services sectors. This incapacity encourages informal employment, characterized by low productivity, low wages, and low or no access to the social security and protection system (see Coneval, 2015; Cordera, 2012).

In summary, low inflation and a restrained fiscal deficit have become the hallmarks of the Mexican economy. Likewise, before the 2008-2009 crisis, Mexico's manufacturing exports were very dynamic. However, the average GDP growth rate has remained low. This prevents the country from closing the income gap with respect to the United States and, more relevantly, from reducing poverty rapidly and significantly, and from creating more formal jobs. Essentially, Mexico's GDP per capita in 1982 was equivalent to 23.3% of what it was in the United States, and nowadays, it is as low as 17%. This gap is similar to the gap in the 1950s, nearly 70 years ago.

The scenario worsened after 2009, because exports lost momentum due to economic weakening and falling global trade, neither of which seems like it will improve in the near future. This external context has obliged Mexico to implement an industrial policy to make the domestic productive matrix more intense, consolidate value chains, and produce goods that can compete in terms of quality and price with imports, also in the domestic market. Urgent recovery of the domestic market will be a major, albeit not the only, motor for economic growth, and this growth will require placing the fight against inequality and poverty at the heart of the development agenda.

Industrial policy: theory and practice

The point of departure for this analysis is to explain the industrial policy that is sometimes referred to as productive development, and how it has an impact on the factors that determine the patterns and intensity of growth in the country. First, it should be emphasized that the fundamental objective of this policy is to drive the highest sustainable and sustained growth possible for the economy as a whole, rather than supporting any one specific industry or manufacturing sector. This industrial policy is about government policies that, in conjunction with reactions to market signals, modify the productive structure of the economy to promote growth potential at the aggregate level (Calderón and Sánchez, 2012; Cepal, 2012).

The industrial policy is based on two key assumptions. The first is that the market alone does not bring about transformations in the productive structure of the economy in the direction, magnitude, or speed desired by society, represented by the government. The second is that economic growth responds, in large part, to the composition of its production and exports, as a consequence of the amount and orientation of capital accumulation. Long-term economic growth is determined to a great extent by what a country produces and exports. Economies with a very diversified export structure tend to grow faster and with more stability than those whose exports are concentrated on very few products and commodities.

The productive structure of an economy is more likely to generate high and sustained growth if it exhibits the following characteristics: *1*) production and exports with capacity to compete in dynamic segments of the global value chains in global markets; *2*) production with a significant and growing presence of innovation- and high technology-intensive activities; and *3*) a high degree of interconnectivity, for both forward and backward linkages (see Cepal, 2012).

These aspects are important to keep in mind when designing, implementing, and tracking industrial policy, but they do not guarantee that the productive structure will be transformed in such a way that increases output and productivity in the long term. However, disregarding these features and permitting the allocation of real and financial resources to obey solely market forces is a recipe for disaster. It is also necessary to consider other factors that have an impact on the effect of industrial policy on economic growth. These include the institutional framework, the reaction of private investment to incentives and rules, access to financial resources, handling of macroeconomic policy, and the potential impact of external disturbances on the terms of exchange or on key markets. The historical and sociopolitical context is also important. If industrial policy design ignores these factors, it may give rise to complications and the policy may be irrelevant or even harmful.

There is growing consensus about the need to apply an industrial policy, but not about what it should look like and what its objectives and instruments should be. Historically, the topic of industrial policy has produced visceral and polarized reactions in Latin America; because it was the central pillar of the post-war development agenda, the neoliberal reforms exiled it from the official economic policy discourse. In practice, however, this did not prevent the governments across the region and from other countries—including wealthy nations—from carrying out broad, varied, and profound industrial policies.

The perception of industrial policy as a nostalgic reference to populist regimes is quite erroneous. In the wake of the 2008-2009 international financial crisis, industrial policy became once again part of both the academic and political discourses. And beyond debate, it is an important economic policy tool for many countries. The European Union, the United States, and other economic powers have launched ambitious initiatives to bolster their manufacturing sectors.

As an example of the resurgence of industrial policy, I point to a speech given by David Cameron, Prime Minister of the United Kingdom: “We need a more strategic, modern approach to maintain and develop our global competitive advantage” (…) “what I call a modern industrial strategy” (…) “[to support] industries where we have a competitive advantage” and encourage the “high growth industries of the future.” The politician added that the success of a modern industrial strategy resides in the “convening power of national government” to “position our key sectors so they have the best chance of winning in the global race” (*The Telegraph,* 2012).

Another example is the explicit commitment made by the Japanese government to “implement programmes and policies with the private sector to boost the manufacturing sector as a reaction to the increasingly aggressive industrial policies of the United States, Great Britain, China, France” (*The Economist*, 2010). In the United States, likewise, industrial policy has been and continues to be applied vehemently, although under a different name and with less hype. The reaction of the Barack Obama administration to the 2009 crisis, with its implementation of vast support and subsidy programs for industry and the financial system, is yet another clear example.

Numerous factors explain the return of industrial policy to the developed world’s agenda. The recent crisis lent fame to the concept as a tool to protect jobs and stimulate domestic demand. It also contributes to driving less environmentally harmful production technologies and the more efficient use of energy to compete in the “green economy.” China and India openly brandish industrial policy. In summary, “the truth is that everyone is using industrial policy—some more successfully and some more openly than others” (Ciruiak and Curtis, 2013).

Myths and challenges for industrial policy

The myth that the best industrial policy is no industrial policy reflects the orthodox viewpoint that this policy is a source of distortions and inefficiencies and should therefore be avoided.[1] The slogan has ideological roots but no solid analysis or track record. When it was coined, Mexico itself was applying an industrial policy to foster the *maquiladora* industry. As reported, market reforms did away with traditional industrial policy, as well as its programs and subsidies. By way of decrees and regulations, the country persisted in supporting the *maquiladora* industry, referring to the industry based on the intensive exportation of low-skilled labor and the use of imported intermediate goods. Some policies were added to shore up Mexico’s largest export companies by giving them fiscal incentives to import inputs and raw materials, as long as these materials were used for products that would soon be exported. This industrial policy persisted and in large measure is still in place today. It also contributed to the *maquiladora* export boom, with very low locally added value.

[1] This section and the previous section update and extend the analysis presented by the author in Moreno-Brid (2013).

The theoretical consensus is that market defects and failings justify public policy interventions in resource allocation. Nowadays, their use is justified, subject to the following considerations: positive externalities, strategic commercial strategy, nascent industries, coordination failures,[2] and the absence of non-existence of markets.

Positive externalities arise when the supply or availability of certain goods and services generates benefits for society as a whole that exceeds the benefits for the company that produces them. In these cases, the market alone does not guarantee a socially adequate supply of the goods and services. For example, a company trying to innovate assumes the costs of that innovation alone, but the benefits of the knowledge are easily cumulative for its current and future competitors. Without direct government intervention, the "supply" of innovation will be lower than the social benefit would imply. The private marginal net benefit is much lower than the social marginal benefit.

It is therefore pertinent to implement strategic commercial and industrial policies in industries with increasing returns to scale to gain higher market shares and a greater production scale, as well as to reduce the average production costs in order to boost productivity. Direct government backing is justified for two reasons: to enter new markets first and to expand the scale of production. Likewise, because other countries promote the international competitiveness of their enterprises through industrial policy, a government doing this within its own country results in higher benefits. Industrial policy can also be justified for certain nascent industry, insofar as productivity advances are far from linear and have gains that are accumulated practically exponentially thanks to "learning by doing." In the absence of temporary protection policies, nascent industries cannot reach the phases of high productivity in which benefits are fully harnessed. This argument is not widely accepted in Mexico, because it tends to be associated with failed experiences in the past, and the dark legend of import substitution. Although there have been missteps in the application of industrial policy, Rodrik (2008) concluded: "It is rather difficult to identify instances of nontraditional export successes in Latin America and Asia that did not involve government support at some stage."

Lin (2010), then a principal economist at the World Bank, wrote:

> Developing economies are ridden with market failures, which can- not be ignored simply because we fear government failure. One such market failure is caused by important *information externalities*. And as economic historians have demonstrated, many developed countries owe a substantial share of their progress to the systematic application of industrial policies to protect national manufacturing pursuant to the logic of nascent industries.[3]

Coordination failures presuppose that the market is unable to guarantee joint cooperation among private companies in situations where it would not be profitable to act in isolation, for example in investment, but it would be enormously profitable to invest in a coordinated fashion. For example, in many poor countries, the fragmented nature of investment by individual private enterprises is not sufficiently profitable. As such, the individual results summed together are not enough to prevent slow economic growth, unless the government

[2] For a detailed description, see Ciuriak and Curtis (2013).

[3] For a historical analysis, see Chang (2002).

coordinates investment to guarantee the benefits of economies of scale and break apart certain oligopolistic markets.

Another myth is that industrial policy must be limited to the application of so-called horizontal policies. That means, not resorting to initiatives that explicitly discriminate or stimulate certain industries to the detriment or advantage of others. However, except in the case of very basic policies, such as reducing bureaucracy, no horizontal policy exercises the same influence over different companies and industries. Policies to support innovation have a more positive impact on high technology and knowledge-based industries than industries whose production processes hinge on low wages and use unskilled labor.

The same is true of another frequently used horizontal policy, the accelerated depreciation of investment capital for tax purposes. Its effects are not uniform because they depend on the relationship between capital and labor in each company. Other horizontal policies, such as exchange rate depreciation or the easing of tariffs also have heterogeneous effects on different companies, depending on whether they produce tradable or non-tradable goods and services.

Another myth is that industrial policy is co-opted by interest groups and therefore becomes a source of corrupt practices and profit exploitation. The same is true of social programs, such as *Oportunidades*, and conditional transfers, which can be used to political ends. The solution is not to avoid the policy altogether, but rather to design efficient transparency, oversight, and accountability mechanisms to prevent the policy from being co-opted by special interests. Industrial policy incentives must be temporary, transparent, and evaluated based on measurable performance criteria defined in advance.

Another myth is that industrial policy exhibits the original sin of "picking winners," which governments cannot do better than the market. As Rodrik (2008) recalled, industrial policy does not seek to choose winners but rather to induce a process of experimentation and discovery with diverse incentives whose fundamental premise is to "let the losers go."

The problem with offering incentives and production to nascent industries is not that of wrongly picking some beneficiaries but rather prolonging support too much. The challenge is to prevent these incentives from becoming arbitrary, permanent, unclear, or contradictory. In light of market failures and absences, well-designed policy interventions improve the overall functioning of the economy, even when they make mistakes. Some who critique industrial policy for the supposed incapacity of the State to "pick winners" support social policies, such as conditional money transfers, which mean that the State has the capacity to pick "losers" at the individual or the family level.

Yet another myth, which is relevant to Mexico, is that industrial policy cannot do much given the international commitments imposed by NAFTA and other obligations entered into with the World Trade Organization. It is true that there are key limitations, such as the prohibition of trade barriers and direct export subsidies, as well as foreign direct investment and content of national origin requirements. Even so, there is plenty of space to maneuver and contribute to the structural transformation of the economy by way of financial and fiscal incentives to promote specific sectors or activities. For example, value chain integration programs; fostering research and innovation; policies to purchase national products in acquisitions and public contracts; and the use of fiscal and financial resources to build technical and educational capacities in the labor force (see Cardero, 2012). Another option is to strengthen industrial clusters and promote anything that leads to lower carbon emissions and a greener economy. The key resides not in the limitations that Mexico's international commitments impose on the industrial policy but rather the political will and financial and fiscal strength needed to implement an industrial policy and promote economic development with equality. There is debate as to whether industrial policy should be limited to strengthening existing comparative advantages or whether it should encourage the creation or accumulation of new comparative advantages. Even in the first case, the industrial policy can include numerous measures beginning with regulatory simplification, reducing transaction costs, and strengthening industries with proven competitive advantages. This position rejects interventions whose objective is to generate new competitive advantages. But moreover, economies that embark on a robust long-term development path are precisely those whose competitive advantages do not remain frozen in time. They systematically improve them through an intense process of creation and destruction, reinventing their capacity to join new and technologically complex linkages in the value chains of global markets. They manage to create significant linkages between companies that participate actively in the export markets and their local suppliers, and cheap labor is not the principal comparative advantage. Another myth is that an industrial policy guarantees the transformation of the productive structure and prompts high and sustained economic growth. This is not necessarily true, because other factors, both endogenous and exogenous, also determine economic growth. What is true is that it is unlikely that a country will manage to boost growth in the long term without an active and concerted industrial policy that involves all relevant economic players: the government, the private sector, and the labor sector. All of this, needless to say, presupposes a firm political commitment to a long-term development agenda with very clear and measurable goals in diverse aspects of performance, but especially for gross fixed capital formation, both public and private, in specific sectors.

Final reflections

Industrial policy is by nature selective, as it must explicitly foster certain activities in the name of structurally transforming the economy to engender long-term development. As noted, many of the most common objections to industrial policy are derived from a series of myths based on an analytically shaky but ideologically powerful foundation, insofar as they seek to oppose government regulation and intervention in the economy. The 2008-2009 international financial crisis should have shown how misguided that position is. When certain markets exhibit crucial failures in their functioning or simply do not exist, industrial policy and, in general, public policy related to regulation and interventions, has ample potential to benefit society as a whole.

The government is responsible for ensuring that its interventions in the economy have a perspective or horizon that is longer than that of the private sector with respect to the country's development agenda. This requires designing and applying an economic policy in particular to achieve, in broad strokes, the desirable evolution of investment, employment, the productive structure, and economic activity, maintaining stability in certain macro-level balances and an ethical and functionally adequate income distribution. In this endeavor, the government must have a robust fiscal structure that is able to intervene counter-cyclically to reduce the adverse effects of external disturbances on production and employment. And it has both the potential and obligation to apply industrial policy in coordination with the private sector to bring about the structural transformation of the economy and attain development.

Peña Nieto's government has admitted the need to implement an industrial policy to promote economic growth, which sparked debate in the country about what a modern industrial policy should look like in the current global context of economic uncertainty and weakness. The advances that have been made are worthy of notice, including an emphasis on the urgent need to create stronger linkages, both forward and backward, between exports and the rest of productive activities to drive economic growth and revive the domestic market in Mexico.

Despite these steps forward, including the approval of the Competition Law and the creation of the National Productivity Committee and the Economic Productivity Unit within the Ministry of Treasury and Public Credit, as well as the renewed official discourse in favor of an industrial policy, in practice, little has been achieved over the past three years. Rising poverty levels and acute inequality, in addition to a deteriorating labor market, as reflected in the rise of the working poor, are all symptoms of a weakened domestic market. The vast majority of official agencies have stood in the way of efforts to raise the minimum wage to an amount high enough to cover the basic needs set forth in the Constitution; an increase that would have been an unbeatable opportunity to democratize productivity. Even as this was happening, official statements lamenting Mexico's slow growth and attributing it to low productivity proliferated.

It should also be noted that in 2013-2015, public investment fell in real terms, to a point where today, its amount measured as proportion of GDP is the lowest it has been since the 1950s. The budgetary restraint of 2015 in light of plummeting oil revenue—still a pillar of public finances due to the lack of profound fiscal reform—does not augur well for public investment. Financing for productive activities continues to be scarce, as are resources for research and development. Nor is there evidence that in practice there is any national industrial policy with the necessary political resources and support. Meanwhile, some federal entities are further along in defining and applying a new industrial policy than the Ministry of Economy itself.

The recent depreciation of the real exchange rate may favor the competitiveness of Mexican industry, especially because it has not translated into inflationary pressures. The financial reform proposed by the current administration has a long way to go, in particular, to strengthen development banking and give momentum to loans for investment in productive activities.

As a result, in Mexico, the development agenda must include policies oriented towards boosting investment in and the competitiveness of manufacturing in both the domestic and foreign markets. In greater detail, said policies must consider the following objectives in order to truly transform the Mexican manufacturing industry: *1*) better insertion in the most dynamic niches of the foreign market—especially in the United States, China, and other select countries in Asia—, with competition based on knowledge intensity and not on low wages; *2*) generate strong and significant linkages with national suppliers to raise local content and added value, and therefore drive the rest of the economy; and *3*) contribute to expanding the domestic market with more and better jobs. This is especially relevant in the fallout of the 2008-2009 international financial crisis. The subsequent slowdown in world trade has made unviable any growth strategy that is counting on exports to be the motor driving the expansion of total productive activity—like Mexico's strategy post-NAFTA.

I agree with what the Secretary of the Treasury said in December 2015, insofar as Mexico has not transitioned from a *maquiladora* model to a true industrial model based on the creation of added value. To do so will require a new industrial policy. We are waiting.

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