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MEXICO’S NEW INDUSTRIAL ORGANISATION SINCE THE 1980s
Glocal challenges from export-orientation and polarisation

Enrique Dussel Peters

In the last 20 years Mexico was first a symbol of successful socioeconomic openness and development in the context of globalisation and the North American Free Trade Agreement (NAFTA); since the beginning of the twenty-first century, however, it became a symbol for not being able to compete with Asia and China. What are the current conditions of Mexico’s manufacturing sector and which were the main influences on this sector in Mexico since the 1990s?

Having these questions in mind, the chapter will be divided into three sections. The first examines a group of theoretical and methodological propositions to understand industrial development in the current historical context of globalisation based on systemic competitiveness, global commodity chains and ‘territorial endogeneity’. As we shall see, this conceptual framework allows for an understanding of Mexico’s manufacturing evolution since the 1990s and a dialogue between macro and micro-economists. The second section focuses on the main structural conditions and challenges for Mexico’s manufacturing sector since the 1990s and particularly for the period 2000–12. This section highlights both short-term and structural conditions and changes in Mexico’s manufacturing sector to understand its main challenges. Based on the former section, the third presents the main conclusions based on Mexico’s case study. As we shall see, the Mexican case is of relevance for the development of industrial organisations and manufacturing sectors in other nations.

Conceptual frameworks to understand industrial development in the twenty-first century

In development economics there has been a long development and macroeconomic tradition for understanding and justifying industrial analysis and policies. Proponents of import-substituting industrialisation (ISI) emphasised various forms of market imperfection – including low-level or underdeveloped economic equilibrium (Nurkse, 1955; Rosenstein-Rodan, 1961), domestic constraints or bottlenecks on economic development (in skilled labour and capital markets, in foreign exchange and in domestic savings and investment). They stressed the importance of direct state intervention, as well as industrial and trade policies, in order to achieve a balanced growth strategy which would increase capital accumulation and enhance investment in the modern sectors of developing economies. Dual economic and population structures, as well as the relationship between the agricultural and industrial sectors, played a critical role in this discourse (Lewis, 1954).

At least four issues are significant in these debates:

1 Much of this debate was rooted in the initial findings and discussion of Raúl Prebisch since the 1950s and his later work at ECLAC (Economic Commission for Latin America and the Caribbean) that highlighted the limitations of development under a core–periphery model in which the latter specialised in primary goods with a low income elasticity of demand vis-à-vis manufactured goods, with higher income elasticities to trade specialisation for Latin America and the Caribbean (LAC) in primary goods resulted in a continuous loss of terms of trade (Prebisch, 1950, 1964). Structural heterogeneity within the periphery, from this perspective, resulted in differences in productivity, high levels of inequality and, thus, in underdevelopment. Intra-Latin American trade and intraregional integration, from this perspective, was an option for a different kind of development that went beyond the core–periphery model.

2 At least as relevant for this discussion were the arguments of Hirschman (1958) stating the importance of specialisation in manufacturing as a result of higher income elasticities with manufacturing activities accounting for more backward and forward linkages – with the suppliers of their inputs and users of their products – than other economic activities. Thus, a shift towards manufacturing production would have a positive effect on growth and development in general.

3 In the context of ISI, and based on these arguments, a battery of instruments to support modern or ‘strategic’ sectors emerged: from tariffs and subsidies to non-tariff mechanisms to protect infant industries in addition to the creation of state-owned enterprises to produce imported intermediate and capital goods.

4 Parallel to these debates in the late 1960s a group of authors discussed the issue of unequal trade and dependency (Cardoso and Faléo, 1969) vis-à-vis Marxist arguments stressing that trade and any kind of exchange in capitalism ex ante includes exploitation and thus inequality.

Since then, several of these arguments have been discussed by different groups of authors and schools of thought. Of particular interest are, on the one side, issues regarding imperfect markets: from knowledge and information (von Hayek, 1992; Stiglitz, 1989) to different forms of dynamic economies of scale, product differentiation and entry-barriers (Krugman, 1981). In several of these cases, the respective authors highlighted issues such as the underdevelopment of labour markets, balance of payments and current-account constraints and bottlenecks, financing, innovation and production, among others, as well as different kinds of ‘gap models’ related to trade and the current-account (Dussel Peters, 2000; Ros, 2000). With the exception of von Hayek, all of the above-mentioned authors conclude that there is a justification for public and industrial policies. Export-oriented industrialisation (EOI) was another central response to ISI and, as we shall see below, critical for understanding Mexico’s current manufacturing structure.
Export-oriented industrialisation (EOI)
and liberalisation strategy in Mexico

Over the course of the 1980s, the new orthodoxy of export-oriented industrialisation (EOI) was widely adopted by policy-makers in Latin America. The lessons of the East Asian miracle, famously summarised by the World Bank in its 1993 report (World Bank, 1993), combined with influential analyses of the ‘rent-seeking’ behaviour associated with earlier ISI regimes in Latin America (Krueger, 1978, 1997), led to a categorical rejection of development strategies throughout much of the region and an embrace of export-oriented policies as the key to growth and development. Convinced that creating a market-friendly environment was the best way to generate foreign direct investment (FDI), policy-makers eschewed targeted industrial policy in favour of a neutral or horizontal approach (that is, policies that attempt to affect firms, sectors and regions, for example, without any particular distinction) and macroeconomic stabilisation became the highest priority of governments that attached great importance to the task of getting the macroeconomic fundamentals right.

The argument in favour of EOI builds on the positive association between exports and economic growth or development. Contrary to ISI, EOI stresses that the global economy, through exports, is the point of reference for any economic unit (firm, region, nation, group of nations). Exports, in general, reflect efficiency; that is, non-exporting economic units are not efficient from this perspective. It emphasises neutral or export-oriented production of manufactures to maximise the efficient allocation of factors of production and a specialisation among nations according to their respective comparative cost advantages (Balassa, 1981). Moreover, it underlines the central role of manufacturing in economies of the periphery based on the transfer of industries to the periphery as a result of comparatively cheap and unskilled labour. Contrary to structural restrictions or bottlenecks imposed by industrialisation – as stressed by some ISI-authors – this “intuitive Darwinian rationale for free trade” (Bhagwati, 1991: 17) argues that the degree and the structure of protection in the periphery under ISI had a significant negative impact on the allocation of resources, and subsequently on exports and overall economic structure.

Probably the strongest argument of EOI supporters against ISI’s infant industry protection and overall policy of state interventions is the rent-seeking behaviour it generates. As a result of market intervention under ISI – such as import licences, tariffs, but in general any form of market intervention – economic units in general, including firms and countries, generate perverse (or nonmarket conforming) results in this environment: excess capacity to obtain rents provided by the state, over-utilisation of promotional instruments, and, in general, an economic structure aimed towards reaping the incentives provided by the state. In parallel, these mechanisms generate perverse social incentives and structures, as in most of the cases, incentives are not taken by the initially expected groups (potential modern/industrial groups), but rather by rent-seeking and corrupt groups, which do not have an incentive to modernise/industrialise. The ubiquity of rent-seeking from this perspective is one of the most significant obstacles to development (Krueger, 1997).

The proposed alternative to interventionist economic management, from this perspective, is for the government to place the appropriate macroeconomic conditions for development – or the generation of a market-friendly environment – at the centre of economic policy. Opening the economy by abolishing tariff and non-tariff barriers to trade and investment, and combating inflation by means of restrictive monetary and fiscal policies, are the main macroeconomic goals of EOI. The state is minimalist, in this approach, while the private sector is conceived as the motor for future development and industrialisation.

It is in this international and national economic context that the major pillars and guidelines of the export-oriented liberalisation strategy in Mexico, since the 1980s, have developed (Aspe Armella, 1993; Dussel Peters, 2000; Salinas de Gortari, 2000, 2004; Sojo Garza-Alidepe, 2005). The key features are:

1. Macroeconomic stabilisation is to ‘induce’ the process of microeconomic and sectoral growth and development, so all sectoral subsidies and specific policies were to be abolished in favour of neutral or horizontal policies.

2. The main priority of the government was to stabilise the macro economy. Since 1988, the government had prioritised controlling inflation, relative prices and the fiscal deficit, as well as attracting foreign investments as the main financing sources of the new strategy, since oil revenues and massive foreign credits were either not available or were insufficient. The macroeconomic priorities of the liberalisation strategy were backed by restrictive money and credit policies of the Central Bank.

3. The nominal exchange rate was used as an anti-inflationary anchor. Thus since the conduct of the inflation rate was the macroeconomic priority of the liberalisation strategy, the government did not allow devaluation, which would result in increasing inflation due to the higher domestic prices of imported inputs (Barra, 1999). Additionally, a stable and overvalued real exchange rate was seen as an incentive for foreign direct investments and particularly for investment in the financial sector.

4. Supported by the re-privatisation of the banking system beginning in the mid-1980s and the massive privatisation of state-owned industries, the Mexican private sector was to lead the economy out of the ‘lost decade’ of the 1980s through exports. The massive import liberalisation process, initiated at the end of 1985, was supposed to support the private manufacturing sector in order to orient it towards exports, as a result of cheaper international inputs.

5. Finally, government policies towards labour unions were of utmost significance. As reflected in the respective Pacto Económico (or economic pacts between the public and private sectors, as well as with trade unions) since 1987, only a few (government-friendly) labour unions were deemed acceptable to negotiate inside firms and with the government, while the rest were declared illegal. This process, which has included violent disruptions of independent labour unions, has made national wage negotiations possible in Mexico within the framework of the respective economic pacts and with the objective to control real wage growth.

Up to the time of writing (2013) the Mexican government has continued, with few exceptions, with a consistent liberalisation strategy (PEF, 2013). NAFTA’s implementation in 1994 is of fundamental relevance for the liberalisation strategy. In a best case scenario, and allowing for a significant structural shift towards exports, the Mexican economy required an outlet and welcoming market for the commodities resulting from the structural change. This outlet was to be Mexico’s main trading partner, the United States.

These issues are relevant for understanding the macroeconomic and policy perspective as of 2013. In the last semester of 2013 the government was attempting to allow the privatisation of the oil and electricity public companies. Additionally, and to understand the coherence and dogmatism of macroeconomic policies today, at least two policies stand out. On the one hand, and even in the international and domestic crisis since 2008, the government has explicitly rejected any kind of anti-cyclical policy, contrary to massive fiscal and sectoral programmes in countries such as China, Japan, United States and the European Union (Banxico, 2010).
On the other hand, the Secretary of Economy continued even in December of 2008 in the middle of the worst crisis since the 1990s with its unilateral liberalisation of import tariffs for manufactured goods. The goal of macroeconomic stabilisation is still the main focus of macro and micro policy in Mexico in 2013.  

**Alternative conceptual frameworks**  
As discussed above, most of the debates on industrialisation in Mexico have resulted from a macroeconomic perspective. Important alternative discussions on industrial organisation, trade, growth and development (Rodrik, 2001, 2007; Thirlwall, 2002) are also highly influenced by and come from a macroeconomic perspective. At least three concepts and methodological issues are relevant, from this alternative perspective, to enrich the understanding of industrial organisation in the context of ‘global’ processes, and to move beyond the discussion of the 1960s and 1970s: debates on (1) global commodity chains, (2) systemic competitiveness and (3) territorial endogeneity.

1. **Global commodity chains (GCC) and their segments.** The methodological contributions of Gary Gereffi, Jennifer Bair and Miguel Korzeniewicz, among others, have highlighted the importance of firms participating in GCC and specific segments of value chains (Gereffi and Korzeniewicz, 1994; Bair and Dussel Peters, 2006). From this perspective, GCC are constituted by different segments with specific characteristics: the yarn–textile–garments (YTG) GCC, for example, are constituted by dozens of different segments, from research and development (R&D) in new fabrics and nanotechnology to the assembly of specific parts and components in the garment industry. Although they are part of the same YTG-chain, they are extremely different in terms of technology requirements, employment, wages, training, financing, required equipment, participation of small and medium firms, type of investment, possibilities for trade and competition with local and global producers, and so forth. This customer-driven commodity chain is substantially different to the autoparts–automobile chain, controlled by producers and fabricators.

2. **Systemic competitiveness and collective efficiency.** Understood as a critique of Michael Porter’s view of competitiveness (Porter, 1990) a group of authors at least since the 1990s have noted the importance of integrating the micro, meso and macro levels of analysis (Esser et al., 1994). Thus, and contrary to a view that prioritises micro or macro aspects, this school of thought emphasises that competitiveness has to be understood at the micro, meso and macro levels; the exclusive prioritisation of one of the levels is insufficient and leads to simplistic, insufficient and limited policy proposals that do not understand the complexity of socioeconomic processes in space and time. Since then a group of authors have highlighted different factors of the systemic competitiveness approach, including the meso-economic level of competitiveness – or of inter-firm and institutional relations (Mesporta, 2013; Meyer-Stamer, 2005), the governance and control of whole chains and respective segments and the technological and detailed characteristics of each of the products and processes. Otherwise, the analysis would lack specific knowledge and could effectively fall in a ‘romanticism’ by which an exclusive local perspective would be able to determine the full scale of the GCC and even to negotiate with transnational corporations (Messner, 2002). Based on the contributions of these authors the meso-economic level of analysis is critical (Meyer-Stamer, 2001), as well as the degree of inter-firm integration that allows for different degrees of learning, innovation and collective efficiency (Lester and Piore, 2004; Humphrey and Schmitz, 2004).

3. **Territorial endogeneity.** While the former schools of thought and respective arguments are relevant in the current policy discussions and as an alternative to the neoclassical school of thought, they lack the concept and proposals of ‘territorial endogeneity’, i.e. the specific form in which territories integrate with the world market in specific segments of ‘global’ commodity chains and the particularities of the form of the systemic competitiveness they achieve (Dussel Peters, 2000, 2008). Thus, it is not the firm, but territories (whether a country, a region, a municipality or a zone) which are the socioeconomic starting point of analysis (Bair and Dussel Peters, 2006; Vázquez Barquero, 2005). From this perspective, it is important to incorporate systemic aspects of competitiveness and to move beyond a primitive macro- or microeconomic exclusive perspective. Starting from the respective territories and their potential for collective efficiency in territorial terms, the segments of GCC that integrate globally from a ‘global’ perspective – i.e. both global and local – need to be considered. Thus trade, industrial and business policies need both a global and territorial perspective which includes the particularities of the segments of a GCC at the relevant territorial level, so that narrowly national indicators of competitiveness and policy interventions are generally insufficient. ‘Territorial endogeneity’ recognises the importance of GCC, but highlights a territorial perspective as against a simplistic macroeconomic perspective that, for example, establishes a general association or elasticity between textile exports and the real exchange rate. In contrast, this approach allows for a detailed differentiation between the real exchange rate and many different items in the YTG-GCC (considering that the YTG-chain accounts for more than 4,500 items in the Harmonised Tariff System). Any direct association with the real exchange rate is unlikely to be relevant for most of these. In addition, each of the segments of a GCC requires a territorial analysis in terms of the industrial organisation and structures and factors that underlie these specific products and processes. Methodologically, the analysis should start with detailed products and processes distinguishing between products (from semiconductors to bananas) and their respective production processes (from R&D, logistics, assembly, manufacturing, final configuration and transportation for example). Policy proposals regarding an upgrading process are much more relevant from this stance. The contribution of systemic competitiveness – including micro, meso and macroeconomic levels of analysis – also enriches this debate and the policy options. However, in addition ‘territorial endogeneity’ usefully examines and measures supplier and client relationships, backward and forward linkages, value-added shares, R&D structures – and their respective effects – in specific segments of value-added chains in their respective territories.

**Mexico’s manufacturing sector**  
Based on EOI and Mexico’s liberalisation strategy up to now, what are the main effects and results in Mexico’s manufacturing sector? This section will examine three general issues regarding manufacturing – first, overall growth and trade performance; second, gross capital formation (GCF) and financing by the private sector; and third, an analysis of industrial organisation in order to understand the former general trends.

Table 18.1 reflects the disappointing growth performance of the Mexican economy since the introduction of the liberalisation strategy at the end of the 1980s. In terms of GDP per capita, Mexico’s average annual growth rate was only 1.2 per cent during 1990–2012, which is far below that of many Latin American and Asian countries, particularly China (with an average growth of 9.4 per cent for the same period). This performance is also low by Mexican historical standards over the period 1940–60, with per capita growth being about 3.3 per cent on
average. For the later period, 2000–12, per capita growth was significantly lower than in Latin America as a whole and was similar to that of the high-income OECD economies.

As expected by the EOJ and the liberalisation strategy, Mexican overall trade and export performance has been outstanding in historical terms as well as compared with other economies. Trade as a percentage of GDP more than tripled for the periods 1961–80 and 2001–12, accounting for 58.2 per cent in the latter period (see Table 18.2). This performance is the result of the liberalisation strategy and the implementation of NAFTA in 1994. The importance of trade in GDP is far higher than in other large countries, such as Brazil and the United States.

Two other tendencies in the economy are significant in understanding the Mexican manufacturing sector under liberalisation. On the one hand, there has been a lack of dynamism of GCF as a percentage of GDP (see Table 18.3) with the ratio remaining relatively stable throughout the period. Particularly significant is that Mexico’s – and Latin America & Caribbean’s – GCF coefficient is at a level far below that of East Asia & Pacific and China. In addition, comparative international data show that Latin America & Caribbean (LAC), and particularly Mexico, have very low levels of domestic credit to the private sector as a percentage of GDP; in the case of Mexico, for example, throughout 1960–2012, levels were never above 30 per cent, while LAC has had levels above 40 per cent since 2010. As East Asia & Pacific as well as China, however, have a level of private sector credit of more than 100 per cent of GDP since the beginning of the twenty-first century. Both variables show that the growth process in Mexico since liberalisation has not been accompanied by shifts in financing and investment, both compared with Mexico’s own historical performance but, much more importantly, compared with competitors.

Table 18.2 Trade as percentage of GDP – selected countries and regions, 1961–2012

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>12.91</td>
<td>15.56</td>
<td>19.48</td>
<td>40.22</td>
</tr>
<tr>
<td>Brazil</td>
<td>15.29</td>
<td>17.33</td>
<td>17.87</td>
<td>25.76</td>
</tr>
<tr>
<td>Chile</td>
<td>33.78</td>
<td>53.71</td>
<td>56.78</td>
<td>69.67</td>
</tr>
<tr>
<td>China</td>
<td>10.62</td>
<td>24.89</td>
<td>38.52</td>
<td>58.85</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>61.48</td>
<td>65.65</td>
<td>83.54</td>
<td>91.57</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>31.66</td>
<td>40.51</td>
<td>44.63</td>
<td>60.57</td>
</tr>
<tr>
<td>European Union</td>
<td>43.84</td>
<td>55.02</td>
<td>59.90</td>
<td>76.07</td>
</tr>
<tr>
<td>Korea, Republic</td>
<td>43.47</td>
<td>65.82</td>
<td>62.49</td>
<td>86.76</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>25.58</td>
<td>33.54</td>
<td>41.90</td>
<td>49.28</td>
</tr>
<tr>
<td>Mexico</td>
<td>18.40</td>
<td>30.86</td>
<td>51.52</td>
<td>58.21</td>
</tr>
<tr>
<td>United States</td>
<td>13.02</td>
<td>18.73</td>
<td>22.93</td>
<td>26.91</td>
</tr>
<tr>
<td>World</td>
<td>29.91</td>
<td>39.01</td>
<td>44.54</td>
<td>55.58</td>
</tr>
</tbody>
</table>

Source: Author’s calculations based on World Bank (2013).
What are the main reasons for this disappointing performance of the economy and of manufacturing in particular? A number of points are relevant for understanding the structural change in Mexican manufacturing since the launch of the liberalisation strategy.

First, there is the surprising, and increasing, fall of manufacturing's share in GDP and employment. In spite of the initial positive expectations of NAFTA and the trade opening for manufacturing (Dussel Peters and Gallagher, 2013), the sector has witnessed a rapid fall in its share in GDP and total employment throughout the period and particularly since 2000 (see Figure 18.2). In the case of GDP, manufacturing's share fell from levels close to 24 per cent of GDP in 1988 to close to 16-17 per cent since 2005, while manufacturing's share in total employment decreased from above 35 per cent at the end of the 1980s to less than 27 per cent since 2009. In both cases there is a general downward trend over the period and particularly since the 1990s and the beginning of the 2000s. What are the main reasons for this performance since liberalisation?

At least three issues are relevant for understanding Mexico's manufacturing structure and its decline under the liberalisation strategy. First, Mexican exports since the late 1980s increasingly have depended on 'temporary imports to be exported' (TIE). Under EOI there have been important incentives in terms of value-added and income taxes, as well as tariffs, which encourage the import of parts and components to allow fast transformation processes in Mexico to allow their export in manufactured or semi-manufactured form (mainly to the USA). Figure 18.3 shows this composition of Mexico's exports by process for 1993-2010, highlighting that exports are highly dependent on TIE and oil, accounting for almost 81.6 and 14.0 per cent of total exports during the period, respectively. As a result of the former trends, EOI in Mexico's manufacturing sector has incentivised a highly dynamic and export-oriented manufacturing sector, based on TIE and ever-increasing imports with little domestic value added, also described as 'import-oriented industrialisation' (Dussel Peters, 2000). This is the main cause of the low levels of value added and 'territorial endogeneity' of Mexican exports and in manufacturing in general, given the incentives provided by the government for several decades. Thus EOI-processes in Mexico are highly dependent on imported parts and components and there is a general lack of backward and forward linkages with effects in terms of limited R&D, upgrading options, wages and employment. The issue has been analysed and discussed in Mexico for decades. OECD-WTO TIVA (2013) examines, for example, how Mexico's domestic content in gross exports fell over 1995-2009 and shows how it is significantly lower than most OECD countries, as well as compared with Brazil, China and Russia, among others. The main reason is the low level of 'indirect' domestic content that is the indirect contribution of national suppliers. 'Indirect' domestic content in Mexico's exports is the lowest compared with other nations in the machinery and equipment category, the most significant export category since the implementation of NAFTA.

TIE often reflects primitive production processes – in some cases of highly sophisticated goods in autos, telecommunications and aeronautics, creating low levels of value added, R&D and 'territorial endogeneity', since the higher value-added segments of global chains, as well as the production of parts and components and segments related to services, are typically located elsewhere in competitor economies. These TIE processes have become the core of Mexico's manufacturing sector, significantly affecting its value-added and employment structure.

Second, Mexico's liberalisation strategy has resulted in a massive socioeconomic polarisation process. Only a few households, firms, branches, sectors, and regions in Mexico have benefited since the late 1980s, while most have seen their economic position either remaining similar or declining. In terms of exports, for example, around 6,000 firms accounted for manufacturing exports during 2007-10 – or around 1.4 per cent of manufacturing firms in 2008 – while 1,100 manufacturing firms with more than 500 workers accounted for more than 80 per cent of total manufacturing exports (INEGI, 2013); at the branch level, only three manufacturing chapters of the Harmonised Tariff System – autos, automobiles and electronics – accounted for more than 71 per cent of total exports during 2001-12 (Monitor de la Manufactura Mexicana, 2013). As a result, the liberalisation strategy in Mexico has benefited a small group of big export-oriented firms with few and decreasing domestic backward linkages with subsequent relatively small effects on the domestic economy in terms of suppliers, production, wages and value added.

Figure 18.2  Mexico's manufacturing GDP and employment (share of respective totals), 1988-2012.
Source: Author's calculations based on World Bank (2013).

Figure 18.3  Export structure by type of programme (share of total exports), 1993-2003.
Source: Author's calculations based on SICM (2012).
Third, and even for this relatively small and ‘successful’ small group of capital-intensive and export-oriented firms in Mexico, since the end of the 1990s and beginning of 2000s competition from Asia and particularly from China has increased drastically and Mexico has been displaced profoundly in value-added chains such as electronics, YTG, toys and furniture. The important exception is the autos-parts-automobile value-added chain where the country has a major advantage in transport costs to the USA. For the period 2000–11, for example, 95.81 per cent of Mexico’s manufacturing exports to the USA in 2011 were under ‘threat’ of Chinese competition, while 74.45 per cent of US manufacturing exports to Mexico were under ‘threat’ from China (Dussel Peters and Gallagher, 2013). As this latter study shows, value-added chains such as YTG were successful in the first period of NAFTA (1994–2000), but have not been able to compete with Asia and China since then; in the case of Mexico the YTG value-added chain has lost more than 50 per cent of its employment since 2000. In aggregate terms, China is today Mexico’s second trading partner, but in an import–export relationship of 10:1 in 2012, and thus China is becoming the main source of Mexico’s trade balance deficit. Asia and particularly China have thus become a massive challenge for EOI in Mexico and the overall North American integration process.

Conclusions

As discussed in the first section, a dialogue between micro- and macroeconomists is still relevant for understanding industrial organisation and manufacturing under current globalisation. The theoretical debates since the 1960s in terms of dependency, imperfect markets, export-oriented industrialisation and liberalisation are critical for an overall understanding of manufacturing in most countries. In addition, however, global commodity chains, systemic competitiveness and territorial endogeneity offer methodologies and an understanding in ‘space and time’ of specific segments of value-added chains that is critical in the twenty-first century. From this perspective, macroeconomic elasticities and relationships are, in most of the cases, of limited help in understanding the increasing complexity of specific segments of value-added chains in particular products and processes. The Harmonised Tariff System (HTS)11 today presents information, at the 10-digit level, for more than 17,000 products and generalisations, that is not relevant even in the best of the cases. A ‘systemic’ approach to competitiveness — respecting macro, meso and micro approaches — in which the particular form of integration with globalisation is fundamental (what we term ‘territorial endogeneity’) allows for such a dialogue. The differences between challenges in terms of “territorial endogeneity” policies is critical and beyond ‘deterministic’ and macroeconomic associations and elasticities between trade, GDP and the exchange rate. From this perspective the arguments on industrialisation in Latin America stemming from Prebisch in the twentieth century, have to be discussed in detail and revisited for thousands of products and processes and, there is, by no means, a positive association between specialisation in manufacturing goods and processes and income. On the contrary, there are many arguments for specialisation in agricultural and agro-industrial goods and processes in higher segments of the respective value-added chains, as upgrading is possible in any value chain. These topics are critical in terms of policy proposals, since an overall industrialisation process is by no means a necessary condition for success, as simplistically proposed in the past and currently still argued by some.

The case of Mexico’s industrial organisation is strongly related to the latter conceptual discussion. Based on EOI, Mexico’s liberalisation strategy strongly engaged in a specialisation in manufacturing goods. However, and as discussed above, Mexican exports have been extremely dependent on TIE and a policy stance which provides incentives to import parts, components and other processes for goods made for export. As the Mexican case shows, however, independent of the particular goods concerned this has resulted in little employment, with the use of relatively capital-intensive processes with few domestic backward linkages. Since the key inputs are imported, few innovations and R&D processes are required, resulting in a lack of competitiveness. Thus over several decades a dogmatic macroeconomic perspective has combined with perverse incentives to block an upgrading process. Mexico’s manufacturing sector is thus an interesting case for understanding the limits of such an EOI strategy and its increasing unsustainability in terms of competitiveness vis-à-vis Asia and China. As discussed above, Mexico’s manufacturing sector is extremely weak against Chinese competition in its main export market — the United States — and domestically has been massively displaced since 2000 in terms of its share in GDP and employment, and this is in spite of a first stage of successful integration into NAFTA.

An analysis based on territorial endogeneity suggests the need for systemic instruments to support the manufacturing sector in terms of macro-, meso- and microeconomic policies to allow for an upgrading process in specific products and processes.12 After more than 20 years, NAFTA and market-friendly policy instruments have failed to develop Mexican manufacturing and its experience has raised profound questions about these policies and overall NAFTA integration.

Finally, while the results of EOI have been extremely limited and have caused a decline in manufacturing share in total GDP and employment, the general argument of this chapter is not a ‘return’ to ISI and policies and programmes of the 1970s and earlier. Such a ‘back to the future’ view does not make sense and is not feasible for Mexico’s manufacturing sector. The argument is that considering the massive structural changes in Mexican manufacturing since the late 1980s, a new understanding is required based on the concepts and methodological approach of GCC, systemic competitiveness and territorial endogeneity — and with new policies to address the massive new challenges posed in recent decades for competitiveness in specific products and processes in particular territories. Otherwise, EOI will continue to be successful in terms of exports, productivity and other variables, but with an ever declining share of manufacturing in GDP, employment and particularly in terms of declining backward and forward linkages within the economy.

Notes

1 For a full analysis of this discussion, see: Dussel Peters (2000), Moreno-Bríl and Ros (2009) and Ros (2000).
2 The approach of Kaldor (1966) and his three empirical laws or generalisations are from this perspective highly related to Hirschman’s approach: first, a strong causality between economic growth and growth in manufacturing; second, a strong association between growth in a specific sector with productivity growth as a result of static and dynamic returns to scale; and third, a positive causality between growth in manufacturing and productivity beyond manufacturing (Kaldor, 1984).
3 See also the works of authors such as Samir Amin and Theotonio dos Santos, among others (Amin et al., 1971; dos Santos, 1970)
4 Since the existence of statistics, the United States has been Mexico’s most important trading partner, so that an export-orientation without the option of increasing exports to the United States did not make political sense (Salinas de Gortari, 2000, 2004; Weintraub, 1991).
5 By Decreto the Executive sector in Mexico liberalised unilaterally more than 8,000 items on 25 December 2008 (Dussel Peters, 2009). As a result, the average tariff fell from 11.5 per cent in 2008 to 6.9 per cent in 2010 (PEF, 2010: 208).
6 While the new administration under Peña Nieto since 2013 stresses the importance of an industrial policy, it explicitly rejects the option of granting subsidies or major interventions, and highlights the goal of removing barriers and obstacles for development such as monopolies and oligopolies, so that in practice the policy stance of the current administration is very similar to EOI and the liberalisation strategy since 1988 (Moreno-Bríl, 2013).
The change in the export-to-GDP ratio from 8.4 per cent during 1961–80 to levels above 25 per cent on average for the periods 1991–2000 and 2001–12 illustrates an important important structural change in the economy (World Bank, 2013).

This is particularly true for Mexico’s manufacturing sector. Financing granted by commercial banks based in Mexico to firms – at a percentage of manufacturing GDP – fell by 68 per cent during 1994–2012, while it increased by more than 360 per cent to the public sector (Monitor de la Manufactura Mexicana, 2013).

TIE-programmes in Mexico have been developed since the mid-1960s and are related to maquiladora and other export programmes which allow exporting firms to avoid value-added taxes, income taxes and import tariffs. Depending on the specific programme, different incentives are on offer. For a full discussion, see Dussel Peters (2003) and Katz and Dussel Peters (2006).

TIE, for example, typically includes processes in which parts and components – from electronics to automobiles and agriculture – are temporarily imported to be exported in a modified form; oil is not a TIE since it does not require temporary imports. While there are no specific statistics on the value added of TIE, in general, the ratio of domestic inputs to total inputs has been between 2 and 4 per cent since the beginning of these processes up to now.

Mexico’s R&D in terms of GDP has been declining since the 1980s and accounts today for 0.4 per cent. This is directly related to the specialisation pattern of manufacturing based on TIE.

The HTS registers trade information at the 2-, 4-, 6-, 8- and 10-digit level, while the International Standard Industrial Classification (ISIC) includes a group of variables relevant for the manufacturing sector.

As discussed above, upgrading processes do not necessarily refer to highly sophisticated processes, as upgrading in apparently primitive processes can still create positive economic effects and can allow for future upgrading in new and more technologically sophisticated products.

References


The Routledge Handbook of Industry and Development is a global overview of industrialisation. Each chapter will provide readers with contemporary insights into this essential aspect of economic development.

Industrialisation has been at the forefront of discussion on economic development since the earliest days of development economics. But over the last fifty years, the manufacturing sectors of different countries and regions have grown at strikingly different rates. In 1960, developing countries took a very small share of global manufacturing production. Today the position has changed radically with fast growth of manufacturing in many parts of the world, particularly in China and the rest of East Asia. On the other hand, countries in Africa and parts of Latin America have been largely left behind by this process of industrialisation. This volume aims to illuminate this uneven development and takes stock of the current issues that hinder and support industrialisation in low and middle-income economies.

This Handbook is a collection of chapters on different aspects of industrialisation experience in a range of countries. Key themes include: the role of manufacturing in growth, the nature of structural change at different stages of development, the role of manufacturing in employment creation, alternative options for trade and industrial policy, the key role of technology and technical change, and the impact of globalisation and the spread of global value chains and foreign direct investment on prospects for industrialisation. Several chapters discuss individual country experiences with examples from India, Mexico, South Africa and Tanzania, as well as an overview of African industrialisation.

This authoritative Handbook will be a key reference source for those studying or wishing to understand contemporary economic development. Offering inspiration and direction for future research, this landmark volume will be of crucial importance to all development economics scholars and researchers.

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INDUSTRIAL DEVELOPMENT IN INDIA

Uma Kambhampati

In the 1950s and 1960s the Indian Government, like the governments of many other developing countries, used industrial policy to facilitate and encourage the transition from agriculture to industry. Unlike many other developing country governments, however, it also had an active competition policy to avoid excess concentration of assets and of production. Together these policies were intended to facilitate its objective of growth with industrialisation but also with socio-economic equity. During this period, the manufacturing sector was seen as central to economic growth both by academic economists and policy makers for a number of reasons. Its processes enabled division of labour and specialisation, allowing it to benefit from increasing returns to scale, unlike the agricultural and service sectors. Manufacturing was also seen as benefiting from longer and deeper linkages (both backward and forward) and within this, the heavy industrial sector was credited with the longest and deepest linkages (a characteristic that made it the focal sector in Socialist development plans). The manufacturing sector also experienced agglomeration economies and benefits from dynamic returns to scale through learning by doing and technological improvements.

In addition to these advantages, it was felt that the shift to manufacturing was part of the 'natural' order of development because of changes on both the demand and supply sides. Thus, increasing incomes would result in an increase in the demand for manufactured products (first towards processed food and then low level consumer goods followed by higher technology consumer durables). On the supply side, increasing productivity in the agricultural sector would create an excess supply of labour in this sector which could be more productively employed in other sectors. The growth of the manufacturing sector, it was expected, would absorb this excess labour and help employ these workers provided that there was sufficient investment in the sector. Some versions of this transition formed the basis of the Lewis (1956) theory of economic development and its extensions. Rostow (1960) also argued that "take off" into growth would require structural change towards a key sector (usually manufacturing). This transition towards manufacturing would be interrupted if there was insufficient investment in the manufacturing sector and it is to avoid this that many developing countries used industrial policies in the 1950s and 1960s. Like most developing countries becoming independent during this period, Indian planners were not convinced that industrialisation could be left to the market or that the market outcome would be appropriate for India.