

Assessing the role of the export sector in Mexican economic development, 1965-2014

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Summary.

The main objective of this thesis is to identify the existence of a process industrial upgrading in Mexico's exporting sector from 1965 to 2014. Four dimensions of upgrading are here assessed: (1) domestic content of manufacturing exports; (2) value added to output ratios; (3) labor productivity, and; (4) participation of skilled-labor. The period of time here studied starts from the first policy attempts to incentivize manufacturing production between firms Mexico and in the United States (i.e. the establishment of the Maquiladora program in 1965), until a period of time where manufacturing became widely fragmented across many countries and regions of the World economy (2014).

In order to meet this objective, this dissertation relies on specific aggregate and firm-level information for Mexico's exporting firms. Aggregate information includes international trade statistics, national input output tables and data in terms of Mexico's national accounting systems that is also classified per manufacturing sector. Such aggregate information is also here linked with additional data provided by major multi-regional input-output datasets. On the other hand, the firm-level information here used corresponds to the official panel datasets for the firms in Mexico that were registered in export promoting programs from 1990 to 2014.

Exporting firms in Mexico are here classified according to the export promotion framework that they belong to. Firms exclusively producing for exports are those included in the Maquiladora program (1965-2006), while firms producing both for exports and for the domestic market were included in the PITEX program (1985-2006). By 2007, to further strength the competitiveness of the exporting sector, policy makers merged those two export promoting programs into a single framework (known as IMMEX). In addition, this dissertation also takes into account other two types of firms: 1) the official data for firms in Mexico that are highly engaged in international production networks (i.e. the concept of Manufactura Global), and; 2) the rest of firms that are located in Mexico's domestic manufacturing.

Upgrading in exporting firms is here analyzed considering the following perspectives. I first start with the policy perspective (Chapter 2). In general lines, Chapter 2 argues that Mexico's policy framework has prioritized higher employment, output and higher levels of foreign direct investment in the exporting sector at the expense of upgrading. Official attempts to develop a network of domestic suppliers have been observed from the opening of the Mexican economy to foreign markets (1982). Nevertheless, the vast majority of exporting firms are reluctant to source inputs domestically as domestic supplier are unable to meet high quality and delivery standards.

A global perspective of manufacturing production is discussed in Chapter 3. Here, I indicate that all advanced and developing economies in the World economy are experiencing decreasing domestic content in their production for final manufacturing output. Depending on the specific characteristic of each manufacturing sector, the main

source of such decreasing domestic content in final output could be either a higher interaction with foreign suppliers located at the country's same region, or a higher interaction with suppliers located in other major regions of the World economy. Firms operating in the sector of electronics, textiles and other manufacturing that are located in advanced and emerging economies are more prone to increase their interactions with foreign suppliers that are outside of their region of origin. For the rest of manufacturing sectors in advanced and emerging economies, and for the manufacturing production in the rest of the developing World, the main source of decreasing domestic content will be higher interaction with regional suppliers.

A long-run perspective on the aggregate evolution of the domestic content of Maquiladora exports, and on their use of highly skilled workers, is presented in Chapter 4. I indicate that such domestic content presents a continuous decline since Mexico decided to open its domestic market in 1981. Such situation was still present by the end of the Maquiladora program (2006). External shocks and key policy changes (both taking place in 1982 and 1994) as well as the composition of Maquiladora output (which is mostly consistent of electronics) largely account for this continuous decline.

Chapter 5 further assesses domestic content embodied in Mexico's final manufacturing output by taking into account the specific country of origin where value added was originally created. With this analysis, I indicate that manufacturing firms in Mexico can participate in local, regional and global value chains. Local value chains are the predominant type of organization for firms in domestic manufacturing as they mostly source their input from local producers in Mexico. Exporting firms, on the other hand, can participate in local regional or global value chains depending on the manufacturing sector being analyzed. Regional value chains are mostly observed in the textile sector in light of the increasing presence of value added coming from the United States. Global value chains are mostly observed at the electronics sector given the important participation of East Asian firms in the production for exports within this sector. The production for exports within the transport sector mostly relies on domestic suppliers and, thus, we infer that the predominant type of production here is local value chains.

Labor productivity in exporting firms is analyzed in Chapter 6. In this chapter, I show that the exporting sector does not contribute much to changes in aggregate labor productivity for total Mexican manufacturing. Manufacturing firms in the domestic sector are the ones driving changes in aggregate labor productivity. Upgrading in the exporting sector (i.e. value added to output ratios) does not play an important level in inducing aggregate productivity changes. At the firm-level, we also observe that value added to output ratio do not show any relevant variation over time.

Two main conclusions are obtained from this dissertation. The first one is that the exporting sector has transformed Mexico in a top manufacturing powerhouse for the World economy. The combination of thoroughly elaborated export promoting policies, trade agreements, unique access to the US market, as well as the intention to fully exploit the set of country-specific competitive advantages enjoyed by Mexico are the main factors that help us understand such important achievement. On the other hand, by means of any relevant indicator studied by this dissertation, Mexican manufacturing has clearly failed to induce a substantial transformation of its exporting sector towards

more complex and technologically advanced manufacturing activities. A process of industrial upgrading that could allow the exporting sector in Mexico capture a higher amount of benefits in the current context of international fragmentation of production is still far from being present.