Substitution Process of National Inputs by Imports in the Brazilian Manufacturing Industry

Topic: Feedback Session 3b
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The Brazilian process of trade opening in the 1990s had an impact on the countryâ€™s productive activity. As a result, there was an asymmetric integration of the Brazilian manufacturing in the global production. The country has participated much more as a consumer of products from other parts of the international networks of large corporations, to satisfy the domestic market or the regional market, than as a producer. The consequence has been losses of sectorial relations of demand. The purpose of this article is to analyze the losses of sectorial relations of demand in the Brazilian manufacturing industry through a process of increasing substitution of domestic inputs by imported ones from 2000 to 2013. The hypothesis is that Brazil has joined the global value chains in an asymmetrical and subordinate manner. The novelty of this research is the use of the method of structural decomposition of the backward linkages of the Brazilian manufacturing sectors, making possible to visualize if imported inputs reduced the backward linkages of these sectors. The period of analysis is divided into three sub-periods, from 2000 to 2003, from 2004 to 2008 and from 2010 to 2013, which better circumscribe the countryâ€™s economic performance. The period of 2000 to 2003 corresponds to the period before the commodity boom, in which Brazil had low and unstable economic growth. The second period, between 2004 and 2008, relates to the effects of the improved world scenario for countries exporters of commodities. In this period, the Brazilian economy presented a better economic activity, with the higher economic growth rates of the period of analysis. The year 2009 was not included as it was an atypical year. Finally, the third period, between 2010 and 2013, captures the period in which the global crisis affects the country and Brazil presented a lower economic activity.

The question that emerges is whether Brazil has been inserted in the global value chains through a process of replacing national inputs with imported ones?

We propose to calculate the Ramussen-Hirschman backward linkages, use the structural decomposition of those backward linkages and also calculate imported coefficient of tradable inputs. The Brazilian manufacturing industry is classified according to its technological intensity, using Pavitt (1984) methodology, which classifies the sectors into five categories: intensive in natural resources; labor-intensive; intensive in scale; with differentiated technology and technology based on science. The input-output matrices are deflated using the method of double-deflation.

The analysis is undertaken using the Brazilian input-output matrices with aggregation of 56 sectors for the period 2000 to 2008 and with the aggregation of 68 sector for the period 2010 to 2013, estimated by Guilhoto and Sesso Filho (2010) and based on National Accounts.

The results of this research show that the substitution of national inputs by imported products occurred in Brazil from 2000 to 2013, mainly in the industries of intensive technology in scale and differentiated. The latter were the sectors with greater potential of generating income. There is a correlation between the participation of products with a higher technological intensity and the level of income between countries: in the high-income countries, the medium and high technology sectors accounted for 77.1% of the manufacturing value added in 2010, against 40.5 % in low-income countries (Mazzanti et al., 2015). There is also a growing participation in the industrial structures of industrialized and emerging industrial countries in the sectors of the third industrial revolution: information and communication technologies; and medical, optical and precision equipment. In Brazil, however, the internalization of these sectors was partial and reduced (Sarti and Hiratuka, 2017). This process weakens the links between productive chains, at the same time as the externalization of the domestic market to imports occurs in products of greater technological intensity.

References

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