

Interregional Trade, Structural Changes and Regional Inequality

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(Extended) Abstract. Recent studies have identified in Brazil and other Latin American economies three broad spatial regimes associated with regional integration to the global economy: (i) a dynamic space associated with “primary exporters” in which the connections are easily associated with specific and scattered export activities; (ii) an “intermediate space”, which assumes a role of transition in the context of the interface between the country’s interregional system with the world economy, more articulated with the domestic markets; and (iii) a denser economic space, more integrated with the world economy, where higher efficiency in manufacturing and services activities plays a crucial role in affecting the country’s overall competitiveness. As these different forms of integration of subnational economies define hierarchies of regional economic structures, one would expect their influence on a region’s responsiveness to national business cycles, ultimately affecting the trajectory of regional inequality.

Different strands of research have analyzed regional performance within business cycles. It is a well-documented empirical fact for Latin American countries that regional income inequality varies over time, with alternating periods of increase and decrease (Azzoni, 2001; Azzoni and Haddad, 2018, 2020; Barufi and Haddad, 2020). More recently, two complimentary bodies of research have been looking at the business cycle co-movement in subnational economies over time, and at the role of structural changes during periods of booms and recessions. The former relates the co-movement with the size of the regional economies, the productive structure similarities, the relative level of development, and geographical distance (Mejía-Reyes et al., 2019; Aroca and Mejía-Reyes, 2023; Azzoni & Castro, 2023). The latter relies on historical input-output databases as valuable sources of information for uncovering some of the important dimensions of structural change in an economy, and for unraveling the various sources of growth of national and regional economies (e.g. Feldman et al. 1987; Dewhurst 1993; Sonis et al. 1996; Dietzenbacher and Los 2000; Hitomi et al. 2000; Romero et al. 2009; Zhang and Lahr 2014; Haddad et al., 2020). The focus falls very often on the role played by technical change and changes in final demand, the latter reflecting changes in social preferences (Haddad et al., 2014). It combines with other approaches based on input-output systems that have attempted to analyze the structure of multi-regional trade flows. Feedback loop analysis has been used for both interregional (Sonis et al. 1995, 2001) and intercountry input-output tables (Sonis et al. 1993) providing an opportunity to examine the hierarchy of intra- and inter-regional trade flows within an integrated economic system.

Combining both frameworks is particularly interesting for assessing the regional propagation of the recent period of economic stagnation in the Brazilian economy. From 2011 to 2019, the period of our analysis, real GDP grew only 2.73% (0.34% a.a.), and population increased by 9.24% (1.11% a.a.) resulting in an overall reduction of per capita GDP equivalent to -5.96% (-0.76% a.a.). In the same period, real GRP from the 27 states varied from -4.7% in Sergipe, to 33.6% in Mato Grosso. In the case of Brazil, the regional productive structures have played an important role since the sectoral pattern of the impacts was influenced by the geographical presence of the public sector and foreign export activities. However, when taking into account direct and indirect effects, the inter-regional integration of the Brazilian economy has also influenced the spatial propagation of the impacts through a complex diffusion of the multiplier effects.

In this paper, we will use a unique database comprised of two fully specified interregional input-output tables for Brazil, estimated for the years 2011 and 2019. What has happened to regional inequality during this period? Have Brazilian states adjusted in different ways? What role did interregional trade play? Using techniques of structural decomposition analysis (SDA) for comparing different economic structures in the context of partitioned input-output systems, we will be able to assess the main driving forces of the changes faced by the Brazilian regions in the so-called “Second Lost Decade”. We will then combine the SDA results with observed demographic changes to identify the main drivers of change in regional inequality during this period of economic stagnation. By focusing on the different dimensions of integration, we will show that changes in intra-regional and international integration were the main drivers of the observed reduction in regional inequality. However, inter-regional trade was also an important element to drive changes in regional value-added, acting as an absorber of structural changes for the richer states. While poorer regions faced technical coefficients and final demand adjustments through stronger internal linkages that favored the internalization of the multiplier effects, they simultaneously increased their dependence upon the rest of the system, increasing the existing leakages.

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