Income inequality and globalization: new evidence from a sectoral perspective

Topic: Input-Output Analysis: Income Distribution Policies - II
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The intensification of globalization processes that has taken place since the 1990s brough about several implications, among which the international fragmentation of production and its configuration along Global Value Chains (GVCs) should be highlighted. As this has affected how global value added is distributed, both within and between countries, these processes might have influenced the recent trends observed in global income inequality.

Recent studies have addressed these relationships between intra- and inter-country inequalities and countries' involvement in GVCs, although those have only been studied at a country/region level. Indeed, these conclude that measures of integration into GVCs (such as participation and position) are related to measures of inequality within countries (usually, Gini indexes) and between countries (indexes of convergence/divergence). Furthermore, the relations to position measures are quadratic, adjusting to the 'smile curve hypothesis', in the sense that value added tends to concentrate in the tails of the chains, and so differential behaviors between upstream/downstream and intermediate positions appear.

As was already commented, this has been done mainly at country level. At sectoral level, previous research has focused on the impact of sectoral diversification/concentration on inequality. These works find that diversified/concentrated productive structures indeed affect income distribution, with results varying depending on countries' levels of development or income.

In this context, we aim to deepen in the relationship between inequality and involvement in GVCs, analyzing how different patterns of trade affect could affect income inequality. Thus is, we want to answer questions such as: How does a higher number of suppliers affect a country's social outcomes, both internally and in respect with other countries? Does occupying central positions in the global networks have an impact on intra-country inequality? How does exports sectoral specialization affect inequality indicators, and which sectors are more determinants?

For achieving our purpose, we are using the latest release of OECD's Inter-Country Input-Output (ICIO) tables, which covers 66 countries and 45 industries for the period 1995-2018. To find these relationships, we construct a panel. We use the tables to calculate two indicators of country's involvement in GVCs, which are participation (a country-sector share of value added embodied in exports over global value added embodied) and position (which, in turn, indicates the 'upstreamness' of the vertical specialization of a country or, in other words, if its production of intermediate inputs is focused on primary or in final goods, a longer distance to final demand meaning a higher upstreamness). Besides, a set of institutional variables highly related to income inequality are used as controls in the panel: these are unemployment rates, enrollment rates in tertiary education, Foreign Direct Investment, Corruption control indexes, Patents, and urban population (all from World Bank). Besides, two sets of dummies variables are included as controls: a time dummy for controlling the 2008 crisis, and a dummy for geographical areas for controlling for spatial effects (and also for levels of development of different areas).

Nonetheless, the novelty of this paper is in the study of these relations to the sectoral anatomies of countries/regions. For doing this, using the input-output tables, we calculate several indicators for measuring different productive structures, such as Herfindahl indexes of sector/country concentration, sectoral participation, or measures of economic complexity associated to technological capabilities. These will be used to determine which are the strategic sectors that might

have influenced the evolution of social inequality in relation to countries' engagement in GVCs.

Finally, some indicators of inequality must be calculated to be used as endogenous variables in our model. As measures of intra-country inequality, we calculate Gini indexes and income concentration from World Inequality Database. These can be complemented with existing measures of inequality and poverty from the Luxembourg Income Study and Poverty and Inequality Platform from the World Bank (these measures including, namely, Atkinson indexes, relative income ratios, relative poverty rates, etc.). Concerning inter-country measures, we calculate ratios of value added per capita to global value added, in order to account for convergence or divergence processes through a linear transformation of these formula.

In short, we hope to contribute to the research line that studies relations between income inequality and globalization by taking into account the sectoral dimension, which we consider to be a key determinant of countries' social outcomes, but has been left out of the existing literature at the moment, to the best of the authors' kn