## Gender dynamics in employment associated with Brazilian international trade in Knowledge-Based Services (KBS): an analysis of total and bilateral trade with South America in 2019

Topic: Trade and Global Value Chains Policies

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Depending on how women and men manage to insert themselves into society, an intensification or retraction of export and import flows in an economy can affect them in different ways. Consequently, changes in international trade can directly or indirectly impact gender inequalities, calming, reinforcing, or perpetuating them.

The paid labor market is one of the privileged loci to discuss the impacts of changes in international trade flows on society and the well-being of its population. This occurs because, in a country, part of the jobs are associated with trade flows, whether those generated by exports or those threatened by imports. On the one hand, the production of exported goods and services generates direct and indirect jobs, and, on the other hand, the sectors most sensitive to import competition may contract, threatening the jobs associated with them (ECLAC, 2021b; FONTANA, 2020).

From the point of view of value-added, trade flows and the labor market, the services sector stands out for its importance to the Brazilian economy. In 2019, the sector was responsible for more than 70% of the country's gross value added, respectively 12.0% and 20.3% of total exports and imports, and concentrated 85.7% and 61.3% of jobs for women and men in the Brazilian economy.

Furthermore, recent transformations in the organization of production in economies with the profusion of global and regional value chains make the service sector, mostly Knowledge-Based Services (KBS), even more intertwined with industrial and agricultural activities. In other words, because of these transformations, the outsourcing of several activities that were previously carried out within an organization/company has occurred, the separation between industry and trade has become more tenuous and the service content in manufacturing production has grown. significantly – to what is conventionally called the "servitization― of manufacturing (ILO, 2019).

Likewise, it is also worth noting that several authors (such as, for example, BRESSER-PEREIRA, NASSIF and FEIJÓ (2016)) consider that certain service subsectors – those "technologically sophisticated marketables― – play, along with high-performance sectors, technological content, a strategic role in development because they have a high added value per capita and remunerate their workers with high salaries.

Recognizing these facts, the objective of this work is to estimate and analyze the content and profile of female and male employment associated with the Brazilian international trade in KBS in 2019, in quantitative and qualitative terms, seeking to answer to what extent gender inequalities in the Brazilian labor market are reproduced in this context. Given the importance of South America as a trading partner (a partner that is the destination of approximately 11.9% of Brazilian exports and the origin of 10.1% of its imports), we will compare the volume and employment profile associated with total international trade with that associated with bilateral trade with South America.

The methodology used to calculate the employment content associated with total and bilateral exports and imports with South America is based on studies such as CASTILHO (2007), KUPFER, FREITAS and YOUNG (2003) and ECLAC (2021a; 2021b; 2022) and It is detailed in FERREIRA (2022). The data used for such estimation are the Input Output Matrix estimated for the Brazilian economy by ALVES-PASSONI and FREITAS (2020), data from the labor market, from the Brazilian Household Survey (Pnad contÃ-nua), and international trade, available in SISCOMEX and SISCOSERV. Furthermore, to qualify jobs, an Employment Quality Indicator (EQI) is calculated, disaggregated by sex, where we group the following variables, coming from the continuous PNAD, into a synthetic indicator: remuneration per hour worked, participation in management positions, the proportion of people formally employed, length of time in the position and participation of women (or

men) in the sector. For all these variables we understand that the higher their values, the better the job characteristics will be for the workers. These indicators are averaged and the IQE is obtained by sector, allowing comparison between sectors and indicating which ones have higher quality jobs. Subsequently, we calculate an indicator weighted by the total sectoral employment of the economy, associated with exports and imports. In this case, the female and male QEI associated with exports, imports and total employment is compared.

The main expected results are to present stylized facts that contribute to arguing that greater Brazilian regional integration with South America cooperates to reduce gender inequalities in the paid labor market associated with Brazilian international trade, with emphasis on the KBS sector.