Research Statement

Alessandro Ruggieri*

Universitat Autònoma de Barcelona and Barcelona GSE

Over the past 40 years, globalization forces took momentum. Several developing and advanced economies have embarked on programs of trade liberalization, dismantling trade barriers, and lowering imports and exports tariffs. Trade flows have significantly expanded, increasing the import penetration of intermediate inputs and final goods, and exposing countries to "foreign competition". Furthermore, improvements in the communication technologies have facilitated the unpacking of production into "offshorable tasks", making producers around the world rely constantly more on trade and global supply chain. As a result, the volume of world-wide cross-border transactions has grown significantly faster than the production of goods and services.

The wide-ranging effects of cross-border trade on welfare are complex and politically debated. Despite the well-known aggregate gains from trade, globalization has been identified as one of the main sources of disruption in the labor markets. Furthermore, while it is only one of many possible forces affecting labor markets, it is much more at the center of the political debate and the public opinion than any other. Like much technological advance, globalization benefits society as a whole, while harming certain groups of people. Understanding the relative costs and benefits of product market integration can help to alleviate the burden and sustain the aggregate payoffs.

In my research I study the effect of globalization and trade reforms on labor market performance, inequality, and welfare. To this extent, my papers contribute to the literature that lies at the intersection of international trade and labor economics. In my work, I focus on understanding (i) how globalization forces induce changes in the distribution of earnings and income across workers, (ii) how frictions and regulations in the labor market determine how unemployment and sectoral employment adjust in response to a trade shock, and (iii) how foreign market exposure affects workers' human capital accumulation and shapes their life-time earning trajectories. In order to address these questions, I construct general equilibrium models featuring heterogeneous firms engaging in international trade and heterogeneous workers′ searching for jobs and receiving on-the-job training. In these environments, firm and employment dynamics emerge endogenously and as a result react to policies. I structurally estimate these models using moments from longitudinal firm- and worker-level survey data. I use the theoretical framework to conduct counterfactual experiments on trade barriers and labor market regulations, and, ultimately, to assess the welfare implication of different forces at play.

*Contact: Departament de Economia i Historia Economica, Facultat D′Economia, Edifici B, Universitat Autònoma de Barcelona, 08193, Bellaterra, Spain, aruggierimail@gmail.com.

In my **job market paper**, "*Trade and Labor Market Institutions: a Tale of Two Liberalizations*", I study how labor market institutions at the time of a trade reform determine the post-reform dynamics of unemployment and inequality. I first use a panel of 40 developing countries that embarked on programs of trade liberalizations to document that: (1) unemployment increases on average following a trade reform; (2) there are significant cross-country differences in unemployment responses; (3) cross-country variation in the labor market institutions in place at the time of the reform can account for the observed differences in unemployment responses.

I interpret this evidence through the lens of a model of international trade, featuring heterogeneous firms, endogenous industry dynamics, and search and matching frictions in the labor market. To unveil the role of labor market institutions, I employ a rich institutional framework which includes employment protection legislation, statutory minimum wage, and unemployment insurance. I estimate the model to match the pre-liberalization firm dynamics in Colombia and Mexico, two countries that differed significantly by the labor regulations in place at the time of trade liberalization. I push the state-of-art in the literature that almost exclusively focuses on steady state comparison and I characterize numerically the full transition path towards the new steady state

I find that up to 46 percent of the average response in unemployment induced by a trade reform can be attributed to the regulations in place at the time of the reform. I show that the response is stronger and more persistent when the firing costs are lower and the statutory minimum wage and unemployment benefits are larger. Hence, consistent with the cross-country evidence, labor market institutions are a key determinant of how labor markets react to trade reforms. I also demonstrate that labor market institutions generate a trade-off between larger but more unequally-distributed income gains versus lower but more equally-spread income gains.

A key lesson from my job market paper is that the transitional dynamics following a trade reform can be highly non-linear, and, to this extent, standard steady-states comparison of welfare gains is potentially misleading. In my future work, I plan to build upon the results of my job market paper to further explore the nature of the transitional response to trade shocks. In particular, the introduction of ex-ante workers' heterogeneity would enable the model to speak about heterogeneous post-reform effects and sorting between tradable and non-tradable sectors. Moreover, the introduction of a more articulated informal sector will allow me to better characterize the difference between the short- and long-run response of unemployment, in a framework where informality is an instrument for workers to cope against trade-induced job loss.

In another paper, titled "*Training, Offshoring, and the Job Ladder*" and coauthored with Nezih Guner and James Tybout, we study the effect of offshoring and import competition on workers' careers, employment reallocation and earning trajectories. Using US worker-level survey data from the Survey of Income and Program Participation (SIPP) and the Panel Study of Income Dynamics (PSID), we first document that in the last 30 years: 1) job-to-job transitions have declined on average, particularly within low-skill and low-paid occupations, and into more trade-exposed occupations; 2) transitions out of employment have increased on average, particularly from employers in low-skill and low-paid occupations, and from employers in more trade-exposed occupations; 3) provision of on-the-job training has declined in low-skill, low-paid and more trade-exposed occupations and increased in high-skill, high-paid and less trade-exposed occupations; 4) the earnings gap between trained and untrained workers has grown; 5) the wage life-cycle profiles for jobs in occupations more exposed to globalization have flattened relative to others.

To interpret these facts, we develop an open-economy search model, where heterogeneous workers engage in on-the-job training and climb the job ladder. In this framework, globalization destroys low-skill jobs in the trade-exposed occupations - thereby changing incentives to invest in college degrees and on-the-job training - while improving the relative demand for high-skill occupations. We find that changes in relative demand for low- versus high-skill occupations induced by a reduction in trade barriers can potentially explain the stylized facts that we document.

My research plan for the future is to further explore the magnitude of the welfare gains from trade and unveil the heterogeneous effects across the population. Despite the large academic literature in international trade, and the extensive debate among policy makers, very little is known about (1) the distributional effects of product market integration, i.e. who are the "winners" and who are the "losers" of globalization, and (2) the active policies in the labor market that can enhance or hamper these gains.

The first pillar of my future works will focus on the effects of globalization on labor income risk, job uncertainty and unemployment risk, using a framework where precautionary savings could help heterogeneous workers insuring against variation in firms' hiring and firing policies induced by trade exposure. Almost every paper that focuses on trade and labor market frictions assumes risk-neutral workers and abstracts from asset accumulation. Introducing workers' accumulation of wealth in a model of international trade, that features incomplete market for assets and frictional labor market, could potentially deliver such a framework, while being consistent with the observed increase in wealth inequality observed, among the others, in the US during the last decades. The ultimate objective of this project, joint with Nezih Guner and James Tybout and titled "*The Price of Globalization*", is to quantify the welfare cost of globalization.

The second pillar will focus on the effect of trade policies on human capital accumulation, with a particular emphasis on in the interaction between firms' participation in the foreign market and job training provision. In a work still in progress, titled "*Trade, Human Capital Accumulation and the Career of Workers*", I use firm- and worker-level survey data for Brazil, to document that: (1) exporting firms are more likely to provide job training to their workers relative to non-exporting firms; (2) exporting firms are more likely to train production workers relative to non-production workers; (3) trained workers enjoy a wage premium and larger within-job wage growth relative to non-trained workers; (4) trained workers experience larger employability relative to non-trained workers. The plan for this project is to reconcile these findings within a structural model of international trade, discipline the model to replicate Brazilian micro-evidence on formal employment dynamics, life-cycle wage profiles, and dynamics of formal firms, and use the model to address the effectiveness of re-training programs aiming at helping trade-displaced workers.