PAMELA MEDINA

Department of Economics
Duke University
213 Social Sciences, Box 90097
Durham, NC, 27708-0097

+1 (202) 674-9768
pamela.medina.quispe@duke.edu
http://sites.duke.edu/pamelamedina/

Research Statement

My research centers on Applied Microeconomics with policy-relevant applications on the fields of International Trade, Industrial Organization and Development Economics. In particular, it focuses on the application of industrial organization methods to two broad areas of research: (1) international trade and industry performance, and (2) firm dynamics and determinants for growth. Below I describe in detail my research agenda.

1 International Trade and Industry Performance

In my first line of research, I examine the effects of globalization on industry performance, a question that has been central to the economic and policy debate of the last two decades. With the trade liberalization of various developing countries, and more recently with the rapid growth of low-wage countries such as China or India, governments and policy makers have raised a deep concern about the potential effects of trade for their economies and are seeking for guidance. In particular, my research agenda aims to analyze the relationships between import competition and within-firm technological change represented by quality upgrading, innovation and product diversification.

In my job market paper, "Within-Firm Responses to Import Competition: Quality Upgrading and Exporting in the Peruvian Apparel Industry", I study how apparel manufacturers in Peru respond to competition from Chinese imports. The workhorse models of international trade, which have emphasized across-firm effects of trade, would predict that import competition generates selection of more efficient firms and reallocation of factors between them, contracting the industry. In fact, this is what happened in many apparel industries around the world following China's accession to the WTO. However, the Peruvian apparel industry managed to kept afloat. Despite no government intervention and the fact that Peruvian firms were losing considerable share in the domestic market, the industry survived primarily due to a burst in their export activity and the switch to production of high-quality garments.

My research extends existing models of trade to allow for both of these patterns. I do this by developing a dynamic general equilibrium model that builds upon recent trade models of heterogeneous firms and extends them by allowing the redeployment of inputs within the firm, across its products, as well as differences in taste for qualities across countries. When firms receive a negative shock in their domestic market, factors would be redeployed to export production. Moreover, given richer countries have a greater taste for quality, production increase due to factor reallocation would be mostly focused on high-quality goods. I take the model to data, and find that the possibility firms had to switch to high-quality products and sell them in the export market increases annual industry sales by as much as 17.5 percent as it also has a major effect on employment (17.7 percent) and firms' annual profits (16.4 percent). All of those without any lost in consumer welfare, whom still gets the benefits from the variety and prices of Chinese apparel. These effects contrast sharply with the impact of commonly used trade policies to protect domestic industries such as tariffs. While they can increase industry sales, they do so at a major cost on consumer welfare.

Policy-wise, the model serves as a tool to examine and predict more exhaustively firm and industry responses to policy measures that change the level of import competition, considering firms are also responding in this margin. More importantly, it shows that by considering within-firm responses such as the ones I study, policy makers should redirect their agenda to foster industry growth and include alternative policies such the strengthening of the supply chain of high quality products or lowering cost to access high quality inputs rather than the use of import tariffs to protect their domestic industries.

There are two extensions of this work I am currently pursuing. First, given that the access to high-quality inputs is key, it is important to understand whether all firms are able to switch. Based on interviews with small firms in the Peruvian apparel sector, this was not happening. Instead, big and medium sized firms were establishing contracts in advance with textile producers for most of their Pima cotton production. This project aims to look whether vertical integration and forward contracts are results of import competition as well as what are the specific inefficiencies preventing a group of firms to access high-quality inputs.

In order to disentangle whether it is vertical integration or other type of barrier which prevents firms to switch to high-quality products, I will complement my existing dataset with information of mergers and acquisitions from the National Registry of Property in Peru, and previously unexplored data on suppliers given in the National Economic Survey. This dataset will allow me to explore: (1) whether vertical integration was a response to import competition, (2) whether there is a higher concentration of Pima cotton suppliers for certain firms, and (3) whether both vertical integration and supplier concentration are responses to import competition. Therefore, this paper relates to the vast literature on competition and vertical integration and presents new evidence on how firms reorganize in order to assure they are able to upgrade their quality.

A second extension will explore the fact that not all firms switch products or start exporting at the same pace. This project aims to look at the importance of transitional dynamics on firms' survival as well to understand the reasons of differences between short- and long-run responses to trade shocks. In this project, I drop the assumption of fixed factors of production and model in detail the process of accumulation of the shared factor faced by different firm types. Given that one source of heterogeneity could be differences in the costs of including new markets and products across firms, I also differentiate between observable (export fees) and unobservable costs (managerial ability, network) for switching products and destinations. This will allow me to provide more accurate policy recommendations of what can the government do in order to help firms to switch to more profitable segments, i.e., reduce export fees (observable costs) or promote export agencies (unobservable costs).

2 Firm Dynamics and Determinants for Growth

Most of the industrial organization literature has focused on supply-side determinants of firms' growth. However, as highlighted in the groundbreaking work by Foster et al. (2008), firms' growth is not only driven by idiosyncratic factors such as a firms' productivity but, to a great extent, explained by systematic demand factors. In my second line of research, I focus on different demand driven situations that might be determinant for firm survival. Among several, I study demand factors such as customer-supplier relationships in the case of firm to firm transactions and information asymmetries in the consumer side of entrepreneurs.

In a first project, "Demand and its determinants: The case of customer-supplier relationships in the

US Automobile Industry", I explore the importance of customer-supplier relationships for the survival of upstream firms. As Foster et al. (2009) suggest, when considering firm to firm relationships, from the point of view of supplier firms, these highly persistent and endogenously-formed demand process could be exemplified as customer-supplier relationships. By using a simple theoretical model and fairly underutilized sections of the Compustat database, I characterize these relationships in the US automobile industry and estimate their main drivers. Understanding those is important and could help explain the cascade effect originated by the bankruptcies of major US automakers General Motors and Chrysler in the late 2000s. Given the big three US automakers shared several suppliers, the fact that customer-supplier relationships highly determine suppliers' survival entails great risk for all agents in the industry.

Results of the analysis show that the formation and dissolution of customer-supplier relationships, just like firms' overall entry/exit processes, depend critically on productivity. However, they are also heavily dependent on variables related to the existence of the relationship such as the supplier's previous experience, and the revenue and diversification of these partnerships. Moreover, the findings also provide suggestive evidence on the existence of capacity constraints or strategic behavior of automakers that turn out to be more relevant than diminishing technological costs or economies of scale when suppliers decide the number of customer-supplier relationships to hold, even when controlling for other supplier-level idiosyncratic factors. Finally, to further complement this project, recently acquired data from Automotive News would be used to better asses the nature of the customer-supplier network.

In a second project, in joint ongoing work with José Martinez, "The Effect of Information Disclosure on Small and Micro-Enterprise Development: Evidence from Traditional Restaurants in Ecuador", we examine another demand characteristic that could affect, in particular, micro and small firms. In this paper, we analyze what are the effects of asymmetric information for firms' development and whether policies focused on informing consumers such as quality certifications and information campaigns have a significant impact on small firms and entrepreneurs growth and investment. In addition, we aim to understand how these demand shocks affect not only treated firms, but also spillover effects to nearby competitors. Finally, given that many small firms in the retail sector are family-owned businesses, the study also considers the effect of these demand shocks on the entrepreneur's household welfare.

Empirically, we focus on the impact of 2015 Ecuador Me Sabe Bien (EMsB), the national Ecuadorian gastronomic fair of entrepreneurs, on its participants and their closest competitors. Currently, following the design and field work to collect the baseline survey, we are in the process of analyzing the data. The survey collects information on the business, its owner and household characteristics including purchasing inventory, number of employees, labor costs, total sales, perception of competition, managerial practices, barriers for growth and advertisement/investment choices. The collection of the baseline has been funded by the Duke Economics Department. To our knowledge, we will be the first to examine how reducing different types of information asymmetries affects the dynamics of micro and small firms in a developing country, a study that opens the door for alternative and complementary policy interventions promoting entrepreneurship. In order to continue this work, we are considering applying to scholarships such as IPA SMEs Initiatives and the Center for Latin American and Caribbean Studies at Duke University.