

RESEARCH STATEMENT

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My main research fields are Economic History and International Economics. My research builds on understanding the determinants and consequences of economic integration through migration and international trade. I have devoted my research to studying the consequences of migration and trade shocks to the local economy. My empirical research draws on the use of digitized or hand-collected historical records coupled with novel methods of linking historical data sets. My research combines different empirical strategies, such as ethnically motivated immigration shocks with rich micro-level data to explore causal questions from different perspectives and uncover patterns still unknown to the literature.

In my job market paper, *"Send Them Back? The Real Estate Consequences of Repatriations"* [1], we study how the United States' repatriation of Mexican immigrants from 1930 to 1936 affected housing markets in US cities. In studying the economic consequences of immigration, the main empirical challenge is to separate cause and effect: whether the migration flow causes the economic conditions of a city or if the economic conditions instead push people to move. In this paper, we exploit one of the largest ethnically motivated migration shocks in US history to quantify its effects on real estate outcomes of US cities. Our main contribution is to shed light on an understudied type of migration shock to housing markets: an out-migration shock. Making this distinction when studying housing markets is indispensable. Because housing is durable, the effects on prices from out-migration may be asymmetric to in-migration effects. We combine confidential, full-count US Census data with hand-collected data on building permits to show that repatriating Mexicans during the Great Depression significantly depressed housing prices in the period. Employing an instrumental variable approach that accounts for the endogenous business cycle, we show that cities with higher Mexican outflow experienced lower growth in commercial and residential real estate activity. We uncover the negative and significant impact of the Mexican repatriation on the growth rate of the number and value of building permits and cities' median house values and rents.

As the Mexican Repatriation led to the out-migration of a specific populational group, it is plausible that regions *within a city* were differently affected, depending on where Mexicans lived back then. Testing this, however, requires highly granular data *at the house level* in each US city. We propose a novel, automated linking method to match addresses across the Censuses of 1930 and 1940 to quantify the effects of the Mexican Repatriation at the house level. Using the "IPUMS Restricted Complete Count Data," this procedure generates a sample of over 4 million linked addresses across the US—a matching rate of 41.7% of all identifiable addresses in 1930. Using the matched-address sample, we find that houses inhabited by Mexicans in 1930 faced an average decrease of 8.2 percentage points in their house value between 1930 and 1940 for every percentage point drop in the local Mexican population. We also do not find evidence of a statistically significant effect on houses occupied exclusively by US-born residents. These results suggest that the repatriation strongly impacted housing markets, but these effects seem to be disproportionately concentrated on the Mexican neighborhoods.

My future research agenda on this topic involves extending the automated method to link addresses across all Census pairs. My goal is that this methodological contribution becomes a "public good" provided to the research community via fully anonymous crosswalks applicable to other questions. I also plan to leverage the address-matched sample by conducting further studies on the historical evolution of house prices and housing wealth in the United States, highlighting potential heterogeneity across regions or income levels.

In 1930, another policy that affected the economic integration of the US with other countries was the general increase in tariffs from the Smoot–Hawley Tariff Act. The 1930 Tariff Act is considered one of the most comprehensive protectionist trade policies ever implemented in the United States. In work-in-progress research, *"The Consequences of the Smoot–Hawley Tariffs on US Manufacturing"* [2], we study the responses of firms and local labor markets following the Smoot–Hawley tariffs. We exploit variation in the tariff increases across industries and variation in the industry mix of local employment across

US regions to measure changes in local labor demand induced by the tariffs. This work uses detailed micro-level historical data described as follow: (i) hand-collected data of quantities and values of US imports disaggregated by product; (ii) product-level tariff rates for 1928–1932 from *The Foreign Commerce and Navigation of the US*; (iii) worker-level information from full-count *US Censuses* between 1920–1940; and (iv) establishment-level data from the *US Census of Manufactures* between 1929–1935.

Other interests on my research agenda include studying the determinants of international trade flows. In “*Port Efficiency and Brazilian Exports*” [3], published by *The World Economy*, we study the role of port efficiency in shaping international trade. We estimate the impact of vessel turnaround time on Brazilian exports. The main empirical challenge is to control for non-observed local factors that determine trade flows. We address this challenge by combining detailed data of Brazilian exports with an empirical strategy that controls for various unobserved local determinants of exports. We use a unique database with vessel turnaround time at each port and city-level exports. The data include information on the Brazilian port used, the destination country, and products. The empirical strategy relies on a difference-gravity equation to explore the variation of turnaround time in port procedures. This approach controls for unobserved characteristics and determinants common to geographically close cities, exporting the same product to the same destination country. We find that each additional hour of port procedure delay is equivalent to a reduction in relative local exports of 2%. On average, a 10% relative reduction in vessel turnaround time increases the number of exported product categories by 1%. Our findings suggest that delays in port procedures represent costs to Brazilian exporters, that may lead to loss of competitiveness of Brazilian products abroad, affecting both the intensive and extensive margins of trade.

In “*Determinants of Bilateral Trade in Manufacturing and Services*” [4], we study the determinants of international trade in services and manufacturing within a gravity framework. Gravity models have been extensively used as workhorse models to explore the determinants of international trade. While most of the literature has focused on trade in manufacturing, recent literature has emerged that uses gravity models to study international trade in services. Despite showing that gravity equations are well suited to studying trade in services, there is little research on the systematic differences and specificities when using gravity models for each type of trade. This paper addresses the determinants of aggregate bilateral trade in services *vis-à-vis* manufacturing. The main objective is to understand the systematic differences between services and manufacturing trade that are borne out empirically. In doing so, we derive a joint theory that brings out “systematic” differences in response to scale and trade cost variables between trade in manufacturing and services. We build a unified theoretical framework incorporating a *demand bias* towards services and a difference in *national product differentiation* between the two sectors. The *demand bias* yields larger income elasticities for trade in services compared to trade in manufacturing, and differences in *national product differentiation* produce a higher elasticity of bilateral trade in manufactures for the exporting country’s size than in services. We show that the model predictions find support on traditional gravity equation estimates using various specifications and estimation approaches. We also investigate the role of virtual proximity and internet infrastructure in international trade. Our findings demonstrate that virtual proximity is a strong predictor of aggregate trade in services and manufacturing.

My research interests also include the firm-level factors that determine international trade activity. Recent literature has shown that a firms’ ability to engage in international trade depends crucially on its access to credit. A growing body of research seeks to study the role of credit availability to international trade activity. However, the limited availability of firm-level data and the difficulty in separating credit supply shocks from other economic factors pose a significant challenge for these studies. In “*The Direct and Indirect Effects of Credit Shocks on Exporter and Importer Firms*” [5], we use a combination of highly granular and unique Brazilian databases hosted by the Central Bank of Brazil to investigate and quantify the effects of a sudden change in credit availability on international trade activity, including potential spillovers to the rest of the domestic economy. We study the general credit expansion from Government-owned banks in Brazil following the 2008 Global Financial Crisis to estimate these effects. Before the Financial Crisis, private and Government-owned banks behaved similarly regarding their credit operations and growth rates. After Lehman’s bankruptcy, however, increased risk concerns spread across financial institutions causing them to reduce credit availability. To prevent the adverse effects of credit constraints from spreading throughout the economy, the Brazilian Government pressed Government-owned banks to act counter-cyclically. This research contributes to the understanding of the Global Financial Crisis in

2008 to the Brazilian economy in the context of international trade. This novel work has potential policy implications for credit expansion policies in supporting exporters and importers during financial crises.

I am also interested in the consequences of international economic integration to patterns of income inequality that we observe in developing countries and developed economies. The main challenge in estimating these effects is to deal with the potential endogeneity between the labor market conditions and a country's level of international trade integration. The China's rise has provided a rare opportunity for studying the impact of a large-scale trade shock on labor markets. During the 2000s, bilateral trade between China and other developing economies such as Brazil have increased dramatically. Over the same period, Brazil and other Latin American countries experienced a large decline in wage inequality. In *"International Trade and Wage Inequality: Evidence from Brazil"* [6], we investigate the relationship between the Brazilian wage inequality and the increased international trade exposure of the country to China. Using a detailed employer-employee database, we identify the direct winners and losers from the trade shock between and within sectors. We also find that indirect exposure to trade shocks through industry production networks has important effects on wages. To understand the mechanisms behind this result, we derive a model with sector heterogeneity and selection into imports. Our model provides a reasonable approximation of first and second-order statistics observed in the economy. We then propose different counterfactual scenarios where we isolate the impact of export and import exposure. We show that the China shock is responsible for a fall of 1 percent in the overall wage variance, driven by losses in the higher-paying manufacturing sector. Average wages remain relatively unchanged. In a counterfactual scenario where tariffs were 20 percent lower, wages across the economy would have increased substantially, but at the expense of increasing the wage variance. Although highlighting the winners and losers from trade, our findings suggest a mild impact on the between-firm inequality compared to other papers in the literature. However, the wage gains could be substantially larger under counterfactual scenarios with lower tariffs, increasing wage inequality.

REFERENCES

- [1] Cortes, G. and Sant'Anna, V. (2021) *"Send Them Back? The Real Estate Consequences of Repatriations."* [External Link]
- [2] Cortes, G. and Sant'Anna, V. (2021) *"The Consequences of the Smoot–Hawley Tariffs on US Manufacturing."*
- [3] Sant'Anna, V. and Kannebley Jr., S. (2018) *"Port Efficiency and Brazilian Exports: A Quantitative Assessment of the Impact of Turnaround Time,"* ***The World Economy***, 41(9), 2528–2551. [External Link]
- [4] Das, S. and Sant'Anna, V. (2021) *"Determinants of Bilateral Trade in Manufacturing and Services: A Unified Approach."* [External Link]
- [5] Cortes, G.; Sant'Anna, V. and Van Doornik, B. (2021) *"The Direct and Indirect Effects of Credit Shocks on Exporter and Importer Firms."*
- [6] Chagas, L. and Sant'Anna, V. (2021) *"International Trade and Wage Inequality: Evidence from Brazil."* [External Link]