Dynamic Pricing and Exchange Rate Pass-Through in a Model of New Exporter Dynamics

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Thesis Abstract

With the increasing availability of customs data at the the firm-level, researchers have been able to study firms’ export performance over time, and uncover previously unknown features of the trading environment. One common observation is that, although many firms export every year, only a small number of firms account for the vast majority of the total export value. Given that the micro-level decisions of these large exporters can shape the aggregate trade response to macroeconomic volatility, a proper understanding of the process through which these firms become successful exporters and how they respond to external shocks, has become a crucial task. In this paper, I empirically investigate the importance of demand dynamics in explaining the growth process of new exporters, and the degree of response of firm-level prices to movements in the bilateral exchange rate. Using a detailed custom-level data for Colombia over the period 2008 to 2018, I find that: 1) export sales and continuation rates are initially small, but then consistently grow in the years following entry to a new market; 2) prices of exported goods increase with the number of years a firm has exported to the same destination; 3) the exchange rate pass-through into international prices is incomplete and new exporters exhibit a considerably higher pass-through than incumbent exporters. To rationalize these empirical facts, I develop a dynamic discrete choice model of exporting introducing consumer base accumulation due to habit formation. A key feature of this model is that pricing decisions become dynamic, and exporters face a trade-off between invest and harvest motives. On the one hand, exporters have incentives to lower their prices to boost their future demand, at the expense of current profits. On the other, they have incentives to increase their current prices and fully exploit the looked-in customers they have accumulated. I calibrate the model to match several static and dynamic moments of Colombian exporters, and show that it successfully replicates the observed dynamics of export sales, prices, continuation rates and the heterogeneous exchange rate pass-through over the life cycle of exporters. Finally, I study the implications of the model on the aggregate trade response to permanent and temporary trade shocks. In response to a temporary exchange rate depreciation, the transmission into the prices faced by foreign consumers is incomplete, which results in an aggregate elasticity to changes in the exchange rate below one. When the economy is hit by a permanent change in tariffs, the model produces a sluggish response of the aggregate trade volumes that is driven by the firm-level adjustments in the consumer base. The gradual adjustment in the intensive margin coupled with the increase in importance of the extensive margin, induces a discrepancy between the short run and long run trade elasticity.

Import Wholesalers and the Effect of Trade on Canadian Producers

Empirical evidence for many countries suggests that trade intermediaries, such as wholesalers, account for a substantial share of the total import value. Given that these firms constitute an intermediate step in the distribution of merchandise, wholesalers’ decisions of what products to import and from where, affect not only the nature and magnitude of trade frictions, but also the degree of competition faced by domestic producers. Using a unique administrative dataset that combines Canadian domestic firm-level production data with import data across wholesalers and manufacturing firms, this paper documents several features regarding the import behavior of wholesalers. First, Canadian wholesalers are actively engaged in international trade and their contribution to the total import value has increased over the last years. Second, wholesale trade firms have an important presence in the final and intermediate goods markets. Additionally, I identify the multiple margins that manufacturing firms adjust in response to the observed increase in the import activity of wholesalers, emphasizing the differential effect that imports of final and intermediate goods have on domestic producers.

New Exporter Dynamics: Learning and Self-Selection with Incomplete Information

An emerging stream of research has documented that the dynamics of exporters are characterized by a series of empirical regularities. First, that new exporters are smaller than established exporters, and that this gap gradually closes as these new entrants accumulate experience in the international markets. Second, that exporting entails a high degree of failure mostly for young exporters, and survival rates considerably improve with tenure in the export markets. To account for these facts, this paper structurally estimates a model that introduces a learning-by-exporting mechanism into an otherwise standard model of heterogeneous productivity and exporting decisions at the firm-level. The parameters of the resulting dynamic discrete choice model, are estimated so they can replicate a set of moments observed in the Colombian firms for the period going from 1981 to 1991. This augmented model, is able to reproduce new exporter dynamics as well as models that rely on exogenous, time-varying demand shifts. Then, I study the effects of export-oriented policy aiming to incentivize new exporters. The results suggest that policies offering subsidies to the overall fixed costs associated to exporting have a positive effect not only on the share of exporters but also on their survival rates, however the effects depend qualitatively on how fast exporting firms learn from their demand.