Allocating Shipping-Related Tasks Between Exporters and Importers

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International trade relies on buyers and sellers sharing and successfully executing various costly and often unpredictable logistical tasks. Existing work on the obstacles to smooth delivery summarizes the physical and institutional differences between origin and destination countries as some form of "friction" that impedes aggregate trade flows. I offer the first breakdown of the delivery process into its various components, present stylized facts using detailed Colombian transaction-level data, and rationalize the empirical patterns using a model of sequential production (delivery) in an incomplete-contracting environment.

The first set of empirical results exploits within-exporter-year variation in the share of exports under a given role-sharing arrangement. This variation is uncorrelated with time-varying unobserved exporter characteristics like favourable reputations with carriers or existing long-term shipping contracts that may otherwise favour exporter control. Looking across products exported by the same firm to a given destination in a year, buyer-control is more common when importing differentiated products. Within transactions involving a given exporter in a given year, buyer-control is more prevalent in sales to nearby destination countries, even after controlling for destination characteristics and unobserved product characteristics.

The second set of results exploits variation in these shares within exporter-importer pairs in Colombia and Spain. Unlike the first set of results, these findings are also robust to unobservable time-varying importer characteristics that may affect the organization of delivery. Moreover, the exporter-importer-year fixed effects control for partnership-specific unobservables like established shipping practices. First, looking across products, Spanish buyers are more likely to assume full responsibility when importing differentiated products, thus reaffirming the results previously obtained when aggregating over importers. Second, buyer-control is more common when purchasing goods from more productive exporters.

In my model, contracts between exporters and importers only specify the division of the various roles between the potential partners. The parties sign auxiliary contracts with carriers to execute their assigned roles, and then initiate the shipping process. As shipping proceeds, the pair sequentially bargain over the value added by exporter efforts at each stage, earning payoffs in proportion to their residual control rights over the stage in question. These rights stem from the consignor's ability under most shipping contracts to modify delivery following unforeseen contingencies during the relevant portion of the shipping process. The parties anticipate these assignment-dependent bargaining externalities, and allocate the roles to minimize distortions from the exporter's first-best investment levels.

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