Private Enterprise Development in Low-Income Countries

The Impact of Exporting: Evidence from a Randomised Trial

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This project conducts a randomised field experiment in Egypt to study the channels through which export market access drives economic growth and reduces poverty. Our findings indicate that linking firms to export markets substantially improves firm performance and may be an effective means of improving the livelihoods of the poor.

This research project provides small-scale producers the opportunity to export handmade carpets to high-income markets. We evaluate the impact of this opportunity on several dimensions of firm performance:

- Whether export market access has a causal effect on enterprise profits
- Whether there are improvements to technical efficiency induced by exporting ("learning-by-exporting")
- Whether exporting has effects beyond generic demand expansions by changing the volatility of profits during a period of violence and political instability

To provide firms with the opportunity to export, we partnered with a US-based NGO and an Egyptian intermediary to secure export orders from foreign buyers through trade fairs and direct marketing channels. With orders in hand from several high-income OECD markets, we surveyed a sample of several hundred small rug manufacturers with 1 to 4 employees located in Fowa, Egypt. A random subsample of these firms was given the initial opportunity to fill these orders. As in any standard buyer-seller relationship, firms were offered subsequent orders provided they were able to fulfill them to the satisfaction of the buyer and the intermediary. Prior to our study, only a trivial number of firms knowingly exported their products. Hence, our experimental design provided non-exporting firms with the opportunity to export to high-income markets.

The export orders secured by the intermediary not only provided a shock to the demand for the firm's products but also provided a shock to the price paid for high quality rugs. For example, foreign buyers require rugs to have tighter knots, lie flatter, and have more precise colours and sizes than typical domestic rugs.

The study also coincided with a period of major instability in Egypt following the Arab Spring. As a result, firms with overseas demand were more insulated from domestic demand shocks.

Data Collection

The methodology employed is a randomised control trial (RCT). To our knowledge, this is the first attempt to generate external firm-level variation in export opportunities. We selected a treatment group from 219 small and medium enterprises (SMEs) producing a particular rug type for which we were able to generate export orders. After securing a foreign order, treatment firms were offered an order of 110m^2, roughly three months of work. The control group received no such opportunity. Due to our randomisation strategy, we are able to simply compare mean outcomes for the treatment and control groups.

We regularly surveyed treatment and control firms to collect data on product mix and rug specifications, output and input quantities, price and employment. We also collected direct measures of firm-level product quality along 13 dimensions from a skilled quality assessor who visited each firm in every survey round. Our production-line level data allows us to record the specifications of the products made by these firms and any variations over time. Additionally, the intermediary's order book provided us with high-

Private Enterprise Development in Low-Income Countries

frequency data on quality metrics for every set of rugs exported by our treatment firms through the intermediary. We also tracked information flows between buyers, intermediaries, and producers such as transcripts of buyer feedback and the content of discussions between the intermediary and the producers.

Main Results

Our main results are summarized as follows:

- ***Treatment firms earn higher profits***
  The results indicate that profits among treatment firms are 15-25% higher than control firms, depending on the profit measure. These are sizeable increases from existing estimates of the profit impacts of business training or credit interventions on small-scale firms. The increase in profits suggests that demand constraints play an important role in restricting the profitability of small firms in developing countries. Decomposing the profit results reveals that the firms exposed to export markets produce lower output, but receive substantially higher prices as they produce better quality products that take longer to manufacture.

- ***Learning-by-exporting***
  The data reveals three pieces of evidence that exporting induces changes to firm productivity and quality levels:
  1. Treatment firms record higher quality and productivity conditional on rug specifications. If there is no learning-by-exporting, all quality and productivity changes would be captured by changes to specifications on export orders. The data indicate, instead, that after accounting for these rug specifications, treatment firms have both higher productivity and quality.

  2. We find evidence of learning curves with rug quality initially increasing in cumulative export production, illustrated in Figure 1 below. Similarly, productivity initially drops upon exporting and then gradually rises over time.

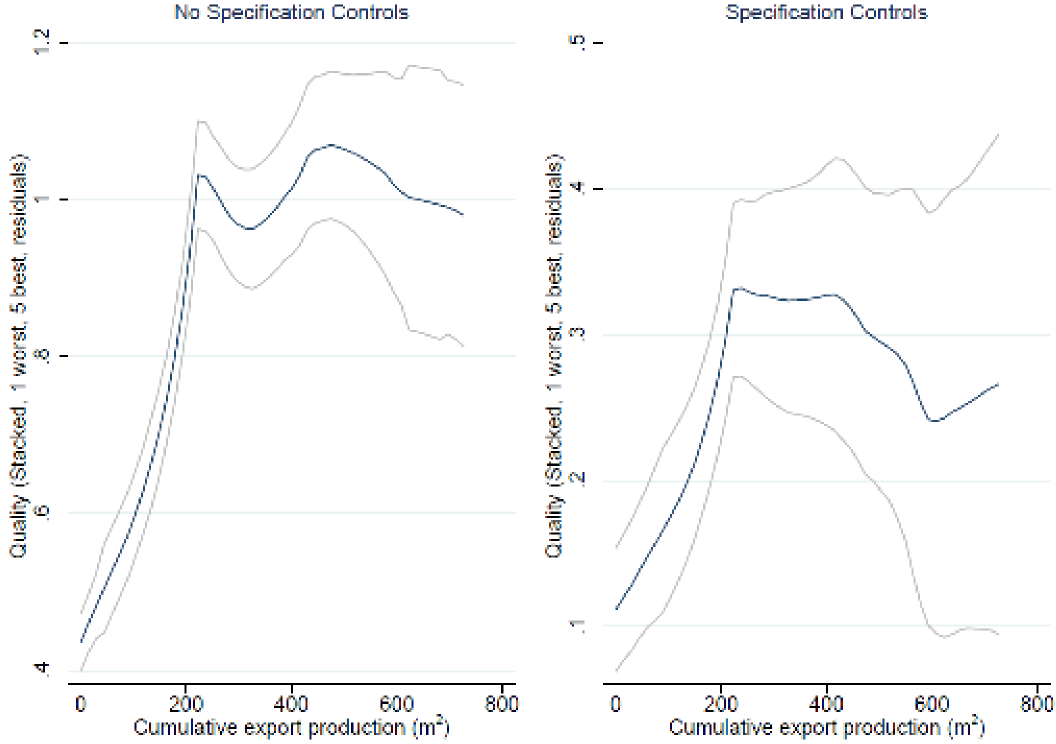

Figure 1: Evidence of Learning Curves

3. We draw on correspondences between foreign buyers and intermediaries, as well as a log book of discussions between the intermediary and producers, to document that our results partly come from knowledge flows. We show that treatment firms improve quality most along the particular quality dimensions that are discussed during meetings between the intermediary and the producer.

- ***Profit Volatility***
  Profit volatility is significantly lower among treatment firms. While control firms experienced volatile demand as domestic spending and tourism fluctuated with the political climate, treatment firms were protected by their access to multiple markets.

Implications for Policy

Recent decades have seen large resources flow into Aid for Trade and market access initiatives in developing countries. For example, the WTO's Aid for Trade Initiative has secured $48 billion in annual commitments from donors to help developing countries overcome “trade-related constraints”. The aim of these interventions is to bring about growth and reduce poverty through improvements in the performance of firms in recipient countries. Central to this goal is the ability for exporting to trigger learning-by-exporting for firms. The results of this project indicate that exporting to high-income markets can indeed raise firm performance by inducing increases in technical efficiency.

Moving Forward…

The bulk of the research studying constraints on small-scale firms have focused on supply-side constraints, such as the lack of management skills, access to credit, or labour market constraints. The results of this project suggest that demand-side constraints also bind, but further research is required to determine whether the particular market access initiative we studied is cost effective and more generally, what should be the optimal market access policy.