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Managers' mobility, trade performance, and wages☆

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A B S T R A C T

Knowledge is key to the competitiveness and success of an organization and in particular of a firm. Firms and their managers acquire knowledge via a variety of different channels which are often difficult to track down and quantify. By matching employer–employee data with trade data at the firm level we show that the export experience acquired by managers in *previous* firms leads their *current* firm toward higher export performance, and commands a sizeable wage premium for the manager. Moreover, export knowledge is decisive when it is *market-specific*: managers with experience related to markets served by their current firm receive an even higher wage premium; firms are more likely to enter markets where their managers have experience; exporters are more likely to stay in those markets, and their sales are on average higher. Our findings are robust to controlling for unobserved heterogeneity and, more broadly, endogeneity and indicate that managers' export experience is a first-order feature in the data with an impact on a firm's export performance that is, for example, at least as strong as that of firm productivity.

1. Introduction

A growing literature in economics explores how the management of a firm affects its performance. Empirical studies have exploited the increasing availability of information on managerial practices and managers' characteristics to establish a strong connection with firm—as well as a country—productivity; theoretical contributions have analyzed different facets of the firm-manager nexus, including matching, incentive provision, ownership, and, of particular relevance to our analysis, trade.[1]

This paper shows that the export experience gained by managers in *previous* firms leads their *current* firm toward higher export performance, and commands a sizable wage premium for the manager. Moreover, export knowledge is decisive when it is *market-specific*: managers with experience related to markets served by their current firm receive an even higher wage premium; firms are more likely to enter markets where their managers have experience; exporters are more likely to stay in those markets, and their sales are on average higher. The management literature offers several case studies consistent with our findings, but lacks a systematic and quantitative evaluation.[2] While it

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[1] Among others, Bertrand and Schoar (2003), Bloom and Van-Reenen (2010), Bloom et al. (2011), and Guiso and Rustichini (2011) on managers and managerial practices; Bandiera et al. (2011), Burkart et al. (2003), and Lazear and Oyer (2007) on matching, incentives, and ownership; Antràs et al. (2006), and Caliendo and Rossi-Hansberg (2012) on trade.

[2] See Andersson and Wictor (2003) and Rialp et al. (2005) among others.

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is reasonable to expect managers to learn valuable skills or information from their previous jobs, it is surprising that managers' export experience is a first-order feature in the data, and that its effect on a firm export performance is at least as strong as that of firm productivity. Our results call for further theoretical work on the connections between trade and the labor market.

Three ingredients make our analysis feasible and robust: reliable data on one country (Portugal) covering the universe of firms and their workers for several years, including rich information on the characteristics of both; the possibility of tracking workers—and in particular managers—as they move from firm to firm (and especially between exporters and non-exporters); a research design that accounts for unobserved heterogeneity, omitted variables, and, more broadly, endogeneity.

We perform two complementary analyses. First, we estimate a wage equation to identify the existence of a premium for export experience. We control for worker and firm fixed effects, previous firm observables, job-change patterns, as well as worker and current firm time-varying observables. We consider both managers and non-managers and conclude that a premium arises for managers only. Export experience for a manager corresponds to an 11.3% (2.9%) higher wage—which is equivalent to 20.4% (50.9%) of the manager status premium—when not accounting (accounting) for unobserved heterogeneity.

One caveat potentially applying to our wage analysis is that export experience might simply be a proxy for some unobservables: for example, having been employed by an exporter could signal the unobserved ability of a manager. We account for this by means of worker fixed effects if unobserved ability is time-invariant. We also account for time-variant unobserved ability to the extent it is captured by time-varying characteristics of the worker's *previous* firm such as size, productivity and industry. Last but not least we further strengthen our results by comparing managers that have export experience in at least one of the markets to which their current firm is exporting to those who have experience in other markets. We find the former managers to enjoy an additional wage premium which is hard to square with export experience simply being a proxy for managers' unobserved ability. One limitation of our study, which is common to Mincerian wage analyses, is the issue of selection, i.e., we only observe wages for those employer–employee pairs that are formed. We discuss at length the implications of selection, as well as of other forms of biases, for our framework.

In the second part of the paper, we assess whether export experience brought by managers affects a firm's export performance. More specifically, we evaluate a firm's likelihood to enter (or to stay) in a new (current) market as well as a firm's exports conditional on entry (continuation). We control for endogeneity in a variety of ways, including firm-year fixed effects and market-year dummies as well as instrumental variables, while getting a very coherent picture. We find that having managers with experience in a specific market increases the probability that the firm enters (stays) in that market by at least 22 (0.7) percent with respect to the average firm in the sample. Both in the case of entry and stay, the effect of such experience is at least as strong as that of productivity. Market-specific experience also increases export value in the case of continuation by 20 to 69%. Interestingly, we do not find evidence of a strong relationship between export experience not specific to a market and firm trade performance.

One fundamental concern with our trade performance analysis is reverse causality: does a firm hire managers with export experience to improve its trade performance or does the firm receive a positive shock and/or improve its trade performance by other means and then hires managers with export experience? In order to deal with this we draw on the timing of events and, building on Roberts and Tybout (1997) as well as on the evidence provided in Das et al. (2007), Iacovone and Javorcik (2012) and Moxnes, (2010), use as instrument export experience 3 years prior to the year *t* we measure trade performance.

Our findings are consistent with the hypothesis that managers transfer valuable export-specific knowledge when moving across firms. Furthermore, such knowledge has a strong market-specific nature, consistently with evidence that export entry costs are mostly country-specific (as opposed to global; see Eaton et al. (2011) and Moxnes (2010) among others) and that successful business practices have to be tailored to the targeted export market (Artopoulos et al., 2013).[3]

There are good reasons to believe that there is something special about managers and export. The growing literature looking at the relationship between trade and tasks (Blinder, 2006; Grossman and Rossi-Hansberg, 2008) suggests that the complexity of the tasks involved in the different stages of the production process (design, manufacturing of parts, assembly, R&D, marketing, commercialization, etc.) is key to understand recent trends in international trade. At the same time, Antràs et al. (2006) explicitly focus on teams of workers and their formation in a globalized economy and highlight the key distinction between managers and non-managers. Managers are different from other workers and likely to be particularly important for trade activity because they are responsible for the most complex tasks within a firm. On the other hand, managers are also different from other workers because they are in charge of marketing and commercialization activities that are not necessarily more complex like, for example, setting-up distribution channels, and finding and establishing relationships with foreign buyers and suppliers. Arkolakis (2010) and Eaton et al. (2012) stress the role of marketing costs in international trade and provide evidence of the importance of the continuous 'search and learning about foreign demand' problem that firms face when selling abroad. At the same time, Araujo et al. (2012) show the importance of trust-building in repeated interactions between sellers and buyers in an international market.

Our findings have important implications for the empirical trade literature. The empirical literature on the determinants of firm trade behavior (Bernard et al., 2012) has so far focused on productivity and selection (Bernard and Jensen, 1999, 2004), sunk costs (Das et al., 2007; Impullitti et al., 2013; Roberts and Tybout, 1997), innovation (Bustos, 2011), quality (Iacovone and Javorcik, 2012; Verhoogen, 2008), workforce composition (Muendler and Molina, 2010; Yeaple, 2005), and uncertainty about demand (Arkolakis, 2010; Eaton et al., 2012). It is fair to say that, even when considering all of these dimensions, we are still far from matching the degree of cross-sectional heterogeneity across firms in their export participation and intensity. There are indeed many very productive or skill intensive firms that do not export at all and quite a few very unproductive or low R&D intensive firms that do sell abroad. Our results suggest that export experience brought by managers is key to draw the boundary between exporters and non-exporters as well as to pin down the trade performance of the former. Furthermore, the fact that knowledge can be transferred from one firm to another via the mobility of managers has profound implications for the way we design and estimate models of export participation and in particular for the assumption that decisions to export are independent across firms.

Our paper also contributes to the following literatures. First, our interest in managers as workers who need specific skills and perform difficult tasks relates to the literature on trade and tasks (Blinder, 2006; Grossman and Rossi-Hansberg, 2008). Second, the role played by workers' mobility across firms in our analysis contributes to the recent debate about the channels via which knowledge transfer takes place (Balsvik, 2011; Parrotta and Pozzoli, 2012). Last, but not least,

[3] In a recent (September 6th, 2010) Financial Times article, Anthony Pierce, the vice national chairman of the Institute of Export, explains that distribution channels can widely differ from country to country; he makes the example of Polaroid, that, many years ago, after selling successfully its Swingers cameras in the UK through the supermarkets, tried to do the same in France "…but nobody bought them because nobody went to the supermarket to buy cameras. They went to specialist camera shops." See http://www.ft.comhttp://www.ft.com.