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### Internationalization and the growth of Vietnamese micro, small, and medium sized enterprises: Evidence from panel quantile regressions

Long Quang Trinh<sup>a,b,\*</sup>, Ha Thi Thanh Doan<sup>c</sup>

<sup>a</sup> Faculty of Finance and Banking, Ton Duc Thang University, Ho Chi Minh City, Vietnam
 <sup>b</sup> Asian Development Bank Institute, Kasumigaseki Building 8F, 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, 100-6008, Japan
 <sup>c</sup> Economic Research Institute for ASEAN and East Asia, Sentral Senayan II, 6th floor Jalan Asia Afrika No.8 Gelora Bung Karno, Senayan, Jakarta Pusat, 10270, Indonesia

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#### ABSTRACT

This paper examines the relationship between internationalization and growth for Vietnamese micro, small, and medium sized manufacturing enterprises. Using panel quantile regression analysis, we find that internationalization has a positive effect on the growth of employment, output, and labor productivity. This effect is more pronounced for firms at the higher end of the conditional growth distribution. The evidence further indicates that continuous engagement in internationalization activities is associated with higher growth than intermittent engagement. Firms that both export and sell domestically to foreign invested enterprises enjoy higher growth than those that engage in only one of these forms of internationalization.

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#### 1. Introduction

It is well documented that in developing economies micro, small, and medium sized enterprises (MSMEs) play an important role not only in job creation but also in industrial development and economic advancement (Coad & Tamvada, 2012; Tybout, 2000). While there has been substantial literature investigating factors impeding the performance of MSMEs, including lack of credit access and adoption of less effective business practices (e.g., Nichter & Goldmark, 2009), studies of the underlying drivers of MSME growth (O'Regan, Ghobadian, & Gallear, 2006) are rare, especially for developing countries. In their study of small firms in India, Coad and Tamvada (2012) found that exporting firms show faster growth than non-exporting firms. However, such studies are limited, and further research on the influence of internationalization activities on firm growth in developing countries is thus warranted.

Internationalization activities include not only exporting but also other activities that facilitate the learning process of domestic firms. Ottaviano and Martincus (2011) and Bøler, Moxnes, and Ulltveit-Moe (2012) argue that local firms may benefit not only from involvement with foreign businesses but also by engaging with foreign invested enterprises (FIEs) operating within the country through input purchases, service provision, and technical cooperation. Most of the current literature, however, examines the impact of each such internationalization activity separately (Clerides, Lach, & Tybout,

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<sup>\*</sup> Corresponding author at: Faculty of Finance and Banking, Ton Duc Thang University, Ho Chi Minh City, Vietnam. *E-mail addresses*: trinhquanglong@tdt.edu.vn (L.Q. Trinh), doan.ha@eria.org (H.T.T. Doan).

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1998; De Loecker, 2007; Fernandes & Isgut, 2015; Godart & Görg, 2013; Görg & Seric, 2016; Javorcik, 2004; Kimura & Kiyota, 2006; Newman, Rand, Talbot, & Tarp, 2015; Van Biesebroeck, 2005; Vogel & Wagner, 2010). This is problematic since a firm may engage in several types of internationalization activity simultaneously.

Using a unique panel of MSME firm-level data collected biannually in Vietnam from 2005 to 2013 and a fixed-effects quantile regression framework, we investigate the impact of engagement in internationalization activities on firm growth. We adopt a broad definition of such activities that includes exporting, selling to FIEs, importing production inputs, purchasing inputs from FIEs, or engaging in technical cooperation with foreign partners. Of these, exporting and selling to FIEs are the most common within our sample, and we analyze the impact of these activities specifically. We aim to answer four questions: First, does engagement in internationalization activities boost firm growth? Second, does the impact of exporting differ from that of selling to FIEs operating domestically? Third, does it matter whether the internationalization activities are continuous or intermittent? And fourth, does the impact vary along the conditional growth distribution such that faster growing firms benefit more from internationalization activities?

Our study contributes to the existing literature in a number of ways. First, we focus on MSMEs in the context of a lower middle-income country. Research of this sort is rare given the general preference for studying firms that are larger, more productive, and more capital intensive (Aw, Chung, & Roberts, 2000; Alvarez & López, 2005; Bernard & Jensen, 1999; Clerides et al., 1998). Second, the paper advances the literature on the heterogeneous effects of internationalization on firm growth in two ways: (a) we consider the importance of consistency in internationalization over time and (b) we allow the effect of internationalization to vary across quantiles of the conditional growth distribution. Because the ability of firms to reap the benefits of internationalization depends partly on their absorptive capacity, we expect heterogeneity in the effects across the conditional growth distribution. Although quantile regression is widely used in studies of the impact of innovation on firm growth (see, for example, Coad & Rao, 2008; Coad, Segarra, & Teruel, 2016; Falk, 2012), only a few studies have used this approach to investigate the heterogenous impact of internationalization on firm growth of exporting and selling to FIEs, and further, allow these distinct forms of internationalization to contribute differentially along the conditional growth distribution.

Vietnam offers an interesting case study as the country has been a vigorous participant in international economic integration. Our data cover the period 2005–2013 when substantial trade expansion and foreign direct investment (FDI) took place. Trade openness, measured as the ratio of trade to gross domestic product (GDP), exceeded 150 percent during this period while the ratio of the inward stock of FDI to GDP reached 44 percent. Within formal sector manufacturing, FIEs contributed 50 percent of employment and 55 percent of revenue in 2012 (Newman et al., 2015). They further accounted for about two-thirds of total exports (Ramstetter & Nguyen, 2016). At the same time, as with other developing countries, MSMEs have played a vital role as engines of growth in Vietnam. The MSME sector accounts for over 90 percent of the total number of firms, 30 percent of GDP, and 70 percent of employment.

The rest of the paper is organized as follows. Section 2 presents a review of literature. Section 3 discusses the empirical strategy. Section 4 presents data and descriptive analysis. Section 5 reports regression results. And Section 6 provides the conclusion.

#### 2. Literature review

An extensive literature exists on the effect of international trade on firm growth. This literature focuses on two channels of influence, namely learning-by-exporting and learning-by-importing. Theoretically, exporting can boost firm performance by reducing production costs through economies of scale, affording access to the advanced knowledge and technology of foreign customers (Grossman & Helpman, 1991), and motivating efficiency gains in response to international competition (Melitz, 2003). Importing, on the other hand, may allow firms to specialize in activities in which they have a comparative advantage, extract knowledge embodied in imported inputs, and gain access to a larger variety of quality inputs (Wagner, 2012).

Empirical evidence on the impact of increased exports and imports on firm performance is, however, ambiguous. Some studies have found significant post-entry improvement of exporting firms, for example, Van Biesebroeck (2005) on Sub-Saharan countries, De Loecker (2007) on Slovenia, Fernandes and Isgut (2015) on Colombia, Greenaway and Kneller (2008) on the United Kingdom, and Lileeva and Trefler (2010) on Canada. In contrast, Clerides et al. (1998), Bernard and Jensen (1999), Aw et al. (2000), Alvarez and López (2005), and Arnold and Hussinger (2005) detected no performance improvement.<sup>1</sup> Similarly, studies of importing firms have also been also inconclusive about the direction of causality between imports and firm growth (Smeets & Warzynski, 2010; Kasahara & Rodrigue, 2008; Vogel & Wagner, 2010).

Another strand of literature emphasizes the importance of FDI for firm growth. A large number of studies have shown that FDI has vertical spillover effects in host countries through backward and forward linkages. Backward spillover takes place when local suppliers of intermediate inputs experience improved productivity due to the presence of FIEs. On the other hand, forward linkages involve the purchase by local firms of inputs from FIEs. Theoretically, vertical spillovers can result from (i) better access to technology that multinational enterprises possess, (ii) improvement in product quality and production

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<sup>&</sup>lt;sup>1</sup> For detailed surveys of literature, see Wagner (2007) and Wagner (2012).

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