How does the geographic export diversification–performance relationship vary at different levels of export intensity?

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A B S T R A C T

We argue that the relationship between geographic export diversification and firm performance follows an S-curve relationship if export intensity is low and an inverted U-shape if export intensity is high. The S-shape curve occurs because firms have weaker incentives to deploy the resources needed for succeeding in foreign markets if they generate relatively low revenues in export markets compared to their domestic market. Firms highly committed to export markets, in contrast, face stronger incentives to accelerate their learning curve, which results in an inverted U-shape relationship. We examine our hypotheses using a panel of longitudinal archival data with over 2000 firm-year observations, which cover all of the possible export destination countries served by large Brazil-based exporters from 2001 to 2010. Our results imply that the degree of export intensity changes the cost-benefit relationship of geographic export diversification.

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1. Introduction

International or geographic diversification has received a large amount of attention in diverse disciplinary fields, such as international business, marketing, finance and accounting (Hitt, Tihanyi, Miller, & Connelly, 2006). Interestingly, almost the entire literature on international diversification focuses on multinational corporations (MNCs) and FDI although other emphases, e.g., exporting, are conceivable. The extant research on MNCs has unearthed diverse results, such as linear (e.g.,Geringer, Tallman, & Olsen, 2000; Pangarkar, 2008), (inverted) U-shaped (e.g.,Contractor, Kumar, & Kundu, 2007; Gomes & Ramaswamy, 1999; Ruigrok & Wagner, 2003) and S-curve (e.g., (e.g.,Contractor, Kundu, & Hsu, 2003; Lu & Beamish, 2004; Ruigrok, Amann, & Wagner, 2007) relationships.

In view of these diverging results, critical scholars have remarked that 'more than one hundred empirical studies [on MNCs] have failed to produce robust results' (Hennart, 2007, p. 445). Thus, an incipient stream of critical research on international diversification has emerged (Verbeke, Li, & Goerzen, 2009). Specifically, in a recent paper, Verbeke and Brugman (2009) noted

that none of the seven studies that tested the S-curve (also called sigmoid or cubic) relationship between international geographic diversification and performance would pass their nine quality criteria. According to these authors, the major drawbacks of existing research consist of mixing up different elements of the value chain, entry modes or internationalization motives in the same study, confusion between the degree of internationalization and diversification, as well as ignoring endogeneity concerns.

In the shadow of the MNC-centered international diversification (multinationality) research, a still embryonic research stream addresses the geographic diversification—performance relationship in exporting. While mostly overlooked, geographic export diversification research naturally mitigates several of the mentioned drawbacks of existing research, specifically, by focusing on only one element of the value chain (sales), by limiting itself to only one entry mode (exporting) and by focusing on only one internationalization motive (market-seeking) (Shaver, 2011). Moreover, export diversification and multinationality are not necessarily equally affected by the same factors. For instance, the fluctuations of exchange rates between the home and host countries particularly influence export diversification (Aulakh, Kotabe, & Teegen, 2000; Boehe, 2014). Compared to multinationality, export diversification is neither subject to several other costs and benefits of internal markets, such as internalization

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advantages, transfer prices, corporate taxes or subsidies in host countries (Hennart, 2015).

Due to these qualities, research on geographic export diversification is important and deserves more attention within the broader field of international diversification research. However, existing studies on export diversification and firm performance are far from unanimous in their findings either, having uncovered linear (Denis & Depelteau, 1985; Dhanaraj & Beamish, 2003) and curvilinear (Aulakh et al., 2000) relationships. Other studies have unearthed a positive effect on sales (Hirsch & Lev, 1971) or cash-flow stability (Shaver, 2011). Given the small number of studies, their predominantly cross-sectional designs and their contradictory (linear and curvilinear) findings, the shape of the relationship between export diversification and performance remains obscure and requires further investigation.

A key to this puzzle of inconsistent results in both export and MNC research, possibly lies in a misconception often present in prior research: although several studies have used export intensity (or foreign sales over total sales, FSTS, or degree of internationalization) and international diversification interchangeably (Contractor et al., 2007; Geringer, Beamish, & daCosta, 1989; Geringer et al., 2000; Reeb, Kwok, & Baek, 1998), this study follows Verbeke and Brugman (2009) in that doing so is misleading. Two firms with the same export intensity (or FSTS) can show entirely different degrees of geographic diversification both in terms of the number of countries or regions covered and in terms of the weights of individual foreign markets in their overall export sales.

Therefore, this study makes a distinction between export intensity and geographic diversification, which has important empirical and theoretical implications, and argues that research on international diversification needs to use both concepts (and measures) concomitantly. By disentangling export intensity from diversification, this study intends to move ahead the scholarly discourse on international diversification in strategy research. Therefore, the present study asks: *how does the geographic export diversification–performance relationship vary at different levels of export intensity?*

We argue that low export intensity is associated with low commitment to export marketing strategies. As managerial, financial and physical resources are necessary to adapt manufacturing, the marketing mix and logistics processes to foreign markets, lower commitment limits the benefits derived from geographic export diversification. This likely affects the contribution of export markets to overall firm's performance negatively. In contrast, high export intensity amplifies the benefits from geographic diversification, for instance, by accelerating its learning curve through significant resource deployment in learning by exporting strategies. Our results suggest an S-curve relationship between export diversification and firm performance for low intensity exporters and an inverted U-shape relationship for high intensity exporters.

Our empirical approach is based on a sample of large Brazilian firms, because geographic diversification seems to be more common among large firms (Bernard, Jensen, & Schott, 2009; Mayer & Ottaviano, 2007). In this paper we consider export diversification as the standardized measure of the weighted distribution of exporters' sales across countries and world regions. Our fine-grained export diversification measure is based on Vachani's (1991) and Raghunathan's (1995) seminal studies and its application to research on export behaviour constitutes a novel contribution in itself. Consistent with the majority of previous literature on the internationalization-performance relationship (e.g., Contractor et al., 2007; Gao, Murray, Kotabe, & Lu, 2010; Lu & Beamish, 2004), we consider performance in financial terms, i.e. return on assets (ROA) and return on sales (ROS).

Indicator	Description	Conceptual basis	Exemplary Studies	Distribution of sales across countries	Related *and* unrelated diversification	Standardized
Country scope	Count measure of the number of destination countries	Ramaswamy (1993)	Lu & Beamish (2004) Tallman & Li (1996)	NO	NO	NO
Herfindahl-Hirschman Index (HHI)	$= \sum_{c=1}^{N} \left(\dfrac{Exports_c}{Total\ Export\ Volume} \right)^2$	Rhoades (1993)	Dhanaraj & Beamish (2003) Bühner (1987), Lahiri (2010)	YES	NO	YES
Entropy	$= \sum_{c=1}^{C} p_{rc} * \ln\left(\dfrac{1}{p_{rc}}\right)$	Jacquemin & Berry (1979)	Aulakh et al (2000) Qian et al.(2008)	YES	NO	NO
Total Geographic Diversification (TGD)	$= \sum_{r=1}^{R} \sum_{c=1}^{C} p_{rc} * \ln\left(\dfrac{1}{p_{rc}}\right)$	Vachani (1991)	Qian, Khoury, Peng, & Qian (2010)	YES	YES	NO
Standardized Total Geographic Diversification (STGD)	$= \dfrac{\left[\sum_{r=1}^{R} \sum_{c=1}^{C} p_{rc} * \ln\left(\frac{1}{p_{rc}}\right) \right]}{\left[\ln(R) + \sum_{r=1}^{R} p_r * \ln(C_r) \right]}$	Raghunathan (1995)	The present study	**YES**	**YES**	**YES**

Fig. 1. Evolution of geographic diversification measures in MNC and export research.
Notes: c=individual country, C=total number of countries, r=individual region, R=total number of regions, prc=proportion of exports to country c within region r, Cr=total number of countries within region r.