Firm-Level Factors Associated with Export Performance

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Abstract

The conceptualization and operationalization challenges which Tookey (1964) highlighted, in a pioneering study on export performance, persist to this day. We attempt to improve the prediction and measurement of export performance by revisiting the role of firm demographics. Premising our propositions on internationalization theories, we test the explanatory power of size and experience against two indicants of performance. Our results suggest that export intensity and exports per capita constitute different objective scales of measurement. This study also illustrates that firm factors and measures of export performance take new connotations when modeled separately for conventional enterprises and international new ventures. The study adds to an emerging stream of literature linking export performance to the path(s) of internationalization.

Keywords: Export performance, firm factors, conventional firms, international new ventures
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Introduction

An intriguing paradox in international marketing is that export development is considered a well-researched facet (Leonidou, 2003) yet export performance is the least understood (Leonidou, Katsikeas and Piercy, 1998). Although some instructive conceptual models (Aaby and Slater, 1989; Bilkey, 1978; Leonidou, Katsikeas and Piercy, 1998) and measuring scales (Lages and Lages 2004; Zou, Taylor and Osland, 1998) have been proposed, a multiplicity of variables and methods continue to be adopted forcing the discipline to splinter and scatter instead of converging around a common schema, paradigm or theory (Sousa, 2004). This fragmentation emanates from the lack of consensus over how to conceptualize and operationalize the various elements of export performance (Aaby and Slater, 1989; Katsikeas, Leonidou and Morgan, 2000; Lages, Lages and Lages 2005; Sousa, 2004; Zou, Taylor and Osland, 1998).

Literature

There are multiple internal and external factors (Calantone, Kim and Schmidt, 2002; Zou and Stan, 1998) that have a direct or indirect relationship (Aaby and Slater, 1989; Cavusgil and Zou, 1994) with export performance. These factors include firm demographics such as size (Bonaccorsi, 1992; Mittelstaedt, Harben and Ward, 2003), age (Brouthers and Nakos, 2005; Ursic and Czinkota, 1984) export experience (Kirpalani and MacIntosh,1980), marketing expertise (Ogunmokun and Ng, 2004) management traits (Dichtl, Koeglmayr, and Mueller, 2000) investment in R&D (Cooper and Kleinschmidt, 1985), and export destination (Ruane and Sutherland, 2005). Further, there are numerous objective and subjective measures (Zou, Taylor and Osland, 1998) for operationalizing performance. Indeed there are 50 ways to operationalize export performance (Sousa, 2004, p.8) and as many as 700 potential drivers for export performance (Gemunden, 1991). As a consequence, results are often inconsistent and contradictory. For example in relation to firm size, some studies propose a strong positive relationship (Dean, Menguc and Myers, 2000; Mittelstaedt, Harben and Ward, 2003), others suggest a weak positive association (Cavusgil and Naor, 1987, Zhao and Zhou, 2002), while some indicate an inverted-U (Baldouf, Cravens and Wagner, 2000) or L-shaped curve (Duenas-Caparas, 2007), signifying declining returns to scale. One study highlights how the relationship between size and export performance can change from positive to negative when the proxy of firm size is switched from sales turnover to number of employees (Kaynak and Kuan, 1993).

Recently, some studies have focused on possible ways to surmount these challenges (Aaby and Slater, 1989; Gemunden, 1991; Shoham, 1998; Sousa, 2004; Zou, Taylor and Osland; 1998). Some scholars have made the case for better conceptualization of export performance (Zou, Taylor and Osland, 1998), improving congruency between performance measures and unit of analysis (Sousa, 2004), and use of uniform measures across studies (Aaby and Slater, 1989) to allow replication (Chetty and Hamilton, 1993). However these hindrances persist (Ali, 2004) because ‘this body of knowledge, consistent with the trend in the overall stream of exporting research, could be described as not being well-grounded in theory (Leonidou, Katsikeas and Piercy, 1998, p.95)

The debilitating absence of a theoretical backbone has also been duly noted by (Brouthers and Nakos, 2005; Couto et. al, 2006; Dhanaraj and Beamish, 2003; Gemunden, 1991).This poses a
hazard to the sanctity of the process of scientific enquiry (Kerlinger, 1986) because, absent a theoretical stencil, studies will resort to using sophisticated analysis (Sousa, 2004) to establish relationships instead of being guided by theory (Gemunden, 1991). In response to Dhanaraj and Beamish’s (2003) call for the development of parsimonious theoretical models, some scholars are starting to apply broader theoretical bases such as social exchange theory (Leonidou, 2003; Styles, Patterson and Ahmed, 2003), natural selection (Child, Chung and Davies, 2003) and complexity theory (Wollin and Perry, 2004) to the study of export performance. This study aims to improve the operationalization of export performance by grounding measures of export performance in internationalization theories.

Theory and Hypotheses

Process models describe internationalization as gradual and incremental (Bilkey and Tesar, 1977; Johanson and Wiedersheim-Paul, 1975). The international new venture (INV) (Oviatt and McDougall, 1994) or born global (Rennie, 1993) paradigm describes the trend of early, rapid and non-sequential internationalization. Despite the development of a stream of literature on INV firms, studies continue to treat exporters as a homogenous group. Researchers have an opportunity to test and contribute to internationalization theories by developing models that consider ‘firm type’ as an integral component (Westhead, 2008). Such an approach entails drawing a line between conventional enterprises and international new ventures (Harveston, Kedia and Davis, 2000). This approach is prudent because INVs are presumed to differ markedly from conventional enterprises due to peculiarities relating to speed of internationalization (McAuley, 1999) firm (McNaughton, 2003) and managerial (Bloodgood, Sapienza, and Almeida, 1996) attributes, and also choice of strategy (Knight and Cavusgil, 2004). In this study, we focus on firm demographics as potential predictors of export performance while premising our propositions on constructs from internationalization theories.

A firm’s start-up size may determine its subsequent survival, growth and performance (Hannan and Freeman, 1984). INVs are typically small in size at inception compared to traditional exporters (Oviatt and McDougall, 1994; Rennie, 1993). Scale is therefore a latent barrier to the growth and performance of such firms and this is often premised on the liability of smallness (Hannan and Freeman, 1984). It follows that the size of an INV is directly related to its export performance. Larger ventures face a ‘less severe’ liability of smallness and can raise capital to support growth (Aldrich and Auster, 1986) while depending on the support of a larger and well-developed network (Carayannopoulos, 2009).

**H1:** The larger the international new venture, the better the performance

The success and performance of a start-up venture depends on its ability to circumvent the liability of newness (Hannan and Freeman, 1984; Suchman, 1995). Exporting firms frequently require some measure of experience to ‘learn the ropes’ (Gripsrud, 1990) or gain legitimacy (Dibrell et. al, 2009). International new ventures are particularly overburdened by newness (Han and Celly, 2008) because their outward expansion is both rapid and non-sequential and occurs before they develop a stable presence in the domestic market (Shrader, Oviatt and McDougall, 2000). This discussion implies the existence of a relationship between operating experience and performance. With increased experience, the impact of newness dissipates and performance improves.

**H2:** The greater the operating experience, the better the performance
For conventional exporters experience enables the firm to increase the resource base and to escalate the level of internationalization from marginal to committed exporter (Bilkey, 1978). However, the long gestation (Knight and Cavusgil, 2005) or time spent focusing on the local market can have a detrimental effect. This long gestation period breeds, domestic market success (Arbaugh, Camp and Cox, 2008), orientation (Autio, Sapienza and Almeida, 2000) or inertia (Oviatt and McDougall, 1995). Domestic market inertia sets in when a firm becomes so entrenched in its local market that it may need to ‘unlearn’ the domestic market attitudes (in particular complacency and contentment) before embarking on foreign ventures (Knight and Cavusgil, 2004). We expect an inverse relationship between performance and experience. 

**H3:** The greater the experience, the lower the performance.

Using a resource-based perspective (Penrose, 1959; Wernerfelt, 1984), a hierarchical argument can be made that firm size is a reliable surrogate for the various resources a firm may be endowed with (Dhanaraj and Beamish, 2003). Size can be a proxy for quality of management, technological intensity or investment in research and development (Ali, 2004). The larger the firm, the greater the likelihood that a firm has better quality management, manufacturing slack or bigger research and development budget. These factors are directly related to export performance. The resource-based proposition suggests that bigger firms may perform better because of the multiple critical resources that size represents. 

**H4:** The larger the firm, the greater the performance

**Data and Methods**

We collected primary data from manufacturing exporters affiliated with the Manufacturers and Exporters Association (MEA). The survey instrument was built into the (MEA) database and distributed to 481 exporters as a ‘link embedded within an e-mail’. An electronic survey was preferred because it results in low cost and faster response times (Bradley, 2007). Of the 113 responses received through the database, nine declined to disclose exporting information on grounds of confidentiality. This resulted in 104 responses, representing a net response rate of 22%. Response rates for electronic surveys tend to be lower than those for hard copy surveys because respondents have numerous concerns ranging from privacy, computer viruses, spamming and selling under guise (Bradley, 2007). Further, there is evidence that New Zealand managers are over-surveyed (Shaw and Darroch, 2004). Even with this said, a response rate of 22% is considered adequate and is comparable to recent New Zealand studies on export development (Darroch and Shaw, 2004; Dean, Gan and Myers, 1998; MFAT, 2010).

We divided this sample into two groups consisting of conventional exporters and international new ventures. We defined international new ventures as those exporters that generated upwards of 25% of their revenue from foreign sales within the first three years of venture formation. This is consistent with several studies on international ventures (Coviello, 2006; Knight and Cavusgil, 1996; Moen, 2002; Spence and Crick, 2009). Using this typology, 48 firms met the criteria for international new ventures, with the remainder (56) being classified as conventional enterprises.

Export intensity was selected as a measure of performance because the construct is a reliable and frequently used objective scale (Enderwick and Ronayne, 2004; Lages and Lages, 2004). While some studies have utilized export sales as a performance measure, we adjusted this variable by expressing it as a proportion of the number of employees (Ruane and Sutherland, 2005) to account for the differences in size. Firm size and operating experience were selected as the
independent variables. Size was measured on two dimensions, sales turnover and number of employees (Cooper and Kleinschmidt, 1985). Operating experience consisted of two separate factors, firm age and export market experience. This is an informative and empirically sound approach for operationalizing firm demographics (Hoang, 1998). We then proceeded to make cross comparisons on export performance, based on type of firm (conventional vs. INV), performance measures (export intensity vs. export sales as a proportion of employees), and performance predictors (size vs. operating experience). Using SPSS regression and correlation, the analysis generated product-moment correlation coefficients and p-values.

<table>
<thead>
<tr>
<th>Firm Type</th>
<th>Dependent Variable</th>
<th>Age</th>
<th>Export Experience</th>
<th>Size (Revenue)</th>
<th>Size (Employee)</th>
<th>Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>Exp Sales/Capita</td>
<td></td>
<td></td>
<td>1*2.09E-11</td>
<td>*0.0004</td>
<td>H₁</td>
</tr>
<tr>
<td>INV (n=48)</td>
<td>Exp Sales/Employees</td>
<td></td>
<td></td>
<td>2r=0.8033</td>
<td>r=0.1029</td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td>Export Intensity</td>
<td>*0.0057</td>
<td>*0.0047</td>
<td>r=0.1673</td>
<td>r=0.1983</td>
<td>H₂</td>
</tr>
<tr>
<td>INV (n=48)</td>
<td>Exp Sales/Total Sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 3</td>
<td>Export sales/Capita</td>
<td></td>
<td></td>
<td>*1.01E-09</td>
<td></td>
<td>H₃</td>
</tr>
<tr>
<td>Conventional (n=56)</td>
<td>Exp Sales/Employees</td>
<td></td>
<td></td>
<td>r=0.8202</td>
<td></td>
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<tr>
<td>Model 4</td>
<td>Export Intensity</td>
<td></td>
<td></td>
<td>*0.0261</td>
<td></td>
<td>H₃</td>
</tr>
<tr>
<td>Conventional (n=56)</td>
<td>Exp Sales/Total Sales</td>
<td></td>
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</tbody>
</table>

Results and Discussion

We found support for hypotheses H₁, H₂ and H₃. However, H₄ is not supported by this analysis. H₁ is supported by both measures of size in relation to export sales per capita. However, only one of the coefficients showed a positive or direct relationship while the other signaled an inverse association. Firstly, this finding is analogous to Kaynak and Kuan (1993) who noted that the direction of the relationship between size and performance changes when different indicants of firm size are used. Firm size (measured by sales turnover) may be directly connected to performance due to indirect benefits attendant to size such as the ability to develop greater managerial, product and marketing competencies (Cavusgil, 1984). The negative relationship (see also, Cooper and Kleinschmidt, 1985; Samiee and Walters, 1990) can be explained by the proposition that additional employees may compromise vital qualities of entrepreneurial ventures such as alertness, agility and flexibility (Oviatt and McDougall, 1995). INVs utilize technology (Loane, 2006) and sophisticated networks (Coviello and Munro, 1997) to leverage firm size without cluttering the venture with additional employees, bureaucracy and organizational layers (Zhang and Tansuhaj, 2007).
We found support for $H_2$ when the dependent variable was changed from exports per capita to export intensity. The coefficients indicated a positive relationship for both measures of operating experience. That age and experience positively impact performance appears to endorse theories of experiential learning and various models on the growth of the firm. Why does experience matter for INV’s and not conventional firms? We argue that experience is more fundamental for INVs than conventional enterprises because INVs draw from a diverse and richer network and are more capable of integrating this knowledge base (Autio, Sapienza and Almeida, 2000) due to their flexible systems and ‘use of alternative governance structures’ (Oviatt and McDougall, 1994).

$H_3$ is supported by both dependent variables against the size measures of performance. A strong positive relationship exists between exports per capita and size as measured by sales turnover. A weaker relationship, in terms of both statistical significance and coefficient, was noted between export intensity and size as measured by number of employees. Not only is size crucial for performance-it is also one of the factors behind the initial international expansion decision (Bilkey, 1978; Cavusgil, 1984; Mittelstaedt, Harben and Ward, 2003). However, $H_4$ is not supported by either of the two models on conventional firms. This could suggest that the so-called negative effect of domestic-orientation may be overstated. However, the results do imply that experience does not significantly impact the performance of conventional enterprises as they do for international new ventures.

Conclusions

From a scholarly as well as a managerial perspective, these results are significant. At a scholarly level we responded to the need to test the explanatory power of the premises used in exporting literature (Doern, 2009). We found some evidence to back hypotheses premised on liability of smallness ($H_1$) and newness ($H_2$). We also note that the explanatory power of the size and operating experience measures, changes in relation to the dependent variable or to firm type. In this regard, this analysis supports studies that lobby for better conceptualization and operationalization by using multiple variables, because no single factor captures the dynamics of export performance (Aaby and Slater, 1989; Lages and Lages 2004; Sousa, 2004; Thirkell and Dau, 1998; Zou, Taylor and Osland, 1998).

Following on the need to focus on firm type (Westhead, 2008) we separated conventional enterprises from international new ventures (Harveston, Kedia and Davis, 2000). From a managerial standpoint, the results of this approach are encouraging, particularly for international new ventures. Once the INV survives the challenges of entrepreneurial start-up, its export performance can improve as it grows in size and experience. Stronger export performance can arise without investing in additional resources or employees. This is consistent with some studies (Etemad, 2004; Knight and Cavusgil, 1996; Oviatt and McDougall, 1994) that suggest that for INVs, it is not ownership but access to resources that counts.
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