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Innovation capacity, international experience and export performance of SMEs in Brazil

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ABSTRACT

Innovation capacity and international experience are factors often related to the internationalisation process of firms, with export activities as the first stage of the process. However, firms from emerging countries seem to show advantages and follow patterns of international expansion that may differ from firms based in developed countries, where the internationalisation models were created. Specifically, exporting firms from emerging countries tend to have limited resources, especially small firms (e.g., for investing in R&D). Despite these facts, the literature on export performance seems biased towards recommending firms to enhance, above all, their innovation capacity in order to achieve better export performance, while little attention is paid to international experience as a factor that is as important as innovation. In this context, the objective of this study is to investigate the impact of innovation capacity and international experience on the export performance of small and medium-sized enterprises (SMEs) located in an emerging country and to identify which factor is more significant. The Resource-Based View and Dynamic Capabilities approach were used as theoretical frameworks. A research model was developed and tested on a significant sample of Brazilian industrial SMEs. The data were analysed through partial least squares structural equation modelling. The results indicate that international experience has a greater impact on export performance than innovation capacity, showing that there is possibility of overemphasising the role of innovation in the export performance of SMEs, at least, in the Brazilian context.

1. Introduction

Innovation capacity and international experience are factors often related to the internationalisation process of firms (Fleury, Fleury, & Borini, 2013; Johanson & Vahlne, 1977; Knight & Cavusgil, 2004), with export activities being the first stage of the process (Johanson & Vahlne, 1977). However, firms from emerging countries seem to present advantages (e.g., they are more used to deal with poorer regulatory quality, lower control of corruption and unstable political environments, which are prominent in such countries) and follow patterns of international expansion that differ from firms based in developed countries, where the internationalisation models were created (Cuervo-Cazurra & Genc, 2008; Guillén & García-Canal, 2009). Specifically, exporting firms from emerging countries tend to have limited resources, especially small firms (Adu-Gyamfi & Korneliussen, 2013), for instance, to invest in R&D (Research & Development); and innovation is an expensive activity that commonly occurs in developed countries (Vernon, 1979; Lall, 1992; Le Bas & Sierra, 2002).

Numerous variables affect export performance (Ibeh & Wheeler, 2005; Zou & Stan, 1998), for instance, those related to managerial (e.g., export commitment, international orientation, perceived export barriers), physical (firm's size, financial resources and firm's location), organisational (e.g., firm's capabilities, general export strategy, product strengths), and relational resources (distribution channel and customer relationships, supply chain links, interpersonal research and foreign market visits) (Ibeh & Wheeler, 2005), but for delimitation purposes, we decided to focus on innovation capacity and international experience.

Following the above logic, firm size may mean greater limitation to the innovation capacity of SMEs located in emerging countries. Nevertheless, many studies on export performance appear to recommend that firms enhance their innovation capacity

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to improve their export performance (e.g., Filipescu, Prashantham, Rialp, & Rialp, 2013; Guan & Ma, 2003; Singh, 2009; Yi, Wang, & Kafouros, 2013) while little attention is paid to international experience (a traditional variable researched in the international business literature) as a factor that is as important as innovation. This is remarkable because, since the 1970s, international experience has been one of the main explanatory variables of the advancement of the internationalisation process of firms (Johanson & Vahlne, 1977; Eriksson, Johanson, Majkgard, & Sharma, 1997). However, to the best of our knowledge, only recently has its connection to export performance begun to be more addressed in more detail in a small number of studies conducted in developed countries (e.g., Kaleka, 2012; Papadopoulos & Martín, 2010), and one in Ghana (Adu-Gyamfi & Korneliussen, 2013). This latter study found no significant effect of international experience on export performance, while the former found positive and significant relationships. Therefore, based on a review of the literature so far, it is not clear which factor is more significant to the export performance of SMEs located in an emerging country like Brazil, which is the context addressed in this article.

In this context, the present study poses the following question: what is the impact of innovation capacity and international experience on the export performance of SMEs located in an emerging country? The objective is to investigate the impact of innovation capacity and international experience on the export performance of SMEs located in an emerging country and to identify which factor is more significant.

The main contribution of this paper is to clarify the role of innovation to the export performance of SMEs, comparing it with international experience, whose impact on export performance remains poorly understood. This comparison is relevant since the literature may be overemphasising the importance of innovation capacity to SMEs, a segment that enjoys access to fewer resources than larger companies (Yu, 2001).

In this study, innovation capacity is defined based on the concept "international innovativeness", which is described by Knight and Kim (2009: 261) as the "capacity to develop and introduce new processes, products, services, or ideas to international markets". On the other hand, international experience is understood as "the sum total of experiential knowledge gained by the firm from all its markets over time" (Papadopoulos & Martín, 2010: 390). Finally, export performance is defined as "the extent to which a firm's objectives, both economic and strategic, with respect to exporting a product into a foreign market, are achieved through planning and execution of export marketing strategy" (Cavusgil & Zou, 1994: 4).

Several factors justify the relevance of export performance as a research topic, including the fact that exporters are more productive than non-exporters (Wagner, 2012), the importance of exports to employment and worker income (Negri et al., 2006), and synergy between export activities and innovation in companies (Filipescu et al., 2013; Golovko & Valentini, 2011). Product innovation, for instance, through its effect on firm productivity, seems to increase the likelihood of the firm entering the export market (Cassiman & Golovko, 2011). Thus, there is considerable academic interest in factors that lead companies to achieve better export performance (Sousa, 2004; Zou & Stan, 1998).

It must be noted that this study is not designed to address the antecedents of innovation capacity or international experience, but to determine the degree to which each of these factors contributes to achieving better export performance.

The study focuses on SMEs belonging to the industrial segment. Our interest in SMEs is justified by the fact that little research has been conducted regarding the export performance of SMEs in emerging countries, as confirmed by the literature review (only two articles specifically analysed samples of SMEs located in such countries, but none of them addressed Brazilian SMEs), despite the representativeness of this segment to exports. For example, in Brazil, SMEs account for approximately 51.6% of the total number of Brazilian exporters in 2014 (MDIC, 2015). In China, SMEs are responsible for over half of the country's total exports (The Economist, 2009 *apud* Cardoza, Fornes, Li, Xu & Xu, 2013).

In order to answer the research question, a theoretical model was proposed and tested through partial least squares structural equation modelling in a significant sample of 112 Brazilian industrial SMEs. The results indicate that both innovation capacity and international experience had a significant positive impact on export performance and that the impact of the latter variable was greater than that of the former, as hypothesised.

Regarding the study variables-innovation capacity and export performance—Wang and Kafouros (2009) declare that most previous research on innovation has focused in developed countries. Furthermore, among the studies that address the export performance in emerging countries, we see that many of them focus on Asian companies (Wang and Kafouros, 2009; Kim & Hemmert, 2015), and there are few studies that focus on the Latin America.

In this sense, World Bank Annual Report 2015 highlights the importance of Latin America to global development concerning the goals of reducing the share of the global population living in extreme poverty to 3 percent by the year 2030, and promoting shared prosperity (The World Bank Group, 2015c). Also according to data from the World Bank report, thanks to high commodity prices and structural reforms for growth, Latin America has enjoyed a decade of strong economic growth and significant social progress (The World Bank Group, 2015c).

Brazil is currently Latin America's largest economy (GDP of 2.3 trillions of US dollars in 2014) and is ranked among the seven largest economies in the world, ahead of India and Russia (The World Bank Group, 2015a), two other BRICS countries (Brazil, Russia, India, China, and South Africa). In 2013, Brazil's FDI inflows were equivalent to 39.5% of all direct investments made in Latin American, or 3.7% of world investments, being the second most attractive country among the BRICS, behind China (The World Bank Group, 2015b). Brazil is also Latin America's second largest exporter (behind Mexico) with 1.22% of world's total exports, based on figures of 2014 (MDIC, 2015).

Brazil is an interesting context for studying variables related to export performance as it is seen as representative of Latin American region, due to its highly globalised and diversified economy. Brazil has one of the most solid and prudently regulated financial sectors in the G20, the largest stock market in Latin America, a broad and sophisticated industrial base, and it is home to Latin America's largest aerospace, automotive, oil and gas, mining, capital goods, medical equipment and chemical industries (Apex-Brasil, 2015). In this way, the choice of Brazilian firms is justified by these facts and data.

Besides the relevance of Brazil in the world economy, the sample selection also considers that international business research on Latin America reflects the promise of using the region as a research laboratory for advancing the theory of international business (Cuervo-Cazurra & Liberman, 2010).

The article consists of six sections, including this introduction (first section). The second section addresses the literature review on export performance from the RBV and Dynamic Capabilities perspectives and presents the hypotheses of the study. The third section describes the method. The fourth section shows the results and hypotheses tests, while the fifth section discusses the results and presents conclusions. The final section presents the limitations of the study and suggestions for future research.

2. Literature review and hypotheses

2.1. Export performance (EP), resource-based view (RBV) and dynamic capabilities approach

EP is a variable that is essentially related to export activity, or the first stage of the internationalisation process (Johanson & Vahlne, 1977).

According to two systematic reviews of the literature on EP made by Zou and Stan (1998) and Sousa, Martínez-López, and Coelho (2008), there is a multiplicity of determinants of export performance, which can be understood by two broad theoretical approaches: the RBV and the Contingency Paradigm (with roots in the Industrial Organisation Theory). The former approach is used to explain the internal factors that affect EP, while the latter approach, the external factors.

Firm's capacities and international experience are internal determinants of EP (Zou & Stan, 1998). In this sense, in studies on EP, both innovation capacity and international experience have been analysed using the RBV theoretical perspective popularised by Barney (1991) (e.g., Beleska-Spasova, Glaister, & Stride, 2012; Filipescu et al., 2013; Guan & Ma, 2003; Knight & Kim, 2009). In fact, the RBV has been recommended to support research on EP to overcome criticisms regarding the lack of theoretical underpinning in export research (Ibeh & Wheeler, 2005).

In brief, the RBV views companies as expanded sets of tangible and intangible resources (Mintzberg, Ahlstrand, & Lampel, 2000), where "resources include all assets, capabilities, organisational processes, firm attributes, information, knowledge etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness" (Daft, 1983: 101 *apud* Barney, 1991). According to the RBV, a resource must have four attributes to generate a sustainable competitive advantage: (1) it must be valuable; (2) it must be rare among current and potential competitors; (3) it must be imperfectly imitable; and (4) there cannot be strategically equivalent substitutes for the former attributes (Barney, 1991).

The RBV, however, is not free from criticism due to its static nature (Priem & Butler, 2001). In this sense, the Dynamic Capabilities (DC) approach introduced by Teece, Pisano, and Shuen (1997) appears to offer a more dynamic perspective of the RBV, suggesting the ability of a firm to change routines and reconfigure resources (including knowledge routines and knowledge resources) as the ultimate source of competitive advantage, with learning playing an important role (Vera, Crossan, & Apaydin, 2011).

DC is defined as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece et al., 1997: 516).

2.2. Empirical research on EP

Based on the previous section, our literature review focused on empirical research on EP that applied the RBV or that assessed variables that are typically analysed using this theory or the DC approach (e.g., capacities, competencies and resources). Following these criteria, the literature review process consisted of three steps: data collection, data analysis and synthesis.

The data collection step consisted in finding journals that have published articles on export performance. We selected journals published until July of 2013 listed in the fields of management and business in the Journal Citation Reports®, 2012 edition. These journals were selected due to their high influence in the academic community, reflected by their impact factors.

Concerning the data analysis step, it consisted in the method used for the selection of the journals best suited for the research purposes. Firstly, we disregarded journals unrelated to the research topic, resulting in a list of 64 journals probably useful for our research purposes. Secondly, we searched for articles related to "export performance" in each of these 64 journals. The search system of 39 of these 64 journals did not return any useful results related to the research topic. Thirdly, the remaining 25 journals returned 133 articles related to export performance. We read the abstracts of these 133 articles and in some cases the article in full. As a synthesis of this process, we found that only nineteen articles reported using the RBV or the DC approach, as follows:

Sixteen articles (Ling-Yee & Ogunmokun, 2001a, 2001b; Dhanaraj & Beamish, 2003; Guan & Ma, 2003; Wilkinson & Brouthers, 2006; Knight & Kim, 2009; Matanda & Freeman, 2009; Singh, 2009; Gao, Murray, Kotabe, & Lu, 2010; Papadopoulos & Martín, 2010; Stoian, Rialp, & Rialp, 2011; Kaleka, 2012; Beleska-Spasova et al., 2012; Filipescu et al., 2013; Yi et al., 2013; He, Brouthers, & Filatotchev, 2013) explicitly report on the application of the RBV as a theoretical framework for defining variables. The remaining three articles (Piercy, Kaleka, & Katsikeas, 1998; May & O'Neill, 2008; Weiss, López, & Medina, 2011) did not do so explicitly, but often measured variables frequently analysed using the RBV or the Dynamic Capabilities approaches. These were therefore included in the study.

These 19 articles were analysed taking into consideration the sample characteristics, independent and dependent variables (among other elements like scales used, level of analysis, data collection method and statistics tests performed). The key findings are:

- Brazilian firms are not analysed in these studies;
- Only two articles specifically analysed samples of SMEs located in an emerging country (Ling-Yee & Ogunmokun, 2001a, 2001b);
- They analyse the EP of firms located in Canada, Chile, China, India, South Africa, Spain, U.K., USA and Zimbabwe, but in spite of the fact that there is little consensus regarding EP measurement, this variable appears to include at least one of the three dimensions (EP finance, strategy and satisfaction) reported in scales validated by Zou, Taylor, and Osland (1998) for different countries;
- There is also little agreement concerning the independent variables reported in these studies, ranging from variables like market turbulence (Matanda & Freeman, 2009) to customer relationship capabilities (Kaleka, 2012), but several of them addresses variables directly or indirectly related to innovation capacity and/or international experience. With regard to innovation capacity, the key related variables found were: innovation capability (Guan & Ma, 2003), technological resources (Wilkinson & Brouthers, 2006), international innovativeness (Knight & Kim, 2009), R&D expenditure (Singh, 2009), product development capabilities (Kaleka, 2012), R&D intensity (Filipescu et al., 2013) and innovative capabilities (Yi et al., 2013). With respect to international experience, the key related variables were export diversity (Dhanaraj & Beamish, 2003), international experience (Papadopoulos & Martín, 2010), firm experience (Stoian et al., 2011), experiential resources (Kaleka, 2012), knowledge-based resources (Beleska-Spasova et al., 2012), export experience (May & O'Neill, 2008) and internationalisation stages (Weiss et al., 2011). Therefore, in the following two subsections, these studies are grouped based on innovation capacity and international experience variables.

2.3. Innovation capacity (IC)

The Organisation for Economic Cooperation and Development defines innovation as "the implementation of a new or significantly improved product (good or service), or process, a new marketing

method, or a new organisational method in business practices, workplace organisation or external relations" (OCDE, 2005: 55), and this definition has resulted in a consensus for understanding innovation. However, IC is defined in numerous ways, and perhaps as a result, there is little agreement concerning the measurement of this variable. Several terms found in the literature refer to this capacity, such as innovative capacity (Miranda et al., 2013), innovation capacity (Dosi, 1988 *apud* Lall, 1992; Fleury et al., 2013), and international innovation capacity (Knight & Kim, 2009). However, these terms appear to refer mainly to the capacity to innovate at the firm or country level.

Crossan and Apaydin (2010) view innovation as both as a process and an outcome. However, they acknowledge that the distinction between these two dimensions of innovation is sometimes blurred. The former is related to "how" we innovate, whereas the latter is related to "what" we innovate. In their comprehensive framework, they propose three groups of determinants of innovation (innovation leadership, managerial levers and business processes), organised according to the levels of analysis (individual/group, organisational and process levels) and theoretical lenses used to support them. RBV and Dynamic Capabilities support the analysis of determinants of innovation at organisational level, which is the case of IC in this research.

As with the definition of innovation, IC measurement in studies on export performance remains undefined. IC measurement has involved highly simplistic approaches, such as that developed by Yi et al. (2013), who operationalised IC as the ratio of new product sales to total sales. The approach of Singh (2009) proposed measuring IC in terms of R&D spending. Operationalisation has also included moderately complex methods involving psychometric scales related to technologies employed by companies and technological leadership (e.g., Beleska-Spasova et al., 2012; Knight & Kim, 2009), as well as more complex forms of measurement, such as that applied by Guan and Ma (2003). These authors defined IC as a construct consisting of seven dimensions: (1) R&D capacity; (2) marketing capacity; (3) manufacturing capacity; (4) learning capacity; (5) organisational capacity; (6) resource exploitation capacity; and (7) strategic capacity. Although Guan and Ma's (2003) method of IC measurement is more complex, it appears to detect several dimensions that are not considered in other studies that sought to relate innovation with EP.

Guan and Ma (2003) report in their study on Chinese companies of various sizes that, with the exception of manufacturing capacity, the other six dimensions of IC positively influence EP. Overall, therefore, it is assumed that there is a positive relationship between the innovation capacity and export performance of SMEs, leading to the following hypothesis:

H1. There is a positive relationship between the innovation capacity and export performance of SMEs located in an emerging country.

2.4. International experience (IE)

For decades, IE has been recognised as one of the main explanatory variables of internationalisation (Johanson & Vahlne, 1977; Eriksson et al., 1997). It has also been cited as a resource (Beleska-Spasova et al., 2012; Kaleka, 2012; Stoian et al., 2011). IE is accumulated over time and may be dependent on unique historical conditions. Therefore, in the light of RBV, IE may be a resource imperfectly imitable, one characteristic that a resource must present to lead to sustained competitive advantage (Barney, 1991). In spite of the supposed importance of this variable for the firms' competitiveness and performance, a review of the literature shows that research on the effects of IE on export performance remains in its infancy. As with innovation capacity, IE has been measured in several ways, but more homogenously. The measurements that have been used include the number of years dedicated to export activities (Stoian et al., 2011; Papadopoulos & Martín, 2010), the number of export countries and diversity of entry modes (Papadopoulos & Martín, 2010), and respondents' perceptions of personnel qualifications for addressing international operations, evaluated through psychometric scales (Beleska-Spasova et al., 2012).

Overall, there is a positive relationship between IE and export performance in studies with exporters located in developed countries (Beleska-Spasova et al., 2012; Kaleka, 2012; Papadopoulos & Martín, 2010; Stoian et al., 2011). Concerning the less developed countries, Weiss et al. (2011) researched Chilean firms (most of them SMEs) and found that higher internationalisation stages, i.e., more experiential knowledge, are positively related to better export performance. However, the relationship between international experience and export performance was not found to be significant in the study of South African firms (of several sizes) by May and O'Neill (2008). Apart from the 19 articles cited in Section 2.2, there is a study of Ghanaian small firms by Adu-Gyamfi and Korneliussen (2013), which also found no significant relationship.

Considering that many studies seem to point to a positive relationship between international experience and export performance, H2 reflects this finding:

H2. There is a positive relationship between the international experience and export performance of SMEs located in an emerging country.

Finally, though trends of accelerated internationalisation among companies must be recognised, even for born-global firms, the fundamental basis for accelerated internationalisation is the acquisition of IE, knowledge that traditional multinationals typically take longer to acquire (Knight & Cavusgil, 2004).

SMEs generally lack the financial resources accessible to larger or multinational companies and other resources (e.g., laboratories) necessary for conducting R&D, an activity that is difficult to replicate given its tacit nature (Cavusgil, Calantone, & Zhao, 2003; Teece et al., 1997). Furthermore, firm size is not always significantly associated with international experience (Abdul-Talib, Salleh, Shamsuddin, & Ashari, 2011), which means that SMEs could probably compete over international experience better than innovation capacity. Therefore, it is assumed that, in general, IE affects the export performance of Brazilian industrial SMEs more heavily than innovation capacity. Thus, the third hypothesis aims to answer the research question fully.

H3. The influence of international experience on the export performance of SMEs located in an emerging country is greater than that of innovation capacity.

3. Method

3.1. Sample

Current research on the international activities of emerging market firms are clearly biased towards China, while other emerging markets remain under-researched (Jormanainen & Koveshnikov, 2012), including Latin American firms (Cuervo-Cazurra & Liberman, 2010). Specifically, studies on the export performance of Brazilian firms remain scarce (Silva, Crespam, & Scherer, 2013). Therefore, Brazilian firms were selected for this study.

The sample was extracted from the National Industry Confederation database, an entity that registers Brazilian exporters

based on official data from the Brazilian government. Data from this website (http://www.brazil4export.com) were gathered on 30 July 2013. The database was compiled using Microsoft Excel software and subsequently updated in consultation with company websites and telephone contacts.

Companies that managed industrial plants and whose products were exported were considered industrial. For the purposes of this study, Brazilian companies were considered those with more than 50% Brazilian capital. Small and medium-sized companies were considered to be those companies that employ 20 to 99 employees and 100 to 499 employees, respectively, a criterion similar to that used in other studies on the subject (Dhanaraj & Beamish, 2003; Knight & Kim, 2009; Wilkinson & Brouthers, 2006).

The model was tested on a sample of 112 Brazilian industrial SMEs, all of them exporters based in the southeast region of Brazil, which is composed by the states of São Paulo (SP), Rio de Janeiro (RJ), Minas Gerais (MG) and Espírito Santo (ES). This region was selected for two reasons: it is the most industrialised part of the country and comprises most of the exporters.

Regarding technological intensity, as defined in OECD classification criteria presented in the International Standard Industrial Classification of All Economic Activities Revision 3 (ISIC Rev. 3), most of the sample consisted of medium-high-intensity companies (42.9%) 29.5% are low, 22.3% medium-low and 5.3% high.

Based on the International Monetary Fund (IMF) classification criteria, 82.1% of the sample managed undeveloped economies as the main product-market export venture and 17.9% managed developed economies. The sample exports to various countries, ranging from one to 131 countries. 50.0% of the sample export to up to 14 countries.

On average, the SMEs analysed had been in operation for 39.8 years, exported for 18.8 years and exported 18.4% of their total sales.

3.2. Questionnaire and field research

The data were collected through a survey using a structured questionnaire that was forwarded to those responsible for exports or foreign trade, following the approach of most studies on the subject (Sousa, 2004). Regarding respondent profiles, 58% were managers, directors or presidents; 26.8% were supervisors, and 15.2% held lower positions, but were in charge of exports or foreign trade.

Before the questionnaire was applied, IC measurement indicators were validated by four academic experts in the field of innovation. The other indicators were validated by three academic experts on internationalisation. Subsequently, a pilot test for the questionnaire was conducted. Ten exporters were contacted, but only four agreed to participate. No issues surfaced regarding comprehension of the questionnaire. However, some participants could not recall the first export year or the number of export countries served.

The questionnaire was sent to 606 companies in São Paulo and to 110 companies located in other states of the southeast region. The data were collected between 06 June 2014 and 02 September 2014. 133 responses were obtained, yielding a response rate of about 18.6%, which is considered adequate (Frohlich, 2002), mainly in Brazil, where the disclosure of information to generate primary data is not a habit (Harzing, 2000). Some firms were not considered Brazilian or were not SMEs. After eliminating them, 112 questionnaires were considered usable.

3.3. Integrating IC, IE and EP

All the constructs were based on indicators used in previous studies. A seven-point Likert psychometric scale (ranging from strongly disagree (1) to strongly agree (7)) was used for all the indicators. A complete list of validated scales and corresponding references is provided in Appendix A.

The IC construct was operationalised as a second-order construct composed of seven first-order constructs, in accordance with Guan and Ma (2003). However, it was not possible to use all the indicators described by these authors due to clarity issues and lack of pertinence of the scales to the concepts presented for each dimension (note: due to space limitations, we do not present the concepts of the seven dimensions, which are provided in full in Guan and Ma (2003). In an attempt to overcome this problem, some indicators reported in the articles described in Section 2.1 were adapted. Moreover, some indicators used in other studies were selected based on their relevance for measuring factors related to innovation. In short, we used the concept of the seven dimensions of IC as proposed by Guan and Ma (2003). However, we had to disregard and replace several indicators from the original study.

In accordance with Beleska-Spasova et al. (2012), IE was operationalised as a one-dimensional construct composed of four indicators, and this approach was most suitable for measuring the international experience of our sample. Objective indicators related to the length of export activity periods or to the number of export countries were not used due to difficulties in obtaining data, as reported in Section 3.2. The EP construct was operationalised using the EXPERF scale presented by Zou et al. (1998). However because this scale only includes three indicators for each dimension, to reduce the risk of eliminating items during the scale and data analysis validation process, four new indicators used in other studies were added (DFIN_4, DSTR_4, DSTR_5, DSAT_4). Additionally, exporters were asked to report EP levels obtained over the last three years, as the EXPERF scale does not account for the temporal aspect, which is essential to the accuracy of the responses.

Consistent with our use of the EXPERF scale, the unit of analysis was the product-market export venture, an operationally simpler solution than the firm level, which favours the use of subjective measures. The use of this unit of analysis enabled us to compare the results of studies conducted in different countries (Sousa, 2004).

Based on a review of empirical studies on the subject, Fig. 1 integrates the IC, IE and EP constructs. The relationship between IC and EP is tested by H1. The relationship between IE and EP is tested by H2. Finally, H3 compares the effects of IC and IE on EP.

As described in the following section, the model was tested using the partial least squares structural equation modelling technique (PLS-SEM). Thus, the relationship between IC, IE and EP refers to the structural model, while the rest of the model specifies the measurement model.

3.4. Statistical analysis

First, the Kolmogorov–Smirnov test was performed using SPSS software. Because the data were not distributed normally, we used PLS-SEM, which is suitable for nonparametric data analysis (Hair, Hult, Ringle, & Sarstedt, 2014). The SmartPLS 2.0 software program was used.

Considering the need to test the hypotheses with latent variables measured by many indicators, we used structural equation modelling, consistent with the method used in several similar studies on EP (e.g., Beleska-Spasova et al., 2012; Dhanaraj & Beamish, 2003; Papadopoulos & Martín, 2010; Stoian et al., 2011).

Our analysis of measurement models and the structural model followed the recommendations made by Ringle, Silva, and Bido (2014), Hair, Ringle, and Sarstedt (2011) and Hair et al. (2014), concerning the recommended steps to evaluate such models and parameters (e.g., AVE values) that needed to be confirmed to evaluate their quality.

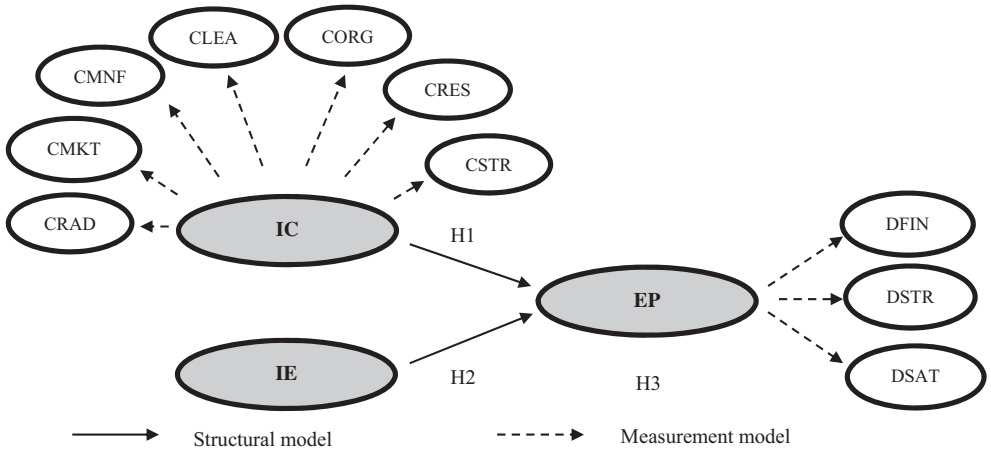

Fig. 1. Research model and hypotheses. *Source:* Prepared by the authors based on the literature review. *Note:* Construct measurement indicators (see Appendix A) do not appear in this figure, but these were specified reflectively following the procedure suggested by Wetzels et al. (2009).

Measurement models were specified reflectively, and higher-order latent variables (IC, EP) were specified following the recommendations of Wetzels, Odekerken-Shröder, and van Oppen (2009), who repeated first-order latent variable indicators among second-order latent variables.

G*Power software was used to determine the minimum sample size based on the following parameters: Test family = *F* Tests, Statistical Test = Linear multiple regression: Fixed Model, R^2 deviation from zero, effect size $f^2 = .15$; α err prob = .05; Power $(1 - \beta$ err prob) = .8 and number of predictors = 3 (the highest number of predictors in the model proposed in this study). We analysed 112 cases, although the minimum sample sized recommended by $G \times$ Power calculations was 68 cases. Although there were only 88 days between the first and last answers, an independent *t* test was conducted to test for non-response bias effects. The sample was divided into two groups (early response and late response), and no significant differences were observed between them with respect to the IC, IE and EP variables. While this procedure was adopted, there were no missing values in the sample analysed.

4. Results

Based on the measurement model results, Appendix A shows that the Average Variance Extracted (AVE) construct values are higher than .50 and that the indicators generated factor loadings (outer loadings) of at least .70. Thus, the initial values obtained fall within desirable limits, suggesting convergent validity for the AVEs and indicator reliability (Ringle et al., 2014; Hair et al., 2011, 2014).

To ensure convergent validity, internal consistency values, which are expressed by Composite Reliability (CR), must also be determined. Higher CR values correspond with higher levels of reliability, and a CR value of at least .70 is generally recommended (Ringle et al., 2014; Hair et al., 2011). This value was achieved (see Appendix A).

Although CR values over .70 are recommended, values higher than .90 may reflect indicator redundancy (Hair et al., 2014). Some first-order constructs do not fit this situation (CLEA, CSTR, CORG, DSTR, DFIN, DSAT). To detect potential problems with the data collection instrument, each indicator was critically analysed based on the meaning of each sentence, as were the response means and standard deviations. No redundancy problems were observed.

Because indicators of first-order constructs were repeated in second-order constructs (Wetzels et al., 2009), high CR values may have also threatened the discriminant validity of the first-order constructs. To ensure that the constructs actually differed, the discriminant validity was tested using two methods recommended by Hair et al. (2014): (1) analysis of indicator cross-loadings and (2) the Fornell and Larcker criterion.

Concerning the cross-loadings analysis, the loadings of the indicators in their respective constructs were higher than those of the other constructs. Hence, discriminant validity was generated using the first method (Hair et al., 2014).

The Fornell and Larcker criterion involves comparing the square root of the AVEs of constructs with correlations between constructs, and the square root obtained should be higher than the correlations to ensure discriminant validity (Hair et al., 2014).

An analysis of the square roots for both first- and second-order constructs (see Table 1) shows that the results meet the Fornell and Larcker criterion, confirming the discriminant validity of the model using the second method.

Now that the model's convergent and discriminant validity has been confirmed, the results of the structural model are reported.

The R square values, which reflect endogenous variable variance explained by the structural model (Ringle et al., 2014),were the following: CLEA ($R^2 = .830$), CSTR ($R^2 = .782$), CMKT ($R^2 = .600$), CMNF ($R^2 = .675$), CORG ($R^2 = .783$), CRAD ($R^2 = .674$), CRES ($R^2 = .743$), EXPORT PERFORMANCE ($R^2 = .205$), DSTR ($R^2 = .901$), DFIN ($R^2 = .841$) and DSAT ($R^2 = .709$). The R^2 of .205 for the main model construct, Export Performance, suggests a moderate effect among the behavioural and social sciences areas, according to Cohen (1998) and Cohen (1998 *apud* Ringle et al., 2014).

The data presented in Table 2 were used to evaluate the significance of the construct relationships.

First, the relationships between the seven IC dimensions and IC construct were found to be positive and significant. Learning Capacity (CLEA) had the highest coefficient (.911, $t = 53.835$, $p < .01$), while Marketing Capacity (CMKT) had the lowest coefficient (.774, $t = 18.517$, $p < .01$).

Secondly, the three EP dimensions were also positive and significant. An analysis of the relationships between IC and EP (.235, $t = 2.403$, $p < .05$) and IE and EP (.304, $t = 2.966$, $p < .01$) also showed that both were positive and significant, supporting Hypotheses H1 and H2.

Thirdly, the effect of IE on EP (.304, $t = 2.966$, $p < .01$) was found to be greater than the effect of IC on EP (.235, $t = 2.403$, $p < .05$), confirming H3.

The results of the three hypotheses are discussed in detail in the following section.

Table 1
AVEs square roots.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Innovation capacity (second-order)	4.84	1.17	**.717**	0	0	0	0	0	0	0	0	0	0	0	0
2. CLEA (first-order)	4.84	1.35	.911	**.870**	0	0	0	0	0	0	0	0	0	0	0
3. CSTR (first-order)	5.03	1.48	.88	.746	**.905**	0	0	0	0	0	0	0	0	0	0
4. CMKT (first-order)	4.43	1.39	.774	.615	.659	**.802**	0	0	0	0	0	0	0	0	0
5. CMNF (first-order)	5.43	1.18	.822	.757	.687	.529	**.783**	0	0	0	0	0	0	0	0
6. CORG (first-order)	4.68	1.48	.885	.794	.770	.608	.668	**.868**	0	0	0	0	0	0	0
7. CRAD (first-order)	4.68	1.58	.821	.748	.611	.669	.677	.622	**.842**	0	0	0	0	0	0
8. CRES (first-order)	4.92	1.18	.862	.729	.770	.584	.665	.736	.642	**.803**	0	0	0	0	0
9. Export performance (second-order)	4.28	1.45	.357	.286	.295	.425	.263	.295	.321	.267	**.816**	0	0	0	0
10. DSTR (first-order)	4.26	1.67	.307	.229	.265	.398	.227	.235	.279	.223	.949	**.909**	0	0	0
11. DFIN (first-order)	3.89	1.52	.267	.199	.193	.388	.174	.197	.266	.200	.917	.848	**.884**	0	0
12. DSAT (first-order)	4.71	1.58	.406	.361	.347	.365	.318	.384	.332	.310	.842	.685	.641	**.902**	0
13. International experience	5.45	1.33	.402	.392	.368	.400	.340	.314	.262	.321	.398	.343	.382	.364	**.872**

Source: Survey data. *Note:* $N = 112$. Numbers in bold refer to the square roots of AVEs for constructs calculated manually. The remaining data were obtained from the SmartPLS 2.0 Algorithm module using the following parameters: Missing value algorithm = Case Wise Replacement; Weighting scheme = Path weighting scheme, Data metric = Mean 0, Var 1, Maximum iterations = 300, Abort criterion = 1.0E − 5, Initial weights = 1.0.

Table 2
Total effects.

Related hypotheses	Paths	Original sample (path coefficient)	Mean	Standard error	*t* Test	Significance
H1 and H3	Innovation capacity → CLEA	.911	.911	.017	53.835	$p < .01$
	Innovation capacity → CSTR	.884	.885	.021	43.169	$p < .01$
	Innovation capacity → CMKT	.774	.775	.042	18.517	$p < .01$
	Innovation capacity → CMNF	.822	.825	.027	30.697	$p < .01$
	Innovation capacity → CORG	.885	.885	.022	39.547	$p < .01$
	Innovation capacity → CRAD	.821	.822	.036	22.960	$p < .01$
	Innovation capacity → CRES	.862	.865	.026	33.624	$p < .01$
	Innovation capacity → export performance	**.235**	**.237**	**.098**	**2.403**	**$p < .05$**
	Innovation capacity → DSTR	.223	.225	.093	2.404	$p < .05$
	Innovation capacity → DFIN	.216	.217	.090	2.407	$p < .05$
	Innovation capacity → DSAT	.198	.200	.084	2.362	$p < .05$
	Export performance → DSTR	.949	.949	.010	99.355	$p < .01$
	Export performance → DFIN	.917	.917	.016	55.996	$p < .01$
	Export performance → DSAT	.842	.842	.038	22.385	$p < .01$
H2 and H3	**International experience → export performance**	**.304**	**.307**	**.102**	**2.966**	**$p < .01$**
	International experience → DSTR	.288	.292	.098	2.955	$p < .01$
	International experience → DFIN	.279	.282	.095	2.934	$p < .01$
	International experience → DSAT	.256	.259	.088	2.910	$p < .01$

Source: Survey data. *Note:* The data were obtained from the Bootstrapping module of SmartPLS 2.0 using the following parameters: Missing value algorithm = Case Wise Replacement; Apply missing value algorithm = Yes, Sign changes = No sign changes, Cases = 112, Samples = 5000.

The quality of model fit was examined for predictive validity using the Stone–Geisser indicator (Q^2) and Cohen indicator (effect size f^2). Both indicators were obtained using the SmartPLS software Blindfolding module based on a reading of model redundancy (CV Red) and commonality (CV Com), respectively (Ringle et al., 2014). With respect to predictive analysis, Hair et al. (2014) recommend that the number of valid observations should not be an integer that is a multiple of the omission distance (d). This recommendation was followed by using $d = 5$ for 112 valid observations.

Q^2 values above zero suggest that exogenous constructs have predictive relevance in relation to the endogenous construct under consideration (Hair et al., 2011, 2014), and this result was found for all of the constructs (see Appendix A).

The f^2 values of .02, .15 and .35 were interpreted as small, medium and large effects, respectively (Hair et al., 2014). An analysis of the values obtained (see Appendix A) revealed that all the constructs significantly explain endogenous EP. In particular, an analysis of IC and IE constructs showed that the latter had a greater effect than the former on EP, which had already been observed when H3 was tested.

Finally, the overall quality of the model was analysed based on the Goodness-of-Fit index (GoF). Our use of the GoF is appropriate because formative measurement models were not used (Hair et al., 2014). The GoF was obtained using the geometric mean of the arithmetic mean of R^2 and the weighted mean (from the number of construct indicators) of the AVEs.

Wetzels et al. (2009) and Wetzels et al. (2009 *apud* Ringle et al., 2014) recommend a minimum value of .36 as suitable for social sciences disciplines. A value of .711 was obtained, which is much higher than the recommended minimum.

5. Discussion and conclusions

This study contributes to the literature on export performance by explicitly comparing the role of innovation capacity (IC) and international experience (IE) in the export performance (EP) of SMEs located in an emerging country. This comparison is a major contribution to the field of SME internationalisation, since SMEs enjoy access to fewer resources than larger firms (Yu, 2001) and should decide on what and how to invest their scarce resources to

achieve better EP. This paper sheds light on the theme, revealing some interesting findings.

The first finding shows that the current literature could be overemphasising the relevance of IC regarding this investment decision. We found in the sample of Brazilian industrial SMEs that both IC and IE had a significant positive impact on EP and that the impact of IE was greater than that of IC, confirming H3 and answering the research question.

IE is one of the main explanatory variables of company growth in the internationalisation process (Johanson & Vahlne, 1977; Eriksson et al., 1997). However, few studies have evaluated its influence on EP. The results obtained herein confirm the importance of this variable in improving EP and corroborate those of Papadopoulos and Martín (2010).

The second finding is related to the IC learning capacity dimension. A model that assesses IE and IC effects on EP was validated, and was elaborated based on previous empirical studies published in high-impact journals listed in Journal Citation Reports®. Efforts were made to organise the literature cited in this study and adopt a common theoretical basis (RBV) suitable for research on EP (Ibeh & Wheeler, 2005).

The model is novel in terms of how IC and EP constructs are integrated. To the best of our knowledge, this is the first study that integrates these two constructs in a multidimensional manner (IC in seven dimensions and EP in three dimensions). Previous studies have addressed one or the other in a one-dimensional manner, thereby neglecting important factors such as learning capacity, which in this study made a greater contribution to the IC construct than R&D capacity. This finding is consistent with the Dynamic Capabilities approach, where learning plays an important role in enabling a firm to change its routines and reconfigure resources. This ability is viewed as the ultimate source of competitive advantage (Vera et al., 2011).

Although the SME sector does not generally follow a formalised R&D structure (Figueiredo, 2005), this does not mean that IC is absent. The measurement of IC over seven dimensions captured various dimensions that have been ignored in several other studies. IC appears to involve much more than investment in R&D, employment or advanced technologies in exported products (Guan & Ma, 2003). Accordingly, the model allows us to make a further evaluation of the role of IC in EP, primarily for SMEs. This enables more accurate comparisons with other factors, such as IE. Based on the literature review, we observe as well that the analysis of the relation between IC and EP in the context of Latin America has been neglected. This research helps addressing this gap in the literature.

The third finding reveals that although H3 has been confirmed, this result warrants careful analysis for two reasons:

- First, 42.9% of the sample consisted of medium-high-intensity companies, exporting mainly to underdeveloped economies, which are likely to require lower IC than developed economies. However, another explanation would be that Brazilian firms seem to prefer such destinations not just because it is supposedly easier to introduce new products in these markets, but because emerging-country firms (i.e. Brazilian firms) are used to operate in countries with poor governance conditions, like it is the case in underdeveloped economies (Cuervo-Cazurra & Genc, 2008). This seems to be a reasonable explanation if we take into consideration the fact that it is not enough for Brazilian firms to have IC to export their products. In addition, they must know how to overcome many problems in their own country, such as high logistics costs, inadequate infrastructure, among others (The World Bank Group, 2015c), which are similar to the ones they find in their main product-market export ventures.
- Second, the result also requires reflection when examined in light of the RBV. According to the RBV, companies compete over resources, which are central to achieving a sustainable competitive advantage (Aaker, 1989). Based on this understanding, it can be concluded that companies also compete over international experience and innovation capacity. Both resources are accumulated over time and can therefore be considered strategic resources (Barney, 1986; Dierickx & Cool, 1989). However, a strategic resource must meet four attributes to generate a sustainable competitive advantage: (1) it must be valuable; (2) it must be rare among current and potential competitors; (3) it must be imperfectly imitable; and (4) there cannot be strategically equivalent substitutes for the preceding attributes (Barney, 1991).

Of these four attributes, perhaps the least difficult to analyse at this moment is the imperfectly imitable resource. Although IE affects EP to a greater degree, according to the RBV, it may be more perfectly imitable than IC in strategic terms. This can be attributed to the fact that companies can typically hire executives from competitors and publish online information on countries where they are based, fairs in which they participate, and countries where they employ sales representatives. This renders international experience more imitable. IC, by contrast, involves knowledge that is tacit and difficult to replicate, such as R&D capacity (Cavusgil et al., 2003; Teece et al., 1997), rendering imitation highly unlikely.

Thus, complementing the answer to the main question of this research, in strategic terms, IC appears to be more relevant than IE in obtaining a sustainable competitive advantage for SMEs in an emerging country. However, obtaining good EP, IC and IE should be viewed as complementary, even though IE's impact proved to be more significant than that of IC, and this finding may be seen as the main contribution of this study.

It should be noted that while IE is a simpler construct than IC, this does not necessarily mean that it is easier to increase or that it requires less investment, although this issue falls outside the scope of this study. Nonetheless, this study can guide future research on ways in which exporting SME managers may optimise scarce resources and the development of public policies that encourage exports.

Concerning the managerial implications, this study reinforces the fact that firms willing to improve their IC need to pay attention not only to their R&D expenditures, but also to the other six dimensions of IC, with emphasis on learning capacity. Investing only in IC may not be sufficient to improve their EP. Firms must balance their investments, considering heavily the importance of improving their international experience to achieve better EP. This could be done proactively by means of some actions, like:

- Seeking new countries offering tariff advantages,
- Analysing specific trade statistics between export and import countries,
- Getting knowledge about the culture of other countries,
- Contracting new international sales representatives for assistance in the implementation of marketing actions,
- Increasing the number of visits to potential customers,
- Participation in the main trade fairs of their sectors,
- Increasing the number of countries served by the firm, among others.

Another important contribution of this study is the fact that it has also validated measurement scales for higher-order IC through partial least squares structural equation modelling, thereby confirming the discriminant validity of first-order constructs. Guan and Ma (2003) did not discuss this aspect.

Finally, the results of this study show that the seven dimensions of IC in question relate positively and significantly to the IC construct and in turn with EP. This final finding differs from Guan

and Ma (2003), who found no significant relationship between the manufacturing capacity dimension and EP, showing that the behaviour of SMEs from different emerging countries could not follow the same pattern. Using only R&D related aspects to measure IC might not be adequate in the context of Latin American SMEs, which often lack formalised R&D structure. Therefore, the proposed way to measure IC seems to allow a better comprehension of this capacity in any context.

6. Limitations and suggestions for future studies

This study has a number of limitations. First, it made use of empirical studies on EP published only in journals. As a result, recent papers that were published as conference proceedings were not included. However, we attempted to overcome this limitation by reviewing studies recognised as important by the international academic community.

The study is also limited in that it does not consider countless other variables that affect EP (Ibeh & Wheeler, 2005; Zou & Stan, 1998), such as those related to institutional environments. This approach was used to define the study topic and objectives. Furthermore, we should acknowledge that several variables may moderate the relationships in question, such as productivity, since the number of export markets served (which means more international experience) seems to increase with firm productivity (Wagner, 2012).

The study's use of the RBV and Dynamic Capabilities as theoretical lenses for the selection of articles reviewed is a third limitation, although this choice was made for the purpose of obtaining more consistent results.

The fourth limitation is related to the sample. This is an empirical analysis in the Brazilian context and the majority of Brazilian companies appear to export to underdeveloped economies, which are likely to require lower IC than developed economies. Samples collected from other emerging countries could provide different results, and this may spur additional studies.

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Appendix A. Questionnaire and statistical analysis results

Questionnaire items	Indicator/ construct label	Factor loading	AVE	CR	CV Red (Q^2)	CV Com (f^2)
International experience	**IE**		**.761**	**.927**	**.760**	**.760**
Our company employs highly qualified staff to address the demands of international clients	INTE_1	.853				
Our company employs staff with experience in international export operations	INTE_2	.875				
Our company employs current knowledge of the export market	INTE_3	.892				
Our company employs information on conducting business in export markets	INTE_4	.867				
Note: INTE_1, INTE_2, INTE_3 and INTE_4 were adapted from Beleska-Spasova et al. (2012)						
Innovation capacity (second order construct)	**IC**		**.514**	**.971**	**.514**	**.514**
R&D capacity	**CRAD**		**.709**	**.907**	**.476**	**.709**
Our company develops technologies by investing in R&D (Research and Development)	CRAD_1	.863				
Our company acquires new technologies	CRAD_2	.870				
Our company is recognised for products that are technologically superior	CRAD_3	.844				
Our company, in product development, employs some of the most qualified industry experts in the country	CRAD_4	.789				
Note: CRAD_1 and CRAD_2 were adapted from Beleska-Spasova et al. (2012). *CRAD_3 and CRAD_4 were adapted from* Knight and Kim (2009)						
Marketing capacity	**CMKT**		**.643**	**.899**	**.377**	**.643**
Our company can segment and target specific markets	CMKT_1	.676				
Our company can utilise marketing tools (product design, pricing, advertising) to differentiate our products	CMKT_2	.849				
Our company implements new pricing methods for the export of goods and services	CMKT_3	.812				
Our company utilises new sales channels abroad	CMKT_4	.798				
Our company applies new techniques to promote products abroad	CMKT_5	.862				
Note: CMKT_1 and CMKT_2 were adapted from Knight and Kim (2009). CMKT_3, CMKT_4 and CMKT_5 were adapted from Pesquisa de Inovação Tecnológica [Study on Technological Innovation](IBGE, 2013)						
Manufacturing capacity	**CMNF**		**.613**	**.863**	**.402**	**.613**
Our company is consistent in the quality of product manufacturing/production	CMNF_1	.812				
Our company manufactures products designed through R&D (Research and Development) efforts that meet customer needs	CMNF_2	.785				
Our company complies with delivery times in the manufacturing/production of our products	CMNF_3	.720				
Our company employs advanced technologies in manufacturing/production compared to our international competitors	CMNF_4	.812				

Appendix A (*Continued*)

Questionnaire items	Indicator/ construct label	Factor loading	AVE	CR	CV Red (Q^2)	CV Com (f^2)
Note: CMNF_1, CMNF_2 and CMNF_3 were adapted from Beleska-Spasova et al. (2012). CMNF_4 was adapted from Guan and Ma (2003)						
Learning capacity	**CLEA**		**.757**	**.940**	**.624**	**.757**
Our company identifies and applies technological trends in our industry	CLEA_1	.808				
Our company promotes a learning culture that allows for the identification, assimilation and exploitation of new knowledge essential to the competitive success of the company	CLEA_2	.857				
Whenever we have needed to develop new skills or technologies to offer new products, we have been able to do so efficiently	CLEA_3	.923				
Learning new skills and acquiring new capabilities that enable the introduction of new products is easily achieved	CLEA_4	.915				
We effectively bridge the gap between what we know or have and what we need to know or have to develop new desired products and to introduce them on the market	CLEA_5	.843				
Note: CLEA_1 and CLEA_2 were adapted from Guan and Ma (2003). CLEA_3, CLEA_4 and CLEA_5 were adapted from Hull and Covin (2010)						
Organisational capacity	**CORG**		**.754**	**.939**	**.589**	**.754**
When necessary, our company adopts a flexible organisational structure to adjust to new projects focused on product or process innovation	CORG_1	.842				
Our company offers managers considerable autonomy in the innovation process	CORG_2	.804				
In our company, there is strong coordination between the technical (e.g., engineering, projects), sales and manufacturing departments	CORG_3	.865				
Our company implements new management techniques to improve routines and work practices and to facilitate the use and exchange of information, knowledge and skills within the company	CORG_4	.907				
Our company implements new work organisation methods to better distribute responsibilities and decision-making tasks, e.g., the establishment of teamwork, the decentralisation or integration of departments, etc.	CORG_5	.918				
Note: CORG_1, CORG_2 and CORG_3 were adapted from Guan and Ma (2003). CORG_4 and CORG_5 were adapted from variables 188 and 190, respectively, in Pesquisa de Inovação Tecnológica [Study on Technological Innovation] (IBGE, 2013)						
Resource exploitation capacity	**CRES**		**.645**	**.900**	**.471**	**.645**
Our company combines internally and externally developed technologies (e.g., technologies developed by business partners)	CRES_1	.696				
Our company maintains a continuous flow of financial resources for the introduction of new products on the market	CRES_2	.815				
Our company is skilled in the allocation of personnel	CRES_3	.812				
Our personnel continually strive to improve our products and processes	CRES_4	.875				
Our employees believe that they are responsible for improving our products and processes	CRES_5	.807				
Note: CRES_1, CRES_2 and CRES_3 were adapted from Guan and Ma (2003). CRES_4 and CRES_5 were adapted from Yalcinkaya, Calantone, and Griffith (2007)						
Strategic capacity	**CSTR**		**.818**	**.947**	**.638**	**.818**
In our company, strategy formulation is guided by a strong entrepreneurial vision	CSTR_1	.887				
In our company, senior management is highly capable of understanding external factors that may affect business operations	CSTR_2	.919				
In our company, senior management quickly anticipates the movement of foreign competitors and adjusts strategies to this movement	CSTR_3	.941				
In our company, there is a strong connection between innovation and value recognition by customers	CSTR_4	.870				
Note: CSTR_1, CSTR_2, CSTR_3 and CSTR_4 were adapted from Guan and Ma (2003).						
Export performance (second order construct)	**EP**		**.665**	**.963**	**.135**	**.653**
Export performance—financial dimension	**DFIN**		**.781**	**.934**	**.644**	**.781**
Over the last three years...						
... our main product-market export venture has been very profitable	DFIN_1	.811				
... our main product-market export venture has generated a high volume of sales	DFIN_2	.913				
... our main product-market export venture has achieved rapid growth	DFIN_3	.926				
... our main product-market export venture has generated high revenues through the introduction of new products	DFIN_4	.879				
Note: DFIN_1, DFIN_2, DFIN_3 are derived from Zou et al. (1998). DFIN_4 was adapted from Kaleka (2012).						
Export performance—strategic dimension	**DSTR**		**.826**	**.960**	**.744**	**.826**
Over the last three years...						
... our main product-market export venture has improved our global competitiveness	DSTR_1	.901				
... our main product-market export venture has strengthened our strategic position	DSTR_2	.926				

Appendix A (*Continued*)

Questionnaire items	Indicator/ construct label	Factor loading	AVE	CR	CV Red (Q^2)	CV Com (f^2)
... our main product-market export venture has significantly increased our global market share	DSTR_3	.912				
... our main product-market export venture has contributed to the company's expansion into new international markets	DSTR_4	.910				
... our main product-market export venture has contributed to the achievement of strategic export goals	DSTR_5	.895				
Note: DSTR_1, DSTR_2, DSTR_3 are derived from Zou et al. (1998). DSTR_4 and DSTR_5 were adapted from Stoian et al. (2011)						
Export performance—satisfaction dimension	**DSAT**		**.814**	**.946**	**.571**	**.814**
Over the last three years...						
... the performance of our main product-market export venture has been very satisfactory	DSAT_1	.888				
... our main product-market export venture has been very successful	DSAT_2	.947				
... our main product-market export venture has fully met our expectations	DSAT_3	.889				
... we are pleased with the growing recognition (awareness) of our products/company in our main product-market export venture	DSAT_4	.884				
Note: DSAT_1, DSAT_2, DSAT_3 are derived from Zou et al. (1998). DSAT_4 was adapted from Papadopoulos and Martín (2010)						

Source: Prepared by the authors based on a literature review and survey data. *Notes:* Item loading, AVE and CR were calculated according to the following parameters: $N = 112$. Data obtained from the SmartPLS 2.0 Algorithm module using the following parameters: Missing value algorithm = Case Wise Replacement; Weighting scheme = Path weighting scheme, Data metric = Mean 0, Var 1, Maximum iterations = 300, Abort criterion = 1.0E − 5, Initial weights = 1.0. CV Red (Q^2) and CV Com (f^2) were calculated according to the following parameters: $N = 112$. Data obtained from the SmartPLS 2.0 Blindfolding module. Omission distance = 5.

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