THE LINKAGE BETWEEN INTANGIBLE RESOURCES AND EXPORT PERFORMANCE: THE MEDIATING EFFECT OF INNOVATION

ABSTRACT

This paper develops a framework to test the relationship between intangible resources and export performance, considering the mediating effect of innovation. Based on survey data from Portuguese small and medium-sized enterprises (SMEs) exporting footwear findings suggest that: (1) innovation has a direct and positive influence on export performance; and (2) innovation does have a mediating effect on the relationship between intangible resources and export performance. This study deepens our understanding and provides novel insights into strategic management literature, since it combines multiple factors and has obtained the importance of each construct in SMEs business growth.

Keywords: Intangible Resources; Export Performance; Innovation; Smes; PLS-SEM.

Cite it like this:

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INTRODUCTION

As the importance of internationalization grows for many firms around the globe, there is an increasing interest in the strategic determinants that predict export performance. Consequently, research on export performance has developed exponentially. This increase interest of the academia is due to the various macro and micro-level benefits associated with export development. At the macro-level, superior export performance is a cost-effective vehicle for economic growth, employment creation and a general improvement in living standards. There are countless benefits at firm-level that includes opportunities for growth, worldwide market share, better margins and risk diversification (Kahiya & Dean, 2014).

Strategic management has focused on firms’ intangible resources and this has attracted considerable interest among academics and practitioners (Barney, 1991). Particularly, scholars have focused a great deal of attention on a subclass of intangible assets that is called “social approval assets”, because they develop their value from favorable collective perceptions (Pfarrer, Pollock & Rindova, 2010).

Innovation, as a process of generating new ideas, will prevent firms’ stagnation and give their products and services competitive advantage by allowing to define direction and business strategy to adopt (Abrar et al., 2009). Moreover, innovation can support a strategic posture and the willingness and ability to question (or leave) existing circumstances, thus creating space for creativity, new ideas and experiences (Frank, Kessler & Fink, 2010). Regardless of the sort of innovation adopted, the most innovative firms tend to overcome unstable situations, and is thus considered the most important dimension in the context of entrepreneurial orientation, as it determines the means by which organizations can achieve competitive advantage and promote its growth (Dess & Lumpkin, 2005).

SMEs are increasingly confronted by challenges and opportunities in international markets. Together with large corporations, smaller firms are among the key players in international trade. Smaller firms that belong to traditional (low-tech and labor-intensive) industries can find here opportunity for growth or challenge their survival. In fact, they are particularly vulnerable to global competition, particularly from players located in low-labor-cost economies. In order to achieve competitiveness in this context, smaller firms need to develop unique, firm-specific assets (Zucchella & Siano, 2014).

Literature on export performance is extensive but arguably it has not yet achieved the consensus required to prescribe exporting strategies to small firm (Casey & Hamilton, 2014). Moreover, factors that set of SME growth (including exporting) are still in need of research (Stouraitis, Harris, Harun & Kyritsis, 2017). So, the purpose of this paper is to broaden the boundaries of strategic management literature and test the following general hypotheses — does intangible resources positively influence small business export performance? Addicionally does innovation mediates this relationship?

Theoretical Framework

Intangible resources

Resources and capabilities are a set of tangible and intangible assets that can be used by firms to help choose and implement strategies (Barney, Ketchen & Wright, 2011). There is a consensus in the literature that the sources of competitive advantage are more associated to intangible resources than with the tangible ones. In addition, the tangible assets tend to depreciate over the time, while intangible assets may accumulate value over time (Porter, 1991).

Scholars argue that resources form the basis of firm strategies (Barney, 1991). Therefore, firm resources and strategy cooperate to create positive returns. Firms employ both tangible resources (such as physical infrastructures and financial resources) and intangible resources (like knowledge and brand equity) in the development
and implementation of strategies. However, intangible resources are more likely than tangible resources to produce a competitive advantage, since they are often rare and socially complex, thereby making them difficult to imitate (Hitt, Bierman, Shimizu & Kochhar, 2001). Thus, intangible resources are considered strategic resources (Amit & Schoemaker, 1993).

Intangibles resources have three intrinsic characteristics that distinguish them from tangible resources (Molloy, Chadwick, Ployhart & Golden, 2011). First, intangibles do not deteriorate with use, since these resources are expected to confer benefits for an indeterminate period of time (Cohen, 2005). Secondly, multiple managers can use the intangibles resources simultaneously, for example, the use of a brand is available for all managers. Finally, the intangibles resources are immaterial, making them difficult to exchange, as they often cannot be separated from its’ owner (Marr & Roos, 2005).

The existing literature suggests six types of resources that are particularly important sources of export venture competitive advantage: reputational resources; access to financial resources; human resources; cultural resources; relational resources; and, informational resources (Morgan, Vorhies & Schlegelmilch, 2006).

Innovation

Innovation refers to the support and encouragement to new ideas, experimentation and creativity that will lead to new products, services and processes. Any form of innovation involves a series of efforts, such as: technological innovation involves a research and engineering effort, focused on the development of new products and processes; product innovation includes market research, design, and the focus on advertising and promotion; administrative innovation refers to the development of management systems, control techniques and organizational structure. Thus, innovation reflects the trend that an organization has to participate and support new ideas, innovations, processes, experimental and creative, which may result in new products, services or processes (Lumpkin & Dess, 1996). Thus, innovation refle te a tendência que uma organização tem para participar e apoiar novas ideias, novidades, processos experimentais e criativos que possam resultar em novos produtos, serviços ou processos (Lumpkin & Dess, 1996), being that the adoption of new innovations can generate competitive advantage and can promote a greater source of growth (Dess & Lumpkin, 2005).

Innovation can occur throughout a long process, a new product line, a new announcement or a new technological advance (Lumpkin & Dess, 1996). On one hand, there are several ways to identify the degree of innovation of companies, such as the quantity of financial resources invested in innovation, human resources devoted to innovation activities, number of new products or services launched on the market or frequency of change in product lines or services. On the other hand, the financial resources invested in innovation and the level of commitment of human resources with the innovative activities will dictate the degree of innovation in an organization (Covin & Slevin, 1989).

While it is true that all types of innovations involve a lot of efforts, be it in technology, management, products or markets, the most innovative firms tend to overcome unstable situations and, in this way, there is a consensus that this dimension is the most important in the context of entrepreneurial orientation, as it determines the means by which firms achieve competitive advantage and growth (Dess & Lumpkin, 2005).

Export performance

The use of efficient worldwide communications technology and transportation, the decrease in governments’ protectionist policies, and the decrease of geographically protected markets have made it possible, and necessary, for many firms to view their operating domains as global (Gil-Pechuan, Exposito-Langa & Tomas-Miquel, 2013). Moreover, small countries with constrained domestic markets depend on the success of small firms who can export successfully and grow to a scale beyond that which their home market could support (Casey & Hamilton, 2014).

Exporting is an early phase in the internationalisation model established by Johanson and Vahlne (1977, 2009), grounded on...
the assumption that new exporters can gradually engage with foreign markets, depending on their exploitation strategy on knowledge and other resources. This export research, however, was not pertinent for small exporters (Casey & Hamilton, 2014), since its unit of analysis was large firms.

In a fairly recent literature review, Sousa, Martínez-López and Coelho (2008) conclude that, along with internal capabilities and competencies, the main determinants of export performance are firm size and international experience. Actually, internationalization processes have mainly been studied with reference to multinational corporations and less for SMEs, because smallness is usually considered a problem, as these firms often have a disadvantage in resource access (Musso & Francioni, 2014). This, however, does not support small firm managers in search of a growth strategy through exporting.

Conversely, the number of small firms operating in international markets has increased and represents the majority of firms in most countries, and therefore, they play an important role in the economic growth of their countries. As a consequence, the internationalization process of SMEs has become a topic of academic and governmental attention (Musso and Francioni, 2014).

Hence, the development of exports is of great importance, both at macro and micro levels. Exporting contributes to economic and social development of nations, helps the industry progress, increases productivity and creates jobs. At firms’ level, through market diversification, exports provide an opportunity for them to become less dependent on the domestic market, gaining new customers, exploiting economies of scale and achieving lower production costs while producing more efficiently (Okpara, 2009).

Exports is a more attractive way to enter international markets, especially for SMEs, in comparison with other alternatives, such as joint ventures, which involve spending a large number of resources (Dhanaraj & Beamish, 2003; Fuchs & Köstner, 2016; Piercy, Kaleka & Katsikeas, 1998), does not create high risk and commitment and allows greater flexibility in adjusting the volume of goods to different export markets (Lu & Beamish, 2002).

On one hand, export activity fulfills certain business goals, which may be economic (such as increasing profits and sales) and / or strategic (such as diversification of markets, gaining market share and increasing brand reputation) (Cavusgil & Zou, 1994).

On the other hand, export motivation may result from proactive or reactive actions. For example, proactive actions are advantage of profit, introduction of a single product, technological advantage, exclusive information, commitment of management, tax benefits and economies of scale. Reactive motivations are identifying competitive pressures, excess production capacity, sales decrease or saturation in the domestic market and proximity of customers and landing ports (Stouraitis et al., 2017; Wood & Robertson, 1997).

**Hypotheses Derivation**

The literature suggests that resources and capabilities are related to each other (Dhanaraj & Beamish, 2003; Morgan, Kaleka & Katsikeas, 2004). Integration, reconfiguration and learning resources only become significant when resources are abundant (Wu & Wang, 2007), thus improving firms’ dynamic capabilities. Moreover, innovation is an ability that can attract the necessary resources to exploit opportunities (Alvarez & Busenitz, 2001). These resources can thus promote, support and facilitate innovation, allowing firms to innovate and prosper, contributing to the construction of healthy and enduring business (Miller, Wright, Le Breton-Miller & Scholes, 2015).

The benefits of innovation may result in the development of products and processes that occurs in multiple stages (multi-stage process), requiring a complete set of resources for an innovative firm (Teece et al., 1997).

Barney (1991) highlights resources as assets, capabilities, organizational processes, firm attributes, information and knowledge, which, according to this author, are valuable, rare, imperfectly imitable and non-substitutable (VRIN).
The resource-based perspective conceptualizes innovation as a complex and dynamic process (Zhang et al., 2016) through which firms consistently develop innovation capabilities by exploring new resources or new combinations of resources (e.g. Galunic and Rodan, 1998; Mahoney and Pandian, 1992; Teece et al., 1997).

**H1: Intangible resources influence positively innovation.**

The RBV posits that variations in firms’ performance result from the possession of heterogeneous resources.

This heterogeneity of resources and capabilities leads to performance imbalances and affects firms’ ability to design and implement competitive strategies (Barney, 1991; Peteraf, 1993). Thus, this theory suggests that heterogeneous resources and capabilities have a direct effect on firms’ performance (Makadok, 2001; Teece et al., 1997). Thus, we tested the following hypothesis:

**H2: Intangible resources influence positively export performance.**

Zahra and Garvis (2000) believe that innovation is important for organizational success both to local and foreign markets. According to these authors, success in the global market requires creativity and risk-taking.

Literature suggests that innovation has a positive influence in business performance (Wiklund & Shepherd, 2005), since it increases firms’ engagement to, for example, create new products and services, seek new opportunities and new markets (Lumpkin & Dess, 1996; Miller, 1983).

In this sense, innovative firms have an extraordinary performance and can even be seen as a country’s engine of economic growth (Schumpeter, 1934). Thus, these firms can control markets by mastering distribution channels and building brand recognition. Hence, we intended to confirm this relationship and test the following working hypothesis:

**H3. Innovation influences positively export performance.**

Innovation is the ability to simultaneously pursue both exploration and exploitation, efficiency and flexibility, or alignment and adaptability (De Clercq, Thongpapanl & Dimov, 2013). Innovation requires different strategic orientations, technological resources and processes. Innovation provides a mechanism to effectively manage change by repeatedly pursue and achieve both disruptive and incremental innovation (Andriopoulos & Lewis, 2009; Jansen et al., 2009).

This research posits one hypothesis regarding the mediating effect of innovation in the relationship between intangible resources and export performance. The significance of the mediating effect of the variables was assessed by Aroian test (Baron & Kenny, 1986). This test is used to determine whether the indirect effect of the independent variable on the dependent variable via the mediator is significantly different from zero (Aroian, 1947). Thus we propose:

**H4. Innovation mediates the relationship between intangible resources and export performance.**

**Methodology**

**Setting and data collection**

To test the hypothesis a sample of Portuguese SMEs exporting footwear was used, that meet the following criteria: companies in which at least 50% of income comes from exports of goods, or companies in which at least 10% of income comes from exports of goods and the export value is higher than 150.000 Euros (INE, 2011).

The population of this empirical study has been drawn from Portuguese footwear industry firms. Questionnaires were used as primary data sources and were carried out over the period of April 22 to July 22, 2014.

The identification of companies was done through the Portuguese Footwear, Components and Leather Goods Association (APICCAPS) database.

To reduce misunderstandings, the questionnaire was validated by the research department of APICCAPS. So, in this study we use a non-probabilistic and convenient sampling.

A total of 42 complete and validated questionnaires accounting for 25 % per cent of the population were obtained. This response rate is considered quite satisfactory, given that the average of top management survey response rates are in the range of 15%-20% (Menon & Bharadwaj, 1999).
Measures

This study uses well-validated scales from previous studies to operationalize the key constructs and adapted them to the particular context of our empirical setting.

Independent variables – Following Morgan et al. (2006), in the intangible resources construct we included six dimensions: reputational resources; access to financial resources; human resources; cultural resources; relational resources; and informational (knowledge) resources.

Mediators - To assess Innovation we adopted Covin and Slevin’s (1989) measurements.

Dependent variable - Performance is a construct that is difficult to operationalize holistically, since it may refer to different aspects of the organizational effectiveness (Gil-Pechuan et al., 2013). The decision-makers were asked to assess the relative position of their firm vis-à-vis their competitors. All constructs were assessed on a five-point Likert scale.

Results

The structural equation model is a multiple regression analysis, with reflective indicators that are presented as an image of the unobserved theoretical construct, representing observed variables or measures, with the objective of strengthening the relationship of influence between the constructs (Marôco, 2011). The simple correlation between these indicators with their construct must have a value equal to or higher than 0.70 so that the shared variance between the construct and their indicators is higher than the error variance (Carmines & Zeller, 1979).

Partial Least Squares (PLS) is a technique that best fits predictive applications (exploratory analysis) and theory development when it is not soundly established (Cepeda & Roldán, 2014). This technique, on one hand, maximize the explained variance of the dependent variables (latent or observed, or both) and estimate structural models with small samples (Chin & Newsted, 1999; Reinartz, Haenlein & Henseler, 2009). On the other hand, it estimates reflective and formative measurement models without identification problems (Chin, 2010). PLS appear to be a preferable option for researchers with samples below 250 observations (42 in this study) (Reinartz et al., 2009).

In order to verify the reliability of overall variables we estimated the stability and internal consistency through Cronbach’s alpha (α). Generally, an instrument or test is classified with appropriate reliability when α is higher or equal to 0.70 (Nunnally, 1978; Chin, 2010). The result of 0.958 achieved for all variables is considered excellent, confirming the sample’s internal consistency (Pestana & Gageiro, 2008). Table 1 show all constructs largely achieved the required level.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach Alpha</th>
<th>p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR</td>
<td>.964</td>
<td>.000</td>
</tr>
<tr>
<td>INOV</td>
<td>.825</td>
<td>.000</td>
</tr>
<tr>
<td>EP</td>
<td>.929</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 1 - Cronbach’s alpha

We also use the composite reliability coefficient to assess construct validity (Chin, 1998). This coefficient reflects construct adequacy for a level higher than 0.6 using confirmatory factor analysis (Gefen & Straub, 2005), as in our case. Table 2 illustrates that the studied constructs (all multidimensional) highly exceeded the minimum required for a good fit.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Composite reliability</th>
<th>R²</th>
<th>p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR</td>
<td>.967</td>
<td>-</td>
<td>.000</td>
</tr>
<tr>
<td>INOV</td>
<td>.895</td>
<td>.276</td>
<td>.000</td>
</tr>
<tr>
<td>EP</td>
<td>.946</td>
<td>.472</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 2 - Composite reliability coefficient of multidimensional variables

For validity assessment, two subtypes are usually examined: convergent and discriminant validity. Convergent validity implies that a set of indicators represents one and the same underlying construct (Henseler et al., 2009). Fornell and Larcker (1981) suggest using the Average Variance Extracted (AVE) criterion and
that an AVE value of at least 0.5 indicates sufficient convergent validity. Next table demonstrates that only absorptive capacity is slightly below the minimum required.

<table>
<thead>
<tr>
<th>Construct</th>
<th>AVE</th>
<th>p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR</td>
<td>.563</td>
<td>.000</td>
</tr>
<tr>
<td>INOV</td>
<td>.739</td>
<td>.000</td>
</tr>
<tr>
<td>EP</td>
<td>.779</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 3 - Convergent validity

Discriminant validity is the degree to which any single construct is different from the other constructs in the model. To have discriminant validity a construct must exhibit weak correlations with other latent variables that measure different phenomena. There are two measures of discriminant validity in PLS. The Fornell–Larcker criterion (1981) recommends that the AVE should be greater than the variance between a given construct and the other with which it shares the model. The second criterion suggests that the loading of each indicator is expected to be greater than all of its cross-loadings (Henseler et al., 2009).

We can observe the explanatory power of each variable in the model. Entrepreneurial orientation is the only purely explanatory variable and reputational resources and absorptive capacity of knowledge exploitation the explained variables. Chin (1998) distinguishes the explanatory power from moderate to substantial. Table 4 expresses the good results in terms of discriminant validity of the research model, confirming that constructs do differ significantly.

<table>
<thead>
<tr>
<th>Fornell-Larcker Criterion</th>
<th>EP</th>
<th>INOV</th>
<th>IR</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP</td>
<td>.882</td>
<td>.516</td>
<td>.478</td>
</tr>
<tr>
<td>INOV</td>
<td>.516</td>
<td>.860</td>
<td>.407</td>
</tr>
<tr>
<td>IR</td>
<td>.478</td>
<td>.407</td>
<td>.750</td>
</tr>
</tbody>
</table>

Table 4 - Discriminant validity

In order to determine the significance of the studied relationships and the confidence intervals of the path coefficients, we used bootstrapping technique. The weighted coefficients indicate the relative strength of each exogenous construct. According to Chin (1998), relationships between constructs, with structural coefficients higher than 0.2, are considered robust. From table 5, we thus conclude that the original model does not present non-significant paths.

| Path   | Original Sample (O) | Sample Mean (M) | Standard Error (STERR) | T Statistics (|O/STERR|) | p values |
|--------|---------------------|-----------------|------------------------|----------------|----------|
| IR --> INOV |                     |                 |                        |                |          |
| Direct effects | .140   | .148       | .200                   | .697           | n.s.     |
| Indirect effects | .267   | .290       | .137                   | 1.956          | .050     |
| Total effects   | .407   | .437       | .114                   | 3.577          | .000     |
| IR --> EP       |                     |                 |                        |                |          |
| Direct effects  | .083   | .054       | .133                   | .624           | n.s.     |
| Indirect effects| .395   | .439       | .115                   | 3.431          | .001     |
| Total effects   | .478   | .493       | .106                   | 4.495          | .000     |
| INOV --> EP     |                     |                 |                        |                |          |
| Direct effects  | .236   | .218       | .116                   | .2034          | .042**   |
| Indirect effects| -      | -          | -                      | -              | -        |
| Total effects   | .236   | .218       | .116                   | .2034          | .042**   |

n.s. – non-significant; p<.001; **p<.05.

Table 5 – Effects

The significance of structural coefficients and the magnitude of the total effects enabled us to test the research hypotheses, having registered the following results:

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1. IR --&gt; INOV – Not supported;</td>
<td></td>
</tr>
<tr>
<td>H2. IR --&gt; EP – Not supported;</td>
<td></td>
</tr>
</tbody>
</table>
Discussion and Conclusions

This study allowed us to conclude that innovation has a mediating effect on the relation between intangible resources and export performance. Our findings confirm that indeed resources and capabilities are related to each other, supporting the studies of Dhanaraj and Beamish (2013) and Morgan et al. (2004). Conversely, results do not support Teece et al. (1997) and Teece (2007), since these authors claim that innovation requires not only the property of intangible resources, but also its exploration.

Success in the global market requires creativity, ingenuity and risk taking, both in domestic markets and in foreign ventures (Zahra and Garvis, 2000). The literature suggests that innovation has a positive and direct influence in business performance (Damanpour, Szabat, & Evan, 1989; Han, Kim and Srivastava, 1998). Our findings support this statement. Indeed, innovative firms have an extraordinary performance and can even be seen as a country’s engine of economic growth (Schumpeter, 1934).

Theoretical and practical implications

Theoretically, this study contributes to the literature of intangible resources that leverage firm performance, when mediated by innovation (e.g. (Cabral et al., 2015; Damanpour et al., 1989; Han et al., 1998). We also highlight the contribution of this study to the theory of strategic management. It is known that strategy includes deliberate and emergent initiatives adopted by management, comprising resource and capabilities used to improve business performance (Nag, Hambrick & Chen, 2007). In order to remain competitive, firms must assess which strategic determinants give them an advantage over their competitors. The findings are a contribution to clarify the influence of innovation, intangible resources and absorptive capabilities in small firms export performance.

In addition, the results provide guidance to business practitioners; since they indicate intangible resources and innovation as predictors for export performance. Firms are a bundle of resources and capabilities (Peteraf, 1993), it is essential to understand and identify which resources are relevant to gain competitive advantage and superior performance. Business managers must be able to systematically analyse the changes that arise in their target market(s) and to identify the present and future needs and market trends, anticipate changes in demand and seek new business opportunities.

Research limitations

While this research provides valuable insights into SMEs in the footwear industry, the study is not without its limitations. First, the main limitation of this study is related to the sample size, since it was difficult to find companies with the willingness to collaborate in this type of research. Second, it would have been interesting to control our analysis. The fact that the research does not consider the effect of control variables such as age, location and target market of the respondents can be seen as a limitation. Third we used an online study to collect our data. While electronic data collection methods are becoming more common, strategies to encourage a greater response rate are lacking compared to other survey implementation methods. Finally, the fact that the sampling is non probabilistic and convenience is a limitation. Therefore we advise prudence in the generalization of results.

Future lines of research

Firstly, in future work, we suggest that the model is used in a sample with a higher number of observations to confirm these results.

Second, this study has been based on a mature sector, as is the footwear sector in Portugal. The results obtained should be understood in this context. For this reason, new research could be done in more modern industries to test again the proposed relations. Third, given the irregular nature of business growth, a snapshot survey may not be able to capture strategy and performance variations over
The Linkage Between Intangible Resources And Export Performance: the mediating effect of innovation

long periods of time. As such, further studies with a longitudinal perspective would be of added value to investigate why these differences persist. In other words, to find how and why some small exporters become highly successful while others, in the same industry, struggle to raise their export strengths. Finally, the moderating effect of other variables (e.g. competitive advantage, dynamic capabilities, environment hostility) should be studied.

References


Makadok, R. (2001). Toward a synthesis of


