On the Effect of Size and Age on the Degree of Internationalisation: An Empirical Analysis of Italian Food SMEs

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Abstract

This paper studies the impact of age and size on the degree of internationalization of SMEs. A review of the literature reveals that the results on this issue have so far proved contradictory. The study aims to contribute to the debate on factors influencing the degree of internationalization of SMEs by analysing a sample of 317 Italian food small and medium firms operating in foreign markets. The theoretical perspective adopted is the RBV that allow explaining the relationship between firm’s processes of resources and competencies accumulation helpful to be effective in foreign markets. Statistical analysis shows that age and size have a significant impact on the degree of internationalization. Managerial and policy implications of this result are drawn on conclusions.

Keywords: Internationalization of SMEs, Firm age, Firm size, Italian food SME

Introduction

Internationalisation is a strategic choice that has been and continues to be the subject of several studies and empirical analyses. The scientific and practical interest on this phenomenon is related to the growing trends towards a global economy based on the interdependence of countries’ markets of resources, products, and commercial services. Furthermore, reaching out to foreign markets is one of the very few strategic choices that allow companies to survive and prosper during periods of economic crisis, like the current one. Finally, the growing involvement of companies in international markets is therefore becoming especially important both for the development of single firms and for contribution to the growth of national economies.

From the firm’s point of view, it’s clear that internationalisation need to be preceded by careful evaluations of relative obstacles and incentives in order to be effective in new foreign markets. This is even truer for small and medium enterprises (SMEs), who encounter specific strategic, organisational, commercial, and financial gaps compared to larger enterprises, as they have had the necessary time to accumulate the knowledge and experience required for being effective in international markets.

In this context, exportation still seems to be the preferred mode for internationalisation (Leonidou, et al., 2007; European Commission, 2010). For the SMEs, in particular, development via exportation is linked to survival, growth, and long term profitability, in particular as it is an approach that carries the least exposure for resources and to connected risk compared to the alternatives such as production/commercial integration and direct overseas investments (Morgan, Katsikeas, 1997).

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Previous research has suggested that there are several factors that influence firms’ international activity trends, from the management’s perception but only some have checked characteristics and range (Chetty, Hamilton, 1993; Sousa et al., 2008; Theodosiou, Leonidou, 2003; Wheeler, Ibeh, and Dimitratos, 2008; Zou, Stan, 1998). One of the explanatory variables that is more frequently examined in literature about internationalisation is the firm’s age (Balboni, Bortoluzzi, Grandinetti, 2013; Sousa et al., 2008). As we will discuss in the review of the main contributions to this topic, since it takes time to acquire resources and skills, the “older” firms would have a greater probability of surviving in foreign markets (Autoio et al., 2000).

Another part of research on companies’ international activities has referred to the size factor (Coviello, McAuley, 1999). Except for the emerging view of the International New Venture or Born Global (McDougall et al., 1994), previous studies on the topic of internationalisation have confirmed that going abroad is a more probable choice for larger firms rather than small ones (Andersson et al., 2004; Bonaccorsi, 1992; Calof, 1993). The topics mentioned above, age and size, are the ones on which this study is based.

Literature on internationalisation has indeed analysed these factors but has mostly done so through case studies (Boter, Holmqquist, 1996; McDougall et al., 1994) or by considering small samples (McDougall, 1989; McDougall, Oviatt, 1996) concentrating on the activities of firms listed on the stock market (Bloodgood et al., 1996; Filatotchev, Piesse, 2009), industries (Fryges, Wagner, 2010; Sorensen, Madsen, 2012), and in particular that of technological products (Bell, 1995; McDougall 1989; McDougall, Oviatt 1996; LiPuma, 2011; O’nettist et al., 2012; Sullivan, 1994) or services (Deprey et al., 2012; Erramilli, 1991; O’Farrell et al., 1998) and on US firms (Calantone et al., 2006) or UK ones (Sousa, 2004; Sousa et al., 2008).

These studies did not succeed in establishing a clear, single relationship between the firm’s age and/or size and the degree of internationalisation of SMEs, even less so referring to Italian firms (Compagno, 2003 and De Toni, Nassimbeni, 2000). Italy is traditionally linked to the activities of its own enterprises on foreign markets and bases the development of its own economy, perhaps more than others, on internationalisation processes base. Italy is ranked eighth in the world classification of exporting companies, with a total value of exportation of goods and services (2011) standing at $523 billion dollars, a 10% growth compared to the previous year. Firms with less than 50 employees represent 93.4% of exporting companies, with a 25.8% share of the total value of exportations (Italian Statistical Agency, 2012).

This paper is intended to examine if, and to what extent, the degree of internationalisation of Italian food SMEs is affected by the firm’s age and size. The analysis has a dual purpose: on the one hand it becomes a part of the current debate on identifying factors that influence firms’ international activity (Lu, Beamish, 2001, 2004; Kim, Hwang and Burgers, 1993; Broughter et al., 2005, 2009; Singh, Gaur and Schmid, 2010; Tallman, Li, 1996), while on the other it addresses the matter with a specific focus on SMEs and in a particularly important and useful context, that of Italian food industry. In detail, the study considers exportation, which is one of the most commonly used modes to access internationalisation for SMEs, not only for Italian firms (Wolff, Pett, 2000; D’Angelo, 2012).

Consistently with the intended aim of the study, the work is organised as follows: the section below presents a brief review of the literature on the matter of internationalisation with a particular focus on the variables being analysed, in order to theoretically justify the use of age and size as explanatory variables of the SMEs’ internationalisation. The third section presents the method used and the results. The fourth section contains some final considerations, the limits of the research and the managerial and policy implications.

Review of the literature and hypothesis

The resource-based view (RBV) will be used as the theoretical frame for this study (Dhanaraj, Beamish, 2003; Ibeh, Wheeler, 2005; Katsikeas et al., 2000; Matanda, Freeman, 2009; Morgan, Vorhies, Schlegelmilch, 2006; Wheeler et al., 2008). According to some authors, the stock of resources available to SMEs is connected to its degree of internationalisation (Bloodgood et al., 1996; Westhead et al., 2001, Soriano e Dobon 2009). In particular, having valuable resources reduces the perceived risk of doing business abroad and this would drive small and medium enterprises to work in foreign markets (Wiklund et al., 2010).

Age and size are considered here as prerequisites for the accumulation of experience and resources that have a positive influence on the degree of the company’s internationalisation, measured through the number of foreign markets served and their cultural distance.
Regarding to the age, it is assumed that the firm accumulates experience overtime (Autio et al., 2000). According to the theory on stages of development (Johanson, Vahlne, 1977), internationalisation is an evolving and incremental process in which, overtime, the variables of learning, knowledge and experience take on a central role for the firm’s ability to progressively enter international markets, even when such markets have different cultural characteristics than the country of origin.

The relationship between the firm’s age and the degree of internationalisation, however, is not univocal. Some studies have proved, in fact, that it is not statistically significant (Andersson et al., 2004; Keng, Jiuan, 1989), while others have found a negative relationship (Kirpalani, McIntosh, 1980), and others still have not yet reached final conclusive proofs (Carr et al., 2010).

According to Zafar et al. (2006) and Yannopoulos and Kefalaki (2010), the degree of internationalisation in firms would be influenced by the “inverse” relationship between knowledge and perception of risk: the greater the former, the smaller the latter. Consequently, it is possible to hypothesise that older firms achieve a higher degree of internationalisation (Brouthers, Nakos, 2005; Daniels, Goyburo, 1976), as they have had the necessary time to accumulate the knowledge and experience required for reducing perceived risk. From this also come a higher number of markets served compared to the younger firms and which are also more distant from a cultural point of view. Also, as the decision-making mechanisms are of the trial and error kind, i.e. the information gained in a previous stage influences the development of subsequent actions, it can be hypothesised that the older firms have been able to experiment with such trials and errors mechanism and accumulate more experience which drives them to operate in countries that are increasingly culturally distant.

Concerning to the size, the hypothesis that comes from the RBV is that large enterprises, with their stock of resources that is qualitatively and quantitatively superior to small firms, should have a higher degree of internationalisation, and a greater probability of success. Over time, enterprises accumulate resources and skills, some of which are especially critical for international activity, such as process/product technology and commercial/marketing skills. These resources reduce the risk connected with the so-called liability of foreignness (Zaheer, 1995; Zaheer, Mosakowski, 1997). In particular, Bloodgood, Sapienza, Almeida (1996) demonstrated that the availability of resources, measured by the company’s size, is positively related to the company’s degree of internationalisation. This hypothesis has not always been confirmed in other studies. Some studies, in fact, have found a positive relationship between size and internationalisation (Hall, Tu, 2004; Calof, 1993). Others suggest the existence of a minimum size required for a firm’s success in overseas markets (Bilkey, 1978; Mittelstaedt et al., 2003). In clear contrast, however, other studies have found that small enterprises, and not large ones, have a higher degree of internationalisation (Bilkey, Tesar, 1977; Cavusgil 1984).

In this paper, consistently with the theoretical perspective taken as a reference, the size is a discriminating factor in the degree of internationalisation, even in the case of SMEs. The accumulation of valuable resources and skills, achieved through well-balanced, virtuous development processes, may create the prerequisite, even for smaller companies, for penetration of a growing number of foreign markets within which it is possible to find high levels of cultural difference (Bonaccorsi, 1992; Lado et al., 2004; Majocchi et al., 2005). Therefore, small and medium enterprises can also operate in international markets, even ones with large cultural differences, just like larger companies, by using the resources they have accumulated during their processes of growth in size.

Considering all the above, the hypotheses to be verified are:

H1: The higher the SMEs’ age (H1a) and SMEs’ size (H1b), the higher the number of foreign markets served
H2: The higher the SMEs’ age (H2a) and SMEs’ size (H2b), the higher cultural distance of foreign markets served
Method of analysis and results

The aim of the investigation is to verify the hypotheses drawn up and, in particular, to measure the weight that the variables age and size carry on the number and cultural distance of the foreign markets served by the Italian SMEs.

The sample

The sample analysed comprises Italian SMEs operating in the food industry, selected by quota sampling.

In particular, the companies being analysed belong to the following NACE Rev. 2 (ATECO 2007) activity codes:

- 10.13.0 - production of meat products
- 10.39.00 - processing and preserving of fruit and vegetables
- 10.41.1 - production of olive oil
- 10.51.2 - dairy production
- 10.52 - production of ice-cream
- 10.62 - production of starches and starch products
- 10.72.0 - production of biscuits, cookies and pastries
- 10.73 - production of pasta
- 10.82 - production of cocoa, chocolate and candies
- 10.83 - production of tea and coffee
- 10.84 - production of condiments and seasonings
- 10.85 - production of food and ready meals
- 11.02.1 - production of wines
- 11.02.2 - production of sparkling wine and other special wines
- 11.05 - brewing

Having established the geographical distribution of the firms in Italy, as a quotation for sampling, the units were then extracted from the AIDA databank, following the quotas for each region shown in Table 1.

<table>
<thead>
<tr>
<th>REGION</th>
<th>QUOTA</th>
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</table>

Table 1: Geographical distribution of enterprises in sample
The data in the study refers to 317 Italian exporting SMEs, chosen between the ones that respect the European Commission’s parameters (less than 250 employees and with a maximum turnover of 50 million Euro) and refers to the financial year 2011. The dataset comprises information taken from four, appropriately assembled, databanks: Infoimprese, It, AIDA, Cibus Parma, official websites of the companies. Using the four sources as above, it was possible to extract information about the year of foundation, the industry section, the number of employees, 2011 turnover and the foreign countries served by each company.

The variables

The independent variables are the firm’s age and size, while the dependent variables are the degree of international diversification and the market distance (Descriptive statistics and correlations in Table 2).

With regard to measuring the independent variables:
- The firm’s age is measured by the number of years since it was founded;
- The firm’s size is measured by the number of employees.

With regard to measuring the dependent variables:
- The degree of international diversification is measured in terms of number of foreign markets served;
- Market distance is measured with the formula developed by Kogut, Singh (1988) that uses the rating processed by Hofstede (1993):

\[
\text{Market Distance}_k = \frac{1}{6} \sum_{i=1}^{6} \frac{I_{ik} - I_{iIT}}{V_i}
\]

Where:
- Market Distance is the cultural distance of the country K from the Country Italy,
- \(I_{ik}\) is the value calculated by Hofstede for the i-th cultural dimension and the country k,
- \(I_{iIT}\) is the corresponding Italian value and \(V_i\) is the variance of the index for the i-th size.

This formula allows measuring the cultural distance of each Foreign Country from Italy Country and starting from these summary values the maximum inclinations for distancing from Italy was measured for each enterprise. The minimum and maximum distance covered by the sample, enterprises in the study were respectively 0.234 and 4.656. These distances identify the country culturally nearest to Italy – Germany – and the most distant – Singapore.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
<th>Age</th>
<th>Employees</th>
<th>Markets</th>
<th>Market</th>
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<td>Abruzzo</td>
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<td>Basilicata</td>
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<td>Campania</td>
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<td>Emilia Romagna</td>
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<td>Friuli Venezia Giulia</td>
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<td>Lazio</td>
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<td>Liguria</td>
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<td>Lombardy</td>
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<td>Marche</td>
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<td>Molise</td>
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<td>Piedmont</td>
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<td>Puglia</td>
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<td>Sardinia</td>
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<td>Sicily</td>
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<td>Tuscany</td>
<td>5.12%</td>
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<td>Umbria</td>
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<td>Valle D'Aosta</td>
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<td>Veneto</td>
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Table 2: Descriptive statistics and correlations between variables
**Method and analysis**

The method used for analysis and the hypothesis test is a structural equations model, with only observed variables. Such a model allows the simultaneous testing of the ratio between the two dependent variables and the independent variables, but also the controlling of any correlation between the two dependent variables.

As shown in Table 3, the empirical verification supports three of the four hypotheses proposed in the study. In particular, age positively influences both the number of foreign markets and the cultural distance of the same markets, while size positively influences the number of markets served but not their cultural distance. In particular, the weight of age on the degree of internationalisation, especially in terms of cultural distance of the countries served, is higher than that of size, measured by the number of employees.

**Table 3: Results of the structural equations model**

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent variable</th>
<th>Model 1</th>
<th>Model 2</th>
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<tbody>
<tr>
<td></td>
<td>Degree of international diversification</td>
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<tr>
<td>β</td>
<td>Hypothesis</td>
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<tr>
<td>Age</td>
<td>.169**</td>
<td>H1 a supported</td>
<td>.219**</td>
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<tr>
<td>Nr. employees</td>
<td>.160**</td>
<td>H1 b supported</td>
<td>.013*</td>
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<tr>
<td>Market distance</td>
<td>.223**</td>
<td>.083**</td>
<td>.613**</td>
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</table>

**p ≤ .001 - The other coefficients are not significant**

The study basically confirms the effect of age, allowing accumulates experience, and size, allowing accumulate resources, on the degree of internationalisation of Italian SMEs. Beginning to operate in international markets and repeat these choice n times is an event for the SME that makes use of the background on the markets accumulated over the years, including the local market, which is then used to expand the company’s own presence in new foreign markets.

In addition, the larger size is linked to an increase in the degree of diversification of markets, but has no effect on their cultural distance. While the first effect, which is significant, seems to be due to the higher capacity to penetrate overseas markets due to the accumulated managerial and technical expertise, the second, not significant, may derive from the specific nature of the enterprises' products that have made up the sample examined (food sector), which limit penetration capacity in cultural different markets with a view to food habits, personal taste and preferences in size, packaging and product combination.

**Conclusions**

The study has provided a contribution to the debate about the relationship between the age and size of SMEs and the degree of their internationalisation. In particular, in reference to results of the sample examined, the firm's age influence the number and cultural distance of the markets served by the Italian food firms while the size affects the number of foreign markets served.

The results of the investigation basically confirm an experience effects and accumulation of resources on the degree of internationalisation, revealing that both variables have a significant impact on the number of overseas markets served by Italian small and medium enterprises and, limited to the age variable, on their cultural distance compared to the country of origin.

In this way, a contribution has been provided towards a more precise knowledge about the phenomenon in
relation to Italy, showing how the relationship between age and size of the company age and size, on the one hand, and on the number of overseas markets served, on the other, is substantially positive. Also, age is also positively correlated to the cultural distance of said markets.

The limits of this study are due to three different elements. The theoretical perspective taken as reference does not complete the picture of company variables that influence the SMEs’ choices of internationalisation. The others, which must be remembered, are: the ownership setup of the company, usually linked to the phenomena of family-owned companies; the organisation of the company, regarding centralisation or decentralisation of decision-making power; the decision-making processes already enacted, in particular during the phase of choosing the target overseas market and adoption of specific entry modes; the economic-financial control mechanisms adopted to measure and assess overseas performance. Future research, in relation to Italy, according to theoretical perspectives which may be different to those adopted for this study, could provide further contributions of knowledge and understanding of the investigated phenomenon.

The examined sample is also a limit and this, in addition to having affected verification of the hypotheses, reduces the possibility of generalising the results obtained for Italian SMEs belonging to other sectors. Further theoretical and empirical researches referring to other sectors of the Italian economy may complete the picture outlined here and provide a more systematic knowledge of a phenomenon that constitutes the “escape route” for several small and medium enterprises in our country. Another possibility would be to consider whether the enterprises included in the analysis belong to any consortiums or enterprise networks, a condition that may influence the paths and results of internationalisation activities. Lastly, the variables used to measure the effect of experience and accumulation of resources is a choice that is simultaneously explanatory and limiting for this study’s ability to provide an explanation of the investigated phenomenon. The measurements of a company’s experience and resources may also concern other internal qualitative and quantitative elements that, together with the ones used in this study, may be the basis for other empirical investigations. In this sense, further research should be carried out to identify and measure the effect of resources that are useful for increasing the degree of internationalisation amongst SMEs.

The managerial and policy implications of this study mainly concern two aspects: in relation to the SMEs’ management and owners, the need for increasing the intensity of knowledge and resource accumulation processes comes to light, which will then be useful for international expansion. For policy makers, this study confirms the opportunity of encouraging and supporting Italian SMEs’ internationalisation, not just for the benefits on margins and profitability, but also to aid expansion and consolidation processes in overseas markets via the accumulation of skills and resources. In line with what emerged from the results of the analysis, it would seem clear, and therefore to be encourages, that the internationalisation of Italian SMEs should be pursued, by decision makers and supported by policy makers via size growth processes that are founded on the accumulation of resources and distinguishing skills, relevant to competitive advantages that are sustainable on international markets.

References


and Increasing Foreign Commitments. *Journal of International Business Studies*


