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Contribution of Resource-Based View and Entrepreneurial Orientation on Small Firm Growth

Contribución del Enfoque de Recursos y Capacidades y la Orientación Emprendedora en el Crecimiento de las Pequeñas Empresas

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Objectives:

This research provides a useful framework for identifying a small firms' propensity to engage in entrepreneurial orientation. We examine the impact of the Entrepreneurial Orientation (EO) as a main resource and capability on small firm' growth.

Prior Work:

The growth seems to come out as an important demonstration of the entrepreneurial orientation of small firms (Davidsson, 1989; Green and Brown, 1997; Janney and Gregory, 2006). Thus, this research builds on prior conceptual research that suggests a positive integration between entrepreneurial orientation and resource-based view.

Approach:

In the first instance, the research will focus on reviewing literature in the emerging area of entrepreneurial orientation as it applies to growth oriented small firms and resource-based view of the firm. Secondly, an empirical study was developed based on a stratified sample of small firms of manufacturing industry. Data were submitted to a multivariate statistical analysis and a linear regression model was performed in order to predict the influence of the resources and capabilities on small firms' growth. In this sense, we consider the construct growth as a dependent variable and the ones relates with resources and capabilities (entrepreneur resources, firm resources, networks and EO) as independent variables.

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Results:

The research results suggest a set of resources and capabilities that promote the growth of the small firms. Also, the EO seems to have a predictive value on growth. Explaining variables related with resources and capabilities and EO were identified as essential in growth oriented small firms. It was still possible to conclude that the entrepreneurial firms which grew seem to have resources and develop more capabilities and take advantage in the search for those competences. This attitude reflects on the EO of the firm.

Implications:

This study has important implication for both researchers and practitioners. It highlights the necessity of firms to develop superior EO of all their members and also to invest on better resources and consequently superior capabilities as a way of reaching higher levels of growth.

Value:

While previous authors have attempted to analyse certain aspects of this process (linkage between entrepreneurial orientation and growth), this research developed a framework that combines these and others factors (resource-based view) pertinent to growth oriented small firms. The results support the necessity to identify explicative variables of multiple levels to explain the growth of small firms. The adoption of an entrepreneurial orientation as an indispensable variable to the growth oriented small firms seems pertinent.

Objetivos:

Esta investigación, proporciona un marco útil para la identificación de la propensión de las pequeñas empresas a tomar una orientación emprendedora. Examinamos el impacto de la orientación emprendedora como principal recurso y capacidad del crecimiento de las pequeñas empresas.

Trabajos previos:

El crecimiento parece revelarse como una importante explicación de la orientación emprendedora de las pequeñas empresas (Davidsson, 1989; Green and Brown, 1997; Janney and Gregory, 2006). Así, esta investigación se basa en investigaciones conceptuales previas que sugieren una integración positiva entre la orientación emprendedora y el enfoque de recursos y capacidades.

Enfoque:

En primer lugar, la investigación se centrará en la revisión de la literatura emergente en la medida en que la orientación emprendedora es aplicada al crecimiento enfocado en las pequeñas empresas y el enfoque de recursos y capacidades de la empresa. En segundo lugar, se ha desarrollado un estudio empírico basado en una muestra estratificada de pequeñas empresas de la industria manufacturera. Los datos fueron sometidos a técnicas estadísticas multivariantes y se desarrolló un modelo de regresión lineal con el objetivo de predecir la influencia de los recursos y capacidades en el crecimiento de las pequeñas empresas. Para ello, consideramos el constructo crecimiento como variable dependiente y las variables relacionadas con los recursos y capacidades (recursos del empresario, recursos de la empresa, network y OE) como variables independientes.

Resultados:

Los resultados de la investigación, sugieren un conjunto de recursos y capacidades que fomentan el crecimiento de las pequeñas empresas. Además, la OE parece tener un valor predictivo en el crecimiento. Las variables explicativas relacionadas con los recursos y capacidades y la OE fueron identificadas como esenciales en el crecimiento de las pequeñas empresas. Todavía era posible concluir que las empresas emprendedoras que crecieron, parecen tener recursos, desarrollar más capacidades y tomar una ventaja en la búsqueda de esas competencias. Esta actitud se refleja en la OE de la empresa.

Implicaciones:

Este estudio tiene importantes implicaciones para investigadores y profesionales. Éste pone de relieve la necesidad de las empresas de desarrollar una mayor OE por todos sus miembros junto con la inversión en mejores recursos y consecuentemente mayores capacidades como una forma de alcanzar mayores niveles de crecimiento

Valor:

Mientras autores anteriores han tratado de analizar ciertos aspectos de este proceso (relación entre orientación empresarial y crecimiento), esta investigación desarrolla un marco que combina estos y otros factores (enfoque de recursos y capacidades) relacionados con el crecimiento de pequeñas empresas. Los resultados muestran la necesidad de identificar variables explicativas de diversos niveles para explicar el crecimiento de las pequeñas empresas. La adopción de una orientación empresarial como variable indispensable para el crecimiento de las pequeñas empresas, parece ser adecuada.

Key-Words:

Resources-Based View, Entrepreneurial orientation Growth of Small Firms

Palabras clave:

Enfoque de Recursos y Capacidades, Orientación emprendedora, Crecimiento de Pequeñas Empresas

1. INTRODUCTION

Entrepreneurship area deals with an enlarged range of theories and approaches and it has been studied in many different ways, with very different purposes. Researchers from all fields of social sciences – economics, sociology, anthropology, psychology, history, politics and several branches of enterprising science – have been giving contributions to this area of studies. The research field of entrepreneurship has been considered to be the target of the most diverse areas of study and it is developing very fast (Ronen, 1983; Sexton and Bowman, 1987; Davidsson, 1989).

This research provides a useful framework for identifying a small firms' propensity to engage in Entrepreneurial Orientation (EO). The objective of this research is to examine the impact of the EO on growth of the small firms. The approach of the current research had its origin in three specific research questions: (1) Is it possible to identify crucial factors which increase or restrain the growth of small firms? If so, which? (2) What is the influence of resources and capabilities in this growing process? (3) What is the connection between EO and growth of small firms?

It seems essential to identify the strategic variables which may reflect the practice, the process, the organisational methods and the decision-making style that small firms use and that probably influence their growth. Nevertheless, the strategy presents itself as a broad and large concept and there are many different definitions of strategy as well as typologies of possible strategic choices in small firms. To identify the most important strategic dimensions in small firms, we may consider, as a starting point, the typologies of firm strategies suggested by the theoretical authors about organisations. A variety of models in the developing of strategy can be found in literature. Well-known models include: (i) the generic strategies of Porter (1980); (ii) the strategic typology of Miles and Snow (1978); (iii) the VRIO model of Barney (1991); and (iv) the EO of Lumpkin and Dess (1996). Each of these models relates a group of variables which do not depend on the growth. Besides this the Miles and Snow model (Hambrick, 1983; Zahra and Pearce, 1994; Gimenez, 1999) and also Porter's one (Miller, 1983) were empirically tested to validate that relationship.

Several authors (Lippman and Rumelt, 1982; Jacobsen, 1988; Day and Wensley, 1988; Grant, 1991; Barney, 1991; Rumelt, 1991; Amit and Schoemaker, 1993; Day, 1994; Finney *et al.*, 2005; Gordon *et al.*, 2005; Janney and Dess, 2006; Runyan *et al.*, 2006) when referring to the RBV, they do it more in a strategic context, presenting resources and capabilities as essential to gaining a sustained competitive advantage and, consequently, to a superior performance.

Wernerfelt (1984), Learned, *et al.* (1969) and Porter (1985) adopted RBV from a strategic point of view considering a resource as a strength that firms can use to formulate and to implement their strategies. The resources and capabilities of the firm are the main competences for formulating strategy (Grant, 1991).

Previous researches consider the strategy dimensions of great importance (Mintzberg, 1973; Miller and Friesen, 1984; Miller, 1987; Lumpkin and Dess, 1996) and besides this they consider that an EO has a great impact in growth. Miller and Friesen, (1982), claim that entrepreneurial firms innovate courageously and regularly, while taking considerable risks in their product/market strategies. Miller (1983) identifies the initiative of a firm concerning: (i) innovation; (ii) risk taking; (iii) proactiveness, as the essential dimensions of

entrepreneurship. For Miller (1983) an entrepreneurial firm is the one that commits itself into the innovation of product/market, undertakes actions which are slightly risky and it is the first one to come out with proactive innovation which beats the competitors.

These three dimensions, which constitute entrepreneurship, have already been mentioned by Miller and Friesen (1982) as the three, of a total of eleven dimensions, of the process of strategic decision-making which confirms that Miller conceives entrepreneurship from a strategic approach. This definition, concerning the entrepreneurial strategy, focuses more on the entrepreneurship process, than on the actor behind it (Wiklund, 1998; Davidsson and Delmar, 1999), this is, it emphasises more the entrepreneurial process than the entrepreneur.

This way, and according to Davidsson and Delmar (1999), the co-relations of entrepreneurship could be searched for in a vaster field than the one related to the individual. This approach reflects, largely, the traditional definitions at an individual level. An entrepreneur is, frequently, considered as an innovative and creative person, suitable to manage a firm which emphasises innovation (McClelland, 1961; Davidsson, 1989; Miner, 1990; Miner *et al.*, 1994).

This research provides a useful framework for identifying a small firms' propensity to engage in EO. We examine the impact of the Entrepreneurial Orientation (EO) as a main resource and capability on small firm's growth.

The paper is structured as follows. First, we give some theoretical background and state our hypotheses. This is followed by a description of our research method, including the sample, the measures, and the analysis, and the presentation of our findings. The paper ends with a discussion and drawing of some conclusions.

2. RESOURCE-BASED VIEW

The Resource-Based View (RBV) of the firm become one of the most widely used theoretical frameworks in the management literature (Beard and Sumner, 2004; Runyan *et al.*, 2006). The foci of RBV are competitive advantages generated by the firm, from its unique set of resources (Wernerfelt, 1984; Barney, 1986, 1991; Peteraf, 1993). Understanding sources of sustained competitive advantage for firms has become a major area of research in the field of strategic management (Wernerfelt, 1984; Porter, 1985; Barney, 1991; Grant, 1991). Since the 1960s a single organising framework has been used to structure much of this research (Andrews, 1971; Ansoff, 1965).

Most research on sources of sustained competitive advantage has focused either on isolating a firm's opportunities and threats, describing its strengths and weaknesses (Ansoff, 1965; Porter, 1980), or analysing how these are matched to choose strategies (Penrose, 1959; Hofer and Schendel, 1978). There is little doubt that this approach have been very fruitful in clarifying our understanding of the impact of a firm's environment on growth (Barney, 1991).

According to Barney (1991) Resource-Based View (RBV) to studying a firm's internal strengths and weaknesses rests on two fundamental assumptions. First, building on Penrose (1959), this work assumes that firms can be thought of as bundles of productive resources and that different firm possesses different bundles of these resources. This is the

assumption of firm resource heterogeneity. Second, drawing from Selznick (1957) and Ricardo (1966), this approach assumes that some of these resources are either very costly to copy or inelastic in supply. This is the assumption of resource immobility.

The most salient characteristic of the RBV is focus in the internal forces of firm. This approach is rather linked to the pioneering work of Penrose (1959) than any other. Recently there has been a reinforced interest in role of firm resources as foundation for firm strategy (Grant, 1991; Miller and Shamsie, 1996). This interest reflects some dissatisfaction with the static, equilibrium framework of industrial organisation economics, where the focus was in the relationship between the strategy and the external environment (Grant, 1991). Several advances have occurred on different strategic levels and all of them contributed to what has been termed resources-based view. Basically, RBV describes a firm in terms of the resources that firm integrates. Penrose (1959) accentuates the condition of a firm not be just an unit, but also a group of resources. Frequently, the term resource is limited to those attributes that enhance efficiency and effectiveness of the firm (Wernerfelt, 1984). Miller and Shamsie (1996) refer that resources should have some capability to generate profits or to avoid losses. A general resources' availability it will neutralize the firm' competitive advantage. Once, for a firm to take high levels of performance and a sustained competitive advantage, it needs to acquire heterogeneous resources and difficult to create, to substitute or to imitate by other firms.

Resources can be tangible or intangible in nature. Tangible resources include capital, access to capital and location (among others). Intangible resources consist of knowledge, skills and reputation, entrepreneurial orientation, among others (Runyan *et al.*, 2006). In this sense, this theory defends that, under imperfection of markets exists a diversity of firms and a variation in the specialisation degrees that provokes a limited transfer of resources which present type, magnitude and different nature (Amit and Schoemaker, 1993). Therefore, the main reason for firms grow and have success can be found inside of the firms, that is, firms with resources and superior capabilities will build up a basis for gaining and sustaining competitive advantage (Peteraf, 1993).

Some authors (Day, 1994; Barney, 1991; Grant, 1991; Chandler and Hanks, 1994; Mahoney and Pandian, 1992) enhance that resources are, by itself, insufficient for obtaining a sustained competitive advantage and a high performance well. According to them, this is possible only if the firms are able to transform resources in capabilities, and consequently in a positive performance (Mahoney and Pandian, 1992). Penrose (1959) refers that the firms reach a superior performance, not because only they have more or better resources, but also because of their distinctive competences (those activities that a particular firm does better than any competing firms) allow to do better use of them.

Despite the wide diversity of resources, it is possible to classify it according to the following categories: (1) tangible and intangible resources (Hall, 1992; Amit and Schoemaker, 1993; Penrose, 1959 and Bogaert, et al, 1994); (2) strategic resources (Day, 1994; Day and Wensley, 1988); (3) human resources (Greene, *et al.*, 1997); (4) social resources (Greene, *et al.*, 1997); (5) organizational resources (Greene *et al.*, 1997); (6) technological resources (Greene *et al.*, 1997); (7) location resources (Greene *et al.*, 1997); (8) assets (Day, 1994; Barney, 1991; Amit and Schoemaker, 1993); and (10) capabilities (Day, 1994; Barney, 1991; Amit and Schoemaker, 1993).

Regarding the capabilities, they are considered, for some authors, not only as firm's resources but also as competences (Penrose, 1959; Hitt and Ireland, 1986; Prahalad and Hamel, 1990; Leonard-Barton, 1992; Pavitt, 1991) and invisible assets (Itami, 1987). The concept of capabilities is frequently used to define a group of individual qualifications, assets and accumulated knowledge, exercised through organizational processes allowing reaching a better coordination of activities and a better use of resources (Amit and Schoemaker, 1993; Day, 1994; Schulze, 1994).

There is a key distinction between resources and capabilities. Resources are inputs into the production process – they are the basic units of analysis (Grant, 1991; Beard and Sumner, 2004). The individual resources of the firm include items of capital equipment, intellectual assets, patents, brand names, and so on. A capability is the capacity for a team of resources to perform some task or activity (Hitt *et al.*, 2003). While resources are the source of the firm's capabilities, capabilities are the main source of its competitive advantage. For Barney (1991) these distinctions can be drawn in theory, but quite confused in practice.

The capabilities are many times developed either in functional areas or in combination of physical, humans or technological resources, controlled by the firm (Amit and Schoemaker, 1993). Capabilities together with the resources are the core competences on firm's strategy formulation and therefore constitute the firm's identity (Grant, 1991). In fact, as refer Bogaert, *et al.* (1994) how more capability is used, more it can be refined and more hard is to copy. This characteristic reflects the dynamic perspective associated to the capabilities (Nelson, 1991). In the dynamic perspective, capabilities approach is a theoretical stream inside of the RBV. This theory considers that, on one side, the firms are constantly creating new combinations of capabilities and, on other hand; the market competitors are continually improving their competences or imitating the most qualified competences from other firms. This approach puts emphasis on internal processes, assets and market position as restricting factors not only the capability to react but also the management capability to coordinating internal competences of the firms (Teece and Pisano, 1994).

In addition, some authors (Granstrand *et al.*, 1997) give special attention to technological competences as an important factor to influence, not only the sales' growth, but also the businesses' diversification and performance. According to Grant (1991) the managers must select an appropriate strategy in order to use more effectively the resources and the capabilities of the firms.

In this sense, it is pointed out the following question: what extent the resources and the central capabilities are identified and applied in a strategic way to create a competitive advantage? Barney (1991) developed the VRIO model structured in a series of four questions to be asked about the business activities a firm engages in: (1) the question of Values; (2) the question of Rarity; (3) the question of Imitability; and (4) the question of Organisation. The answers to these questions determine whether a particular firm resource or capability is a strength or weakness. The VRIO model describes ways that firms can expect to be successful.

Competitive value of the resources can be enhanced or annulled by changes in the technology, by changes in the competitor's behaviour, or by changes in the buyers' needs. All these aspects would be neglectful whether the analysis focus was only centred in the internal resources (Porter, 1985). According to Chandler and Hanks (1994) resources and capabilities create a satisfactory base for formulating competitive strategies. An important

factor that assures a long term competitive advantage is the sustainability of the firm's capabilities or their core competences (Chandler and Hanks, 1994; Aliouat and Masclef, 1999). Sustained capabilities are those that are not easy or quickly reproduced by the competitors and must form the base of firm's strategy. These resources and capabilities are the key for the achievement of competitive advantage and should be protected. Being so, they have a critical role in the competitive strategy of firms.

3. ENTREPRENEURIAL ORIENTATION AND GROWTH

It is hard to imagine a small firm taking advantage of opportunity and having a considerable impact in the market without growing. According to Garnsey *et al.* (2006) the advantages of early growth are internal (learning effects) and well as external (market position). In this sense, the growth seems to come out as an important demonstration of the entrepreneurial behaviour of small firms (Davidsson, 1989; Green and Brown, 1997). Firm's growth has become a very important topic in the field of strategic research. Davidsson *et al.* (2002) discuss in what conditions the study of the growth contributes effectively to the understanding of the entrepreneurship process. According to these authors, to say that entrepreneurship is the same as creation of a new firm is to reduce the field of entrepreneurship, since it does not reflect, in a complete way, its contemporaneous definitions. Then he suggests that the researchers in this field should see the growth of a firm as part a complement of the entrepreneurship process.

About the process of growth in the small firm, Storey (1994) concludes that process results from a combination of three basic components which are: (1) the characteristics of the entrepreneur; (2) the characteristics of the small firm; (3) the development strategies of the firm. These three components are not mutually exclusive and they influence the growth of small firms in a combined way.

When studying the strategy of small firms and in particular the strategic choices, which can influence the growth, it looks pertinent to discuss about the dimensions of EO. Miller (1983: 770) suggests that an entrepreneurial firm is one that "engages in product market innovativeness, undertakes somewhat risky ventures, and first to come up with proactive innovations, beating competitors to the punch. A non-entrepreneurial firm is one that innovates very little, is highly risk adverse, and imitates the moves of competitors instead of leading the way."

Miller (1983) developed a measuring instrument to capture the dimensions of EO in empirical research. This measuring instrument has influence the subsequent research. Although the same measuring instrument is used, different designations are used to measure the same dimensions. Besides, there is little consensus about the type of dimension involved (Wiklund, 1998; Naldi *et al.*, 2007). Although different interpretations of the measuring instrument have been suggested, that does not prevent it from being a feasible instrument to measure the important aspects of the entrepreneurial orientation. Covin and Slevin (1991) support Miller's point of view by referring that organisations, and not only individuals, can behave entrepreneurially. They also defend the use of risk taking, innovativeness and proactiveness, as the relevant dimensions of entrepreneurship. Nevertheless, they refer to this as a type of behaviour labelled as "entrepreneurial posture".

Based on Miller (1983), Colvin and Selvin (1989), and Merz *et al.* (1994) use the same measuring instrument, but argue that such an instrument reflects the strategic orientation of the entrepreneur and that it should be considered as a philosophy of entrepreneurial behaviour which guides the firm as it deals with the environment. Brown (1996) suggests that entrepreneurial orientation is connected with the will that a firm possesses to commit itself into entrepreneurial behaviour. Lumpkin and Dess (1996) argue that the essential act of entrepreneurship is characterised by the new entry. This can be achieved if there is an incorporation to a new or current market with a new or current product, or still, if there is the launching of a new business. The measuring scales, used in every reviewed studies relate themselves with self-perception of the people responsible for the strategy of the firm. Therefore, the expression “strategic orientation” can be understood as the entrepreneurial strategy of the entrepreneur which reflects the intentionality of a firm in committing itself to the entrepreneurial behaviour. EO suggests an independence of action, a willingness to explore new ideas and markets and attempts to destroy the market leader’s position by discovering new markets (Janney and Dess, 2006).

In this context, and according to Miller (1983), the concept of EO is seen as a combination of three dimensions: (1) innovativeness – is concerned with supporting and encouraging new ideas, experimentation and creativity likely to result in new products, services or processes (Miller and Friesen, 1982); (2) risk taking –measuring the extent to which individuals differ in their willingness to take risk is contentious (Lumpkin and Dess, 1996; and (3) proactiveness – is concerned with first mover and other actions aimed at seeking to secure and protect market share and with a forward looking perspective reflected in action taken anticipation of future demand (Miller, 1983; Covin and Slevin, 1989; Lumpkin and Dess, 1996). Given the above discussion, we formulated the following hypothesis:

Hypothesis 1: EO is significantly and positively related to the firm growth.

According to Wu (2007) without dynamic capabilities to convert resource into advantage, entrepreneurial resources do not translate into performance. This view endorse the RBV on firm performance, namely, entrepreneurial resources (such human and financial capital or access to networks through which these capitals can be acquired) determine entrepreneurial success. Therefore, the entrepreneur’s networks are crucial for acquiring the requisite complementary resources and capabilities (Teece and Pisano, 1994; Wu, 2007).

The entrepreneurial process involves the gathering of scarce resources from environment and the resources are usually obtained through the entrepreneur’s network. Several studies (Falemo, 1989; Johansson, 1990; Birley *et al.*, 1991) have indicated that entrepreneurs often go to considerable effort to involve members of their network in both star-up and the growth of their business. In this sense it is hypothesised that:

Hypothesis 2: Entrepreneur resources are significantly and positively related to firm growth.

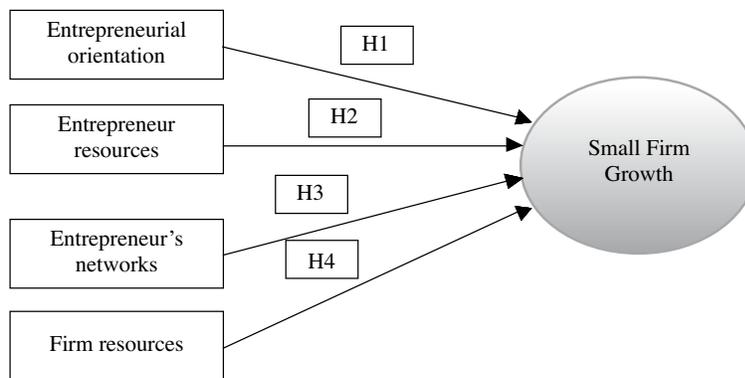
Hypothesis 3: Entrepreneur’s networks are significantly and positively related to firm growth.

As Johansson (1990) notes some of these resources may provide direct solutions to operational problems while others increase the firm legitimacy in the market-place and indirectly provide access to resources needed for the pursuit of economics goals. Van de Ven *et al.* (1984) found high performing entrepreneurs to be more externally oriented,

involving a broader network of potential customers and professional consultants in the planning and development of market. Falemo (1989) found that managers of expansive firms identified more external persons who conducted resources for product development and marketing than managers of regressive firms. According to Fischer and Reuber (2003) external resources providers is a key ingredient for rapid growth. Thus, it is formulated the following hypothesis:

Hypothesis 4: Firm resources are significantly and positively related to firm growth.

Figure 1
Research model



4. METHOD

4.1. Data Collection

The empirical data used in this research is drawn from dataset collected using a structured mail questionnaire addressed to the entrepreneur or owner of the firm. The survey was carried out in spring 2006. The initial population consisted of Portuguese manufacturing small firms³. The questionnaire was developed partly by using seven-point Likert scales to minimise executive response time and effort. Pre-tests for getting feedback regarding the clarity of the survey items were conducted with four firms of varying sizes and belonging to different sectors.

A total of 1470 small firms were identified from Group Coface⁴ database. Of those, 825 were selected casually and in a stratified way. A total of 168 questionnaires were obtained, yielding a satisfactory effective response rate of 20, 4%. The sectors included in

³ The criteria adopted by the European Union were chosen to define small firm and select the sample of the current research (firms with no more than 49 employees).

⁴ Coface Mope is a subsidiary of the French business Group COFACE.

sample were: textile, clothing, chemistry; products of leather; construction, material and equipments; wood and cork; and wholesaling and retailing. Two sectors had the same and bigger weight at study: textile and clothing (25% of firms). Table 1 shows the main Data Collection aspects.

Table 1
Data Collection of Survey

Time Basis	Cross-sectional
Sampling Unit	Portuguese manufacturing small firms
Population (data base)	1470
Sample	168
Sample Error*	0.076
Research Method	Mail questionnaire
Statistical Analysis	Bivariate and Multivariate - multiple linear regression

4.2. Statistic Analysis

Two types of statistic analysis were developed in this study: (1) a bivariate and a multivariate analysis.

(i) *bivariate analysis*: the standard differences between the two groups of firms (low and high growth firms) are analysed based in the following criteria: (i) to the non-categorical variables is applied the parametric test of significance t^5 ; (ii) to the categorical variables is applied a cross-table analysis with an application of the no-parametric test of significance (Pearson test)⁶. The differences of the aggregated means are compared between the groups of high and low growth⁷.

(ii) *multivariate analysis*: in the multiple linear regression it is estimated the direct linear effect of a group of independent variables, in a dependent variable. Since the independent variables are measured in different units, it is difficult to determinate the relative importance of each dependent variable based in the coefficients of partial regression, being preferable to examine the Beta partials (Hair *et al.*, 1998; Pestana and Gageiro, 2000). To find out which coefficients are significantly different from zero, t^8 tests are performed. The relative measures of the adjustment quality are: R^2 and R^2 adjusted squared. This sta-

⁵ The parametric test permits the testing of hypotheses upon averages of a variable of quantitative level in one or two groups, formed from a qualitative variable. For two independent samples the average of a variable in one group is compared with an average of the second variable in the other group (Pestana and Gageiro, 2000).

⁶ Test Qui-squared compares categories of a nominal variable in two or more independent groups. When statistical significance is presented, it demonstrates the existence of differences among the groups (Pestana and Gageiro, 2000).

⁷ Comparison criteria was the following: differences below 0,25 are rejected (Harper, 1996).

⁸ Tests t permit the testing of null hypotheses of inexistence of a linear relation between Y (dependent variable), with each one of the X (independent) variables

tistic method is used to detect and explain the differences that each independent variable exercises on the dependent variable. To test the nature of the distribution the Kurtosis⁹ and Skewness¹⁰ measures are used. To test the adherence to normality, the Kolmogorov-Smirnoff (K-S)¹¹ test was used, as well as the graphs called normal *probability plots, box plots and histogram*¹².

In any circumstance are factorial analysis performed. These analyses are performed to reduce the number of variables and increase the reliability of the measures. It is used the extraction method of the main components and the factors with eigenvalues bigger than 1 are extracted. The varimax rotation method is adopted to solve the original factor. In order to retain the maximum information possible of the original questions, the items which will present a high loading, in certain factors of the factorial analysis, will be condensed into indexes which correspond to the factors approximately. The test Cronbach's Alpha¹³ is used to test the reliability of these indexes.

The statistic software SPSS (Statistical Package for the Social Sciences) was used as a support to all the statistic analyses developed during the present research.

5. MEASURES

5.1. Independent variables: Resources and Capabilities

The resources and capabilities considered in present research are: (i) *entrepreneur resources*; (ii) *firm resources*; (iii) *entrepreneur's networks*; and (iv) *entrepreneurial orientation*. These first three variables were measured using indicators founded in the resource-based view literature (Barney; 1991; Grant, 1991; Brown, 1996). The last one was based on Miller (1983).

(i) *Entrepreneur Resources* – we included in this kind of resources the following indicators: *age of entrepreneur, gender, experience and education level, founder of the firm and formation in management*.

(ii) *Firm Resources* – we considered human resources (*size of management staff, firm's size and firm's size compared to competitors; and education level of employees*) and financial resources (*availability of capital*). This variable is measured using likert scale. The entrepreneurs were asked if the availability of capital, during the last three years, was: (1) not adequate and a strong obstacle for firm development, or (5) completely satisfactory for firms' development.

⁹ A distribution is mesocratic if ($Kurtosis/stdError$) <2; is platycratic if ($Kurtosis/stdError$) <-2 and is leptocratic if ($Kurtosis/stdError$) >2.

¹⁰ For values belonging to the interval of [-2; +2], symmetry is not rejected (Malhotra, 1996).

¹¹ Normality at 5% is not rejected when the significance (sig.) level of this test is superior to 0,05 (Bryman and Cramer, 1992).

¹² These graphics are going to analyse the observations that deviate of the normality (Bryman and Cramer, 1992).

¹³ This test Alpha is especially helpful for investigate the reliability of scales of multi-items that use measures between intervals (Siegel and Castellan, 1989).

(iii) *Entrepreneur's Networks* – we included as entrepreneur's networks: *the informal networks* (friends, family, accountant, employees), *external networks* (clients, providers, consultants, lawyers, competitors), and *institutional networks* (regional institutes, banks, government, professional associations). This variable is measured using likert scale, level of importance (1 to 5) of these networks have in strategic decisions.

(iv) *Entrepreneurial Orientation* - EO was conceptualised as consisting of the variables: (1) *innovativeness*, the development of new and unique products, services or processes; (2) *risk taking*, a will to pursue risky opportunities, taking the chance of failing; and (3) *proactiveness*, an emphasis in the persistence and creativity to overcome obstacles, until the innovator concept is completely implemented.

The measure was adapted from the original scale developed by Miller (1983) and used in order to measure the concept of entrepreneurial orientation. This scale includes a total of eight items: (i) two items related to the risk taking; (ii) three items related to proactiveness; and (iii) three items to measure innovativeness. As the items of the scale centre themselves on several different aspects of strategic position, they were submitted to a factorial analysis so that their dimension or "factorial validity" could be established. The reliability was calculated using Cronbach's alpha test for the three variables of EO scale. As a result, four items were withdrawn (table 2).

This way, the reviewed measuring rule of EO is composed by four items (instead of the eight original items), included in one single index, with an Alpha value of 0,68.

Table 2
Miller's Scale of EO

Dimensions	Items	Factor analysis
Risk-taking (1 item)	– The firm's tendency to engage in risky projects	0,64
Proactiveness (2 items)	– The firm's tendency to follow competitors	0,71
	– The firm's orientation towards growth and innovation policies	0,73
Innovativeness (1 item)	– The emphasis given to research and development	0,65

Note: cumulative explained variance = 56%. Values below 0.5 were suppressed.

The interpretation of the reliability test and the consistency of the factorial analysis support the unidimensionality of the concept. That is, the entrepreneurial orientation is more a combination of grouped variables than of separate and autonomous variables. This position goes against the results of Lumpkin and Dess (1996), but it agrees with the results of several other researchers (Miller, 1983; Covin and Slevin, 1989; Caruana, *et al.*, 1998).

5.2. Dependent Variable: Growth

Based on a review of the literature pertinent to the measurement of growth, two objectives measures of growth were included: (1) the sales growth; and (2) the employment

growth. It was calculated based in the change of the number of employees which took place from the year 2004 to 2005. The growth variable is made up of four indicators: (i) the change of the number of employees from year 2004 to 2005; (ii) the change in the amount of business from year 2004 to 2005; (iii) the growth of the sales compared to that of the competitors; (iv) and the growth of the market value compared to that of the competitors.

5.3. Control Variable: Firm's age

There are firm specific and external factors that may affect a firm's growth, regardless of its entrepreneurial orientation (Lumpkin and Dess, 1996). We used as control variable the firm's age. Firm's age is normally calculated from of the firm's years. This variable was used to verify if the firms, as they grow older, become less entrepreneurial, as it is frequently argued, so it is expected that there will be a negative relation between the firm's age and the entrepreneurial orientation.

6. ANALYSIS AND RESULTS

The firms of the sample are divided in two groups based on the rates of annual increase of sales and the number of employees in year 2004 to 2005. The firms which present an increase in the employment rate bigger than 25% and/or an increase in the sales rate bigger than 25% are identified as "high-growth firms" (note that the inflation was not considered). Below these numbers the firms will be identified as "low-growth firms". According this criterion (Wiklund, 1998), we find 90 low-growth firms and 78 high-growth firms. The intention was to get to know the existence (or not) of significant differences between the firms that show a high growth and the ones that do not. The answer to this question is unquestionably positive (Table 1).

Table 1

Strategic Orientation: strategy and decision-making

	Low Growth	High Growth	Test <i>t</i>
The nature of the environment is risky	2,2	3,6	0,65
Tendency of the firm for projects of risk	1,8	2,1	n.s
Tendency for follow the competitors	5,0	3,5	-1,04
Strategic posture oriented for the growth	2,8	4,5	1,03
Cooperation relationship with the competitors	4,0	3,3	-0,51
Focus on R&D and Innovation of the products	1,7	2,2	n.s
Introduction of new lines of products on market	1,9	2,0	n.s
Significant changes in the products	2,3	4,0	1,04

n.s: not significant

The differences do not seem to be casual or caused by forces out of the control of the firms. The entrepreneur of the high-growth firms, for example, adapts the products so that they can enter new markets and the entrepreneurial quality of the entrepreneur has some importance to the growth. The entrepreneur of the high-growth firms use a strategy more directed to flexibility and to the change. They are more concerned with the new market opportunities and/or have a better capability to react to new opportunities.

Consequently, there seems to be an association between the resources and capabilities and entrepreneurial orientation in several aspects. Variables which, in different ways, report that entrepreneurial orientation, as well as product innovation, perception of business opportunity, distinguish the high-growth firms from the low-growth ones.

7. THE EFFECT OF RESOURCES AND CAPABILITIES ON GROWTH

A multiple linear regression was used to estimate how far the growth can be explained by the variables related to resources and capabilities. The aim of the following analysis is to test the validity of the theoretical assumptions in order to identify what kind of resources and capabilities have influence on the growth. That is, to determine the estimation of the relative importance of the different resources and capabilities to explain the growth process of small firms. As so, all the resources and capabilities were included in the linear regression model as independent variables. The Table 2 shows the results of the analysis.

The *Entrepreneurial Orientation* is the variable that contributes more to the explanation of the growth, with a regression coefficient of $\beta = 0,25$. The variables *Founder of the firm* and *External networks* are also higher. All the other meaningful coefficients present a similar magnitude and it is difficult to establish any definite order of importance among them. Within of the dimensions included in the linear regression model, there are a set of variables that not contribute to explain the growth of small firms, namely, age of entrepreneur, gender, experience and education level, size of management staff, firm' size compared to competitors, availability of capital, and institutional networks.

Table 2
Results of the Linear Regression Model

Variables included ^(a)	Beta Values ^(b) (n = 165)
Resources and capabilities	
Entrepreneur resources	
Age of entrepreneur	n.s
Gender	n.s
Experience and Education level	n.s
Founder of the firm	0,22*
Formation in management	0,13**
Firm resources	

Variables included ^(a)	Beta Values ^(b) (n = 165)
Size of management staff	n.s
Firm' size (number of employees)	0,12**
Firm' size compared to competitors	n.s
Availability of capital	n.s
Distribution of capital	n.s
Entrepreneur's networks	
Informal networks	0,11**
External networks	0,20*
Institutional networks	n.s
Entrepreneurial orientation	
Reviewed scale (4 items)	0,25*
Control variable	
Age of firm	-0,12**
R ²	0,35
Adj. R ²	0,25

Significance * p <.05, **p <.10.

n.s.: not significant

(a) Behaviour of *stepwise* method for the selection of variables to include in the equation of regression.

(b) *Pairwise behaviour* for the *missing values*.

The Entrepreneur resources dimension showed a greater number of not significant variables that no influencing the growth. In what concerns Firm resources, only the firm' size variable appears as meaningless in the prediction of growth. The control variable (the firm's age) has a negative influence on growth. The negative influence of the firm's age on growth suggests that younger firms grow more than older ones.

The analyses performed also allowed us to support to our four designed research hypotheses. In this sense, we can assert that EO is significantly and positively related to the firm growth (H1). That is, the EO dimensions (proactiveness, risk taking, and innovativeness) contribute to explain the process of small firm's growth. The results indicate that the firms which have an entrepreneurial orientation and show some growth are guided so that they can take opportunities. This fact corresponds to the conceptualisation of other researchers (Lumpkin and Dress, 1996; Smallbone et. al., 1995; Davidsson and Delmar, 1999; Mostafa et al., 2006; Chow, 2006; Avlonitis and Slavou, 2007).

Furthermore, it was possible to verify that EO Entrepreneur resources, Entrepreneur's networks, and Firm resource are significantly and positively related to firm growth (H2, H3, H4). The association between resources and capabilities and growth is strong.

The results have some theoretical support in the literature (Johanisson, 1990; Fischer and Reuber, 2003; Ferreira, 2010). As Johanisson (1990) shows some of these resources may give direct explanations to routine problems while others raise the firm legitimacy in the market-place and indirectly provide access to resources needed for the pursuit of economic goals. According to Fischer and Reuber (2003) and Ferreira (2010) high performing firms to be more externally oriented, involving a broader network of potential customers, and professional consultants in the planning and development of market. Falemo (1989) found that managers of expansive firms identified more external persons who conducted resources for product development and marketing than managers of regressive firms. In this sense, we can support those external networks as a key factor for growth.

At a more general theoretical level, it seems that the perception of the environment influences the firm – its growth, but it also seems that the firm may have some influence on the environment where it operates.

8. FINAL REMARKS

This study makes contribution to the literature on entrepreneurship and strategy research by investigating the impact of the resources and capabilities and EO of the firms on its growth and by measuring of the EO concept. To our knowledge, these impacts have not previously been empirically investigated in this way, even though there have been studies on the relationship between EO and growth. In this paper we have focused on EO (intangible resource) as one important dimension of RBV and its impact in growth of small firms. We defined the constructs of EO as innovativeness, risk taking and proactiveness. Confirmatory factor analysis confirmed that these three constructs were statistically significant indicators of EO.

This research complements existing studies, and the results suggest that the firms which grow more, are those which are entrepreneurially oriented, that detect opportunities and obtain an advantage when searching for those opportunities. However, not all firms search for opportunities. A possible explanation could be the entrepreneur's attitudes, this is, the desire to growth or not.

In what concerns the issue of the influence of the EO on firm's growth it seems that the entrepreneurship has, in fact, an important role as firms which grow better, have the tendency to develop an EO supported by proactiveness, innovativeness and risk taking. Based on the most important and consistent results, it was possible to identify the following factors which influence the growth of the small firm: (i) the high-growth firms have a strategic orientation that can be classified as entrepreneurial; (ii) the entrepreneur resources, firm resources and entrepreneur's networks have a great importance to growth; (iii) youngest firms have the tendency to grow more than older ones.

Results support the need of explanatory variables of multiple levels, to explain growth. The setting of the EO as an indispensable variable to the growth of small firms seems to be conceptually and empirically pertinent.

This study has important implications for both researchers and practitioners. It highlights the necessity of firms to develop superior EO of all their members and also to invest on better resources and consequently superior capabilities as a way of reaching

higher levels of growth. We argue that entrepreneurial orientation, based on proactiveness, innovativeness and risk taking, have effect on firm's growth. Entrepreneurs compete not only to identify promising opportunities, but also for the resources necessary to exploit those opportunities. For researchers this research highlights the need for a greater appreciation of the importance and relevance of EO and RBV and how they can influence and impact on the growth of small firms.

For policymakers, this research has implications in terms of affording a means of identifying the contributory resources and capabilities affecting growth of the small firms. Finally, we hope that our study will encourage researchers to further examine the impact of different resources and capabilities on growth.

Considering that the approach chosen was, effectively, a cross-sectional research and quantitative analysis methods, there are, consequently, several accepted limitations: (i) the sample used in the research it is not representative of the total population of small firms and the sample covers small firms in a single country, Portugal; (ii) the multiple linear regression estimates only the average and the linear effects, which limit the conclusions about the relations of variables (Mckelvey, 1997; Miller and Friesen, 1984); and (iii) the period of time considered in the collecting of information, serving as the basis to determine the independent and dependent variables, is relatively short. Based on these limitations we suggest as future research the follows: to consider longer period for determining growth rate (minimum three years); to apply structural equation model in order to measure different relationships among the variables; and finally we suggest that contribution of resources and capabilities and EO on small firm growth be based through longitudinal nature studies.

The EO is seen, frequently, as something inherently good, something firms should make an effort to achieve it. This vision is supported by the results of the research. However, it is essential to examine the relationship between EO and the success of the firms. It would also be fruitful to examine the relationship between EO and other intangible resources, such as organisational learning capabilities and growth. We believe that the integration of different elements would certainly enhance the theory development in the field.

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