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THE PERFORMANCE OF ENTREPRENEURIALLY ORIENTED FAMILY FIRMS:

INNOVATIVENESS, COMPETITIVE AGGRESSIVENESS AND AUTONOMY

Supervisor Alessandra Tognazzo PhD

Candidate Chiara Uberti
ID Number 1080597

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Introduction & Summary

Entrepreneurially Oriented Family Firms: a Sphere of Growing Interest - Nowadays, the role of family businesses is crucial because these firms represent one of the most important economic forces in the world. Family Business Year Book (2014) showed that the presence of family businesses around the world is very high and it reaches the 85% in Italy. The research on this topic has grown a lot in the last few years, as showed by scholars who continue to investigate this unique context under several points of view. Today, the search of new opportunities and a strong entrepreneurship are fundamental to stay competitive within the markets. For these reasons, family firms that want to be successful and aim to survive across generations need to strengthen their entrepreneurial orientation. That's why, in the last decade, various theoretical and empirical analyses have been developed throughout the international business literature about this topic.

Aim of the Dissertation –The aim of the dissertation is threefold: first, we focus on the impact of the ownership composition (family or non-family owned) on entrepreneurial orientation in terms of innovativeness, competitive aggressiveness and autonomy. Second, we assess the impact of entrepreneurial orientation components on decision-making outcomes (i.e., the composition of the board of directors and firm innovation in terms of patents) and finally, we explore the relationship of these outcomes with firm performance. In order to do that, it is first necessary to consider the literature on the topic. Then, these combined literature analyses lead to the formulation of a comprehensive model of hypotheses. To test and verify the empirical evidence of the model, we take into consideration a sample of 175 Italian firms and we perform a multiple regression analysis. This project is a part of a large national research project about entrepreneurship and education in professional and family firms supported by ASFOR (*Italian Association for Managerial Education*).

CHAPTER ONE – The first chapter of the dissertation focuses on the importance of entrepreneurially oriented family firms. It gives a general overview of what researchers intended for family firms and describes what are the main features that distinguish this unique form of business, especially the role played by the socioemotional wealth. It introduces and analyses the entrepreneurial orientation construct, describing its five salient dimensions. Considering the entrepreneurial orientation as a crucial aspect to successfully compete in the market even for family firms, the chapter combines the two literature streams about entrepreneurship and family firms. This literature review about entrepreneurially oriented family firms shows that researches' results are highly controversial under several perspectives. Here, we contend that in family firms the dimensions of innovativeness, competitive aggressiveness and autonomy deserve more attention and we conclude posing a fundamental question: are family firms more or less entrepreneurially oriented?

CHAPTER TWO – The second chapter follows the directions given in chapter one and analyses how entrepreneurial orientation influences the firm strategy and the decision-making outcomes. In particular it focuses on how this entrepreneurial attitude might affect the governance structure and firm innovation. To achieve this aim, it is necessary to define first, the concept of strategy and decision-making process and later to analyse the literature on the specific topics. Concerning governance structure, we give a particular attention to the board of directors, especially to its composition and to the presence of family members within it. Moreover, despite the role played by the ability of the firm to innovate, is widely studied in traditional firms, it is less considered within family firms. Therefore, the chapter aims to understand how entrepreneurial orientation affects structure of the governance and the level of innovation in family firms.

CHAPTER THREE – The third chapter attempts to complete the development of the comprehensive model on entrepreneurially oriented family firms. It follows the analyses of chapter two about governance and firm innovation and it investigates their relationships with firm performance. It gives a general overview of the performances' levels that characterise family firms and entrepreneurially oriented firms, then it analyses these business outcomes in the combined context of entrepreneurially oriented family firms. More specifically, it aims to understand if the presence of family members within the board and the ability to innovate (in terms of patents) can influence the family firm performance.

CHAPTER FOUR AND SYNTHESIS OF THE RESULTS – The concluding chapter presents the empirical study, which tests the comprehensive model framed along chapter one, two and three. In order to perform the different regression analyses, a sample of 175 firms was selected and the related variables were generated. Each step that leads to the conclusive presentation of the empirical results is described along the different sections of the chapter.

Findings from the regression analyses, show that if family firms are measured in terms of family ownership, the presence of family members positively affects the level of autonomy within the business. Interestingly, innovativeness, competitive aggressiveness and autonomy have no kind of influence on the presence of family members within the board of directors. However, two of the three dimensions influence the level of innovation exhibited by family firms. Innovativeness increases the firm innovation, autonomy reduces it, while high levels of competitive aggressiveness does not seem to influence. Finally, results demonstrate that family firms can achieve better performances when they have family members within the board, while the influence of the ability to innovate (in terms of patent counts) appears to be surprisingly irrelevant.

1. CHAPTER

ENTREPRENEURIALLY ORIENTED FAMILY FIRMS

1.1 Introduction

Today, family business is a dynamic area of growing interest among researchers, theorists, scholars, investors and policymakers. Indeed, during the last few years the research on this topic has grown a lot, enabling scholars to deeply investigate their unique features under several different points of view. Nowadays, family enterprises are seen as the most common form of business entity in the world and as an important source of economic development and growth (Family Business Year Book 2014, Zahra et al., 2004).

Although, it is demonstrated that family firms have distinct features compared to their non-family competitors and that they pursue noneconomic goals, entrepreneurial activity is a common characteristic of many family businesses (Berrone et al., 2012). Today, future profit streams from existing operations are uncertain and, in an environment of rapid change and shortened product and business model life cycles, is essential to seek new opportunities and enhance entrepreneurship. For these reasons entrepreneurial orientation construct is seen as a useful framework for the research into this kind of unique firm entrepreneurship.

This chapter aims to understand the importance of entrepreneurially oriented family firms and to analyse the conflicting literature concerning this topic. For this purpose we first illustrate what is intended for family business and what are the main dimensions of the entrepreneurial orientation construct. Then, combining the two concepts, we examine the literature on entrepreneurially oriented family firms, considering both theoretical frameworks and empirical studies. These steps, together with the empirical analysis of the Italian cultural context, aim to address the research gap about the link between the non-economic pursue and attitude of family businesses with the entrepreneurial process as proposed by Berrone et al. (2012). The hypotheses formulated to explore if family firms are more or less entrepreneurially oriented, will be further tested in the empirical study presented in chapter four.

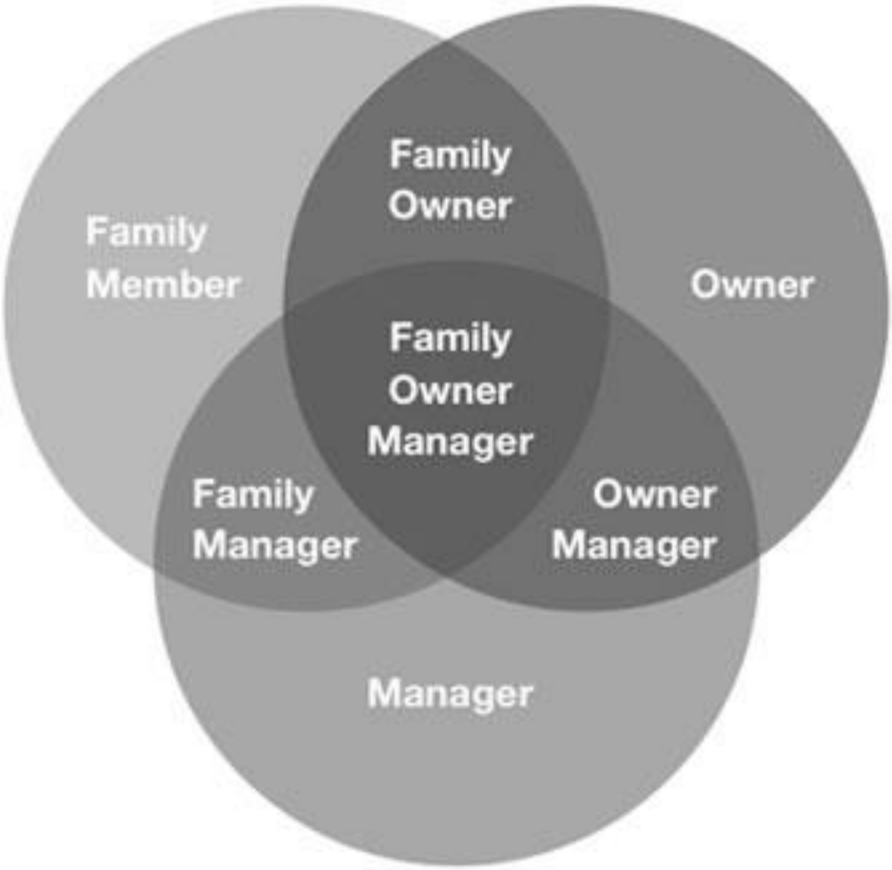
1.2 The importance of entrepreneurially oriented family businesses

Family firms are a significant economic force, recognized as a vital and distinct organizational form and representing the majority of the number of firms. Family Business Yearbook (2014) showed that the presence of family businesses worldwide is very high and it reaches the 85% in Italy.

Research on family firms has grown rapidly in the last 15 years or so, analysing several different aspects of this emerging concept. Starting from the definition of family firms, Chua et al. (1999) analyse this problem of defining a family business, proposing a theoretical definition based on behaviours. They consider the family business as a business governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition. This coalition is controlled by members of the same family or a small number of families in a potentially sustainable manner across generations of the family or families. This kind of firm is considered unique because the pattern of ownership, governance, management and succession materially influences the firm's goals, strategies, structure and the manner in which each of them is formulated, designed and implemented. Zahra et al. (2002) gives a narrower definition of family firm, asserting that this kind of firms are those businesses that report some identifiable share of ownership by at least one family member and have multiple generations in leadership positions. Family businesses can be even identified as a whole range of enterprises in which an entrepreneur or next-generation CEO and one or more family members significantly influence the firm. They influence it via their managerial or board participation, their ownership control, the strategic preferences of family’s culture and values (Poza, 2013). Despite the multiple definitions of the same concept, it is possible to identify three common and prevalent elements which are family, ownership and management.

The most used theoretical approach to study this kind of unique firms, the so-called *Systems Theory* (Figure 1), relies on these three shared factors. The firm is seen as a model based on three overlapping, interacting and interdependent subsystems of family, management and ownership, where this unique combination produces a joint system operating according to rules derived from the needs of the separate parts but adapted to the needs of the whole (Davis, 1983).

Figure 1 The three-circle model of family businesses



Source: (Tagiuri & Davis, 1982)

Moreover, Poza (2013) sustained that, if the three previously outlined systems are considered in their more extreme forms, it leads to categorization of family businesses based on their propensity to have a family-first, ownership-first or management-first perspective on issues. Family-first businesses are focused on the importance of the family, in fact the employment in this firm is a birth right. Members belonging to the same generation receive equal payments regardless of merits, results or responsibility and, often, benefits obtained by the family are extensive. Lack of transparency and obtuse financial systems characterise this kind of companies, where the business becomes part of the lifestyle and the commitment to continuity depends on individual agendas.

On the other hand in management-first business, the employment is based on qualification and family members are discouraged to start their working career within the firm. Performances are equally reviewed between family and non-family employees and their respective compensations are based of their responsibilities and performance levels. The entire business is perceived as a productive asset and this demonstrates how the business prevails over family issues. In ownership-first business, shareholders come first and the most significant issues are investment time horizon and perceived risks. This kind of family business may have shorter time frames in which financial results are evaluated and this is the reason why they are short term oriented. Shareholders may loose will and vision while patient capital, that is one of the keys to achieve competitive advantage, may disappear. The family business system has an implicit complexity that derives from the potentially different goals and operating principles that distinguish each subsystem and so they are vulnerable to the consequences of blurred boundaries among the family, ownership, and management subsystems. In this case there could be incongruent policies and bad decisions, due to problems determining if these issues are related to family, management or ownership. Often, family rules may prevail over traditional firms' rules and even the emotions are critical issues to take into consideration.

In addition to that, according to Habbershon and Williams (1999), a family business is characterised by an idiosyncratic bundle of resources, in terms of family and organizational process, that holds the potential for performance advantage. In this context, the firm is able to shape a unique set of resources such as the systemic interactions of the family unit, business entity and individual family members, the concentrated ownership structure, the focus on customers and market niches and the desire to protect the family name and reputation. All these features are at the basis of the firm's competitive advantage and performance outcomes (Poza 2013).

As already pointed out, family firms are an idiosyncratic type of business, characterised by distinctive features that differ from non-family firms under several dimensions. Gómez-Mejía et al. (2011) after a literature analysis on this topic, identify five broad categories of managerial decisions that distinguish family firms from other organizational forms. They are organizational choices concerning management processes, firm strategies, corporate governance, stakeholder relations and business venturing. Moreover they stress the importance that literature gives to the role of noneconomic factors in the management of the firm as the key distinguishing feature, identifying three main levels. First of all, they consider the strong emotional overtone, focusing on the identity of family members which is closely linked to the firm; on the extent to which the outside perception of the firm is directly affecting the image and reputation of family itself; on the ability of family members to exercise authority and control over the business which is an important source of emotional satisfaction. In fact, family members are generally emotionally stuck in the business.

Second, there is a strong desire to introduce the family values within the business and consequently a strong influence on the development of the business culture. This strong influence was related to the altruistic behaviour among family owners, referring to their desire to cater to the welfare of the family unit. These aspects can be married under the concept of socioemotional wealth (SEW), labelled by Gómez-Mejía et al. (2007). By SEW they refer to non-financial aspects of the firm that meet the family's affective needs, such as the identity, the ability to exercise family influence and the perpetuation of the family dynasty. The model, developed as an extension of the previously outlined *Behavioural Agency Theory* (Wiseman & Gomez-Mejia, 1998), wants to capture the stock of affect-related value that a family derives from its controlling position in a particular firm and the need for a closer identification with the firm that usually carries the family's name. The value of SEW or affective endowments is intrinsic for the family, its preservation becomes an end in itself and it is anchored at a deep psychological level among family owners whose identity is inextricably tied to the organization. SEW preservation is the primary reference point of family principals and strategic choices, in fact decisions are not completely driven by an economic logic but by the endowment preservation even if detrimental for the business performance (Gómez-Mejía et al., 2007). Berrone et al. (2012) consider SEW as a multidimensional concept, proposing five major dimensions of SEW labelled as *FIBER*. The first dimension, *Family control and influence*, refers to the control (direct or indirect) and influence of family members. The second one is *family members' Identification* with the firm, that causes the firm to be seen both by internal and external stakeholders as an extension of the family itself. Then there are the family firms' social relationships, that could promote a sense of stability and commitment when shared by non-family members and it is identified as *Binding social ties*. *Emotional attachment* is the fourth dimension that considers the affective content of SEW the role of emotions in the family business context. The fifth and last dimension is the *Renewal of family bonds to the firm through dynastic succession*, which refers to the intention of handing the business down to future generations and it is crucial in the decision-making process.

Family firms, that are seen as an important source of economic development and growth, create value through product, process and service innovations that fuel growth and lead to prosperity (Zahra et al., 2004). Recent empirical research has shown that entrepreneurial activity is a common characteristic of many family firms (Zahra et al., 2004; Zahra, 2005) and even Berrone et al. (2012) in their study pose some research questions in order to try to find a link between SEW and the entrepreneurial process.

Entrepreneurial family firms, as any other entrepreneurial company, continuously look for organizational renewal, innovation, constructive risk-taking and pursuit of new opportunities (Miller, 1983). The fact that this type of companies often become family-owned businesses, means that family firms play a major role in leading economic growth throughout the world (Zahra, 2003). Berrone et al. (2012) suggest the importance to understand why, when or how the pursuit of noneconomic goals might lead to positive performance outcomes. This is the reason why they propose research questions that embody the concept of entrepreneurial orientation and in particular, they call for research that explores the link between the SEW theoretical perspective and entrepreneurial orientation in family businesses. The answer to these questions shows how the family presence can influence firms' overall performance, by pointing out how socioemotional elements influence either strategic choices or the implementation of those choices and consequently, performance outcomes.

Previous literature demonstrates that is crucial to focus on family firms where, the family is more likely to have considerable impact on entrepreneurial activities and firms' performance and to consider the entrepreneurial orientation construct as a useful framework for research into this kind of unique firm entrepreneurship.

In short, considering that in family firms the desired performance level is reached on the basis of both economic and non-economic concerns, the SEW perspective can help us to better uncover why family firms have a different entrepreneurial strategic posture.

1.3 What is entrepreneurial orientation?

1.3.1 A general overview

Entrepreneurial orientation, EO from this point over, is a relevant concept for entrepreneurship and it is widely developed by researchers that conducted more than 100 studies on this topic (Rauch et al., 2009).

In order to understand the meaning of an entrepreneurially oriented firm, we refer to one of their most important paper about EO issued by Lumpkin and Dess in 1996. The study published in the Academy of management Review aims to clarify the nature of the entrepreneurial orientation construct and proposes a contingency framework for investigating the relationship between EO and firm performance. They want to make a clear distinction between the concepts of entrepreneurship and entrepreneurial orientation. Entrepreneurship is defined as a new entry, an essential act that can be accomplished by entering new or established markets with new or existing goods or services. New entry is the act of launching a new venture, either by a start-up firm, through an existing firm or via internal corporate venturing. Thus, the concept of new entry as an act, explains what entrepreneurship is, while entrepreneurial orientation describes how new entry is undertaken.

EO refers to the key entrepreneurial processes, intended as the methods, practices and decision-making styles managers use to lead to a new entry. These include such processes as experimenting with promising new technologies, being willing to seize new product-market opportunities and having a predisposition to undertake risky ventures. A firm is entrepreneurially oriented when it shows a certain propensity to act autonomously, a willingness to innovate and take risks, a tendency to be aggressive toward competitors and proactive relative to marketplace opportunities. Lumpkin and Dess (1996) suggest that successful new entry may be achieved even if only some of these factors are operating and that this success may be contingent on external factors (business and industry environment) or internal factors (organisational factors, founders' or managers' features). Our study on entrepreneurial orientation, as Lumpkin and Dess (1996) suggest, will take into account this construct only at the firm level regardless the fact that the concept of new entry could even refers to actions that may be initiated by an individual.

1.3.2 A short history about EO in research works

Initially entrepreneurship was considered a balanced combination of three main variables that was product-market and technological innovation, risk taking and proactiveness (Miller, 1983). The same concept is sustained and applied some years later by Covin and Slevin. They use these measures to assess the positive link between business success and entrepreneurship in term of organization, not as an individual (Covin & Slevin, 1986). They apply innovation, risk taking and proactiveness to many researches, in fact, some years later they use these dimensions in a scale from 1 to 7 to establish which kind of strategic posture influences the firms' performances in a hostile or benign environment (Covin & Slevin, 1989). They even apply this framework of three components to evaluate firms' entrepreneurial posture. Since it is considered a behavioural phenomenon, they suggest how it can be managed and how to foster or limit behaviours according to the specific organizational reward system (Covin & Slevin, 1991).

Besides these empirical studies, Lumpkin and Dess (1996) argue, in one of the most important conceptual paper on this topic, that two more dimensions can be introduced to better describe entrepreneurial orientation, identifying autonomy and competitive aggressiveness as new components. Moreover, they do not focus on the concept of what entrepreneurship is, but on how it is ventured by entrepreneurs and referring to EO as a new entry in terms of processes, decision-making activities and practices.

Initially, EO dimensions were considered as a unidimensional construct. In fact, in the nine-item scale used to measure strategic posture, even if each single element focuses on a precise dimension they are all at the basis of a distinct and unidimensional strategic orientation (Covin & Slevin, 1989). When Lumpkin and Dess, (1996), identify EO as a five key dimensions construct they suggest to consider each item as independent but part of a multidimensional framework, where measures that may vary independently in relation to the context have the same influence on business performances.

1.3.3 The five EO dimensions

Risk Taking

Risk taking is one of the first three dimensions identified by Miller (1983). According to different points of view, risk is used to refer to the risk-return trade-off (the probability of having a loss or negative outcome), to the sense of uncertainty incurring heavy debt and making large resource commitments.

Risk taking under a EO perspective at the firm level, is measured adopting the Miller's approach (1983) where the main aim is to ask managers about their firm's proclivity to engage in risky projects and managers' preferences for bold versus cautious acts to achieve firm objectives.

In short, a firm that takes risks is entrepreneurially oriented because it takes bold actions by venturing into the unknown, borrowing heavily and/or committing significant resources to the ventures in uncertain environments.

Proactiveness

As risk taking, even the dimension of proactiveness, has been applied at the beginning as part of the EO construct. It is defined as the propensity of the firm to act first and to shape the environment by introducing new products, technologies, administrative techniques, etc., instead of following the leaders in the market (Miller & Friesen, 1983). It refers to the ability of a company to take the initiative by anticipating and pursuing new opportunities and by participating in emerging markets (Lumpkin & Dess, 1996).

Earlier literature tends to equate proactiveness with competitive aggressiveness, as Covin and Slevin (1989) assert, explaining their model of entrepreneurial strategic posture based on innovation, proactiveness and risk-taking. They define this concept as a frequent and extensive technological and product innovation, aggressive competitive orientation and strong risk taking propensity by top management.

Later researchers suggest a clear distinction between the two dimensions, considering proactiveness as the ability of a firm to relate to market opportunities in the process of new entry, by seizing initiative and acting opportunistically in order to shape the environment. Competitive aggressiveness refers instead to how firms relate to competitors, in terms of responding to trends and demand that already exist in the marketplace. The two ideas are similar but proactiveness has more to do with meeting demand, whereas competitive aggressiveness is about competing for demand (Lumpkin & Dess, 1996).

Therefore, on the basis of this literature we can define a firm as proactive when it has opportunity-seeking, forward-looking perspective and it seeks opportunities introducing new products and services ahead of the competition and acting in anticipation of future demand.

Innovativeness

Miller (1983) identifies innovation as one of the three main elements that a firm needs in order to gain and sustain competitive advantage, including both product-market or technological attributes. Lumpkin and Dess (1996) refer to innovativeness as the propensity of a firm to promote and support actions in terms of ideas, novelty, experimentation and creative processes that lead to new outcomes and processes. This possibility to pursue new opportunities can be measured in different ways such as for example the level of expenditure for R&D activities, the employment of engineers, scientists and specialists and the frequency of changes in services or product lines.

Innovativeness differs from proactiveness, referring to the firm’s predisposition to engage in creativity and experimentation through the introduction of new products/services or technological process rather than the firm’s ability to be the first mover, taking initiatives in anticipation of the competitors.

Competitive aggressiveness

Competitive aggressiveness is introduced as a component to draw EO by Lumpkin and Dess in 1996, who frame this concept from the previous suggestion of Miller (1983). He points out that a firm, to be considered entrepreneurial, needs to have some key features, such as the ability to firmly beat competitors.

This dimension refers to the capacity and responsiveness to unconventionally react to the competition in order to enter a new market or improving the firm’s position among existing rivals in terms of intensity to out perform and head-to-head and offensive posture (Lumpkin and Dess 1996; Rauch et al. 2009). In their study, Lumpkin and Dess (2001) suggest that the dimensions of competitive aggressiveness and proactiveness need to be considered as two separate concepts, regardless of the prior research inclined to merge the of them asserting an analogous repercussions on the firm performance. The study provides some arguments about the different effects that the two approaches could have on a firm relating them to the characteristics of the external environment. Organizations in dynamic or growing environments full of opportunities do not benefit from the combative posture typical of the competitive aggressiveness, while environments identified for their intense and hostile competition and mature industries are more inclined to benefit from this dimension.

Autonomy

Autonomy is defined as the ability of a team or an individual to act autonomously and independently in promoting new ideas, making decisions and proceeding without organizational boundaries (Lumpkin & Dess, 1996). According to an EO perspective autonomy has to be considered under a strategic point of view (strategic autonomy), because an higher degree of this dimension is crucial for the value creation, since it facilitates the identification problems and the related goals that need to be achieved to clear it up (Lumpkin et al., 2009). Lumpkin et al. (2009), focus on this measure, arguing that although autonomy is considered a key dimension of EO, most studies do not include it as an element of the construct. They support two reasons to justify this absence: the first one is related to the original definition of the EO dimension given by Miller (1983) and further improved by Covin and Slevin (1986, 1989) where only innovativeness, proactiveness and risk taking were considered; second this lack is due to the dearth of an efficient firm-level scale that evaluate autonomy from an EO perspective.

An EO approach consists not only on relating autonomy to work method issues, but also on the involvement of decisions, initiatives and actions that could have strategic implications on the organization and that are apart from the chain of command. Following this latter approach just few scales have been developed, thus one of the purposes of Lumpkin et al. (2009) is to identify and test an improved EO-based autonomy scale. They posit that previously adopted measures are inadequate, since most of them have a limited application through different types of organizations because they could be used only for specific industry or positions within the firm. Moreover, many of them point the attention only on structural-level autonomy and do not make a clear distinction with decentralization that is a complete separate concept. Specifically they conduct two different studies based on a combination between traditional literature and the EO measures: in the first one they try to separate autonomy from the three original dimension of risk taking, innovativeness, and proactiveness (Miller, 1983) while the second one is a replication of the previous one with the introduction of competitive aggressiveness, considering so the complete construct of EO (Lumpkin & Dess, 1996). Finally, the results of this study show that this ability that gives organizational members the flexibility and freedom to advance and enact entrepreneurial initiatives could be considered as a separate dimension of EO and not isomorphic with the other EO dimensions.

Moreover, the level of autonomy within the firm is related to the management style, ownership or size of the organization itself which is influenced in turn by the degree of centralization and delegation (Lumpkin & Dess, 1996). The role of autonomy in terms of behaviours within the firm is taken into consideration from the literature perspective in two different contexts: in the first one autonomy, defined as *autocratic,* is the ability of imposing an individual and centralised vision to the organisation through the control of its initiatives, prevalent in small-sized and owner/manager firms (Shrivastava & Grant, 1985); the second one is based on the research conducted by Hart (1992) and considers an integrative framework that includes the so called *generative mode of strategy-making* where the strategic direction of the firm depends on the autonomous behaviours of the members at lower levels that generate and develop new ideas according to a bottom-up approach.

1.3.4 The use of the five EO dimensions in research works

Lumpkin and Dess identified, in 1996, the five independent dimensions of EO as risk taking, proactiveness, innovativeness, autonomy and competitive aggressiveness. The further investigation on these dimensions has been different across literature and time. Three of them such as risk taking, proactiveness and innovativeness have been at the centre of attention of many studies and analysis while the others have been less taken into account. Several factors can explain this difference: these three dimensions were defined at the beginning of the EO construct identification, literature tends to treat proactiveness and competitive aggressiveness the same, researchers give lots of importance to the relationship between entrepreneurship and risk taking and also to the role of innovation as a crucial dimension to lead the strategy. Moreover, the questionnaire including only the three dimensions is particularly easy-to-use for researchers.

Concerning risk taking, the study conducted by Zahra (2005) and entitled "Entrepreneurial Risk Taking in Family Firms" points out that the ability of a firm to take risks is important for the creation of new technologies, jobs, and wealth. The results show that family ownership and involvement promote entrepreneurial risk taking. This should encourage managers to capitalize on the skills and talents of their family members in promoting entrepreneurship and selective venturing into new market arenas. The research proposes a broader definition of risk, where family firm managers experience different types of risks, from the business risk, that results from the variability in the business performance, to the industry related risk that reflects the change in the competitive environment, but even the firm risk, related the unique qualities of the firm and its senior decision makers.

Another well-known article that focuses on this topic is “Entrepreneurial Orientation, Risk Taking, and Performance in Family Firms” (Naldi et al., 2007). Analysing a sample of Swedish SMEs the study identifies risk taking as a distinct dimension of entrepreneurial orientation in family firm and positively associated with proactiveness and innovation, therefore risk taking cannot be considered an isolated phenomenon. Results suggest that, even if family firms do take risks as part of their entrepreneurial activities, they do it to a lesser extent than nonfamily firms do supporting the notion that family firms tend to be more conservative and risk averse. In addition to that, researchers find evidences that even if family firms take risks while engaged in entrepreneurial activities, this is negative related for their performances.

A further example of this kind of study that focuses on risk taking and proactiveness is “Cultural Influences on Entrepreneurial Orientation: The Impact of National Culture on Risk Taking and Proactiveness in SMEs” (Kreiser, Marino, Dickson, & Weaver, 2010). The study assesses the impact of national culture and certain institutions that are representative of national culture on these two dimensions of entrepreneurial orientation. The results suggest that national culture, measured according to the four basic cultural values identified by Hofstede (uncertainty avoidance, individualism, masculinity and power distance) has a significant impact on two distinct components of EO. This demonstrates how the national culture, impacting firm behaviours has important managerial implications. In shaping their strategy, firms need to take into account not only their national culture, but also even the cultural values of the society in which their competitors are operating.

Proactiveness is analysed even deeply by Lumpkin and Dess (2001) in a research focused on the relation between proactiveness and competitive aggressiveness and the relation of the two with performance and strategy making. They define proactiveness as a response to opportunities and a forward-looking perspective, introducing new products or services ahead of the competition and acting in anticipation of future demand to create change and shape the environment. The results underline the distinction between competitive aggressiveness and proactiveness as dimensions of an entrepreneurial orientation. This finding shows that proactiveness has strong positive relationship to the business performance, that it is well-suited to the introduction and growth stage of an industry's life cycle and that it may involve costs that don't pay off in more mature industries.

Many researchers focus on the relationship among risk taking, proactiveness and innovation, especially how the first two influence the ability of the firm to introduce new products and services. Saleh and Wang (1993) point out that the commitment to entrepreneurial activities and risk taking can contribute significantly to promoting innovation in the company while for the proactiveness dimension they could not find significant results. Avlonitis and Salavou (2007) in their study published as "Entrepreneurial orientation of SMEs, product innovativeness, and performance", they divide entrepreneurs of a group of Greek companies between active and passive, in order to find variations in product innovativeness dimensions of different performance potential. The findings suggest that active entrepreneurs unlike passive entrepreneurs adopt a more aggressive orientation characterized by willingness to undertake action of high risk and before that of competition. Nonetheless, proactiveness contrary to risk-taking is found to be an important contributor to the performance of new products introduced by both groups. Luño et al. (2011) distinguish innovation generation from innovation adoption, finding that that proactivity and risk taking are positively associated with the number of internally generated innovations. Moreover, they find here that both proactivity and risk taking were positively related with an emphasis on innovation generation over innovation adoption.

Concerning specific studies on innovativeness, we can find a wide range of researches that embrace each aspect of this dimension. Innovation is such important because is considered to be an inherent condition in the domain of entrepreneurship. This concept was firstly discussed by Schumpeter (1934) and further developed by many other authors. Some of them suggest that firm's strategy influences the process of innovation, considering it the essence of entrepreneurship (Miller & Friesen, 1982; Stevenson & Jarillo, 1990), others focus on the link between the EO dimensions and innovation and between innovation and firms' performance (Atuahene-Gima & Ko, 2001; Hult et al., 2004; Renko et al., 2009; Saleh & Wang, 1993; Tajeddini, 2010).

The other dimensions of autonomy and competitive aggressiveness have received lower level of attention and interest from the literature even if they are equally important in building up the EO construct. This is probably due to the fact that the EO scale has been conceived empirically with the work done Miller and Covin and Slevin (1991; 1983) rather than theoretically. A conceptual work has arrived only in 1996 (Lumpkin e Dess), where the two dimensions of autonomy and competitive aggressiveness were first introduced.

1.4 Entrepreneurially oriented family firms

An EO is a potentially important element for the success of firms, since it relates to strong performance (Lumpkin & Sloat, 2001). Nevertheless, in the context of family firms, literature has come through some controversial findings.

In practical terms, family firms that want to survive across generations and remain successful may need to strengthen their entrepreneurial orientation. In fact, fewer than 30 percent of successful family businesses survive to the third generation and fewer than the 15 percent survive through that generation. This because many of them have a lack of a clear framework for thinking about the future of the business and the family (Ward, 2011). Thinking entrepreneurially should increase their chances of surviving past the third generation (Martin & Lumpkin, 2003), revitalise their business and stay competitive. It cannot be assumed that the interests, strengths, and abilities of the next generations are identical to those of the current generation of leaders and founders, or that the attributes required to launch a business are the same as those required to grow or manage it (Poza, 2013). Therefore, family firm should focus on the different dimension of the EO construct to maintain the business success throughout the time and across generations.

Literature investigates the EO constructs in family business context under several different aspects. In particular, some studies on family firms demonstrate how the EO dimensions are influenced by the family's features and values. For instance, Cruz and Nordqvist (2012) suggest that external factors, such as environmental factors, and EO are correlated in family firms and depend on the generation in charge. In fact, their model shows that the presence of non-family managers has a positive effect on EO only in third-and-later-generation family firms, meaning that while non-family managers are not as central in promoting an EO in first-generation and second-generation family firms, their presence leads to greater EO in family firms in later generations. In another study by Zellweger and Sieger (2012) which analyses the EO construct in the context of long-lived family firms, it is showed that a continuous adaptation of the company's EO profile seems to be necessary and so that a maximum degree of all EO dimensions does not always seem to be best solution. This range of view confirms the previous study of Zellweger et al. (2010), which pointed out that the long term success of a family firms seems to be indicated by the right level of EO at the right time, not always the maximum score. Moreover, the composition of EO construct depends on family background (Zellweger et al., 2010), meaning that the role of the family is crucial in shaping the different dimensions. It is even demonstrated that fostering entrepreneurship in family firms requires the use of different levers, depending on the type of family firm we are dealing with (Salvato, 2004).

Therefore, all these studies point to the fact that the investigation of family firms in the light of an EO perspective becomes critical and at least as important as for non-family firms, even because this kind of companies represents the majority of the number of firms worldwide. Literature demonstrates that family entrepreneurship is part of this unique form of business and, in an environment of rapid change and shortened product and business model life cycles, where future profit streams from existing operations are uncertain, is essential to seek new opportunities and enhance entrepreneurship.

In brief, the role of the family context for EO is very important but not yet well understood and deeply investigated in the literature. Some previous researches argue that the kinship ties that are unique to family businesses have a positive effect upon entrepreneurial opportunity recognition (Aldrich & Cliff, 2003) and that the long-term nature of family firms’ ownership fosters entrepreneurship (Ward, 1997; Zahra et al., 2004). Yet, others suggest that the desire to protect family socio-emotional and financial endowment leads family firm owners and managers to become too conservative in taking risks associated with entrepreneurship (Naldi et al., 2007; Zahra, 2005). These controversial findings have led authors to ask to what extent current corporate venturing models are relevant to family-controlled enterprises. A shortcoming of existing research on entrepreneurial orientation in family firms is that it largely overlooks the difference between family owned and family managed firms.

The tables below summarize the most relevant theoretical and empirical studies focused on the EO in family business context. Respective variables' measurements and results are taken into consideration to show how studies differ and to highlight the controversial findings.

Table 1 *Studies on more entrepreneurially oriented family firms*

More entrepreneurially oriented Family Firms					
Empirical	Authors	Theory Applied	Measures of Family Firms	EO Dimensions	Main Results
NO	Ward (1997)	(Commentary about famìly firms growth using theories of stagnation)	Family ownership	(Owner and firm strategic orientation)	Requirements to promote expansion and overcome the challenges, they are: assure fresh strategic insights, attract and retain excellent non-family managers, create a flexible and innovative organization, create and conserve capital, prepare successors for leadership and exploit the unique strategic advantages of family ownership.
NO	Habbershon and Williams (1999)	Resource Based View	Familiness can foster competitive advantage		Family is an idiosyncratic resource that can be managed into competitive advantage.
NO	Aldrich and Cliff (2003)	Family embeddedness perspective and life course theory			They present a framework that emphasizes how the characteristics of entrepreneurs' family systems (i.e., transitions, resources, and norms, attitudes, and values) can influence the processes involved in venture creation (i.e., opportunity recognition, the launch decision, resource mobilization, and the implementation of founding strategies, processes, and structures).
YES	Salvato (2004)	Entrepreneurship and family firms literature	Family ownership (majority of ownership or perceived by the CEO as family firm) and considers founder-centered, sibing/cousins consortium and open family firms	Nine questions (Likert-type scale)	Explores the drivers of entrepreneurship. Having some entrepreneurial ideas that shape the strategy will enhance entrepreneurship. Fostering entrepreneurship requires different levers depending on the type of family firm.
YES	Zahra et al. (2004)	Resource Based View	Family ownership (over 50 percent of ownership)	7 item index (Miller 1983)	Family firm's culture, in terms of external orientation, decentralization and a long- versus short-term orientation, positively influences their entrepreneurial activities, more than in non-family businesses.

YES	Zahra (2005)	Agency Theory	Family perception as family owned and family ownership (percentage of company stock held by the owner family)	Risk taking (use of domestic and foreign alliances, entering new domestic and foreign markets, investment in emerging radical technologies and radical product innovation and introduction	The length of a CEO's tenure is negatively associated with entrepreneurial risk taking. High family ownership is conducive to venturing into new domestic and international markets in order to create new revenue streams that enrich family members. Family ownership is negatively associated with the use of domestic and foreign alliances.
YES	Kellermanns and Eddleston (2006)	Corporate entrepreneurship, family culture and strategic planning literatures	Family ownership (and at least two family members are employed in the firm)	7-item scale (Miller 1983)	The ability to recognize technological opportunities, pursue organizational change, and exploit opportunities through strategic planning increases corporate entrepreneurship in family firms. .
NO	Lumpkin et al. (2010)	Different perspective (agency theory, stewardship theory)	Family ownership (higher levels of family ownership are likely to be associated with a stronger LTO)	Lumpkin and Dess definition of EO	Long term orientation is positively associated with innovativeness, proactiveness, and autonomy but negatively associated with risk taking and competitive aggressiveness.
YES	Chirico et al. (2011)	Resource based view	Family ownership (majority of equity owned by the family)	Instrument developed by Miller (1983)	Highest performance outcomes are achieved only by those family firms with high levels of EO, generational involvement and participative strategy.
YES	Cruz and Nordqvist (2012)	Entrepreneurial orientation literature	Family ownership (more than 50% of the ownership)	Nine-item, seven-point scale (Miller 1983)	External environment and EO correlate differently in family firms, depending on the generation in charge, and it is generally stronger in second-generation family firms. Non-family managers and investors make a positive difference for EO only in the third-generation.
YES	Zellweger et al. (2012)	Transgenerational entrepreneurship	Controlling family holding at least 50% of the voting rights of at least one company with at least at second-generation family involvement in the businesses.	EO dimensions and FEO (family entrepreneurial orientation scale)	There is strong entrepreneurial activity undertaken by controlling families beyond their core (i.e., largest) company. Family entrepreneurial orientation may serve as an antecedent to transgenerational value creation by families

Table 2 Studies on less entrepreneurially oriented family firms

LESS EO FAMILY FIRMS					
EMPIRICAL	AUTHORS	THEORY APPLIED	MEASURES OF FAMILY FIRMS	EO DIMENSIONS	MAIN RESULTS
YES	Martin and Lumpkin (2003)		Family ownership (family members own at least fifty-percent of private firms or at least ten-percent of the stock in public firms)	Dichotomous variables and several different versions of five-point Likert-type scales	Decreasing entrepreneurial orientation and an increasing family orientation in successive generations.
YES	Naldi et al. (2007)	Agency Theory	Ownership and management control of the company dominated by one family	Nine-item scale (Covin & Slevin, 1986, 1989)	Risk taking positively associated with proactiveness and innovation; negatively related to performance and less exercised compared to non-family firms.
YES	Zahra (2005)	Agency Theory	Family perception as family owned and family ownership (percentage of company stock held by the owner family)	Risk taking (use of domestic and foreign alliances, entering new domestic and foreign markets, investment in emerging radical technologies and radical product innovation and introduction	The length of a CEO's tenure is negatively associated with entrepreneurial risk taking. High family ownership is conducive to venturing into new domestic and international markets in order to create new revenue streams that enrich family members. Family ownership is negatively associated with the use of domestic and foreign alliances.
YES	Short et al. (2009)	Entrepreneurial orientation and family firms	Business governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families	Lumpkin and Dess definition of EO (exhaustive list of words to capture each dimension)	Family firms exhibit language consistent with an entrepreneurial orientation for all dimensions but use less language than that of nonfamily firms in relation to autonomy, proactiveness, and risk taking.

YES (case study)	Zellweger et al. (2010)	Entrepreneurial orientation and family firms	Family ownership prevails (at least 2nd generation family ownership, ownership group of at least 2 family members, 1 family member in management, majority of family control in at least 1 of the controlled companies in the group, self-perception as a family business)	Five EO dimensions	Family firms score rather low on the five salient EO dimensions, it might not always be the wisest course of action to strive for a maximum score on each. Certain scales are inappropriate in the family firm context since they are not sufficiently defined and applicable for this specific type of organization.
YES	Zellweger and Sieger (2012)	Entrepreneurial orientation and family firms	Family ownership prevails (at least 2nd generation family ownership, ownership group of at least 2 family members, 1 family member in management, majority of family control in at least 1 of the controlled companies in the group, self-perception as a family business)	Nine-point scale for each dimension	Family firms are successful over time, even with moderate or low levels of overall corporate entrepreneurship.
YES	Boling et al. (2015)	Entrepreneurial orientation and family firms (Executive life cycle)	Family members ownership position and/or family members member of the board of directors	Three components by Miller (1983)	Inverse U-shaped relationship between CEO tenure and entrepreneurial orientation where EO's peak appears later when compared with nonfamily firms.

1.5 Three critical EO dimensions in family firms: innovativeness, competitive aggressiveness and autonomy

Zahra et al. (2004) highlight the importance of organizational culture for value creation in family businesses, claiming that family businesses are typically characterized by an emphasis on social control and on the centrality of their founder, meaning that organizational cultures may be of even greater strategic significance than for non-family firms. The controlling family's influence, interests and values have overriding importance, they are incorporated into the goals and objectives set for the firm and in to the strategy and control mechanisms implemented to achieve those goals (Sharma et al., 1997), values and interests that are at the basis of the organisational culture. If we consider the family ownership within the firm, the fact that family members are shareholders is crucial to exercise their voice by preventing or sabotaging radical changes that might change their company's mission and strategic direction (Zahra, 2005). Zahra in this paper of (2005), underlines also the importance of the involvement of family members within the business. Results from this study shows that an active family, especially if different and multiple generations are considered, can bring fresh insight and experiences in shaping the strategy.

Moreover, entrepreneurship in small medium sized family firms, is intrinsically related to the relationship between family and firm, ownership structure, governance and organisational characteristics (Salvato, 2004). These kinds of relationships vary from one type of family business to another, according to different characteristics. Salvato sustained that, independently from the type of family firm, having several entrepreneurial ideas and defining a strategy on the basis of these ideas rather than on the available resources will enhance entrepreneurship. Entrepreneurship, that can be fostered using different levers depending on the specific context (Salvato, 2004), is also affected by cultural dimensions that facilitate rapid and effective responses to environmental change and new opportunities (Zahra et al., 2004). This cultural influence makes family business unique and difficult to imitate, since it influences the behaviour of organizational members and entrepreneurial activities (Zahra et al., 2004). The potential advantage is realized when these dimensions of culture encourage the firm to be more entrepreneurially oriented (Miller, 1983; Zahra et al., 2000).

Literature underlines the importance of EO dimensions in family firms and their relationship with culture. Since risk taking and proactiveness have been already deep analysed, we focus on the dimensions of innovativeness, competitive aggressiveness and autonomy. Innovativeness, even if it is at the centre of many studies could not be excluded since it is intrinsic and fundamental for entrepreneurship. Under a literature perspective it is possible to sustain that family firms may become conservative and unwilling or unable to take the risks associated with entrepreneurship (Solow et al., 1989); may incentivize the protection and preservation of family wealth (Poza, 2013); may not perceive opportunities in their environments (Salvato, 2004); may have a desire to maintain the status quo (Gersick, 1997) and the related family considerations and interests can limit their strategic aggressiveness (Ward, 1988).

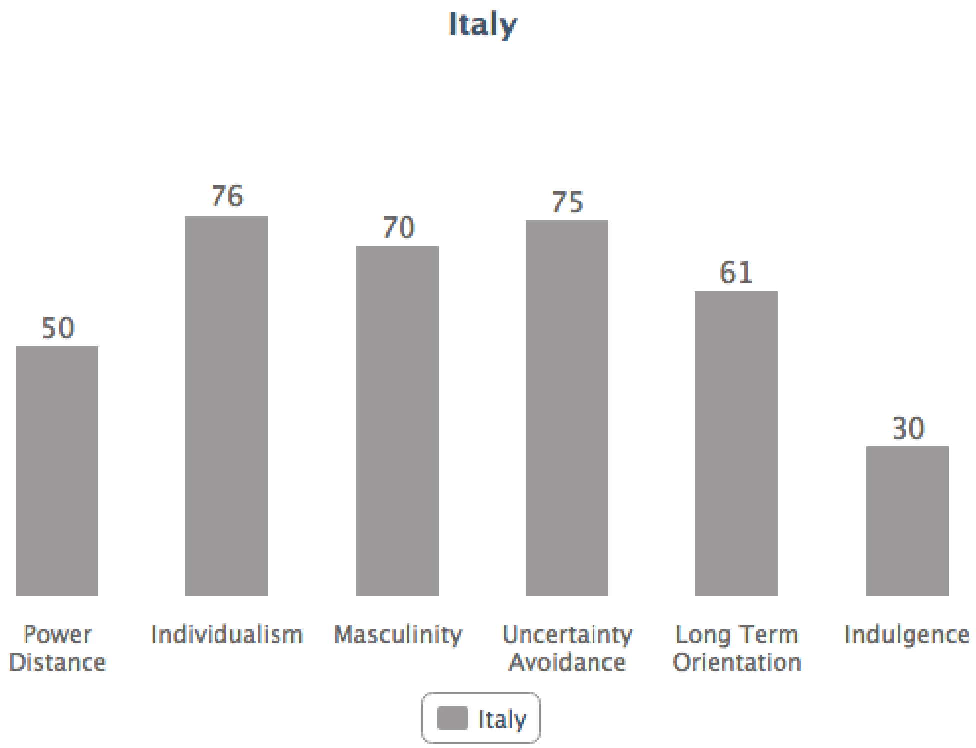
1.5.1 Innovativeness, competitive aggressiveness and autonomy in Italian family firms: the effect of culture

According to the Resource Based View theory, organizational culture can be a strategic resource that generates a sustainable competitive advantage when it is valuable, rare and imperfectly imitable (Barney, 1986). The unique family firm's organizational culture is considered an important strategic resource in comparison to non-family businesses and it is influenced by the national culture of the belonging country (Zahra et al., 2002).

Italy is a country that, as previously outlined, is mainly characterised by family firms. Analysing the Italian culture under the Hofstede National Cultural Model it is possible to identify specific scores and related features for each cultural dimensions.

Figure 2 shows the scores for each driver, where each dimensions refers only to Northern Italian culture.

Figure 2 *Hofstede's model for Italy*



Source: http://geert-hofstede.com/italy.html (Hofstede, n.d.)

As shown in Figure 2 the first driver, *Power Distance,* defined as the extent to which the less powerful members of institutions and organisations within a country expect and accept that power is distributed unequally, has a score of 50, meaning that Northern Italy tends to prefer equality and a decentralisation of power and decision-making. The results for the Southern Italy are often high, quite the opposite of North. *Individualism*, that is the degree of interdependence a society maintains among its members, has a score of 76, meaning that Italy is an Individualist culture, "me" centred, especially in the big and rich cities of the North. This dimension varies in Southern Italy where the family network and the group belonging are important social aspects. At a level of 70, Italy is a *Masculine* society, indicating that the society is driven by competition, achievement and success. The dimension of *Uncertainty Avoidance* has to do with the way that a society deals with the fact that the future can never be know and Italy shows a 75 score. It is a high score, which means that Italians are not comfortable in ambiguous situations. *Long Term Orientation* describes how every society has to maintain some links with its own past while dealing with the challenges of the present and future. Italians, with a score of 61, encourage thrift and efforts as a way to prepare for the future. The last one is *indulgence* and it has a low score of 30. This score indicates that, based on the way that people are raised, Italians are restraint and that there is a tendency to cynicism and pessimism.

In short, applying this deep analysis of the Italian culture to the family firm context, it is possible to assert that Italian family businesses are influenced by people who are very conservative and pessimistic, they do not like uncertain and ambiguous situations, that would like to achieve the success and that in general they do not like to delegate.

1.5.2 More or less entrepreneurially oriented family firms?

Berrone et al. (2012) propose in their research a further study on how the family presence and SEW influence the formulation and implementation choices under the EO perspective. The body of research, focused on the relationship between family and EO dimensions, is very broad and, as show in Table 1 and Table 2, the outcomes of these studies are controversial. In some cases scholars measure a higher level of EO in family firms while in others find a lower extent of EO among these businesses. Research can be divided between theoretical articles, that conceptually consider a combined overview of previous literature bringing forward hypotheses and propositions, and empirical works which verify the validity of certain hypothesis contributing to the literature under several aspects.

Theoretical frameworks on this topic focus on the importance of EO as a key and positive element in family firms (Ward, 1988; Habbershon & Williams, 1999; Aldrich & Cliff, 2003; Lumpkin et al., 2010): they see the construct as a way to achieve the unique competitive advantage, to overcome the challenges and to create new opportunities and ventures. Unfortunately these studies are not supported by any empirical research that could validate these assumptions.

Empirical works are much more open to debate, because they are almost equally divided between those which sustain that there is a low level of EO in family businesses and those who support the opposite result. Moreover, they diverge under several aspects regarding the measurement of the different considered variables and their propensity to make a comparison with non-family firms.

The large majority of the studies on family firms, analyse the EO construct as originally developed by Miller and later applied by Covin and Slevin (1986, 1989; 1983), considering just the three dimensions of innovativeness, proactiveness and risk taking (Zahra et al., 2004; Zahra, 2005; Kellermanns & Eddleston, 2006; Naldi et al., 2007; Chirico et al., 2011; Cruz & Nordqvist, 2012; Boling et al., 2015), while just a few consider autonomy and competitive aggressiveness as part of the EO dimensions (Short et al., 2009; Zellweger et al., 2010; Zellweger & Sieger, 2012; Zellweger et al., 2012). Secondly, most of these papers do not give a complete view of the concept, comparing family business with non-family business, thus they do not highlight the differences between the two under the EO perspective. The tables above even show that previous literature on this topic, often consider as measure of family business the family members' ownership rather than family governance or management.

Following the suggestions proposed by the study of Berrone et al. (2012), we want to move along this direction testing the relationship between family ownership and EO.

In sum given that in prior works, most scholars asserted that EO three-primary-dimensions are generally higher in family firms (Zahra et al., 2004; Zahra 2005; Kellermanns & Eddleston, 2006; Chirico et al., 2011; Cruz & Nordqvist, 2012), we formally state:

Hypothesis 1a: Family ownership is positively related with innovativeness

In addition to that, a distinctive focus should be given to competitive aggressiveness and autonomy that are almost unexplored among empirical studies. Considering the general tendency to take into account EO dimensions as positively developed in family firms, we want to demonstrate that the presence of the family in a business does not influence in a negative manner the level of competitive aggressiveness as outlined in the theoretical framework of Lumpkin et al. (2010). Therefore:

Hypothesis 1b: Family ownership is positively related with competitive aggressiveness

Concerning autonomy, despite the predominant positive EO attitude found in family firms, a study conducted by Short et al. (2009) demonstrates how family governed or managed firms exhibit less language in relation to autonomy than non-family business. Moreover, this lower level of autonomy in family firms may be a consequence of the non-financial principles that guide strategic choices. SEW is in fact the primary reference point for family principals and development of strategic choices (Gómez-Mejía et al., 2007) and, SEW strongly influences the entrepreneurial attitude of a firm. According to this perspective, family members tend to protect their SEW, this fosters an inward looking strategic posture and therefore family firms promote less autonomy within the firm. In addition to that, the level of autonomy can be affected even by national culture. Italian companies, in fact, are mainly characterised and managed by people who are very conservative, do not like uncertain and ambiguous situations and that in general do not like to delegate. These specific attitudes might lead family firms to exhibit a lower level of autonomy. Given the above considerations about previous literature, SEW theory, conservative Italian culture and the fact that the only empirical work that shows a lower level of autonomy uses governance as family measure, we formally state:

Hypothesis 1c: Family ownership is negatively related with autonomy

1.6 Conclusions

This chapter analyses the importance and main features of the entrepreneurially oriented family businesses. Nowadays the ability of a firm to enhance entrepreneurship is fundamental to face the challenges and seek new opportunities. As non-family firms, family enterprises are involved in entrepreneurial activities and they are seen worldwide as a vibrant source of growth.

We have defined family businesses as a particular kind of firm where family members influence the firm through their involvement as shareholders, managers or members of the board. Despite many definitions of family firms, three main elements - that are family, management and ownership - are commonly exhibited in this kind of firm as overlapping, interacting and interdependent subsystems. Family firms show distinguishing features, not recognizable in other organizations, that impact on managerial decisions. These features can be merged in a single concept labelled by Gómez-Mejía et al. (2007) as SEW. It specifically refers to non-financial aspects of the firm that meet the family's affective needs, such as the identity, the ability to exercise family influence and the perpetuation of the family dynasty. Since family firms are considered a key component of the global economy, it becomes crucial to study their entrepreneurial posture in its link with SEW.

To reach this aim we have introduced the concept of entrepreneurial orientation (Lumpkin & Dess, 1996), which is a key aspect of the entrepreneurial process. Success can be achieved only if some factors, identified as five key dimensions, are operating, these are: innovativeness, proactiveness, risk-taking, competitive aggressiveness and autonomy. The first three of these dimensions were empirically developed by Miller in 1983 and further applied in many studies, while scant empirical attention has been given to the concepts of competitive aggressiveness and autonomy.

This chapter combines the two concepts of family firms and entrepreneurial orientation, analysing the literature about entrepreneurially oriented family businesses. The results of this literature review show that theoretical studies and empirical works exhibit controversial findings. Some of them consider family firms more entrepreneurially oriented while others less entrepreneurially oriented.

Following the suggestions proposed by the study of Berrone et al. (2012), who has recommended to investigate the relationship between SEW and entrepreneurial process, we aim to study some less analysed topics in order to contribute to the high controversial findings of the literature. For these reasons we have stated three hypotheses, that predict whether family ownership is positively or negatively related with some of the EO dimensions.

The next chapter will move along the same directions, focusing on how EO could influence the decision making process and consequently the managerial decisions and organizational outcomes.

2. CHAPTER

EO IN FAMILY GOVERNED FIRMS AND FIRM INNOVATION

2.1 Introduction

Following the same directions, defined in chapter one, we want to move forward in this research. This second chapter aims to enhance our study focused on entrepreneurially oriented family business, giving a particular attention to the results and the outcomes of an entrepreneurially orientated attitude.

Giving that the literature considers EO as a key aspects in shaping the strategy of a firm, we aim to understand how the different levels of each dimension may influence decision makers. Since family firms' strategy must incorporate family issues into its framework (Sharma et al., 1997; Ward, 1988) it is particularly interesting to understand how EO affect the definition of goals and consequently the strategy implemented by the firm.. After defining what it is intended for strategy we focus on the observation of Poza (2013), who recognises among the sources of value which create an effective strategy in family firms, the product, the organisational capabilities and the family unit.

Considering that, the subsystem represented by the family could be promoted and protected by an effective governance (Poza, 2013), our research focuses on understanding the link between governance and EO. The main goal of this chapter is to review the literature on this topic, taking into consideration the same studies previously outlined in the first chapter and but focusing on particular importance of the role of the governance and its relationship with the EO dimensions. The analysis of the literature will be at the basis of the formulation of our set of hypotheses (H2).

Moreover, this second chapter takes into consideration the innovation as an outcome of the firm's strategy (Poza, 2013). The importance of a strategy that foster innovation is widely recognised and researchers have studied many features and aspects related to this concept, but surprisingly just few entrepreneurship works focus on combining the key concepts of EO and product innovativeness. Therefore, this second chapter aims to understand the link between the EO dimension and the innovation (in terms of patents held by the firm) in entrepreneurially oriented family firms. The third set of hypotheses (H3) based on the literature review on this topic, as the set of those related to the governance will be further tested in chapter four.

2.2 Strategy-making process in entrepreneurially oriented family firms

2.2.1 EO and strategy-making

Lumpkin and Dess (1996) suggested that the EO, where dimensions vary independently, can be a source of competitive advantage or strategic renewal. Effective EO may be an example of good strategic management and it reflects in the organizational process and decision-making style of a firm, representing the process aspect of entrepreneurship. Therefore it answers the question of how new ventures are undertaken. In fact, EO can be used by key decision makers to enact their firm’s organizational purpose, sustain its vision, create competitive advantage and so it may be viewed as a way to shape the entrepreneurial strategy-making process (Rauch et al., 2009). According to Hart (1992) strategy making is an organization wide phenomenon that incorporates planning, analysis, decision making, and many aspects of an organization’s culture, value system and mission. A firm's strategy-making processes may be viewed also as encompassing the entire range of organizational activities that involve planning, decision making and strategic management (Lumpkin & Dess, 1996). Moreover strategic management implies that there are goals being pursued, a strategy designed to fulfil those goals and mechanisms in place to implement the strategy and control the firm’s progress toward the achievement of its goals (Sharma et al., 1997).

Literature demonstrates that the EO dimensions affect the definition of goals and consequently the entire strategy of the firm. The content of business-level strategy is defined in terms of the firm's overall collection of business practices and competitive tactics that are the manifestation of the basic strategic direction. These include decisions relating to such things as financing alternatives, personnel practices, manufacturing or operations strategy, pricing policy, customer service systems and many others. They are the specific means through which entrepreneurial posture and mission strategy are implemented (Covin & Slevin, 1991). After all, the extent to which an entrepreneurial approach to strategy making is useful, will frequently depend on the organizational or environmental conditions under which such decisions are made (Lumpkin & Dess, 2001).

Thus, EO may be viewed as the entrepreneurial strategy-making processes that key decision makers use to enact their firm's organizational purpose and sustain its vision and it represents the policies and practices that provide a basis for entrepreneurial decisions and actions.

2.2.2 Creating the strategy in family businesses

In the context of family business, strategy differs from other types of companies because it is more likely to be based on multiple, complex and changing goals rather than a singular, simple, and constant goal and it must incorporate family issues into its framework (Sharma et al., 1997; Ward, 1988). Poza (2013), in asserting that strategy is about making choices and choosing to be different, considered its planning crucial for the value creation and the gain of competitive advantage. Strategic planning can help both, business and family, to strengthen the family enterprise and extend its lifespan, creating motivation that can sustain the firm through inevitable differences in individual perspectives between the family and the business themselves. A good planning releases energy that the family can use to fulfil the dream of many family businesses, that is creating and sustaining a healthy family enterprise for the next generation (Ward, 1988).

In family businesses, the ideal starting point for the planning process is the family itself, which has to establish its level of commitment to the future of the business (Ward, 1988). Poza (2013) stated that the nature of this special interaction between the business and the family constitutes a unique competency and source of value that is positively correlated with an effective management and governance practices for these family-owned and family-controlled businesses. This interaction between family and business is even at the basis of the so-called SEW, one of the key features that distinguish family firms from other organisations. According to Gómez-Mejía et al. (2007) the preservation of the socioemotional endowment is critical during the development of the strategy and it becomes the primary reference point for guiding managerial choices. When there is a threat to that endowment (a potential SEW loss) or the opportunity to enhance it (a potential SEW gain), the family is willing to make decisions that are not driven by an economic logic. This concept is even supported by Cennamo et al. (2012) who affirm that SEW becomes the family principals' frame of reference for taking strategic decisions that are a combination of both instrumental and normative motives, intrinsically tied to the building and preservation of SEW.

Therefore strategic planning requires a new level of communication among family members, between the family and management and between management and the board in order to avoid disagreements and conflicts. Ward (1988) suggested that, this weaving together of business and family plans represents a special challenge for the family business, because it means that the business and the family plans are highly interdependent. The plan of the business requires the family to determine the extent of its commitment to the company and that commitment depends on the prospects for the business that the planning process reveals. As a result, the family cannot separate strategic business planning from family strategic planning. It must undertake both in a connected and simultaneous way.

Strategy matters when family firms want to achieve the success being creatively different. Many organisations, both family firms and non-family firms, engage in some resistance to change and prefer to maintain the status quo, but then this attitude do not help them to create value for customers and to realise their core competitive advantage. The primary sources of value in family firms identified by Poza (2013) are financial resources, physical assets (plants and equipment), the product and its price and performance, brand equity, organizational capabilities, customer–supplier integration (distribution and logistics) and a positive family–business relationship. Mixing up these seven sources of value in various ways and combining them with the endowment's preservation will give rise to a unique business model that characterises family firms.

2.2.3 EO and family

As demonstrated, family firms literature sustains the influence of the EO on the strategy making and consequently, on the decision-making process and all the related actions implemented by the firm to achieve its goals. The outputs of the DMP are the set of decision regarding the operations of a firm, the so-called managerial decisions.

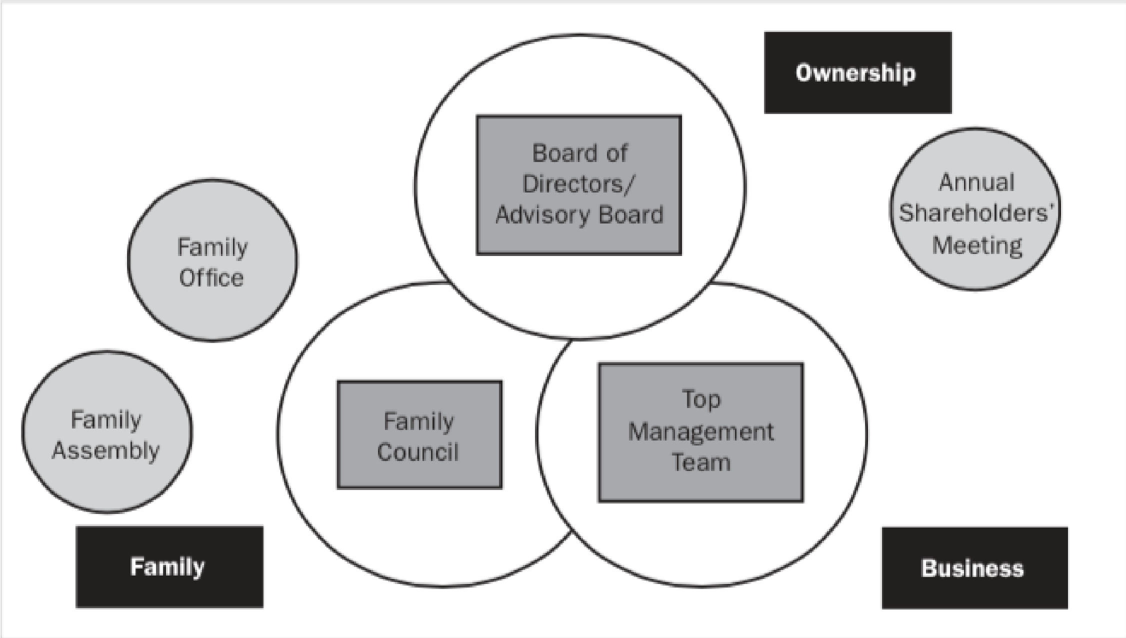
Managerial decisions in family firms are shaped combining their propensity in preserving the SEW and their level of entrepreneurial orientation, since both impact on the strategy-making process. Moreover, Poza (2013) suggests that if a family firm wants to build competitive advantage it has to focus and implement managerial decisions related with what he recognises as sources of values.

Briefly, the dimensions of family firm's strategy-making processes may be viewed as encompassing the entire range of organizational activities that involve planning, decision-making and strategic management. Such processes also encompass many aspects of the organization's culture, shared value system, corporate vision (Hart, 1992), but also family involvement and endowment preservation.

2.3 Governance in entrepreneurially oriented family firms

The previous paragraph has emphasized the importance of the source of value represented by the family unit. This unity could be promoted and protected by the ability to optimally discipline and control the nature of the relationship between family members, shareholders and managers, which is the definition of an effective governance. The unique governance, organizational architectures and capabilities could differentiate a firm from the others and could create value in ways that others find difficult to replicate (Poza et al., 2004; Poza, 2013). Poza (2013) sustains that governance in a family firm can be fostered through different classes of voting and nonvoting stock, but even appropriate contributions from boards of directors, advisory boards, family councils, family assemblies, family offices, annual shareholders’ meetings and top-management teams can encourage an effective governance structure. Governance, as represented in Figure 3, is essential for governing the relationships among management, ownership and family.

Figure 3 Governance structure of family businesses



2.3.1 The board of directors

The board of directors is one of the most important governance structures within family firms. Differently from the others it is a legal entity and it is usually prescribed in the articles of incorporation. For these reasons the board has unique rights and responsibilities, which expose directors to a larger sphere of liability. This uncertainty may require the company to provide directors with liability insurance and, in light of the rash of corporate fraud and evidence of self-dealing by corporate management, may discourage some peer CEOs from serving as independent outsiders on a board. This and other reasons lead many family-owned businesses to prefer to restrict membership on the board of directors to family members and use an advisory board as a complement to the board (Poza, 2013).

Poza, in his book (2013), identifies what are the primary responsibilities of a board of directors. He suggests that a board need to review the financial status of the firm; to ensure the ethical management of the business and the application of adequate internal controls; to be a respectful critic of management by asking insightful questions ; to review the performance of and hold the CEO and top management accountable for performance and good shareholder returns; to bring a fresh outsider perspective; to provide advice to the CEO and to assist in the recruitment, selection and election of new board members.

Moreover it has responsibilities that are strongly linked with the family involved in the business, such as deliberating on the strategy of the company ; looking out for the interests of shareholders ; promoting and protecting the unity and long-term commitment of the owning family; mitigating potential conflicts between shareholders and assisting in the objective planning and managing of the multiyear succession and continuity process.

In short the role of the board of directors within family enterprises is crucial to combine the family's and business' interests and to help managing this relationship.

2.3.2 Governance and EO: literature review and hypotheses

As we have already outlined in the previous chapter, family business literature gives a great importance to the entrepreneurial orientation, with both theoretical studies and empirical research (see Table 1 and Table 2 in chapter one). The large majority of these works tend to measure whether a company is a family business or a traditional firm, taking into consideration just the percentage of family ownership. Just few works analyse the family involvement taking into account the other measure of the governance structure. For instance, in Zellweger et al. (2010a) and Zellweger and Sieger (2012) the family ownership measure prevails even if they consider other measure as management, control or self-perception for determining if a firm is a family business. Similar considerations are at the basis of the work developed by Naldi et al. (2007), who considers ownership and management; by Boling et al. (2015), who allows for both family ownership and family members as part of the board of directors and by Short et al. (2009), who focuses on governance and management to evaluate family firms. All these empirical studies demonstrate the tendency of family firms to be in general less entrepreneurially oriented. Despite that, some of them measure the EO with just the three primary dimensions of innovativeness, proactiveness and risk taking while others, which take into account the entire construct show similar findings and even some controversial results.

Starting from the evidence that an effective governance structure is one of the main sources of values to achieve competitive advantages, that its composition is an outcome of the decision-making strategy, which in turn is influenced by the level of entrepreneurial orientation and that the board of directors is the most important structure within it, we want to deep investigate the relationship between the most critical or unexplored EO dimensions and family governance. More precisely we want to analyse how these

dimensions affect the organisational structure in terms of board of directors' composition, since it is a field of research that has been less considered among scholars. Indeed, among our review we find only study of Boling et al. (2015) which takes into consideration the board and finds an inverse U-shaped relationship between CEO tenure and EO.
First of all, we need to pay attention to the dimension that is mostly taken into account as intrinsic component of entrepreneurship, that is innovativeness. One study conducted by Short et al. in 2009, which considers family governance in general, demonstrates that family firms exhibit language highly consistent with EO for the innovativeness; the other studies that consider family ownership all point to the fact that family firms are more innovative as compared to non-family firms as argued in chapter one. For these reasons, for the reasons stated in the previous chapter, considering governance in terms of family participation on the board of directors, we assert:

> Hypothesis 2a: High innovativeness characterizes family governed firms.

Other important dimensions that are almost unexplored in the literature are competitive aggressiveness and autonomy.
As for innovativeness, competitive aggressiveness is at the centre of controversial results. In fact, we refer to the same research works that we have just mentioned to justify H2a. In addition to that, other papers on family businesses measured as governance do not consider this dimension, since they focus just on the primary three items identified by Miller in 1983 (Zahra, 2005; Naldi et al., 2007; Boling et al., 2015). Following the evidence of work by Short et al. (2009), which highlights how family governed and/or managed firms manifest language related to competitive aggressiveness as EO and considering governance just in terms of board of directors, we formulate the following hypothesis:

> Hypothesis 2b: High competitive aggressiveness characterizes family governed firms.

Similarly to competitive aggressiveness, autonomy is less taken into account by scholars, but contrary to the previous dimensions the work of Short et al. demonstrates a less use of language for this item. In addition to that, we have seen that Poza (2013) affirms that family businesses to prefer to restrict membership on the board of directors to family members, meaning that a high level of autonomy is not particularly appreciated by the family and that higher is the autonomy, lower might be the number of family members involved in the board. Therefore, considering governance just in terms of board of directors:

Hypothesis 2c: Low autonomy characterizes family governed firms.

2.4 Innovation in entrepreneurially oriented family firms

2.4.1 What is innovation?

Schumpeter (1934) defines innovation as the commercial or industrial application of something new in terms of product, process, method of production, new market, new source of supply or a new organization of any industry. He sustains that this new combinations of resources build up the enterprise and that it is an essential feature for describing entrepreneurship.

Damanpour and Wischnevsky (2006) differentiate between the generation and the adoption of innovations. As the terminology indicates, the generation of innovation refers to situations where a firm internally generates a product, process or technology that was previously unknown to the market in which the firm operates, so innovation results in an outcome (*new to the world*). If a firm adopts innovation, on the other hand, it assimilates knowledge and technologies that have been developed elsewhere, so it acquires or imitate others' innovation (*new to the firm*). They consider both ways a source for firm to achieve market newness.

Innovation, both generation and adoption, is essential for firms to pursue a continuing growth and the survival of the entire business system. Fostering innovation remains nowadays a major challenge for business executives in order to be effective and beat competitors. According to Miller and Friesen (1982) innovation is not a natural and spontaneous process in every firm. It has to be stimulated by environmental challenges and threats and, as a consequence to that, decision makers need to control information and need to be part of a particular structure that leads them to develop an adequate ability to innovate.

The level of innovation of a firm can be recognised and measured in different ways according to the specific context in which the company is operating. Researchers usually tend to grade innovation considering the number of new products or processes developed and introduced into the market (Saleh & Wang, 1993; Gebert et al., 2003; Avlonitis & Salavou, 2007; Renko et al., 2009; Pérez-Luño et al., 2011). Indeed, the majority of them highlight the importance of the newness as a fundamental characteristic to determine the ability of a firm to innovate.

Innovation has a vital and central role in shaping the strategy and its related activities (Atuahene-Gima & Ko, 2001; Miller & Friesen, 1982). Consequently, the entire decision making process of a firm is influenced by the adoption of a conservative or an entrepreneurial strategy and this concept could be applied also for family firms. Poza (2013) associates the level of technology and innovation of a family business with the value created by the products offered by a firm, attributing lots of importance to the related price and performance. In fact, the product is considered one of the key elements in implementing managerial decisions.

2.4.2 The importance of innovation in family firms

The importance of innovation in the development of new products, processes and services for the market is widely recognized. In Schumpeter's view, innovativeness stimulates economic development and is the engine of corporate growth and wealth creation. Since the term entrepreneurship refers to the creation of new resource combinations that did not previously exist, innovation and change are considered at the root of an entrepreneurial strategy (Saleh & Wang, 1993). These concepts are widely applicable, so they could be relevant even for the family business framework.

More precisely, Poza (2013) sustains that innovation is crucial for family firms in order to avoid stagnation. Its development and the business healthy growth across generations is due to the strategy crafted by the combination of the current generation of owners and managers, the dreams and aspirations of the next generation and the timeless wisdom of loyalty to one's customers. According to that, one of the defining characteristics of a family business is intergenerational involvement and, innovation in this context is based on envisioning and enacting this unique perspective. Within family businesses, some families' members exhibit innovative initiatives across generations while others display such tendencies in only one generation. In other cases innovative tendencies are absent in both generations (Litz & Kleysen, 2001).

Therefore, in today's competitive and fast-changing environment any kinds of organizations have to explicitly articulate a strategy to induce innovative activities, a so-called entrepreneurial strategy.

2.4.3 Innovation and EO: literature review and hypotheses

Innovativeness is a concept of emerging attention to both researchers and practitioners. They have studied many of its features and aspects, but surprisingly just few entrepreneurship research studies focus on combining the key concepts of EO and product innovativeness. Considering that innovation is an essential element for entrepreneurship, we want to deeply investigate the almost unexplored relationship between entrepreneurial orientation and the ability of a firm to introduce new products, services, processes or technologies. Innovativeness is considered as one of the key dimension of EO, as the propensity of a firm to promote and support actions in terms of ideas, novelty, experimentation, and creative processes that lead to new outcomes and processes, but it distinguishes from entrepreneurial orientation in that it does not require new market entry (Lumpkin & Dess, 1996).

Literature has already examined some aspects of the link between EO and innovation and the Table 3 below summarizes the most relevant empirical studies focused on this topic. Respective variables' measurements and results are taken into consideration to give a complete overview of the findings.

Table 3 Studies on the relationship between firm innovation and EO

Innovation and EO					
Empirical	Authors	Family business context	EO Dimensions	Measure of innovation	Main Results
YES	Saleh & Wang (1993)	NO	Risk taking, proactiveness and innovation	Outstanding breakthrough of scientific or technical significance contributing to the development of a process, product, or technology. The invention must be an original creation or a discovery of a unique nature	The results showed that the innovative companies use or have more of the following than the less innovative ones: calculated risk taking, commitment to entrepreneurial activities and innovation, integration and intermingling of talents in teams and task forces, group and collective orientation, and a reward system that reinforces entrepreneurial behaviour. Proactiveness is not significant.
YES	Atuahene-Gima & Ko (2001)	NO	It refers to the EO in general, but the measurement scale reflects the organization's degree of risk taking propensity, proactiveness and competitive aggressiveness	Likelihood of new product introduction by the firm. Use of perceptual measures	The interaction between market orientation and entrepreneurship orientation plays an important role in fostering product innovation, its activities and its outcomes. The alignment of these two orientations is important also for timing of market strategy, product quality, proficiency of market launch and management support for innovation.
YES	Gebert et al. (2003)	NO	Autonomy	Creativity, new products and new processes	Innovativeness does not begin to decline with increasing situation control but continues to rise
YES	Hult et al. (2004)	NO	It refers to the EO in general, but the measurement scale is based just on the three primary dimensions	Quantified using the five-item scale from Hurley et al. (1998)	Entrepreneurial orientation plays a key role in the development and maintenance of innovativeness
YES	Zhou et al. (2005)	NO	Measure on the basis of Naman and Slevin's (1993) and Hult and Ketchen's (2001)	The degree of technological advances and improved benefits over existing products	An entrepreneurial orientation positively affects both tech- and market-based innovations

YES	Avlonitis & Salavou (2007)	NO	The measurement scale is based just on the three primary dimensions	Three dimensions measure product innovativeness, they are based on the perceived assessments of the respondents that capture both the firm's and the customer's perspective and are product newness to customers, new product uniqueness and product newness to the firm	Proactiveness contrary to risk-taking is found to be an important contributor to the performance of new products introduced. They find a simple positive relationship between EO and product innovativeness.
YES	Renko et al. (2009)	NO	It refers to the EO in general, but the measurement scale is based just on the three primary dimensions	Companies that develop innovations either for the pharmaceutical markets or for use by other companies. The study measures the product innovativeness as company’s new product introductions to markets, NPD projects started and end products that are/have been developed based on the company’s invention(s) during the previous three years. It measure even the share of R&D expenses out of total expenses of the firm and the number of patents	Entrepreneurial orientation is not related to product innovativeness, but there is a positive correlation with share of R&D expenses of a firm’s total expenses. Patents are significantly and positively correlated with the product innovativeness measurement.
YES	Pérez-Luño et al. (2011)	NO	Proactiveness and risk taking	Industries that are most likely to exhibit innovative behaviours. Their number of new products introduced into the market over the past five years (percentage of these new products that were new to the world, new to their market and new to their company)	In terms of innovation generation they find that proactivity and risks taking are positively associated with the number of internally generated innovations and that both proactivity and risk taking are positively related with an emphasis on innovation generation over innovation adoption.

At first sight, the majority of works on this specific topic analyse first the previous literature related to these themes and later develop an empirical study to test their hypothesis on a sample of selected firms. The large majority of research works measure the level of innovation taking into account the quantity of new products introduced by the firm, while for what concerns the EO dimensions they do not follow a constant measurement scale. In some cases, scholars tend to consider EO under a general point of view, without distinguishing among the different dimensions in explaining their results as Atuahene-Gima and Ko (2001), Hult et al. (2004), Zhou et al. (2005) and Renko et al. (2009) do. Others focus more on some specific dimensions as Saleh and Wang (1993), Avlonitis and Salavou (2007) and Pérez-Luño et al. (2011) do when they analyse the relationship between innovation and the dimensions of risk taking and proactiveness, or Gebert et al. (2003) when they focus just on the level of autonomy.

The combined analysis of these studies is important to understand what are the unexplored fields of research and to clearly point out the controversial findings. The large majority of these findings demonstrate that, in general, the EO is positively related to the product innovativeness. However when researchers focus just on particular dimensions, we notice some results that are highly controversial. Saleh and Wang (1993) find out that proactiveness has no kind of significant relationship with innovation, while risk taking for Avlonitis and Salavou (2007) has not an important contributor to the performance of new products as proactiveness could be. The most contradictory result belongs to the study conducted by Renko et al. in 2009, where they state that there is no kind of relationship between EO and product innovation.

A general overview on the literature on this topic demonstrates that researchers did not pay attention to the study of this relationship in the unique context of family businesses, in fact none of them focus their empirical application on a sample of family firms. Thus, hereafter, we aim to analyse the ability of innovate of entrepreneurially oriented family firms considering those dimensions that have been less taken into account.

Since innovativeness is part of the EO construct, it could be interesting to understand the link between the ability of the firm to promote and support actions that lead to new outcomes and processes with the effective introduction of new products in the market. On the basis of the fact that the dimension of innovativeness and product innovation are the development of the same concept and that literature generally sustain a positive link between EO and innovation (in terms of patents held by the firm) we formally state:

Hypothesis 3a: Innovativeness is positively related with firm innovation

As previously outlined, literature focuses more on the dimensions of proactiveness and risk taking as original dimensions of the EO construct, while it gives just a marginal importance to competitive aggressiveness and autonomy.

Concerning competitive aggressiveness, none of the works analysed takes this dimension into considerations. This could suggest a further investigation on the relationship between this unexplored dimension and the innovation of a family firm. Empirical findings tend to generally demonstrate a positive relationship between product innovation and EO both, under a general point of view and in relation to the single dimensions. Therefore, on the basis of these findings we hypothesize:

Hypothesis 3b: Competitive aggressiveness is positively related with firm innovation

Differently from competitive aggressiveness, who has never been deeply examined in this context, autonomy has received the attention of Gebert, Boerner and Lanwehr who have studied in 2003, how decentralization of power and participative leadership could affect the promotion of innovativeness in the organizations. The purpose of this empirical research is to understand whether or not an increase in the situation control for employees, so less level of autonomy, leads to an innovativeness decline. The results demonstrate that innovativeness does not begin to decline with increasing control but continues to rise. Although autonomy is well examined in this paper, this field of research is largely under investigated and that is the reason why it could be interesting to further explore its link with innovative entrepreneurially oriented firm. On the basis of these considerations and on the evidence showed by the empirical analyses regarding the general positive relationship between EO and firm innovation, we frame our third hypothesis:

Hypothesis 3c: Autonomy is positively related with firm innovation

2.5 Conclusions

This second chapter focuses on how EO could influence the decision making process and consequently the managerial decisions and organizational outcomes. First of all, to introduce the concept of strategy that refers to the concept developed by Lumpkin and Dess (1996), who sustain that strategy-making processes may be viewed also as encompassing the entire range of organizational activities that involve planning, decision making and strategic management. An effective EO may be an example of good strategic management, it reflects in the organizational process and decision-making style of a firm and it can be used by key decision makers to enact their firm's organizational purpose, sustain its vision, create competitive advantage. Thus, EO represents the policies and practices that provide a basis for entrepreneurial decisions and actions.

Focusing in particular on family firms, the primary sources of value guide the formulation of the strategy are financial and physical resources, the product and its price and performance, brand equity, organizational capabilities, customer–supplier integration and a positive family–business relationship (Poza, 2013). In addition to that, socioemotional endowment becomes critical during the development of the strategy, turning into the primary reference point for guiding managerial choices In integrating the SEW preservation within the strategy-making process, the nature of the interaction between the business and the family constitutes a unique competency and source of value that is positively correlated with an effective management and governance practices (Poza, 2013).

The second part of the chapter highlights the importance of effective governance in family business, it is defined as the ability to optimally discipline and control the nature of the relationship between family members, shareholders and managers. The unique governance, organizational architectures and capabilities could differentiate a firm from the others and could create value in ways that others find difficult to replicate (Poza et al., 2004; Poza, 2013). One of the most important governance structures is represented by the board of directors, which has unique rights and responsibilities. In order to understand how governance is linked EO, we have analysed under the perspective of the family governance the same works summarised in Table 1 and Table 2 (chapter one). The findings of this review, show that just few works analyse the family involvement taking into account the governance structure, especially the role played by the board of directors. For these reasons, starting from the fact that the governance structure is an outcome of the decision-making strategy, which in turn is influenced by the level of entrepreneurial orientation and that the board of directors is the most important structure within it, we have formulated a set of hypotheses (H2) to investigate the relationship between EO dimensions and the presence of the family on firm board of directors. They aim to explore the relationship between the governance structure, intended as composition of the board of directors, and the level of EO dimensions.

Then, we have focused on the importance of the product and its innovativeness as a source of value in creating the strategy. Primary we have defined innovation as the commercial or industrial application of something new and as an essential feature for describing entrepreneurship (Schumpeter, 1934), then we have described the central and vital role of innovation in shaping the strategy and its related activities (Atuahene-Gima & Ko, 2001; Miller & Friesen, 1982). In the last section we have considered this concept in the context of family firms, as Poza (2013) sustains innovation is crucial for family firms in order to avoid stagnation. Despite the importance that it has within family business, literature does not focus on the link between innovation and EO dimensions in this particular context as showed in the summary of the main empirical studies on this topic (Table 3). Therefore we have formulated a set of hypotheses who aim to understand the link between the level of EO and the ability of a family firm to innovate.

The next chapter will continue to explore the governance and the firm innovation in the family business environment. More precisely it will analyse if these features could influence the firm performance.

3. CHAPTER

FIRM PERFORMANCE, FAMILY GOVERNANCE AND FIRM INNOVATION

3.1 Introduction

Chapter two demonstrates how the different EO dimensions could influence the decision making process and consequently the managerial decisions and organizational outcomes. This third chapter continues along these directions, focusing on the influence that the organisational outcomes, as governance structure in terms of composition of the board of directors and innovation, have on the firm performance.

The chapter gives first a general overview of what is intended for firm performance and of how an entrepreneurial attitude could affect the performance of an enterprise. In order to do that we take into consideration the broad literature that studies the relationship between the firm performance and the different EO dimensions. It further focuses on the unique context of family firm analysing how the performance of these companies could be differently influenced by other issues compared to the traditional firms. Finally, combining the two separate concepts, it studies the performance of entrepreneurially oriented family firms. Therefore, one of the purpose of this chapter is to give a general overview of how the propensity of a family firm to be entrepreneurially oriented might affect economic and financial outcomes.

The next two sessions of the chapter aim to go more deeply into this topic, finding what are the possible links between the decisions making process outcomes and the performance of the firm. More precisely, the chapter first focuses on how the governance structure and especially the presence of family members within the board of directors could influence the performance. Second, it analyses what is the relationship between the propensity of a firm to innovate and the business performance. To understand how these two aspects are linked with the performance of a firm, we take into consideration the literature that studies these concepts and later we make a specific analysis of the family firm context. These crucial steps will bring us to the formulation of the other two hypotheses that will complete our model.

3.2 The performance of entrepreneurially oriented family firms

3.2.1 Entrepreneurially oriented firms: a focus on performance

As already defined, EO refers to the strategy making processes that provide organizations with a basis for entrepreneurial decisions and actions (Lumpkin & Dess, 1996) and it represents one of the areas of entrepreneurship research where a cumulative body of knowledge is developing. For what concerns the number of studies that examine the relationship between EO and business performance, it is high and it is still continuing to increase. The first interest to explore this relationship was exhibited by Miller 1983 and many other researchers further developed it, as showed in the next sections of the chapter. Conceptual arguments suggest that EO leads to higher performance, because firms need to continuously seek out new opportunities (Wiklund & Shepherd, 2005) to survive and to sustain their competitive advantage. Despite that, the magnitude of the relationship seems to vary a lot across different studies.

Most of the studies, which take into consideration the relationship between EO and firm performance, demonstrate those businesses that adopt a strong EO, perform much better than firms that do not adopt an EO. To be more precise, evidence is showed in the study of Wiklund (2006), where he shows results indicating a positive relationship between EO and performance. In addition to that, he sustains that, since the effect of EO appears to be long term and persistent, an investment in EO might be worthwhile. Evidence that supports this positive relationship is demonstrated even by Rauch et al. (2004), by Wiklund and Shepherd (2005) whose findings suggest that EO, in the dimensions of proactiveness, innovativeness and risk taking, positively influences small business performance. The important role played by EO in enhancing firm performance is even illustrated by other studies as for example those of Zahra (1991), Zahra and Covin (1995), Wilklund and Shepherd (2003) and Keh, Nguyen and Ng (2007).

On the other hand, other works reported negative or lower correlations between EO and performance. Indeed, Zahra (1991) shows in his work a negative relationship between firm performance and level of EO. The same was even demonstrated by Lumpkin &

Dess (2001) which illustrate how the dimension of competitive aggressiveness is negatively related to sales growth and only weakly related to profitability and return on sales. Besides these works, there are also other studies that are unable to find a significant relationship between EO and performance (Andersén, 2010; Hughes & Morgan, 2007).

In addition to that recent studies have found that the effect of EO on performance is influenced by the specific firm feature, such as firm size, national culture (Rauch et al., 2004), access to financial resources (Wiklund & Shepherd, 2005), network capability (Walter, Auer, & Ritter, 2006), strategic processes (Covin, Green, & Slevin, 2006) and learning orientation (Wang, 2008).

In sum, the results concerning the performances of entrepreneurially oriented firms are highly controversial and they even show that other elements, that are firm specific, might affect the EO-performance relationship.

3.2.2 Key features of family firms' performance

Since the aim of the chapter is to better understand how the decisions making outcomes influence the performance of family firms, we have to analyse the main features and characteristics of the economic performance of these unique kinds of businesses. As outlined in chapter one, the unique characteristics of family firms may result in greater efficiency and higher profitability than businesses owned by diverse shareholders. On the other hand, potential conflicts between the family and business can hinder firm performance.

The relative merit of the family influence on firm performance is therefore an important empirical issue as demonstrated by the study of Eddleston, Kellermanns and Sarathy (2008). It shows that the performance of family firms cannot be fully understood if the psychodynamic effects of family relationships are not considered. Thus, specific family resources and reciprocal altruism could help family firms to succeed. Moreover, studies have claimed that as family firms grow, their performance advantage remains in effect only if professionalization of the management of the firm has been achieved and a board that provides advice and independent oversight is present (Poza, 2013).

In addition to that, there is remarkable evidence, that family firms outperform non-family firms and this is demonstrated by many studies on the topic. A work conducted in 2003 involving a sample of 700 family businesses in Germany and France, shows that firms in which families have significant influence and ownership roles overlap management roles enjoyed appreciably improved financial performance (Jaskiewicz, 2005). In Spain, the performances of 8000 large and medium sized family and nonfamily firms have been compared in a research conducted by Menéndez-Requejo (2006). Spanish family firms perform better in terms of return on equity than their nonfamily counterparts of the same size and in the same industry. Another study developed in Latin America compares the performance of 100 family firms with that of 75 nonfamily firms during the 10 years between 1994 and 2003 and finds that family firms outperformed their counterparts in return on assets and return on equity (Martínez, Stöhr, & Quiroga, 2007). In addition to that, one of the main study on the topic, belonging to Anderson and Reeb (2003), shows that family-controlled firms in the S&P 500 outperform management-controlled firms by 6.65 percent in return on assets and return on equity and create an additional 10 percent in market value between 1992 and 1999.

To conclude, literature demonstrates that, in general, family firms perform better than their non-family competitors. The influence of the family and individual family members is crucial in shaping the performance's results of a firms, it can be evaluated more positively in relation to the business entity (Habbershon, Williams, & MacMillan, 2003) and it varies depending on the definition of family business (Miller et al., 2007). In relation to that, it is important to distinguish among family governed, owned or managed firms.

3.2.3 The performance of entrepreneurially oriented family firms

As showed in the previous paragraphs many studies focus on the performance of family firms and on the performance of entrepreneurially oriented business, but just few of them combine the two concepts and analyse how the propensity of a family firm to be entrepreneurially oriented affects the performance.

Findings of these studies are provocative: some researchers suggest that higher level of EO negatively influence the firm performance, while others sustain the opposite. A negative relationship is demonstrated by Naldi et al. (2007), who claims that family firms generally show a high propensity for risk taking, but this has negative implications for their performance. In addition to that there is evidence that these kind of firm can be successful over time even if they have moderate or low levels of overall EO (Zellweger & Sieger, 2012). However, Chirico et al. (2011) suggests that highest performance outcomes are achieved only by those family firms that are able to with optimal combine high levels of EO, generational involvement and participative strategy. Thus, EO and family participation offer important elements for performance gains, but their most important effect is realized when coupled with resources.

In sum, despite that the researches that study family firm performance and the relationship between EO and business performance is wide, there is just few works that combine the two aspects together. Therefore, it would be interesting to move forward along this direction to better clarify controversial results showed by the empirical researches and to understand how the outcomes of an entrepreneurial strategy might affect the firm performance.

3.3 The performance of family governed firms

3.3.1 The influence of the board of directors' structure on firm performance

Chapter two reports that the governance structure is an outcome of the decision-making strategy, which in turn is influenced by the level of entrepreneurial orientation. Given the continuing interest and empirical attention to corporate governance structures and their relationships to financial performance, we want to provide a clear description of the impact that the composition of the board of directors, as crucial structure within governance, has on performance.

The research conducted by Dalton et al. (1998) identifies 54 relevant empirical works that study the link between board composition and financial performance. After a review of the literature they conclude that, according to agency theory an effective boards will comprehend even outside directors, who are believed to provide superior performance benefits to the firm as a result of their independence from firm management. On the other hand, consistently with the stewardship theory, they sustain that other researchers have found that inside directors are associated with higher firm performance.

In sum, the literature on this topic, as demonstrated by Dalton et al. (1998), is highly controversial: some authors find that outside directors lead to a poor firm performance (Hermalin & Weisbach, 1988), while others sustain the opposite consequences (Pearce & Zahra, 1992; Stevenson & Jarillo, 1990). Despite that, the following empirical analysis conducted by Dalton et al. (1998) shows that there is evidence, that board composition has virtually no effect on firm performance.

According to these findings, it would be interesting to continue the research and analysis of this debated topic, in order to understand if the board composition really impacts on firm performance and to frame the same concept within the context of family firms.

3.3.2 The performance of entrepreneurially oriented and family governed firms

Giving that industry, governance, firm characteristics and management are the typical factors that scholars have argued are the determinants of the firm performance, we aim to understand how this can be applied to the context of family firms where even the family involvement matters. In addition to that we aim to investigate how the board composition, as a measure of governance, could impact on family firm performance, since it is not clearly demonstrated by the previous literature.

Within family business literature, the study conducted by Anderson and Reeb (2004) shows that the higher-performing firms are those in which representation on the board is balanced between independent directors and family members. In fact, family firms with relatively few independent directors perform significantly worse than the average non-family firm in the sample. The study also finds that a moderate presence of family members on the board provides substantial benefits to the firm, so the addition of independent members and advisors is not meant to exclude continuing family participation on the board. Thus, the composition and monitoring board, as most important governance structure, have an impact on firm performance in the presence of diverging shareholder interests.

Nevertheless, the large majority of the works, which focus on the family firm performance do not give a great importance to the role of the governance and prefer to focus more on the ownership and management (Anderson & Reeb, 2003; Sciascia & Mazzola, 2008; Westhead & Howorth, 2006).

For these reason we find interesting to continue the analysis of the family firm performance as Anderson and Reeb (2004) did, taking into consideration that EO influences the composition of the governance structure. Considering that Anderson and Reeb (2004) show a positive link between the presence of family members within the board of directors and the performance outcomes, we want to verify what they suggest and so, we formally state:

Hypothesis 4: Firm performance is positively influenced by family governance

3.4 Innovation and family firm performance

3.4.1 The innovation-performance relationship: a general overview

Fostering innovation remains a major challenge for business executives and innovation represents an area in which academic research can still continue to make valuable contributions. Recalling the definition of innovation given in chapter two, which states that it is the commercial or industrial application of something new (Schumpeter, 1934), we want to highlight its importance as constitutive element of entrepreneurship for corporate growth and wealth creation (Lumpkin & Dess, 1996; Schumpeter, 1934).

The literature on innovation-performance relationship is very broad and despite the general mind-set that innovation contributes to enhance firm performance, scholars frequently present mixed findings. Table 4 shows some of the main works that analyse this relationship.

Table 4 Innovation and performance relationship

Innovation and Performance		
Authors	Type of Study	Relationship with Performance
Brown and Eisenhardt (1995)	Theoretical analysis	Positive relationship
Deeds and DeCarolis (1999)	Empirical analysis	
Li and Atuahene-Gima (2001)	Empirical analysis	
Klomp and Van Leeuwen (2001)	Empirical analysis	
Hult et al.(2004)	Empirical analysis	
Bausch and Rosenbusch (2005)	Meta-analysis	
Eddleston, Kellermanns and Sarathy (2008)	Empirical analysis	
McGee, Dowling and Megginson (1995)	Empirical analysis	Negative relationship
Vermeulen De Jong and O'shaughnessy (2005)	Empirical analysis	
Birley and Westhead (1990)	Empirical analysis	No relationship
Heunks (1998)	Empirical analysis	

As exhibited in Table 4, Bausch and Rosenbusch (2005) present a meta-analysis on the topic, considering 60 published studies over the past 15 years that have looked into the relationship between innovativeness and firm performance in over 18,000 firms. They demonstrate that the overall effect of innovativeness on firm performance is small but positive and significant. This positive relationship was previously demonstrated by many other authors who conducted empirical and theoretical researches that confirm how innovativeness is an important determinant of business performance and firm success (Brown & Eisenhardt, 1995; Deeds & Decarolis, 1999; Li & Atuahene-Gima, 2001; Klomp & Van Leeuwen, 2001; Hult et al., 2004). In particular, it is suggested that innovative companies that are able to create and introduce new products and technologies, can generate extraordinary economic performance and they are described as the engines of economic growth (Brown & Eisenhardt, 1995). Moreover an effective performance depends not only, to a great extent on the success of the innovative activities within the organization, but particularly on the way they are managed (Saleh & Wang, 1993).

Other empirical works, as showed in Table 4, report that innovation does not influence firm performance (Birley & Westhead, 1990; Heunks, 1998). These results, as long as those which show negative performance implications of innovation (McGee et al., 1995; Vermeulen et al., 2005), contribute to point out the contradictory and inconclusive research on this topic.

3.4.2 The performance of entrepreneurially oriented family firms: does innovation matter?

As reviewed in the previous paragraph the literature that focus on the link between innovation and performance is very broad and contradictory. However, just few empirical works analyse this relationship in the context of family firms. Chapter two has already analysed the link between EO and the propensity of a family firm to innovate, so it would be interesting to move along the same direction and investigate the relationship between innovation and performance in the same context.

It has been suggested that family firms must consider investments in innovation if they want to avoid stagnation and promote high performance (Zahra et al., 2004; Poza, 2013). Accordingly, innovative capacity appears to be a particularly potent firm-specific resource that may significantly distinguish successful family firms from their less successful counterparts (Gudmundson, Tower, & Hartman, 2003). Indeed, those family firms that are innovative and possess internal cohesiveness may enjoy a strategic advantage (Miller, Breton- Miller, & Scholnick, 2008) and they may strength their market position over time, adapting and even initiating changes in their markets and industries thanks to the role played by their innovative capacity (McGrath, 2001). The importance of innovation in family firm has been analysed even in a work published by Eddleston, Kellermanns and Sarathy (2008), which shows that the innovative capacity can enhance a family firm's ability to successfully compete in any environment, as suggested by the significant main effect of innovative capacity on performance. Moreover they assert that performance of family firms can be fully understood only if we take into account even the psychodynamic effects of family relationships, since specific family resources and reciprocal altruism help family firms to achieve the success. This study confirms the fact that innovative capacity could be considered a particularly important resource that contributes to family firm success, since it fosters entrepreneurial activities, increases firm distinctiveness and profitability (McGrath, 2001; Zahra et al., 2004). In contrast, those family firms that fail to develop innovative capacities may eventually become misaligned with the evolving needs of their customers and may lose market shares (McGrath, 2001).

Considering these suggestions and the fact that just few empirical works analyse the innovation-performance relationship in family firms, we find interesting to further examine this issue in order to contribute to the controversial literature. According to the positive link found in the study of Eddleston, Kellermanns and Sarathy (2008) and considering the majority of the empirical findings, we hypothesize:

> Hypothesis 5: Firm performance is positively influenced by firm innovation

3.5 Conclusions

This Chapter aims to continue the investigation introduced in chapter two about the governance and the firm innovation considering also the family business context. More precisely it focuses on how the composition of the board of directors and the firm innovation could influence organizational results.

The first section gives a general overview of the literature about firm performance, analysing the specific works regarding the business performance in entrepreneurial oriented firms and in family businesses. The number of works that study the relationship between EO and business performance continues to increase and despite the fact that many of them demonstrate that the link with the EO is positive (Zahra, 1991; Zahra & Covin, 1993; Wilklund & Shepherd, 2003; Rauch et al., 2004; Wiklund & Shepherd, 2005; Wiklund, 2006; Keh, Nguyen, & Ng, 2007), others findings show controversial results. Some of them find evidence about a negative relationship (Lumpkin & Dess, 2001; Zahra, 1991), while others do not find any kind of link between EO dimensions and firm performance (Andersén, 2010; Hughes & Morgan, 2007). For what concerns the performance of family businesses, literature demonstrates that generally these firms perform better than their non-family competitors and that it is fundamental to take into consideration the influence that the family members relationships (Eddleston et al., 2008) and firm specific features might have on the business outcomes. Combining the two concepts of EO and family involvement, it is possible to notice that just few works focus on the performance of entrepreneurially oriented family firms. They are highly provocative, so one of the main aims of this chapter is to better analyse this relationship in this particular context.

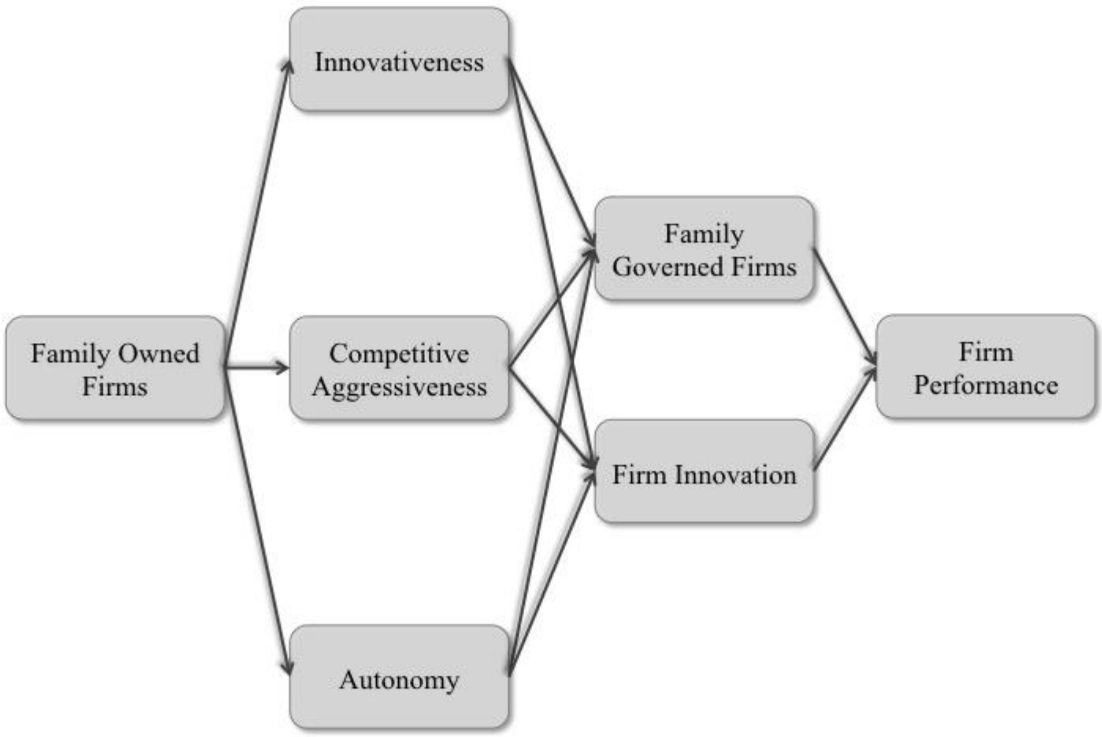
The following section in the chapter focuses on the role of the governance in influencing the business performance, especially the effect of the board's composition. As demonstrated by the comprehensive work conducted by Dalton et al. in 1998, the literature on this topic shows controversial findings regarding the role of inside or outside directors in traditional firms. Moreover they find empirical evidence that the composition of the board does not influence the firm performance. Concerning the presence of family members within the board, Anderson and Reeb (2004) demonstrate that the participation of family members in the board is important to achieve a better performance. Therefore, considering the controversial literature of traditional non-family firms and what Anderson and Reeb (2004) sustain we have formulated the hypothesis H4, in order to better understand how the governance structure influences the performance of a family firm.

The last section of this chapter analyses the influence of the innovation on firm performance. After a general overview of the broad literature that focuses on the innovation-performance relationship, we conclude that the results are not clear. Indeed, despite the majority of researchers find a positive link, others show evidence about a negative relationship or they are not able to find any kind of connection between the ability to innovate and firm performance. Regarding the study of this relationship within family firms, the literature demonstrates that innovative capacity is an important resource that contributes to family firm success (McGrath, 2001; Zahra et al., 2004; Eddleston et al., 2008). According to these latter suggestions we formulate the hypothesis H5, in order to contribute to the controversial literature, demonstrating that innovation matters in family firms.

Figure 4 summarises the comprehensive model developed along these chapters and the related set of hypotheses. As exhibited H1 focus on the link between family ownership and EO, H2 on the influence that EO has on family governed firms, H3 on how the ability of a firm to innovate is affected by innovativeness, competitive aggressiveness and autonomy, while H4 and H5 take into consideration the relationship between family governed firms or firm innovation and firm performance.

The aim of following chapter four is to test the hypotheses (Figure 4) on a given sample of firms and to show the related empirical analysis and results.

Figure 4 Comprehensive model of entrepreneurially oriented family firms



4. CHAPTER

EMPIRICAL STUDY

4.1 Introduction

The principal aim of chapters one, two and three is the analysis and review the literature concerning entrepreneurial oriented family firm and the consequent formulation of different sets of hypotheses. The comprehensive model exhibited at the end of the previous section will be the core of this fourth and conclusive chapter. Indeed, chapter four aims to test this model and to analyse the related findings and results.

To do that, we first describe the dataset used to conduct the empirical study. After a description of the sample of Italian firms, we illustrate the different variables (variables of interests and control variables) focusing on their measurement and their specific role within our study. Because of their relevance in the study and the complexity in their formulation, we give a particular attention to the measurement of the different EO dimensions. The chapter provides a detailed description of how researches, across years, developed the formulation of the different questions belonging to the questionnaire used to gather data.

After the analysis of the descriptive statistics and correlation that distinguish the sample, the chapter focuses on testing the different hypotheses that framed the outlined model. This section provides the results of the six different regressions performed and it shows if these findings support the hypotheses. Results might be in line with what supposed according to the literature perspective, they might be contradictory or even not statistically supported.

The last section aims to better clarify the validity of the comprehensive model through the analysis of the regression diagnostics. For these purpose we follow different procedures and tests to verify multicollinearity, the normality of the residuals, homoscedasticity and the correct specification of the models.

4.2 Data and sample

The empirical study has been conducted through the analysis of dataset of 175 Italian firms. In 2011, the *Italian Association for Managerial Education* (ASFOR) randomly identified 200 names belonging the databases of the business schools associated and conducted a research through a methodology based on Computer-Assisted Telephone Interview called CATI.

The questionnaire, submitted to the companies, was divided in five different sections: a first general part where they had to give some personal data, information about the company and the role they have within the firm. Then they had some questions related to their entrepreneurial profile, to the different dimensions of entrepreneurial orientation, to how was their own business education school programme, if they did, and finally to how they managed education and training in the firms. The results of the questionnaire were later combined with other data on firm characteristics such as ownership structure and composition of the board of directors. Financial data were retrieved by the AIDA database, while data on patents were retrieved by the European Patent Register database. It has to be noted that to perform all the analysis reported in the next paragraphs we used Stata 13.

4.3 Study variable measurements

4.3.1 Variables of interests

The variables of interest for the empirical study are six: innovativeness, competitive aggressiveness, autonomy, family governance, firm innovation and firm performance.

Innovativeness (f_inn), competititve aggressiveness (f_agg) and *autonomy* (*f_aut*), refer to the EO dimensions. They are the results' combination of the questions belonging to the ASFOR questionnaire and they are relevant for the hypothesis H1a, H1b and H1c. We factor analyzed the items (more details about the items used are given in paragraph 4.3.3.). Cronbach alpha for the whole three factors is 0.57, while for innovativeness it is equal to 0.44, for aggressiveness to 0.66 and autonomy 0.60. Given that this is an exploratory study, these values can be considered as not acceptable (Nunnally & Durham, 1975). Although, we calculated the Composite Reliability scores (using the on-line free calculator that calculates the scores on the basis of standardized factor loadings at: http://www.thestatisticalmind.com/calculators/comprel/comprel.htm) on the bases of factor loadings and these were 0.73 for innovativeness, 0.75 for autonomy and 0.78 for aggressiveness. These values are considered as acceptable as they are higher than 0.70. Composite reliability above the 0.70 threshold and an extracted variance above the 0.50 threshold are recommended by (Hair Junior, Anderson, Tatham, & Black, 1998).

Family governance (fam2), that is the focus of the second hypotheses, is represented by a dummy variable where d=1 when more than 50% +1 of the ownership belongs to family members that are identifies as people with the same surname.

The third hypotheses refer to the *firm innovation* (*num_patents*) and in this case the dependent variable is identified as the total number of patents held by the firm. For the regression, the variable has been transformed through a logarithmic function (*numpatents2_ihs*) to make it closer to a normal distribution. This measurement is consistent to what is sustained by Coombs and Bierly , when they consider patents as the output measure of technological capabilities.

The last section of the empirical study focuses on *firm performance* (*roa2010*) whose measurement corresponds to the ROA of the year 2010.

4.3.2 Control variables

There are various factors that could influence decisions and behaviours of the firms, and of the people belonging to them.

First of all it is necessary to consider the characteristics of the people that answered the questionnaire and the main features of the different firms. Concerning the characteristics of people, the study controls for the *age*, for the *gender* through a dummy variable (dummy=1 if male), while for companies' features it considers the *firm industry* and the *firm size* (*sales10*), through the generation of a logarithmic function of the sales of 2010. In particular, for *firm industry*, the analysis applies the classification of technology intensity of manufacturing activities adopted by the Italian National Institute of Statistics and elaborated from the Pavitt taxonomies. It defines industry in the traditional field (*pavitt_tradiz*), the specialised one and sectors characterised by high R&D intensity (*pavitt_rsspec*) and fields with high economy of scale (*pavitt_ecscala*). For what concerns the concept of family firm, in addition to family governance (*fam2*), the study takes into consideration the *family ownership* (*fam1*), that corresponds to a dummy d=1 when more than 50%+1 of the ownership belongs to family members, as characterised by the same surname.

In the cases in which the EO dimensions are not seen as dependent variables, it is necessary to control for them (*f_inn*, *f_agg* and *f_aut*). The same occurs when it is needed to control for the composition of the board of directors (*fam2*) and firm innovation, as independent variables.

4.3.3 The measurement of entrepreneurial orientation

The empirical study, that is going to be presented in a later stage, gives a lot of attention to the role played by EO dimensions. The measurement of these variables is based on a questionnaire of 14 different questions. After a first literature review, researchers elaborated in 2009 a first draft of questions, for each different dimension.

Risk taking

The draft of the questionnaire related to risk taking was formulated considering the literature perspective of Covin e Slevin (1989). The three aspects developed were the ability of the firm to launch risk projects; the ability of the company to undertake wide-ranging and brave acts that are necessary to achieve the firm's objectives but could impact on the organization and finally the propensity to adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities. Table 5 illustrates the first draft of the questionnaire in Italian.

Table 5 First draft risk taking (Italian original version)

RISK TAKING	MAI O A VOLTE		ABITUALMENTE			SPESSO O SEMPRE	
	1	2	3	4	5	6	7
In azienda si intraprendono con relativa facilità progetti rischiosi. (Covin & Slevin, 1989)							
A causa del mercato e dell’ambiente competitivo in cui opera la mia azienda, per raggiungere gli obiettivi aziendali, è necessario intraprendere azioni coraggiose e talvolta “brutali” che possono ripercuotersi su più unità organizzative. (Covin & Slevin, 1989)							
Se ci sono decisioni da prendere e queste hanno un ampio margine di incertezza, in genere si adotta un atteggiamento aggressivo e audace per massimizzare la probabilità di sfruttare le potenziali opportunità. (Covin & Slevin, 1989)							

Proactiveness

The first draft of the questionnaire related to proactiveness was based on the original formulation of Covin and Slevin (1989). They state that this dimension refers to the ability of the firm to be a first mover, compared to competitors that react to firm initiatives in a second stage and to the ability to be the first in introducing product/service/management innovation. Another question was based on the more recently scale provided by Lumpkin and Dess (2001) that distinguishes proactiveness from competitive aggressiveness. It refers to the ability of the firm to preempt competitors thanks to the introduction of new ideas and products. The last question was linked to the concept formulated by Venkatraman (1989), that considers how easy is for a firm to leave activities that are in an advanced stage of their life cycle and that are considered inconsistent with the strategy. The complete draft is showed in Table 6.

Table 6 First draft proactiveness (Italian original version)

PROACTIVENESS	MAI O A VOLTE		ABITUALMENTE			SPESSO O SEMPRE	
	1	2	3	4	5	6	7
La strategia della mia impresa si muove prima dei concorrenti, e solo successivamente questi rispondono alle nostre iniziative (Covin & Slevin, 1989)							
La mia impresa è la prima ad introdurre innovazioni di prodotto, o servizio, o di gestione manageriale rispetto ai concorrenti (Covin & Slevin, 1989)							
La mia azienda tende ad anticipare le mosse dei concorrenti introducendo nuove idee e nuovi prodotti (Lumpkin & Dess, 2001)							
Nella mia impresa è facile “abbandonare” le attività nelle fasi più avanzate del loro ciclo di vita e ritenute poco coerenti con la strategia (Venkatraman, 1989)							

Innovativeness

The first daft of the questionnaire related to innovativeness was based on seven different items. The first three propositions derived from the suggestions of Covin and Slevin (1989) who sustain that, in order to be innovative, a firm need to invest a lot in R&D and provide latest technologies, unless than focusing only on the marketing of already existing products. Moreover, the firm need to introduce new services or product lines in the last three years and even product or process innovations that are drastic or radical. The following statement was suggested by Zahara e Covin (1993) and stated that a firm need to be recognised among its competitors as the one that innovates and experiments new methods and technologies. Saleh and Wang (1993) advance that this dimension characterised an organisation that easily adapts to new circumstances, without worrying about past practices and where there is a strong integration among entrepreneur, managers and technicians that support each others. The last question, derived from another earlier study (Miller & Friesen, 1983) which suggeste that more a firm tries to solve problems through creativity and development of new ideas more it could be innovative. The original Italian draft is showed in Table 7.

Table 7 First draft innovativeness (Italian original version)

INNOVATIVENESS	MAI O A VOLTE		ABITUALMENTE			SPESSO O SEMPRE	
	1	2	3	4	5	6	7
La mia azienda tende ad investire maggiormente in ricerca e sviluppo e a dotarsi delle ultime innovazioni tecnologiche, rispetto a investire nella sola commercializzazione di prodotti già sul mercato da molto tempo. (Covin & Slevin, 1989)							
Negli ultimi tre anni, la mia azienda ha introdotto nuove linee di prodotti o servizi (Covin & Slevin, 1989)							
Quando la mia impresa introduce innovazioni di prodotto o processo, si tratta di innovazioni drastiche o radicali (Covin & Slevin, 1989)							
Tra i miei concorrenti la mia azienda è riconosciuta come quella innovativa e che sperimenta nuovi metodi e tecnologie (*vedi: Tecnology policy e in particolare Aggressive Technological Posture Scale*) (Zahara e Covin, 1993)							
La mia azienda si adatta facilmente alle nuove circostanze senza preoccuparsi dei principi che ha utilizzato in passato. (Saleh & Wang, 1993)							
In azienda vi è integrazione tra imprenditore, managers e tecnici e tra le loro competenze. Si rinforzano e supportano l'uno con l'altro. (Saleh & Wang, 1993)							
In azienda le soluzioni dei problemi si cercano tramite la creatività e lo sviluppo di nuove idee (brainstorming, etc.) (Miller e Friesen, 1983)							

Competitive aggressiveness

The first draft of the questionnaire on this dimension provided just two items of measurement. The first one, based on the definition of Lumpkin and Dess (2001), drew competitive aggressiveness as the aggressive attitude of a firm that always tries to compete in the market facing competitors. The second outlined the firm's capacity to dealing with competitors through a hostile approach (Lumpkin & Dess, 2001; Covin & Slevin, 1989 - Proactiveness). Table 8 provides the draft of the questions in Italian.

Table 8 First draft competitive aggressiveness (Italian original version)

Competitive Aggressiveness	Mai o A volte		Abitualmente			Spesso o Sempre	
	1	2	3	4	5	6	7
La mia azienda è aggressiva e cerca sempre di competere con le altre del settore, confrontandosi con i competitors. (Lumpkin e Dess, 2001)							
Quando si confronta con i concorrenti del settore, la mia impresa adotta un approccio molto aggressivo nei loro confronti. (Lumpkin e Dess, 2001 da Covin e Slevin, 1989 – Proactiveness)							

Autonomy

The first draft of the questionnaire related to autonomy considered measures based on the Autonomy Scale Items developed by Lumpkin et al. (2009). This scale provides eight different items specifically developed to be neutral with respect to the type of firm and industry segment. The scale values each item in a range from 1 to 7. As suggested by this study, researchers considered just the four most relevant dimensions as described in Table 9 and they later formulated a first draft of the questions as showed in Table 10.

Table 9 Autonomy scale items

My firm supports the efforts of individuals and/or teams that work autonomously	vs	My firm requires individuals or teams to rely on senior managers to guide their work.
In general, the top managers of my firm believe that, the best results occur when individuals and/or teams decide for themselves what business opportunities to pursue.	vs	In general, the top managers of my firm believe that, the best results occur when the CEO and top managers provide the primary impetus for pursuing business opportunities.
In my firm, individuals and/or teams pursuing business opportunities make decisions on their own without constantly referring to their supervisor(s).	vs	In my firm, individuals and/or teams pursuing business opportunities are expected to obtain approval from their supervisor(s) before making decisions.
In my firm, the CEO and top management team play a major role in identifying and selecting the entrepreneurial opportunities my firm pursues.	vs	In my firm, employee initiatives and input play a major role in identifying and selecting the entrepreneurial opportunities my firm pursues.

(Lumpkin, Cogliser, and Schneider 2009)

Table 10 First draft autonomy (Italian original version)

AUTONOMY	MAI O A VOLTE		ABITUALMENTE			SPESSO O SEMPRE	
	1	2	3	4	5	6	7
La mia azienda supporta il lavoro individuale delle singole persone e dei gruppi di lavoro (Lumpkin, Cogliser and Schneider, 2009)							
Tra i manager della mia azienda si crede che i migliori risultati avvengano quando gli individui e/o i gruppi decidano da soli quali opportunità cogliere. (Lumpkin, Cogliser and Schneider, 2009)							
Gli individui e i team di lavoro nel seguire le opportunità di business prendono le decisioni da soli senza costantemente fare riferimento al/i proprio/i superiore /i. (Lumpkin, Cogliser and Schneider, 2009)							
L'iniziativa dei dipendenti e i loro input costituiscono parte fondamentale nell'identificazione e nella selezione delle opportunità imprenditoriali che l'azienda segue. (Lumpkin, Cogliser and Schneider, 2009)							

Final questionnaire

After few elaborations, the final questionnaire presented in 2011 was based on 14 statements. It was useful to conduct the research for ASFOR that was illustrated at a later stage in a specific book (*La formazione manageriale e imprenditoriale nelle PMI. Processi evolutivi e nuove sfide nell'executive education.* (Gubitta, 2015)). These questions did not precisely indicate to which dimension they referred. They were mixed up and sometimes reversed in order to avoid biased answers. People interviewed had to choose an answer on a range between 1 (not agree at all) and 5 (completely agree), rather than between 1 and 7, as showed in the previous drafts.

To be more precise, EO dimensions were divided as follows: risk taking (questions 3, 7, 13), proactiveness (questions 2, 6, 10), innovativeness (questions 1, 9, 12), competitive aggressiveness (questions 4, 8) and autonomy (questions 5, 11, 14).

Table 11 Final questionnaire (Italian original version)

	Per ciascuna delle seguenti affermazioni indichi un punteggio da 1 (per nulla d'accordo) a 5 (completamente d'accordo)	**1**	**2**	**3**	**4**	**5**
1	Abbiamo investito di più nella ricerca e sviluppo piuttosto che sulle politiche di marketing per sfruttare la gamma di prodotti esistenti					
2	Abbiamo prevalentemente reagito alle mosse dei nostri concorrenti (e non anticipato)					
3	Abbiamo privilegiato i progetti magari con rendimenti bassi, ma piuttosto certi					
4	Abbiamo evitato nei limiti del possibile scontri frontali con i nostri competitor reali o potenziali					
5	Abbiamo favorito lo sviluppo di autonomia nei lavoratori e di lavoro in team					
6	Abbiamo introdotto innovazioni dopo nostri concorrenti o altre imprese (cioè, prima abbiamo cercato di capire se funzionavano con altri)					
7	Ci siamo mossi sul mercato dopo attente analisi sulle dinamiche evolutive e dei competitori					
8	Abbiamo cercato accordi e altre forme di collaborazione con i nostri competitor per evitare bagni di sangue					
9	Abbiamo introdotto un numero rilevante di nuovi prodotti o servizi					
10	Abbiamo cercato di imitare il leader del mercato (cioè, non abbiamo rischiato di percorrere strade nuove mai battute da altri)					
11	Siamo sempre più convinti che per identificare le opportunità di business servano l'iniziativa e le proposte di tutti i dipendenti					
12	I processi di innovazione sono generalmente incrementali e progressivi					
13	Abbiamo adottato decisioni orientate alla cautela e, in alcuni casi, all'attesa e alla prudenza					
14	Abbiamo favorito la diffusione tra i lavoratori di "atteggiamenti imprenditoriali"					

4.4 Descriptive statistics and correlations

Table 12 Descriptive statistics and correlations

	Mean	S.D.	Min	Max	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Age	41.22	8.65	25	70	1												
2. Gender	0.72	0.45	0	1	-0.02	1											
					0.8												
3. Firm size	9.21	1.64	4.06	13.83	0.03	0.15*	1										
					0.7	0.06											
4. Pavitt Traditional	0.2	0.4	0	1	0.12	-0.07	0.01	1									
					0.11	0.36	0.88										
5. Pavitt High-tech	0.29	0.45	0	1	0.04	0	0.25****	-0.32****	1								
					0.56	1	0	0									
6. Pavitt Others	0.15	0.36	0	1	0.11	-0.17**	0.07	-0.21**	-0.26****	1							
					0.14	0.03	0.35	0.01	0								
7. Innovativeness	0	1	-3.26	2.07	0.08	-0.05	-0.16**	0.01	-0.01	0.05	1						
					0.31	0.48	0.04	0.9	0.89	0.49							
8.Comp. Aggress.	0	1	-1.8	2.04	0.11	-0.11	-0.01	0.04	-0.12	0.07	0.04	1					
					-0.13	0.15	0.92	0.64	0.11	0.37	0.62						
9. Autonomy	0	1	-2.79	1.81	0.11	0.12	-0.22****	-0.11	-0.02	-0.05	0.32****	0.13*	1				
					-0.15	0.11	0	0.14	0.77	0.52	0	0.09					
10. Family owned	0.54	0.5	0	1	0	-0.06	-0.03	0.03	0.12	0.06	0.05	0.01	0.12	1			
					-0.98	0.42	0.73	0.71	0.1	0.42	0.52	0.88	0.1				
11. Family governed	0.51	0.5	0	1	0.01	-0.06	-0.11	0.03	0.03	0.2**	0.03	-0.02	-0.04	0.63****	1		
					0.93	0.44	0.16	0.71	0.67	0.01	0.71	0.79	0.64	0			
12. Firm innovation	0.87	1.48	0	5.96	-0.05	0.04	0.45****	-0.11	0.27****	-0.02	0.08	-0.07	-0.14*	-0.02	-0.04	1	
					0.52	0.57	0	0.15	0	0.75	0.27	0.35	0.06	0.75	0.63		
13. Firm performance	3.48	8.68	-29.5	44.53	-0.01	0.06	0	-0.16*	0.06	-0.13*	-0.08	-0.06	0.11	0.11	0.11	0.01	1
					0.89	0.43	0.99	0.05	0.46	0.09	0.31	0.44	0.15	0.15	0.18	0.89	

*p<0,1 **p<0,05 *** p< 0,01 **** p< 0,001; N=15, (numbers reported in the second raw are p-values)

4.4.1 Descriptive statistics

Descriptive statistics, as summarized in Table 12, shows that the average age of people who answered the questionnaire is 41 years old and that the majority of them are male, since the mean of the dummy variable is around 0.7.

Concerning the features of the firms, the average sales are 35.728.140 €; ROA, our measure for firm performance, is on average 3.48 while the ownership and also the governance are almost equally distributed among non-family firms and family firms. Family ownership is about 54% while family governed firms are the 51%. The majority of the companies responding to the questionnaire do not have any patents (69%), while for those firms in the sample who have at least one patent, the maximum number obtained belongs to a company that holds 343 patents.

4.4.2 Correlation

Table 12 shows also the correlations among the different variables involved in the empirical analysis.

As it can be seen from this table, the firm size is positively related with gender (r=0.15*, p=0.06) which means that males answering the questionnaire correspond to larger firms. For what concerns the industry, pavitt high-tech is positively related with firm size (r=0.25****, p=0.000) and negatively with pavitt traditional (r=-0.32****, p=0.000), these results show that a higher number of firms belonging to the high-tech sector correspond, on one side to larger companies and one the other, to a lower number of traditional firms. Pavitt others is negatively related to pavitt traditional (r=-0.21**, p=0.01) and pavitt high-tech (r=-0.26****, p=0.00), which means that firms characterised by economies of scale are associated with a lower number of traditional and high-tech companies. This kind of firm is even negatively related to the gender (r=-0.17**, p=0.03).

Innovativeness and autonomy, defined as two of the EO dimensions, are negatively related with the firm size (r=-0.16**, p=0.04 and r=-0.22****, p=0.000), meaning that high degree of innovativeness, on one side, and of autonomy on the other, coincide with smaller firms in terms of annual sales (2010). In addition to that, autonomy is even positively related with the remaining EO items that are innovativeness (r=0.32****, p=0.000) and competitive aggressiveness (r=0.13*, p=0.09). This suggests that a firm with higher degree of autonomy corresponds to higher level of the other two dimensions.

Family governed firms are positively related with family ownership ($r=0.63$****, $p=0.000$), which means that companies that have a board of directors based on more than two family members correspond to the majority of the family ownership. Family governed firms are also positively associated with the industry characterised by high economies of scales ($r=0.2$**, $p=0.01$).

Regarding firm innovation, it is positively related to the firm size ($r=0.45$****, $p=0.000$), which means that higher levels innovation corresponds to larger firms. This firm dimension is even positively correlated with pavitt high-tech ($r=0.27$****, $p=0.000$) suggesting that higher innovation is associated to sectors characterized by intense R&D activities. On the other side, firm innovation is negatively related to autonomy ($r=-0.14$*, $p=0.06$), meaning that a higher number of patents is linked to a lower degree of autonomy.

In conclusion, the firm performance is negatively related with both pavitt traditional and pavitt others ($r=-0.16$*, $p=0.05$ and $r=-0.13$*, $p=0.09$) which means that better firm performance in term of ROA 2010, corresponds to a lower involvement in the traditional sectors and in those classified as others.

4.5 Regression: analysis and results

4.5.1 Model

The research is based on a comprehensive model based on five sets of hypotheses, that have been developed through chapter one, two and three according to a theoretical analysis and review of the literature concerning both family firm and EO.

To test the first, fourth and fifth hypothesis, two multiple regressions have been performed, since innovativeness (*f_inn*), competitive aggressiveness (*f_agg*) and autonomy (*f_aut*) for H1 and firm performance (*roa2010*) for H4 and H5 are continuous variables. On the other hand the second set of hypotheses (H2) is based on a logit model because we use a dichotomous outcome variable (*fam2*) to understand if the board of a firm is mainly composed by family members or not. The third set of hypotheses (H3) has been tested through an ordered logistic regression of the model, since firm innovation (*numpatents2_ihs*) is considered an ordinal dependent variable.

4.5.2 Entrepreneurially oriented family firms: Hypotheses 1

Figure 5 *Hypotheses H1*

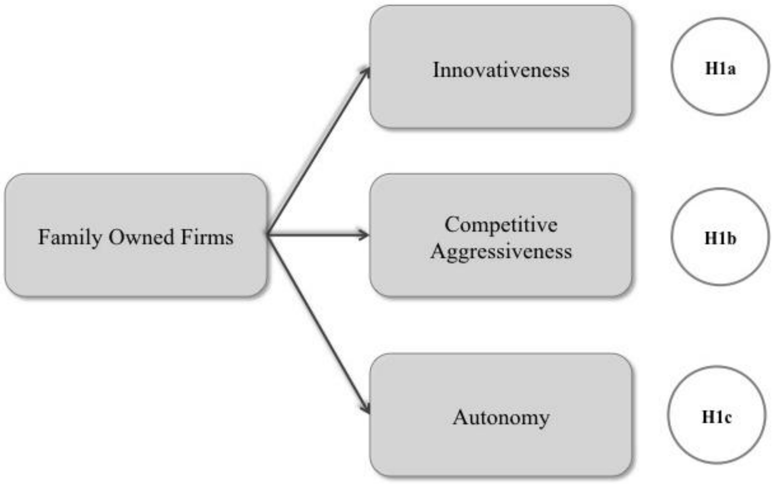


Table 13 *Innovativeness regression*

VARIABLES	f_inn	f_inn
Age	0.00482	0.00485
	(0.00945)	(0.00948)
Gender	0.0589	0.0585
	(0.183)	(0.183)
Firm size	-0.120**	-0.120**
	(0.0522)	(0.0525)
Pavitt Traditional	0.0787	0.0749
	(0.231)	(0.233)
Pavitt High-tech	0.175	0.169
	(0.212)	(0.216)
Pavitt Others	0.277	0.271
	(0.258)	(0.261)
Family Ownership		0.0268
		(0.163)
Constant	0.740	0.720
	(0.592)	(0.606)
Observations	161	161
R-squared	0.039	0.039

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 14 *Competitive aggressiveness regression*

VARIABLES	f_agg	f_agg
Age	0.0117	0.0117
	(0.00940)	(0.00942)
Gender	-0.260	-0.261
	(0.182)	(0.182)
Firm size	0.0289	0.0317
	(0.0516)	(0.0519)
Pavitt Traditional	-0.0144	-0.0302
	(0.229)	(0.231)
Pavitt High-tech	-0.346	-0.368*
	(0.210)	(0.213)
Pavitt Others	-0.0828	-0.107
	(0.256)	(0.259)
Family Ownership		0.103
		(0.162)
Constant	-0.451	-0.526
	(0.589)	(0.601)
Observations	162	162
R-squared	0.040	0.042

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 15 Autonomy regression

VARIABLES	f_aut	f_aut
Age	0.0128	0.0131
	(0.00918)	(0.00908)
Gender	0.338*	0.334*
	(0.177)	(0.175)
Firm size	-0.142***	-0.134***
	(0.0505)	(0.0501)
Pavitt Traditional	-0.348	-0.396*
	(0.224)	(0.223)
Pavitt High-tech	-0.0607	-0.131
	(0.206)	(0.206)
Pavitt Others	-0.244	-0.319
	(0.250)	(0.250)
Family Ownership		0.332**
		(0.156)
Constant	0.662	0.420
	(0.575)	(0.579)
Observations	161	161
R-squared	0.104	0.130

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 15 shows the results of the regression (H1c) estimating the factors, which may affect autonomy under the EO point of view. It is possible to observe that three control variables of firm size, gender and family ownership are significant. Since family ownership has a coefficient of β=0.332 and p-value= 0.035, there is evidence that, the fact that a firm is mainly owned by family members positively affects the level of autonomy.
Empirical evidence shows a positive relationship between family ownership and autonomy and this is the opposite result of what we expected in framing H1c. Our results are controversial compared to the study conducted by Short et al. (2009) which demonstrates how family firms exhibit less language in relation to autonomy than non-family business. Despite the conservative Italian culture, that could reduce the level of autonomy and the influence of the SEW in shaping the entrepreneurial attitude, our findings seem to be in keeping with the tendency to consider EO dimensions as well positively developed in family firms.
On the other hand H1a and H1b are not supported, since family ownership as independent variable is not statistically significant in both cases. These results are exhibited in

Table 13 and Table 14 and demonstrate that there is no evidence that family ownership influences innovativeness and competitive aggressiveness. Moreover, under these circumstances we cannot contribute in sustaining the literature that demonstrates neither a higher level nor a lower level of EO dimensions in family-owned firms. Our study does not find any kind of link between these two EO dimension and family ownership.

4.5.3 Governance structure in EO family firms: Hypotheses 2

Figure 6 Hypotheses H2

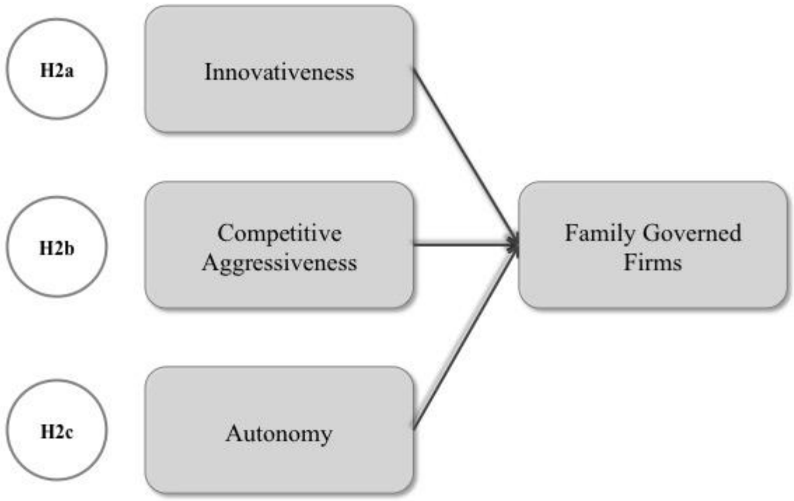


Table 16 Family governed regression

VARIABLES	fam2	fam2
Age	-0.00688	-0.00641
	(0.0204)	(0.0206)
Gender	0.162	0.181
	(0.386)	(0.393)
Firm size	-0.258**	-0.254**
	(0.113)	(0.118)
Pavitt Traditional	1.057**	0.984**
	(0.483)	(0.488)
Pavitt High-tech	0.977**	0.904**
	(0.445)	(0.452)
Pavitt Others	2.111***	2.041***
	(0.613)	(0.618)
Innovativeness		-0.0107
		(0.183)
Competitive Aggressiveness		-0.0284
		(0.176)
Autonomy		-0.0612
		(0.190)
Constant	1.910	1.897
	(1.286)	(1.302)
Observations	162	160

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The results reported in Table 16 concern our second set of hypotheses. As demonstrated, none of the three EO dimensions is statistically significant, since the p-values are not below the requested thresholds. In fact, p-value for innovativeness is equal to 0.954, for competitive aggressiveness is 0.872 and for autonomy is 0.747. Consequently, in this case there is no empirical evidence that support these hypotheses. This means that a higher level of innovativeness, competitive aggressiveness or autonomy do not influence the composition of the board, intended as participation of family members within the board. Therefore, we cannot support the study conducted by Short et al. in 2009, which demonstrates that family firms exhibit a use of the language that is highly consistent with EO for the innovativeness and competitive aggressiveness but lower in terms of autonomy. Moreover, we cannot contribute to the literature sustaining any kind of link between the essential dimension of innovativeness and the unexplored competitive aggressiveness and autonomy and the presence of family members in the board of directors. For these reasons, we cannot even confirm what Poza (2013) affirms when he says that family businesses prefer to restrict membership on the board of directors to family members, meaning that level of autonomy is negatively related with the number of family members.

4.5.4 Innovation in EO family firms: Hypotheses 3

Figure 7 *Hypotheses H3*

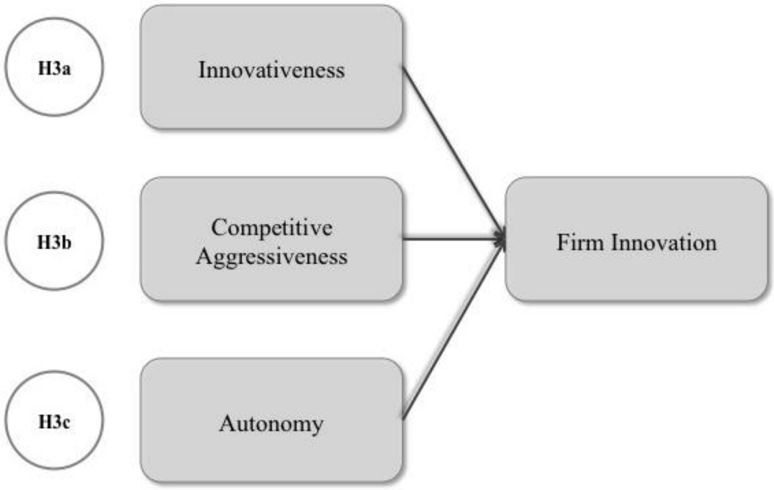


Table 17 Firm innovation regression

VARIABLES	numpatents2_ihs	numpatents2_ihs
Age	-0.0165	-0.00794
	(0.0198)	(0.0203)
Gender	0.123	0.121
	(0.388)	(0.420)
Firm size	0.562***	0.602***
	(0.135)	(0.144)
Pavitt Traditional	-0.190	-0.109
	(0.555)	(0.580)
Pavitt High-tech	0.947**	0.973**
	(0.453)	(0.482)
Pavitt Others	0.646	0.603
	(0.544)	(0.567)
Family Governed	0.0129	0.0844
	(0.359)	(0.368)
Innovativeness		0.506**
		(0.202)
Competitive Aggressiveness		-0.310
		(0.190)
Autonomy		-0.340*
		(0.188)
Constant cut1	5.502***	6.404***
	(1.484)	(1.569)
Other cuts omitted		
Observations	162	160

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 17 shows the results of testing for the third set of hypotheses. For this regression we use a different measure of the firm innovation, introducing a logarithmic transformation (*numpatents2_ihs*) of the *num_patents* variable that measures the number of patents held by the firm.

We notice that the only EO dimension that is not significant is competitive aggressiveness, since its related p-value is higher that the threshold of 0.1. Therefore hypothesis H3b is not supported and there is no evidence that competitive aggressiveness positively influences firm innovation. Regarding H3a and H3c, the coefficients associated to innovativeness and autonomy are significant and equal to β=0.506 β=-0.340 respectively, meaning that these two dimensions seem to influence the firm's tendency to innovate.

Therefore, find evidence that innovativeness affects in a positive way the number of patents held by the firms, which means that Hypothesis 3a is supported by the regression outcomes. This finding is consistent with the empirical works who sustain a positive link between EO and firm innovation (Atuahene-Gima & Ko, 2001; Avlonitis & Salavou, 2007; Hult et al., 2004). This result can be considered an important contribution even for family business literature, since none of the previous studies focus their attention on the link between EO and family firm innovation. The empirical study even controlling for the presence of family members within the board introducing, it shows that a high level of the innovativeness dimension leads to a higher number of patents held by firms,

On the other hand Hypothesis 3c is not supported by the results because, even if the coefficient for the autonomy is significant, it is negative, suggesting the contrary compared to what we expected. The level of autonomy has a negative influence on the innovation's intensity of a company. The fact that higher autonomy leads to a lower number of patents held by a family firm is contrary to what is empirically demonstrated by Gebert, Boerner and Lanwehr (2003).

4.5.5 Performance in EO family firms: Hypotheses 4 and 5

Figure 8 Hypotheses H4 & H5

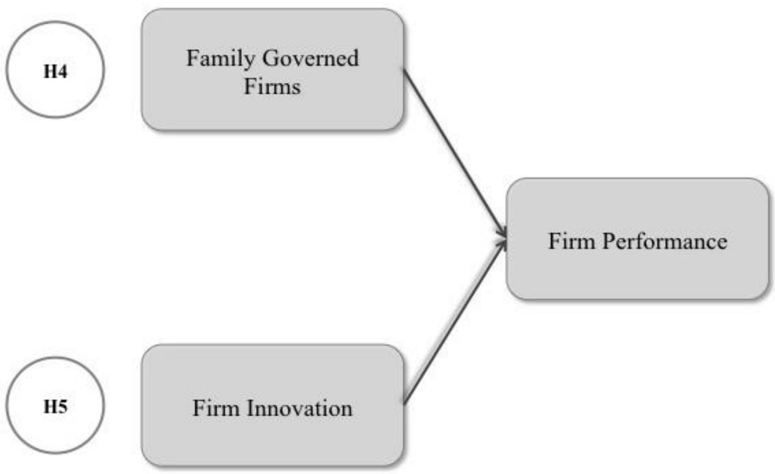


Table 18 *Firm performance regression*

VARIABLES	roa2010	roa2010
Age	0.0415	0.0490
	(0.0620)	(0.0627)
Gender	-0.253	-0.545
	(1.257)	(1.270)
Firm size	0.238	0.476
	(0.496)	(0.498)
Innovativeness	-0.757	-0.712
	(0.778)	(0.767)
Competitive Aggressiveness	-0.657	-0.647
	(0.618)	(0.601)
Autonomy	1.034	1.110
	(0.747)	(0.769)
Pavitt Traditional	-4.372**	-5.121**
	(2.046)	(2.108)
Pavitt High-tech	-1.433	-2.296
	(1.802)	(1.857)
Pavitt Others	-4.472**	-6.003**
	(2.137)	(2.308)
Firm Innovation		0.00708
		(0.0155)
Family Governed		3.471**
		(1.371)
Constant	1.633	-2.008
	(5.091)	(5.055)
Observations	158	158
R-squared	0.081	0.122

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 18 presents the results of the firm performance regression and the related estimated coefficients for each variable. Apart from the traditional industry and others sectors, that negatively influence the performance it is possible to assert that there is evidence that a family governed firm positively influences companies' success in terms of ROA. This is in relation with the hypothesis H4. Since the estimated coefficient for this variable (*fam2*) is β=3.471 and related p-value= 0.012, we can confirm a positive influence of family board composition on the firm performance. This results confirms what Anderson and Reeb (2004) sustain about the presence of family members in the board of directors: they show that a moderate presence of family members on the board provides substantial benefits to the firm and that the higher-performing firms are those in which representation on the board is balanced between independent directors and family members.

Differently, the results showed in Table 18 do not support the fifth hypothesis because even if the coefficient of the firm innovation (*num_patents*) is β =0.007, the p-value= 0.649 is much higher than the 0.1 threshold. In this regression, firm innovation was not transformed in a logarithmic function to make findings more comprehensive as in Table 17, since transformation does not affect the significance of results. Due to lack of significance, we can assert that there is no evidence that firm innovation, in terms of number of patents, affects the performance of the business. Therefore this finding could contribute to the controversial literature sustaining that for family firms the ability of a firm to innovate does not influence the performance. Similar results was even showed by Birley and Westhead (1990) and Heunks (1998) in their works.

4.6 Regression diagnostics

This section seeks to assess the validity of the model in a number of different ways, when we use regressions. Therefore we analyse multicollinearity, normality of the residuals, homoscedasticity and the correct specification of the models, which belong to hypotheses H1 and H4-H5.

4.6.1 Regression on innovativeness

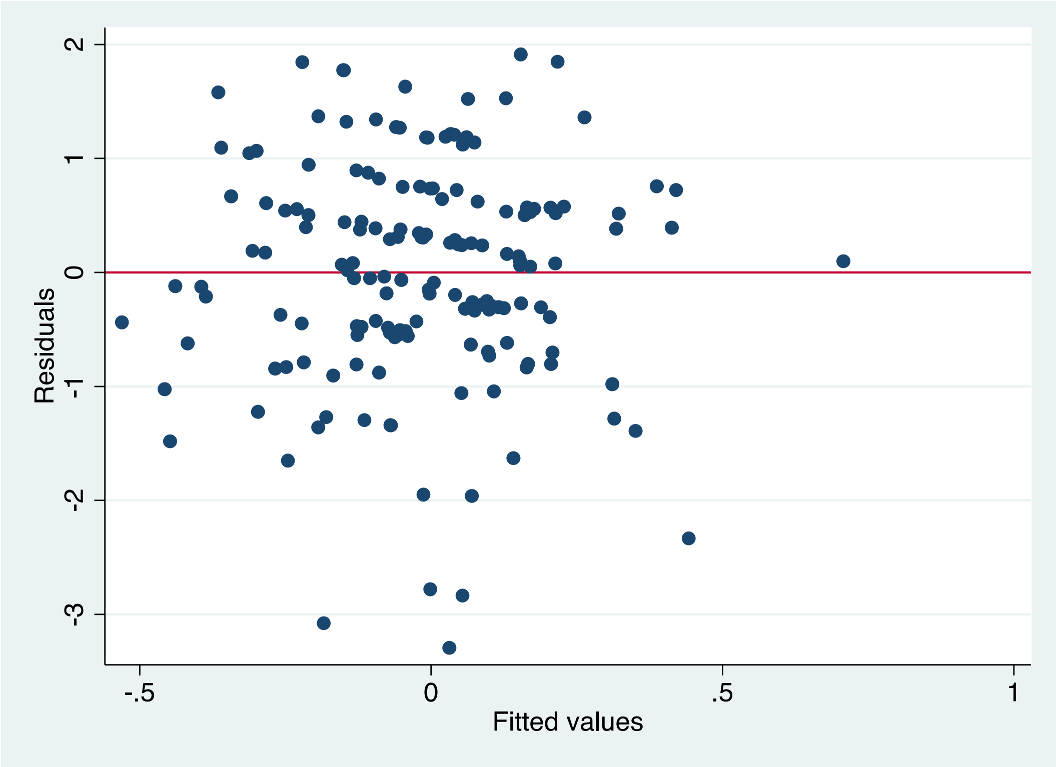
We performed the regression diagnostics for the regression of innovativeness on the independent variables.

Multicollinearity has been tested through the estimation of the variance inflation factor (VIF). In this regression, it results between 1.05 and 1.51 (mean=1.25), which is below the cut-off of 10. For this reason, multicollinearity does not seem to prompt concern.

The Shapiro-Wilk test has been performed in order to test the normality of the residuals. The coefficient W= 0.97206 and a p-value= 0.00239, meaning that since it is significant we can reject the hypothesis that r is normally distributed.

To verify homoscedasticity, we performed a graphical test, which shows if the residuals and the fitted values are correlated. In this case, Figure 9 demonstrates that residuals and the fitted values are uncorrelated, so homoscedasticity is present.

Figure 9 *Rvfplot innovativeness*



Moreover, to check if the he model is correctly specified, we perform the Link test. Results show that *_hat* is significant (p= 0.013) while *_hatsq* is not (p= 0.481), meaning that the specification of the model is accurate.

4.6.2 Regression on competitive aggressiveness

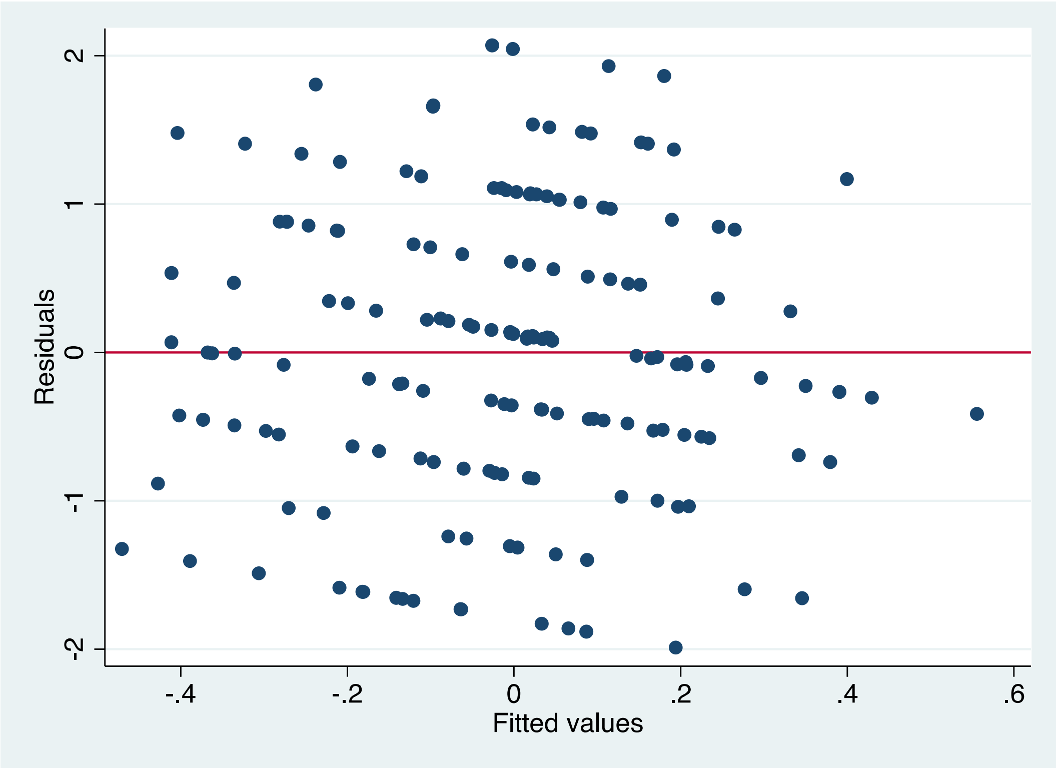
We performed the regression diagnostics for the regression of competitive aggressiveness on the independent variables.

To examine multicollinearity, the variance inflation factor (VIF) has been calculated. For this regression, it results between 1.05 and 1.50 (mean=1.25), which is below the cut-off of 10. Multicollinearity does not seem to prompt concern and so it does not merit any other further investigation.

The coefficient of the Shapiro-Wilk test is W= 0.98217 and a p-value= 0.03499, meaning that since it is significant we can reject the null hypothesis that r is normally distributed.

Figure 10, exhibits the graphical test to understand if the residuals and the fitted values are uncorrelated. It shows that there is homoscedasticity, since residuals and the fitted values are uncorrelated.

Figure 10 Rvfplot competititve aggressiveness



The Link test shows that *_hat* is significant (p=0. 0.018) while *_hatsq* is not (p= 0.202). these results demonstrate that the model is correctly specified.

4.6.3 Regression on autonomy

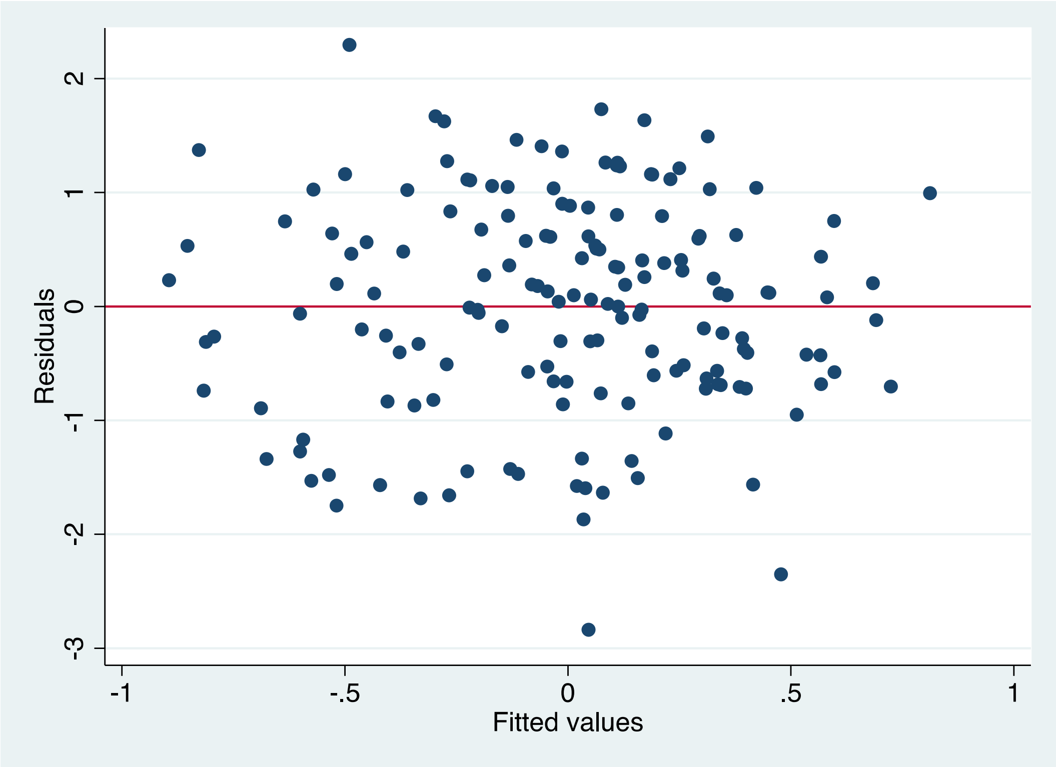
We performed the regression diagnostics for the regression of autonomy on the independent variables.

In order to examine multicollinearity, the variance inflation factor (VIF) has been calculated. For this regression, it results between 1.03 and 1.55 (mean=1.23), which is below the cut-off of 10. This means that it does not merit any further investigation since multicollinearity do not seem to prompt concern.

For what concerns the normality of the residuals we have run the Shapiro-Wilk test, which indicates a coefficient W= 0.99 and a p-value= 0.165, meaning that since it is not significant we cannot reject the hypothesis that r is normally distributed.

In order to verify the homoscedasticity, we performed a graphical test (Figure 11), which demonstrates that the residuals and the fitted values are uncorrelated. The graph shows that residuals and the fitted values are not correlated, so homoscedasticity is present.

Figure 11 Rvfplot autonomy



Finally, to check if the model is correctly specified, we did the Link test and results shows that *_hat* is significant (p=0.000) while *_hatsq* is not significant (p=0.328), meaning that the specification of the model is accurate.

4.6.4 Regression on firm performance

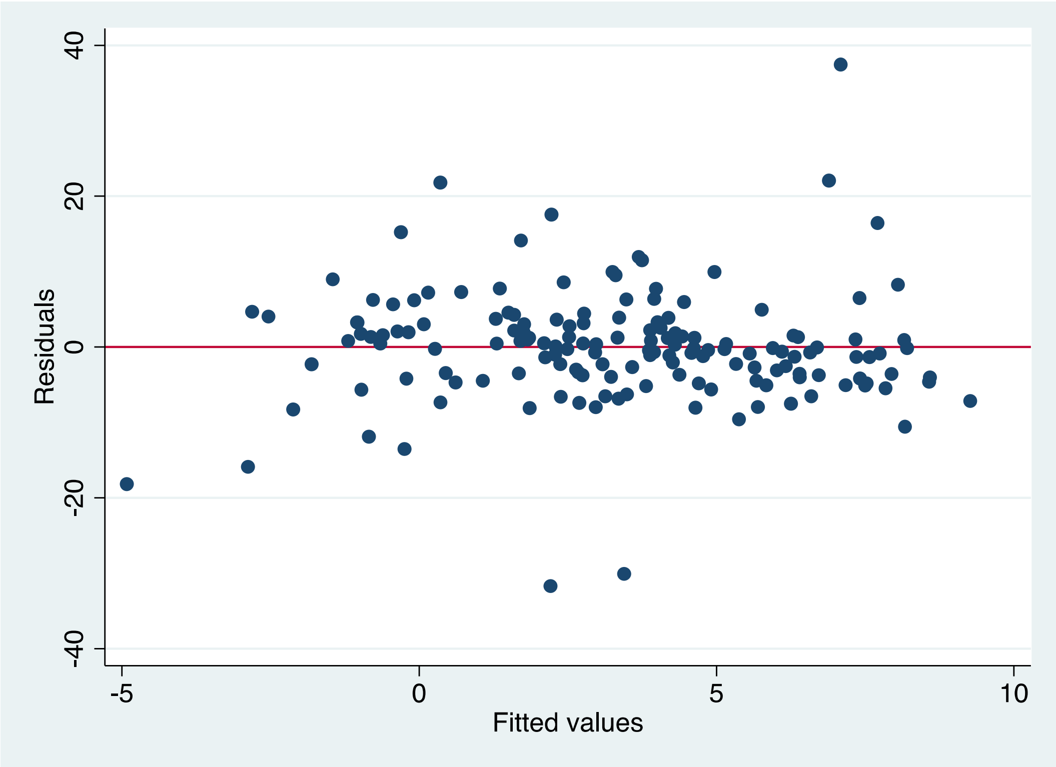
We performed the regression diagnostics for the regression of firm performance on the independent variables.

The variance inflation factor (VIF) was calculated to test for multicollinearity and it results between 1.07 and 1.68 (mean= 1.31), which is below the cut-off of 10, so, as in the previous cases, it does not merit any further investigation.

Normality of the residuals has been tested through the Shapiro-Wilk test, which indicates a W= 0.898 and a p-value= 0.000, meaning that since it is significant we reject the hypothesis that r is normally distributed. Although after checking possible transformation (*gladder* and *ladder* command in Stata) we found no better alternative.

As for the autonomy, we performed a graphical test to analyse homoscedasticity as shown in Figure 12. Given that they follow a clear trend, heteroscedasticity is present, so we used the robust standard errors in the regression analysis reported in Table 18.

Figure 12 Rvfplot firm performance



In conclusion, it is possible to assert that the model is correctly specified because the link test, showing that *_hat* is significant (p=0.000) and *_hatsq* is not (p= 0.142), demonstrates that the model is accurate.

4.7 Main results and conclusions

Chapter four aims to test the comprehensive model framed along the previous chapters and for this purpose it shows the empirical results and related analysis.

The empirical study has been conducted through the analysis of a dataset of 175 Italian firms, which were collected by the *Italian Association for Managerial Development* (ASFOR). These firms were part of the wider business schools associated databases and they were selected through a research interview. Companies responded to a questionnaire divided in different sections according to the different data needed to conduct the study. This available information was later combined with other data on firm characteristics, such as the number of patents held and the firm performance.

This study identifies the variables of interests according to the different set of hypotheses that need to be tested. These variables are six and they are first of all, the EO dimensions considered by the model, that are *innovativeness*, *competititve aggressiveness* and *autonomy*. Then family governance, firm innovation in terms of patents and firm performance. The study controls for many other variables that represent firms' features and the characteristics of people who responded to the questionnaire. These variables are age and gender of people, firm industry, firm size and family ownership. In the cases in which variables of interests are not considered as dependent variables, the study controls even for them.

In this chapter we report, descriptive statistics highlight the main features of the samples, while correlations show what are the positive or negative relations among the different variables considered.

The core of this fourth chapter is the test of the different hypotheses, through six different regressions. To test the set of hypotheses H1, that aim to understand if family firms are more or less entrepreneurially oriented, we perform three different regressions. Results shows that H1a and H1b are not supported, meaning that we cannot find evidence that family ownership positively influence the level of innovativeness and competitive aggressiveness. On the other hand, there is evidence that the presence of family members as shareholders positively affect the level of autonomy. This is demonstrated by the positive (β=0.332) and statistically significant coefficient. Nevertheless these findings are the opposite of what we expected in formulating H1c.

Differently, the second set of hypotheses (H2) that are at the basis of a logit model, aims to understand how EO affects the composition of the board. In this case, results show that there is no empirical evidence that higher levels of innovativeness, competitive aggressiveness and autonomy influence the presence of family members within the board of directors.

The third set of hypotheses (H3), which aims to clarify how EO affects the firm innovation, has been tested through an ordered logistic regression of the model. The results of the regression show that the two EO dimensions of innovativeness and autonomy are statistically are significant, while competitive aggressiveness is not. This means that there is evidence that innovativeness is positively (β=0.506) related to the number of patents held by the firm, as supposed in H2a. The empirical result for H2c demonstrates a negative (β=-0.340) relationship between autonomy and firm innovation. This result is the opposite of what is suggested by the literature and the opposite of what we have supposed. For what concerns competitive aggressiveness, findings are not statistically significant and so H3b of our model is not supported.

The hypotheses H4 and H5 have been tested through a regression model, that considers firm performance as dependent variable, and family governance and firm innovation as independent. The family governed coefficient is positive (β=3.471) and statistically significant, which means that empirical results support the positive relationship between firm performance and the presence of family members within the board (H4). For what concerns the positive influence that firm innovation could have on firm performance as suggested by H5, findings do not support the hypothesis. Therefore, there is evidence that there is no kind of relationship between the number of patents held by the firm and the business outcomes.

Although this study aims to contribute to the family business literature under several perspectives, it does have some limitations. First, the sample analysed, includes 175 firms based Italy, restricting the implications of the results just to this country. Since family firms are located all over the world, it could be interesting to compare the performance of entrepreneurially oriented family firms in different countries. Therefore, we encourage research efforts to test our comprehensive model in different cultural environments. Second, the computed reliability for the factors of innovativeness, competitive aggressiveness and autonomy is just above the admitted threshold. Then, this empirical study focuses only to the decision-making outcomes of innovation and composition of the board of directors, while even other activities such as financing activities, personnel practices, pricing policy and customer service systems are important for the creation of the firm strategy and for the achievement of a better business performance.

In addition to that, we have focused our attention on three of the five EO dimensions, so it would be stimulating to include proactiveness and risk-taking in the model, in order to give a complete overview of the EO construct. Such efforts will contribute to further theoretical and empirical developments in the field of family business entrepreneurship.

In conclusion, it is possible to assert that the empirical analysis conducted to test the comprehensive model of entrepreneurially oriented family firms, shows that the fact that a firm is owned by family members positively affects just the level of autonomy exhibited within the company. Interestingly, even if innovativeness, competitive aggressiveness and autonomy do not influence the presence of family members within the board, this particular structure of the governance might help family firms to perform better. However, two of the three dimensions considered influence the level of innovation exhibited by a family firm: innovativeness increases the firm innovation, autonomy reduces it, while high levels of competitive aggressiveness does not seem to influence. Interestingly, when a firm wants to achieve better performances and business success, the presence of family members within the governance is much more important that the ability to innovate. Indeed, there is no kind of relationship between the ability of a firm to innovate and the firm performance.

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