The Role of the Top Management Team in Understanding the Innovation Capacity and Sustainability of Family Firms

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Theoretically framed by upper echelons theory, this paper aims to synthesize the current knowledge on top managers in family firms and to suggest valuable future research avenues. The purpose is to investigate the relationship between family firms and innovation capacity. This study will examine how innovation capacity is affected by family involvement and other characteristics of the top management teams (TMTs) of family firms. This article examines the management characteristics in a family firm and their affect on the innovation and sustainability of the firm. Familiness is examined to provide further insights and measures of TMTs in explaining the firm’s capacity to innovate. Things like family involvement, size, and age of the firm along with other TMT demographics are investigated. To understand innovation in family-owned businesses, the focus will be on the capacity including innovative activities, such as research and development, number of patents, and new product development. Specifically, this research will investigate the significance of innovation management and how it is influenced by the TMT characteristics of family firms. This work contributes to the field by developing a better understanding of innovation and sustainable competitive advantage within family firms. This paper will advance the research on strategic innovation in a family firm, as well as shed light on the failure of innovation management literature to recognize the importance and deliberately integrate family firms into the literature.

Keywords: top management teams (TMTs), innovation capacity, firm performance, familiness, TMT heterogeneity

Introduction

Family businesses are extremely significant regarding economic development and growth. Worldwide, family firms are the predominant form of business (Gersick, Davis, Hampton, & Lansberg, 1997) accounting for 40%-60% of GNP and 35%-70% of job generation (Van Gils, Voordeckers, & Hagedoorn, 2008). The challenges of the present market implicate that entrepreneurial attitude and behavior, of family firms especially, is a prerequisite for success in the economy. Although family firms have been a hot topic in the literature, there are still numerous gaps in the literature that need to be explored. One of those gaps happens to be the investigation of innovation in family-owned businesses as it relates to the top executives within the top management teams (TMTs) and upper echelon theory approach. Despite its importance pertaining to growth, performance, and profitability, this area has not been extensively studied. The literature points to innovation as being essential for the growth and survival of all firms (Wolfe, 1994; Cefis & Marsili, 2006). Family businesses are seen as one of the most complex forms of business (Neubauer & Lank, 1998), therefore we have to deal with this specific group in a separate context.

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Innovation in its simplest form is the transformation of ideas into beneficial outcomes. The innovation process starts with a firm’s ability to innovate; referred to as innovation capacity by Hult, Hurley, & Knight (2004). Innovation capacity influences the innovation output. The problem lies in the fact that it is ignored by many of the family-owned enterprises. Lack of attention to innovation is one of the reasons why family-owned enterprises fail in their succession from one generation to another. Managers focused on the traditional methods of conducting business often miss the concept of innovation. Innovation drives the initial years of any business, however, family businesses often become followers of the past, rather than becoming leaders and innovators of the future. Innovation is a broad topic. It can be found in the innovation literature that innovation has been used as an umbrella term. Innovation has been used to describe both the process to generate new products, as well as new or improved products themselves (Porter, 1990). The output of the innovation process can be defined as the adoption of a system, program, policy, product or service that is new to the adopting organization (Damanpour & Evan, 1984). This topic is especially important to top management of family-owned firms and it must be understood that innovation is what distinguishes a leader from a follower. Family firms have a complex structure regarding their TMTs. With their power in the market and influence in the overall health of the economy, it is essential to understand how the innovation process, specifically innovation capacity is affected by different characteristics of family-owned businesses, such as TMT. To see new growth, profits and sustainable competitive advantage, family firms must have a balance between traditions and forward-thinking. Family firms should make innovation part of their firm’s culture and core competencies. Management needs to implement strategies and plans that help the firm overcome risk averseness and make new changes that allow the firm to grow and adapt to the ever-changing environment. Family business owners need to embrace the threat that innovation brings, because sometimes the opportunity cost associated with not changing is higher than the cost of changing and implementing new processes, techniques and product developments. Research in the U.S. illustrates that the majority of family businesses are characterized by a lower dynamism of innovation, compared to non-family owned counterparts. Family firms tend to give more attention to minimizing risk and maximizing return on investments (Tanewskiej, 2003). The literature shows that family firms have an acute understanding of how to use their environment for innovation (Craig & Moores, 2006). The design of a family business is long-term oriented, so they put more emphasis on strategies to ensure the welfare of the family and future generations (Jaffe, 1991). Research depicts that family firms are less innovative, emphasize market leadership less, however, they have a greater long-term vision than non-family firms (Tanewskiej, 2003). Several studies show that innovative family businesses, which had high family involvement, are highly innovative in their markets (Aronoff, 1998). There are contradicting arguments about family business environments. It has been discussed in the literature that family involved businesses create environments that flourish some entrepreneurial activities (Rogoff & Heck, 2003; Litz, 1995; Aldrich & Cliff, 2003); on the other hand, other scholars claim that family businesses are indisposed to innovation, risk-averse and resistant to change (Naldi, Nordquist, Sjoberg, & Wiklund, 2007; Kets de Vries, 1993; Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson, & Moyano-Fuentes, 2007). U.S. family firms often outperform their non-family counterparts on both ROA accounting and stock market performance (Anderson & Reeb, 2003). Family firms are more traditional and stable (Doncles & Frohlich, 1991). Strategic orientation is a major component of innovation in any firm, but family business owners are particularly more risk-averse and more conservative in their strategies (Ward, 2004). Large firms have a vast amount of know-how in specific technological areas, they also can afford to participate in large scale research and development. This create barriers to entry for new entrepreneurs which are mostly family owned firms (Te Velde, 2001; Day &
Jean-Denis, 2016). Ensley & Pearson (2005) argue that the unique dynamics created by the social aspects of the family firms will result in higher cohesion, less task conflict, and more strategic consensus than those TMTs with less “familiness”. This research seeks to explore some of the factors, such as the characteristics of the family firms may or may not engaged in innovative activities based on the characteristics of their TMTs.

**Theoretical Framework and Development**

**TMTs and Family Firms**

Besides a few studies, such as (Ensley & Pearson, 2005), family business literature seems to be lacking regarding the importance of family top executives. In this study, the authors look at the significance of the level of “familiness” of the TMTs, which is defined as the level of family involvement within the team of top executives in family firms. Another missing piece in the literature is with the upper echelon research. The literature focuses mostly on large firms and fails to look at firms with concentrated ownership, such as family firms. This issue needs to be addressed by combining previous research on TMTs characteristics with basic traits of family firms, such as family involvement and long term orientation (Le Breton-Miller & Miller, 2006). Even though studies shows that family firms are extremely significant in the well-being of the economy, research dealing with its characteristics is not prevalent (Schulze & Gedajlovic, 2010). This paper will look specifically at TMTs characteristics and how it affects the innovative capacity of the family firm. This gap in the literature is important because TMTs play a huge role regarding the governance of family firms (Neubauer & Lank, 1998). Governance of family firms differs from non-family firms governance in an important way: Owners that are family members may have multiple roles in the business, which makes the dynamics more complex. Building from the upper echelon theory, TMTs are the true influence of strategic orientation and which entails performance outcomes as well. This is the case with family firms because the board of directors, when there is one in place, is usually only in existence to fulfill legal requirements, in which the boards limit itself to endorse decisions made by the TMTs (Dyer Jr., 1986). The literature on TMT is primarily based on the upper echelon theory approach regarding cognitive base and team dynamics (Wiersema & Bantel, 1992). The composition of TMTs consists of difference in age, gender seniority or education levels of the team members (Certo, Lester, C. M. Dalton, & D. R. Dalton, 2006). In the context of the family firm, one of the more significant variables is family involvement: Whether or not the members of the TMTs belong to the owning family or not (Minichilli, Corbetta, & MacMillan, 2010). One of the main issues of the family firm is the family high need for control, which gives them near absolute power over the firm, as well as the board members (Neubauer & Lank, 1998). Therefore, a way of adding diversity in this case would be the inclusion of non-family members (Minichilli et al., 2010). Another important factor to consider is whether the top executive or CEO is a family member or not, which in this study we examine this variable as a moderator between the family firm TMTs characteristics and innovation capacity.

**Innovation**

Innovation involves the development of new ideas (Sousa, Pellissier, & Monteiro, 2012). Innovation is sometimes confused with invention. However, there is a distinct difference between the two. The difference is that “an invention is an idea, a prototype or model for an improved product, process or system”, whereas “an innovation in the economic sense is accomplished with the first commercial transaction involving the new product, process, system or device” (Freeman, 1982). Innovation is an umbrella term and can be given many different meanings in different contexts (Cirera & Muzzi, 2020). According to the literature, the main characteristic of innovation is change. Therefore, it is difficult to build a theory of innovation because the idea of
change is still not entirely comprehended in the literature. For the purposes of this study, the definition proposed by the OECD (1981) will be adopted:

“Innovation consists of all those scientific, technical, commercial and financial steps necessary for the successful development and marketing of new or improved manufactured products, the commercial use of new or improved processes or equipment or the introduction of a new approach to a social service R&D is only one of these steps.” (OECD, 1981)

Successful innovation in new product and processes is a major topic in business literature (Porter, 1990). It’s deemed as one of the main concern in economic development. Innovation stimulates growth that occurs despite of the state macro-economy (Craig & Debrill, 2006). In the literature, one can find that innovation has been used to describe the process to generate new products, as well as the new or improved products themselves (Porter, 1990). From the definition, it is clear that innovation can be divided into two parts: (1) Product innovation and (2) process innovation. Product innovation would be new or improved product or service that has competitive advantage in the market. Process innovation speaks to the adoption of new or improved operating or distribution process (Cropley, Kaufman, & Crople, 2011). However, there are not mutually exclusive because a process innovation could lead to a product innovation or vice versa. In addition to product and process innovation, there is also: (3) Organizational innovation. In a general sense, the term “organizational innovation” refers to the creation or adoption of an idea or behavior new to the organization (Daft & Becker, 1982; Damanpour & Evan, 1984; Damanpour, 1991). Organizational innovation can lead to more effective utilization of human resources. This capital is essential to the successful exploitation of new ideas and processes (Marques & Monteiro-Barata, 2009). Furthermore, the three types of innovation can also be classified more extensively. The literature shows that there is incremental innovation and there is radical innovation. The two types of innovation have different views (Tidd, Driver & Saunders, 1993). Radical Innovation—Technological knowledge that is very different from existing knowledge, radical innovation will make existing obsolete-competence destroying. Incremental Innovation—The knowledge required to offer a new product that builds on existing knowledge and existing products. Research shows that most innovation is incremental (Cefis & Marsili, 2006). Radical innovation usually results in a product that is so superior that existing products are rendered non-competitive. To contrast, incremental innovation still allows existing products to stay competitive.

Innovation Capacity

The organization’s capacity to innovate is one of the key essentials to being competitive in the modern business world (Prajogo & Ahmed, 2006). The literature in the innovation management field does not offer extant coverage of the concept of innovation capacity. There is a bit of inconsistency in the terminology and usage, but there is an alignment of the central idea. The terms innovative ability, innovative capability, innovative competence and absorptive capacity seem to all relate to this notion of innovative capacity. However, when the literature puts emphases on the ability of a firm to innovate, innovative capacity is frequently cited as “The ability of a firm to recognize the value of new external information, assimilate it and apply it to commercial ends is critical to its innovative capabilities” (Cohen & Levinthal, 1990). In a study conducted by Higgins in 1995, he mentioned, “If firms are to survive and prosper in the 21st century, they must assess their innovative capabilities and take strategic action to improve their innovation skills” (Higgins, 1995). We do not believe that an authoritative definition exists as regards the ability to innovate. For the validity of this research, we will adopt the following definition. In 1997, George Papaconstantinou, an economist with the OECD, states the factors that influence innovative capacity of a firm.
“The capacity of firms to innovate depends on a multitude of factors, not least the efforts they make to create new products or improve production processes, the extent of skills in their workforce, their ability to learn, and the general environment within which they operate (Papaconstantinou, 1997).”

The innovation capacity of a firm can be examined as a possible capability or potential of a firm to produce innovative activities; this potential is reliant on the synergetic integration of the culture, internal processes and external environment of the firm (CBI/DTI, 1993). The key dimensions of innovation capacity are from the results of a study by CBI/DTI (1993) on the performance of companies in the UK regarding innovation. The abovementioned study identifies key success factors that the companies with the greatest capacity to innovate demonstrate:

1. Culture.
   A clear sense of mission and purpose is common among innovative companies. Innovation is built in their strategy. The organizational structure of innovative companies is flatter than the norm. The environment is one of transparency and openness with constant feedback from stakeholders.

2. Internal processes.
   a. Idea generation and capture—Innovative companies constantly generate and capture new ideas. Cross-functional activities between R&D, production, sales and marketing and customers.
   b. Review and implementation—Screening procedures are in place for identifying priorities among projects to ensure successful implementation and outcomes
   c. Performance measures—Innovative companies constantly review their progress by measuring against benchmarks set by top management.
   d. Training—The skills content of staff at all levels is crucial to the ability to innovate. Continuous training and development of staff at all levels are common to innovative companies.

3. External environment.
   The external environment consists of the firm’s customers, competitors, suppliers. Innovative companies are proactive in their approach towards customers, shareholders, and investors. The innovative firms develop strong supplier relationships and are usually active in partnerships and collaborations. Innovative companies tend to look at regulation in a positive way and most of them have partnerships with the government.

**Firm Performance and Innovation**

Firm performance is a complex construct because it can have many different denotations. Innovative activities, operational outcomes or developmental execution of the firm can all indicate firm performance (Schroeder, Bates, & Juntilla, 2002). Normally when we think of firm performance, we are referring to employees and their collective output. However, firm performance can also be viewed in a larger context as part of the firm’s business development as a whole including the firms capacity to innovate. It’s important to note that a firm performance is mainly measured in terms of how effective and efficient the firm is regarding operation activities. Furthermore, if a firm has success in its development, its operations are considered efficient (Hirsch & Levin, 1999; Porter, 1990). This entails that there is a direct relationship between firm performance and innovation capacity. The more efficient the firm’s innovative activities are, the more positive their organizational performance will be and *vice versa*.

The primary approach to measuring firm performance is to examine the firm’s strategic outcomes collectively. In the business arena, factors such as cost, quality, delivery and flexibility are all considered when
thinking about firm performance (Ward, 1998). The primary purpose and goal of most strategic management studies have been understanding what factors determine firm performance as a function of managerial decision making (Rumelt, 1991). The firm performance variables can include organizational effectiveness and financial performance which both can be observed objectively and from data collected from the family firms.

**TMT Heterogeneity and Innovation Capacity**

There are various studies (Priem, 1990; Byrne, 1961; Pfeffer, 1981; Katz, 1982) that studied top management characteristics and concluded that team characteristics and team demographics make a significant contribution to firm performance and strategic actions of the firm. In the literature, there are some contradicting opinions for homogeneity or heterogeneity. Some scholars suggest that homogeneity will enhance communication efforts and create a smoother workflow (Allen & Cohen, 1969; Zenger & Lawrence, 1989), on the other hand, Katz (1982), Murray (1989), and some other scholars supported heterogeneity in the team demographics. In addition to all that duality in literature, Priem (1990) suggested that performance is likely to suffer from high levels of homogeneity or heterogeneity and suggests that the proper level of homogeneity and heterogeneity is related to how stable or dynamic the environment is (Nordqvist, 2005). Homogenous team demographics will cause a propensity to keep the status quo (Wiersema & Bantel, 1992) and it will lead to perceptions of similarity with attractions to others (Byrne, 1961; Pfeffer, 1981). Having being a member of an organization, or experiencing an event like birth at the same time period, in other words, shared group membership (Ryder, 1965), will indicate similar exposure to organizational, social and environmental events (Wiersema & Bantel, 1992). People who share similar experiences, backgrounds, beliefs and values develop a shared language (Allen & Cohen, 1969; Rhodes, 1983), and that language enhances communication frequency and integration (O’Reilly III, Caldwell, & Barnett, 1989; Wagner, Pfeffer, & O’Reilly, 1984; Zenger & Lawrence, 1989). On the other hand, a team’s cognitive base will be represented by its demographic heterogeneity. According to Hambrick and Mason’s (1984) upper echelon theory, teams with diverse demographics will gather information from multiple sources and have different interpretations, opinions and attitudes about the collected data. Dutton and Duncan (1987) argued that heterogeneity in an organization’s belief structure, defined as high complexity with low consensus, strengthen the search for information, the momentum for change and the perception that change is feasible. Katz (1982) posited that heterogeneity and diversity in team members will increase the ability of an organization to adopt. Moreover, many other theorists suggested that team diversity is associated with high levels of creativity and innovation. (Wanous & Youtz, 1986; Katz, 1982; Bantel & Jackson, 1989; Murray, 1989). In this study, we will focus on previously proven demographic heterogeneity characteristics for firms, particularly for family firms. Family member ratio, organizational tenure, TMT tenure, and age heterogeneity will be studied and hypothesized. Many family business literature theorists have studied the performance and family involvement relationship. In addition to finding a consensus that family involvement has a positive relationship with firm performance, authors focused on particular reasons underlining this causality relationship. Studies like (Chu, 2011; Anderson & Reeb, 2003) found that family ownership is positively associated with firm performance. The positive association is strong particularly when family members serve as CEOs, top managers, chairpersons, or directors of the firms. The findings lend more support to stewardship theory than they do to agency theory, indicating that when active family management and control are presence, the interests between owners and managers are better aligned, and the performance of family firms is thus enhanced. Large concentrated shareholders however, may derive
greater benefits from pursuing objectives, such as firm growth, technological innovation, or firm survival than from enhancing shareholder value (Anderson & Reeb, 2003). In line with the Priem’s (1990) suggestions, Minichilli et al. (2010) find support for a hypothesized U-shaped relationship between the ratio of family members in the TMT and firm performance. In other words, family member ratio is an important factor for the success of the TMT. In addition to providing long-term financial support to the family, there are many reasons to often maintain a long-term presence in their firms for founding families. Several authors studied the link between long tenure and high commitment and find a link in between those and the status quo (Stevens, Beyer, & Trice, 1978; Staw & Ross, 1980). Mainly organizational tenure described as an individual’s group membership, shared experiences, perspectives and values within group. Since those shared experiences create similar perspectives or similar interpretations for events (Allen & Cohen, 1969; Lawrence & Lorsch, 1967), it will create smooth communication among group individuals. Thus heterogeneity in team member demographics, particularly in organizational tenure will lead to diverse opinions and promote an innovative environment (Wiersema & Bantel, 1992). Strategic decision making perspectives and choices of an individual are influenced by his/her age (Wiersema & Bantel, 1992). Hitt and Tyler (1991) suggest that strategic evaluation is influenced by the executive’s age. When people get older, their flexibility decreases and rigidity and resistance increase. For older executives, securing career and financial positions carries important weight. That character might cause less risky decisions (Carlson & Karlsson, 1970; Vroom & Pahl, 1971; Taylor, 1975). Younger managers compare to older ones, like to take more risk and low executive tenure is associated with both corporate growth and volatility of sales and earnings (Child, 1974; Hart & Mellons, 1970). Diversity of age is expected to increase the variety of perspectives on strategic issues facing a firm. This diversity stimulates the consideration of change making the team less risk-adverse. The benefits of increased age diversity will be greater at moderate levels and will taper off the more heterogeneous in age a TMT becomes (Wiersema & Bantel, 1992). Heterogeneity of team tenure implies that the various members of a TMT have been promoted at different times. This suggests that different viewpoints on the strategic vision for the firm are present. On the other end of the spectrum, there is team tenure homogeneity which suggests shared socialization and group experiences are present in the team. Thus, it is expected that the heterogeneity of TMT tenure will provide a variety of information and managerial implications (Wiersema & Bantel, 1992).

Family CEO Effects

Although upper echelon theory suggested that TMT demographics will proxy top managers’ cognitive base (Hambrick & Mason, 1984). Hambrick, Finkelstein, and Mooney (2005) explored the importance of discretion as a moderator effect and suggested that since some of the top managers in organizations have more discretion than others, managerial characteristics will not always be predicting organizational outcomes. High discretion settings provide abundant opportunities for managerial judgments to be exercised (Hambrick et al., 2005; Finkelstein & Hambrick, 1990). Many studies found that although family CEO has a positive effect on the performance of the company, a potential conflict between family member managers and non-family member managers might create schisms and that might hurt the firm in an indirect way (Minichilli, et al., 2010). Conversely, when compared to non-family member managers, family CEOs focus less on short term decisions, like acquisitions and downsizing options, and focus more on long term research and development investments (Lumpkin & Brigham, 2011). This indicates that the family CEOs are more likely to create unique capabilities and resources that will increase the financial results (Le Breton-Miller & Miller, 2006). Although it might be
problematic to restrict senior management-labor with only family members, a family CEO can bring special skills and attributes to the firm that outside managers do not possess (Anderson & Reeb, 2003). Morck, Shleifer, and Vishny (1988) suggest that founder CEOs bring innovative and value-enhancing expertise to the firm.

**Theoretical Model and Propositions**

**Theoretical Propositions**

![Proposed theoretical model.](image)

Proposition 1: TMT heterogeneity affects top managers’ decision making regarding innovative activities.

- P1a: Family member ratio in TMT has a positive effect on innovation capacity and firm performance.
- P1b: TMT tenure heterogeneity has a positive effect on innovation capacity and firm performance.
- P1c: Age heterogeneity has a positive effect on innovation capacity and firm performance.

Proposition 2: TMT characteristics, education level, average age, and academic specialization affect decision making regarding innovative activities.

- P2a: Higher organizational tenure within the TMT will have a negative effect on innovative capacity.
- P2b: Higher average age will have a negative effect on innovative capacity.
- P2c: Higher variations of academic specialization will have a positive effect on innovative capacity.
- P2d: Higher average education level will have a positive effect on innovative capacity.

Proposition 3: Top management characteristics are less influential on innovation capacity when the family CEO is in duty.

- P1a: CEO being a family member will have a negative effect on decision making regarding innovative activities.

**Discussion and Future Research**

Employing upper echelon theory to explore the relationship between TMT characteristics and innovation capacity in the family firms provides another perspective to understand the complexity behind the success or failure of family firms. Although Hambrick and Mason (1984) and many other scholars showed that TMTs are important components to analyze the strategic directions of the firms. The family firm concept requires us to investigate CEO effect on the relationship between TMT characteristics and innovative capacity of a firm.
Family CEO factors out the effectiveness of the overall TMT influence due to the high discretional potential. Hambrick et al. (2005) suggested that since some of the top managers in organizations have more discretion than others, managerial characteristics will not always be predicting organizational outcomes. We suggest there should be further studies to analyze the discretion effect of CEO’s on top management’s strategic decision making in family firms. This will improve our understanding of family business dynamics. Future studies should focus on how CEO discretion affects the long term orientation, as well as long term oriented innovation plans. Although there are contradicting studies about team heterogeneity, in terms of family ratio, an increased number of family members in the top management will positively affect the innovation capacity of the family firms. It is mainly tied to aligned goals and reduced agency conflict. In addition to that, shared cohort membership (Ryder, 1965) will increase the communication frequency and integration among the TMT members. Studies examining top management characteristics like average age, team tenure and education level and the various affects they have on strategic decision making within family firms are all great avenues for future research. Valuation of external and internal factors related to the strategic decision-making process and firm performance is significantly affected by managers’ cognitive base and values, which are mostly proxied, by demographic characteristics. Although high family membership ratio is suggested for family-owned businesses, heterogeneity or diversity in TMT demographics is also suggested. Day & Jean-Denis (2016) argued that diversity of educational specialization and having different levels of education proved to be a leading driver of innovation. In this study, the theoretical implications of the TMT characteristics and innovation capacity relationship have been explored. Future studies should focus on empirically testing those individual characteristics in terms of their relationship to innovation capacity.

**Conclusions**

This article contributes to the family business literature by employing the upper echelon perspective to family involvement and innovation capacity relationship. Upper echelon theory has been extensively studied to understand the strategic outcomes of firms, but unfortunately, it has not been applied to this topic before. Therefore, this study seeks to help close this gap. I suggest that while TMT demographic heterogeneity is important for continuous and strategic innovations, for long-term success there should be significant family involvement in the TMT. Moreover, without a family CEO in place, there will be some agency issues, which will diminish the family effectiveness, which in turn will affect the long-term success of the company. These issues should also be addressed in future studies.

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