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Design-Led Innovation Strategies of Family Entrepreneurs. Case-based Evidence from an Emerging Market

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Abstract: This paper reveals insights from an ongoing PhD study engaging with the innovation management of family owned furniture manufacturers in Turkey. The initial findings presented in this paper relate to the strategies applied in the innovation process of the first case study undertaken within the ongoing PhD. The aim of the study is to seek the entrepreneurial opportunities and challenges when achieving Design-Led Innovation (DLI) in an emerging market. The data are hoped to provide a better understanding of the factors affecting a family business to gain competitive advantage in the market through innovation. The main insight presented in this paper is that family entrepreneurs have unique decision-making processes and strategies during phases of innovation. The other key initial insight found through thematic analysis of in-depth qualitative interviews include key concepts such as vision for design awareness, strengthening existing know-how, customer-oriented strategy, and investment in knowledge.

Keywords: Family Business, Design-Led Innovation, Innovation Management, Emerging Markets

1. Introduction

Family mostly affects how firms are created, survive, and have success; thus it is considered as the basic institution. Therefore, family business research has substantially grown in the last 15 years (Schulze, Lubatkin, Dino, & Buchholtz, 2001; Dyer, 2003; Lumpkin, Steier, & Wright, 2011; Gomez-Mejía, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2011). As family firms are very significant for global economy, it is also possible to find some research related to the field of innovation management and new product development particularly dealing with the issue of family business and how they practice organization and management (Litz & Kleysen, 2001; Craig & Moores, 2006; Cassia, De Massis, & Pizzurno, 2011).

Innovation is also a significant competitive advantage for businesses in a constantly changing environment (Tushman & O'Reilly, 1996; Dess & Picken, 2000), and for most scholars, the performance of a firm is related with its capability to innovate (Mone, McKinley, & Barker, 1998). This capability continuously requires to evaluate existing strategies, and moreover to establish new

perspectives and alternative scenarios (Lockwood, 2010; Matthews & Bucolo, 2011). In this respect, design becomes significant in transforming the current stringent business strategies by supporting multidisciplinary collaboration, for instance; thus it is able to add value to sustain in a fast changing industry (Lockwood, 2010). When the concept of design is integrated at a strategic level not only related to the development of a product or service but also to the manufacturing activity, it is called Design-Led Innovation (DLI) where design and strategy becomes inseparable (Bucolo & Wrigley, 2014). Even though the practical success of DLI has already been accepted in business, case study data including how companies embody a culture of design and innovation is very limited in the existing literature (Matthews & Bucolo, 2011).

In addition, extended further research is also proposed to study the attributes and structure of the decision-making and evaluation process of the family managers, strategic behaviours of the family firms such as internationalization, new product development, mergers and acquisitions, and also innovation decision behaviours and heterogeneity among family firms with qualitative methods (Kotlar, Fang, De Massis, & Frattini, 2014). Those future research opportunities would reveal significant insights for innovation managers about the influence of family firms on the management and organization of innovation, but also family firms would apprehend strengths and weaknesses in their unique innovation processes (De Massis, Frattini, & Lichtenthaler, 2012).

Therefore, the aim of this paper is to reveal some initial insights explored during an ongoing PhD study engaging with the innovation management of a family owned manufacturer in Turkey. It is anticipated that by establishing some of the emerging characteristics unique to a family business, all the actors in the process i.e. other companies, stakeholders, governments, designers, and consultancies comprehend the need to infuse the capability to change. The data provides a better understanding of the factors affecting a family business to gain competitive advantage in the market through innovation. The study also seeks the entrepreneurial opportunities and challenges when achieving a DLI in an emerging market.

As this case is specific to the Turkish context as an emerging market, the family owned manufacturers that are mostly based on traditional approaches of strategy prioritize the ability to gain a competitive advantage, and to adjust the altering demands in the global industrial market (Pozzey, Wrigley & Bucolo, 2012). Thus, this study intends to explore the innovation management processes that form the following three research questions:

1. What do family businesses use/need to reach their goals and core culture? (ability as resources - innovation input)
2. How can family businesses make strategic, structural, and tactical decisions? (ability as discretion - innovation activity)
3. Where do family businesses want to reach according to their goals, intentions, and motivations? (willingness - innovation output)

2. Literature Review

2.1 Innovation in Family Business

A widely accepted definition states that family firms are “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 in a manner that is potentially sustainable across generations of the family or families” (Chua, Chrisman, & Sharma, 1999). This study prefers to define family firm as a business that its vision is influenced by familiness and its mission is to long-

term survival after the succession of generations (De Massis, Sharma, Chua, & Chrisman, 2012). The most ever-present organizations in the world are family businesses that essentially affect the global economy (La Porta, Lopez-de-Silanes, & Shleifer, 1999). For this reason, the unique behaviour of family firms is increasingly studied (De Massis, Di Minin, & Frattini, 2015). Those unique behaviour of the family firms influences the whole business process (Dyer, 2003), from corporate management (Randøy & Goel, 2003) to internationalization (Zahra, 2003), and from entrepreneurship (Naldi, Nordqvist, Sjöberg, & Wiklund, 2007) to finance (Romano, Tanewski, & Smyrniotis, 2001).

As innovation is considered to be the key to competitive advantage as a driver of business performance, research on innovation in the field of family business gains interest by the scholars (De Massis et al., 2012; Hatak, Kautonen, Fink, & Kansikas, 2016; Röd, 2016; Fuetsch & Suess-Reyes, 2017). The research on innovation in family firms of almost 10 years has varied findings (Blundell, Griffith, & Van Reenen, 1999). Family firms are mostly considered to have dual features both as being moderate and having determined goals thus being less innovative than other businesses, and also as constituting the 50% of the most innovative businesses in Europe (Borden et al., 2008).

In some recent studies, innovation strategies of the family firms are tried to be mapped using *where* questions to understand where to find the innovation resources (existing bases, new domains, searching, etc.), *how* questions to understand how to manage the innovation process (open/closed approach), and *what* questions to understand what to innovate (product/service, process, business model, and radical/incremental) (e.g. De Massis et al., 2015). The key findings taken from the existing research are as follows:

- Innovation inputs: Existing research is largely consistent in indicating that family firms generally invest less money in R&D compared to their non-family counterparts. (e.g. Block, 2012; Asaba, 2013; Sciascia, Nordqvist, Mazzola, & De Massis, 2015)
- Innovation activities: There are preliminary results suggesting that innovation activities are handled differently in family vs. non-family firms, but this area needs much more theoretical and empirical research effort to be completely developed. (e.g. Kotlar, De Massis, Fang, & Frattini, 2014; Kotlar, Fang, De Massis, & Frattini, 2014)
- Innovation outputs: Findings are controversial here, with some studies showing that family firms are more innovative than non-family firms, while others suggest instead that the opposite is true. (e.g. Westhead, 1997; Chin, Chen, Kleinman, & Lee, 2009)

In a review paper on the researches of innovation in family firms dealing mostly with technological innovation, the effect of family on innovation process and family firms being less innovative are revealed (De Massis et al., 2013). Another meta-analysis paper, trying to understand whether nonfamily firms are more innovative than family firms, also states that family firms make less innovation investment but successfully innovate with higher outputs because of the engagement and control of family (Duran, Kammerlander, Van Essen, & Zellweger, 2015). Thus, these reviews propose to study the innovation process of family firms in more detail (De Massis et al., 2013), and to more clearly define the unique features of family firms (Duran et al., 2015).

The issue of familiness, defined by the decision-making process affected by family, builds the innovation behaviour in family businesses (Weismeier-Sammer, Frank, & von Schlippe, 2013), such as the positive effect of their goal of sustainability and long-term survival (Le Breton-Miller & Miller, 2006), their vision of creating trust and strong social networks (Bennedsen & Foss, 2015), and their informal but efficient structures in organization (Daily & Dollinger, 1992). Despite those positive attributes of the family firms towards innovation, the studies on the innovation outputs show some

inconclusive results (De Massis et al., 2015). The reasons would be the paradoxical issues of familiness; such as avoiding taking risks in order to protect family legacy (Gómez-Mejía et al., 2007), keeping the traditions and not trying new things (Miller & Le-Breton Miller, 2005), being averse to increase external capital (Poutziouris, 2001) and to receive skills and knowledge from an external actor (Garcia & Calantone, 2002). This phenomenon of having the potential to innovate but being averse to use it is called ability-willingness paradox in the literature (Chrisman, Chua, De Massis, & Frattini, 2015). As the ability-willingness paradox is most highly interested concept in the literature, the ability of a family is being related to the long-term direction, leadership, tacit knowledge, family values, social networks (Patel & Fiet, 2011), and thus all transformed liability assets (Bennedsen & Foss, 2015). Whereas the willingness is related to the family goals, motives, being averse to risk, fear of loss of control (Chrisman et al., 2015), and socioemotional concerns that can be defined as the non-economic goals of family firms (Gómez-Mejía et al., 2007). Those previously mentioned various economic and non-economic goals of the family firms lead to heterogeneity in innovation outcomes (Chrisman et al., 2015). For this reason, family firms are known as innovating incrementally (Carnes & Ireland, 2013; Hiebl, 2015), but in fact they can both have incremental and radical innovation outcomes (Sharma & Salvato, 2011) when both ability and willingness exist (Holt & Daspit, 2015).

In a review paper studying publications in journals on innovation in family businesses between 2004 and 2015 (Fuetsch & Suess-Reyes, 2017), it was analysed in the findings that family businesses usually have exploitative innovation strategies with incremental outcomes. R&D investments are negatively affected by familiness in spite of having diverse actors. Family businesses are willing to take financial risks, despite rarely investing in R&D. When they do invest in R&D, they do it efficiently that would be explained by eccentric traits and socio-emotional preferences of family firms. As an example of that behaviour, family firms show innovative business performance with a conservative culture and a management style of support and care despite having an environmental pressure (e.g. industry momentum, risk of copy, ambiguity of technological improvements). On the other hand, innovation in family firms would be negatively affected by the firm getting older but the succession of family members in charge may provide a positive chance for innovation based on the family culture, either being adaptive to change or being closely related with business. As practical and managerial implications proposed in this review article (Fuetsch & Suess-Reyes, 2017), family firms do not need large investments on R&D for an innovation outcome, but they should use their own potential with joint innovation strategies by considering the environment, adapting to the market and competitors, by using and creating networks, by combining stakeholders and family members, by involving external specialists and consultants, and by strategically selecting the successors for innovation success.

2.2 Design-Led Innovation

The approach of implementing design principles and philosophies provides a brand-new perspective to create, form and bring new opportunities and innovation for companies through design thinking (Brown, 2008), design-driven innovation (Verganti, 2009), and most currently design-led innovation (Bucolo, Wrigley, & Matthews, 2012). Design-Led Innovation (DLI) can be defined as the process of providing a system for businesses to establish possible ways of creating competitive advantage in low cost environments (Bucolo & Wrigley, 2014). When design thinking approach is internalized in the core culture of a business with top line growth, deep customer insights, and also through stakeholder engagements, the vision of design-led, which was first specified by Bucolo and Matthews (2011), would be achieved. Significant evidence in existing literature on some European and Asian countries indicates that companies with design integration operate both effectively and efficiently (Cox, 2005;

Borja de Mozota, 2002; Moultrie & Livesey, 2009; Dell’Era, Marchesi, & Verganti, 2010), even so embracing a DLI approach has been recently emerged in Turkey.

The framework of DLI consists of four crucial elements called as *top line growth* as increase in gross sales or revenues, *deep customer insights* as recognition of market’s inherent needs and values, *provoking* as confrontation with stakeholder’s emotional responses, and *strategic mapping* as evaluation of the effect of changing offerings on organization. As it is also stated in the literature, the process of integrating DLI has three main stages (Bucolo & Wrigley, 2014):

- Dissect (understand - what is the business, reveal - who are the stakeholders, ask - is there a matching strategy)
- Learn (propose - what are the proposed assumptions, prototype - what are the valued insights, provoke - what new meanings are created, reframe - what new opportunities are provided value to)
- Integrate (design - what are the new product and service offering, share - how is it collectively executed, transform - how these learnings are executed and integrated across the entire organization)

3. Methodology

A qualitative and comprehensive approach with various stages relevant to the previous theories and methods are needed to apprehend the complex and unique features in response to the “how” and “why” questions of innovation in family business research (e.g. De Massis et al., 2013; Classen, Carree, Van Gills, & Peters, 2014; Schmid, Achleitner, Ampenberger, & Kaserer, 2014; Weismeier-Sammer, 2014; Bennedsen & Foss, 2015). In a case study, the subject would be explored with a deeper understanding, the researcher would describe the existence of a phenomenon, question old theoretical relationships and explore new ones (Flyvbjerg, 2006). This paper reveals insights from the pilot explorative case of an ongoing PhD study with a multiple case methodology. As the qualitative approach has different interviewing styles and certain types are more appropriate to particular situations, the implications and problems of such interviews needed to be considered by the researcher (Fontana & Frey, 2005). In order to get significant and in-depth information from the participants, the researcher should let them speak freely about the subject without using strictly defined questions that would be too limiting and directive, and without using unstructured questions that would be too difficult to generate themes and analyse comparatively.

Thus, in this explorative case study, semi-structured questions were used as the primary data source, where the researcher prepares an interview script as a frame, and guides the interview with additional questions specific to the participant. The questions were structured in order to get insights on how the family business is managed and operates, the aims, the concerns, and the core culture from the participants including third generation family manager and marketing director. All interviews were conducted face-to-face, audio recorded, and transcribed verbatim. A variety of secondary sources (e.g., organizational documents, newspaper/magazine articles, internal reports, and company websites) were also used to triangulate and complement internal validity. The interview protocol involved questions about the innovation and design process in the firm, actors, their roles and responsibilities in the process, and the main challenges and opportunities during the process. Firstly, an initial picture was built by reading through the interview transcripts and other textual material. Later, with a thematic analysis, patterns that describes a phenomenon and are associated with a specific research questions emerged (Patton, 2002). Consequently, the themes were categorized under four key insights.

4. The Case

4.1 Company Background

In the last 50 years, Turkey has been in a major transformation with significant improvement in economy and social well-being:

“...Turkey has successfully transformed herself from an essentially agriculture-based, closed economy relying on import-substitution and with a predominantly rural population, to a relatively industrialized country with an export-competitive economy, predicated upon free-market forces and with a population the majority of which is now living in urban centers” (Gürüz & Pak, 2002).

With the rise of knowledge economy, new determinants for economic growth and make use of new information and communication technologies, innovation has become an increased focus of competitiveness. Turkey has a strong entrepreneurial culture and SMEs represent the largest percentage, thus the issue of innovative and internationally competitive SMEs is very critical for growth and prosperity. The identified key challenges of Turkey to promote and support innovation, especially in innovative SMEs, were identified as R&D investment, knowledge intensity of manufacturing and internationalization. The access to finance and lack of internationalization were stated as two main obstacles with major challenges such as political instability and cultural attitudes (Napier, Serger, & Hansson, 2004). Turkey has also a poor R&D performance (Elçi, 2005), thus technology is mainly imported (World Bank, 2006).

The furniture industry is one of the leading sectors in Turkey in terms of value adding and increasingly contributing to economy by most use of local resources and least dependent to imported goods. In recent years, because of increasing urbanization, population growth, rising living standards, and opening up new workplaces, the demand for furniture rises. Turkish office furniture sector, as one of the youngest sector in the industry, has shown incredible advance in terms of technology and competitiveness in the last ten years. Some local leading companies have reached an international level with design, production, marketing and finance issues in mind, thus it positively affected the small-scale producers of the sector in terms of quality, image, brand and standardization (Adıgüzel, 2016). In addition, OECD Science, Technology and Industry Scoreboard 2017 stated that Turkey has witnessed the most notable rise (up by almost 80%) in the R&D budget with 45% of gross domestic expenditure on R&D in 2015 (35% in 2005). It is also evident that Turkey experienced one of the highest and notable increases in the share of foreign value added in exports (OECD, 2017). According to Global Innovation Index 2017, Turkey was ranked 43 with total score of 38.9. The annual European Innovation Scoreboard (EIS) provides a comparative assessment of the research and innovation performance of the EU Member States and the relative strengths and weaknesses of their research and innovation systems. Turkey is a Moderate Innovator. Over time, performance has increased by 13.2% relative to that of the EU in 2010. According to European Innovation Scoreboard 2017, relative strengths of the innovation system are firm investments, innovation-friendly environment, and innovators; whereas, relative weaknesses are employment impacts, intellectual assets, and attractive research systems. In the last FEMB JSA League Table Top 100 of European Office Furniture Companies prepared by European Union and European Federation of Office Furniture (FEMB), there are five companies from Turkey ranked according to sales of office furniture, market share, European sales, number of employees and sales per employees.

The case family business, *Case Co.* (pseudonym used to retain anonymity) is one of those leading Turkish office furniture manufacturer that was founded as a small metal workshop in 1958, produced its first chair in 1962, launched wooden furniture production in 1987 with a more institutionalized

structure and a renewed machinery park, opened a modern plant in 1990, and initiated collaborations with local and international designers at the beginning of 21st century. With its strong performance in the last eight years through nearly 60 design awards as of 2018, highly modern and huge production centres, concept showrooms as idea experience centres with first and richest virtual design library in Turkey, exclusive dealership agreement with leading global office furniture brand, partnership with UK based office furniture company, first R&D and design centre in the sector, *Case Co.* was ranked one of the fastest growing companies in Turkey.

Table 1. Structure of Case Co. family business.

No of Employees	No of Generation	Family Members	Professional Roles
462 (Large)	1 st	Grandfather - passed away	Founder, Honorary CEO until 2017
	2 nd	Father (1)	Vice CEO
	2 nd	Father (2)	CEO
	3 rd	Son (1)	Deputy General Manager
	3 rd	Son (2)	General Manager

4.2 Key Insights

The initial findings emerging from the first in-depth interviews with *Case Co.*'s third generation family manager and marketing director reveals the opportunities and challenges of the company through DLI process. The key themes present the strategies of a family-owned manufacturer in an emerging market in order to achieve competitive advantage. The key insights of the thematic analysis are outlined in the table below (Table 2).

Table 2. Codes and their descriptions

Thematic Analysis: Key insights through DLI process	
Vision for design awareness	It refers to the design value and related investments in <i>Case Co.</i> - internalize design principles and philosophies (RQ1: ability as resources - innovation input)
Strengthening existing know-how	It refers to the strengths of <i>Case Co.</i> - successfully orchestrate resources, efficiently use employees and capabilities (RQ2: ability as discretion - innovation activity)
Customer-oriented strategy	It refers to the multiple sales and marketing strategies of <i>Case Co.</i> - organizational innovation strategies for sales and marketing, innovate incrementally (RQ3: willingness - innovation output)
Investment in knowledge	It refers to the internal and external knowledge sources of <i>Case Co.</i> - take risks with organizational and marketing innovations, invest money in R&D and design (RQ1: ability as resources - innovation input / RQ3: willingness - innovation output)

- Vision for design awareness

The value of design in *Case Co.*'s core culture was the first key insight emerged from the interviews. In the last 10 years, *Case Co.* made significant investments to create design awareness in the company, local community, and in the market. With that vision in mind, the participants told that a showroom for the company turned into an innovative, engaging, and dynamic public interior concept. That concept then morphed into a communication project combining *Case Co.*'s long history of craftsmanship and created a social platform bringing young Turkish and international artists and designers from different fields together with the aim of creating the largest virtual culture and arts library in Turkey. The newest centre of *Case Co.* was also created as centre of ideas with temporary exhibition spaces, and hosting talks in event spaces after having a workshop with a strategic consultancy firm on specializing in office layouts to analyse that new centre. It was also stated that the partnership with the consultancy firm increased *Case Co.*'s workplace know-how, settled their credibility, and allow them to transfer some methodology. In addition, *Case Co.* also introduces open platforms for social and cultural dialogs such as the public event on the work culture and change in workplaces with speakers specialized in the field that the company organized and sponsored in 2018. In light of all this, it is revealed that *Case Co.* embraces a DLI process by establishing possible ways of creating competitive advantage in a low-cost environment (Bucolo & Wrigley, 2014) and internalizing a design thinking approach in the core culture of business (Bucolo & Matthews, 2011) by a communication project for the awareness of craftsmanship, a social platform for artists and designers, a virtual culture and arts library, and a centre of ideas, exhibitions, workshops, and events. All those initiatives of *Case Co.* also show their vision of creating trust and social networks (Bennedsen & Foss, 2015), partnership with specialized consultancy firms in particular, their goal of sustainability and long-term survival (Le Breton-Miller & Miller, 2006), and their informal but efficient structures in organization (Daily & Dollinger, 1992).

- Strengthening existing know-how

Know-how as a value to be strengthened was also expressed as one of the key priorities in the innovation process. Furniture manufacturing was defined as knowledge accumulation in manual labour, craftsmanship, and mastering skills with industry. Know-how and experience on how to process and manufacture raw materials, industrial competency with technical capacity and production power, and also master in craftsmanship are stated as the strongest accumulations of *Case Co.* As it was clearly understood from the participants, *Case Co.* constantly strengthens its own know-how, especially 60 years of experience in metal, with its long-term survival (Le Breton-Miller & Miller, 2006) after three generations even if the average life span estimated for family business is 27 years. For instance, the recent initiative of *Case Co.* was to open craftsman training and breeding centres, especially for upholstery, painting, and carving. Strengthening existing know-how is also supported with latest production centre with self-supporting energy system and maximum use of natural lighting, and strategic alliances for eco design projects and green product designs. Even though existing research is largely consisting in indicating that family firms generally are averse to increase external capital (Poutziouris, 2001), and avoid taking risks in order to protect family legacy (Gómez-Mejía et al., 2007), *Case Co.* prefers to invest in know-how and take risks especially to protect family legacy of craftsmanship and mastering skills.

- Customer-oriented strategy

As the challenges of competing with low-cost sub-industry products, having high production cost, and economic instability were mentioned in the interviews, another key insight was identified as

having multiple customer-oriented strategies for the innovation process, especially for sales and marketing. The participants emphasized that the traditional operational approaches and methods have changed with the new century, on the contrary of the tendency of family businesses to keep the traditions and not trying new things (Miller & Le-Breton Miller, 2005). Main focus has been on team work with motivated employees, managers, customers, and designers; in order to have brand awareness and to be in the upper segment. Recently, *Case Co.* has not been only just an office furniture manufacturer but also a public supplier, an architect, a dealer, and a contractor. While making a catalogue selection for public institutions, preparing the whole project as an architect, and selling the imported products as a dealer, they have multiple processes as a contractor depending on having a customer from healthcare, finance, or hotel sector. The expertise and intellectual capital vary from catalogue selection to space planning, from concept design to application drawing, from mock-up setting to custom-made size, fabric, and mechanism of furniture, from technical specification support to cost analysis. Thus, for instance, this variation led *Case Co.* to have independent sales team for private sector with specialized technical staff of interior designers, architects, and industrial engineers. This insight shows that *Case Co.* generally innovate incrementally (Carnes & Ireland, 2013; Hiebl, 2015) and also rarely but successfully innovate with higher outputs because of the engagement and control of family (Duran, Kammerlander, Van Essen, & Zellweger, 2015) and when both ability and willingness exist (Holt & Daspit, 2015). Thus, both economical and non-economic goals of the family firms lead to heterogeneity in innovation outcomes (Chrisman et al., 2015).

- Investment in knowledge

The willingness of taking risks with operational and marketing innovations, and with high investments on internal and external sources of knowledge also emerged from the interviews. Having an in-house team of designers, and internal R&D and design centre with material laboratory for useful models and patents founded 2017 as the first in furniture sector in Turkey are mentioned as internal investments of *Case Co.* for innovation. Additionally, external investments can also be summarized as exclusive dealership agreement with leading global office furniture brand, partnership with UK based office furniture company, outsourcing design, hiring experts, purchasing latest technologies, and taking consultancy in communications and marketing. *Case Co.* also managed to be accredited by the national brand-building program initiated by the government called *Turquality* that facilitates and supports Turkish brands internationally. Contrary to the statements in the literature, *Case Co.* takes risks (Gómez-Mejía et al., 2007), tries new things (Miller & Le-Breton Miller, 2005), increases external capital (Poutziouris, 2001), invest money in R&D and design (e.g. Block, 2012; Asaba, 2013; Sciascia, Nordqvist, Mazzola, & De Massis, 2015). Rather than dealing only with product innovation, *Case Co.* also do not hesitate to invest in organizational and marketing innovations.

5. Conclusion

The main insight presented in this paper is that family entrepreneurs have unique decision-making processes and strategies during development phases of innovation. Other key initial insights found through thematic analysis include key concepts such as vision for design awareness, strengthening existing know-how, customer-oriented strategy, and investment in knowledge.

Some findings presented in this paper are in accordance with the literature of Design-Led Innovation (DLI) and innovation in family business. The main DLI approach identified as vision for design awareness reveals the significance of internalizing design principles and philosophies to bring

innovation with new opportunities for family business. Strengthening existing know-how identified as an insight related with innovation activity and ability as discretion states that family business can successfully orchestrate the resources and efficiently use their employees and capabilities (Röd, 2016), thus is able to innovate through tradition with the embodiment and reinterpretation of past knowledge (De Massis, Kotlar, Frattini, Chrisman, & Nordqvist, 2016). With the idea of customer-oriented strategy, it is understood that family business mostly profit from organizational innovation, also innovating incrementally (Carnes & Ireland, 2013; Hiebl, 2015).

However, the paradoxical issues of not taking risks (Gómez-Mejía et al., 2007), carrying out traditional approaches (Miller & Le-Breton Miller, 2005), being hesitant to increase capital (Poutziouris, 2001) and invest less money in R&D (e.g. Block, 2012; Asaba, 2013; Sciascia, Nordqvist, Mazzola, & De Massis, 2015) contradict with the insight of investment in knowledge based on the innovation input and ability as resources. The tendency of family business to use external knowledge (Garcia & Calantone, 2002), is also aligned with the findings.

As practical and managerial implications proposed in this review article (Fuetsch & Suess-Reyes, 2017), family firms do not need large investments on R&D for an innovation outcome, but they should use their own potential with joint innovation strategies by considering the environment and adapting to the market and competitors, by using and creating networks, by combining stakeholders and family members, by involving external specialists and consultants, and by strategically selecting the successors for innovation success.

Moving forward from with the initial key insights revealed in this paper, the study will continue with additional cases to evaluate the ability of a family business to manage and execute DLI depending on the degree of willingness of embodiment and adaptation of a core culture.

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