

GERMAN FAMILY BUSINESSES AND DIGITAL TRANSFORMATION: HURDLES AND TRIGGERS ON BUSINESS MODEL INNOVATION

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Abstract

New technologies such as the Internet of things and artificial intelligence are opening up great opportunities although their operational implementation may require radical changes to current business models. While family firms consider innovation as basic to their positive development, they traditionally tend to favor incremental innovations. In the lens of an apparent gap between traditional thinking and digital framework conditions the aim of this paper is to understand *why* family businesses have such a hard time with business model innovation. The paper discusses this question by reviewing 15 C-level-manager interviews in family firms that are faced with digital transformations of their business. Interviews took place in January and February 2022. This study identifies the main tasks value, leadership, and culture that could support or restrict business model innovation of family firms. Since family firms are considered as the backbone of Germany's economy and having essential impact on global markets, this paper might provide avenues for future research and business practice on business model innovation globally.

Key words: family businesses, digital transformation, business model innovation

JEL Code: M10, M21, O30

Introduction

Digitalization and digital transformation are subjects of increasing importance both in scientific research and in business practice. New technologies like the Internet of things, blockchain, and artificial intelligence are opening great opportunities although their operational implementation may call for radical changes to existing business models and force business model innovation. Yet, family businesses consider innovation in general as key to their positive development, they traditionally tend to favor incremental innovation. Hence, balancing the traditional businesses and new technologies of digitalization seems tough for most German family-owned businesses. In the context of an apparent gap between traditional thinking and digital framework conditions this paper's target is, to understand *why* family firms have such a hard time with business model

innovation. Though there is a growing research attention towards innovation management (De Massis et al., 2016), empirical insights on how family-owned companies are approaching digital transformation continue to be rather scarce. My paper addresses this subject by drawing on data from 15 interviews with C-level managers of 15 German family firms, who are confronted with the digital framework and the associated demands on their firms. Findings from the qualitative analysis enable me to identify different hurdles and potential triggers, that could be considered once family businesses initiate digital transformation. This study targets to inspire principally family-owned firms proceeding digital transformations along with business model innovation as a fundamental opportunity to align their traditional family businesses sustainably in terms of cross-generational thinking under digital framework conditions.

1 Theoretical Framework

Digital Transformation

Digitalization may be interpreted as the application of new technologies supporting firms such as family firms during their digital transformations to improve efficiency of existing processes, providing new products, services and general business options (Brynjolfsson & McAfee, 2018). Digital transformation is for this study understood as basic changes to the global business world (Rasch & Koß, 2015) and the comprehensive transformation of firms, which might include the redesign of business models in line with new, digital technologies (Clauß et al., 2022).

Family Businesses

Family businesses are typically described as businesses in which decisions are influenced by a family invested in the business and that gives direction to steer, allocate, supplement, or divest the resources of the business (Clauß et al., 2022) in order to push forward strategic initiatives in pursuit of the family-centered objectives (De Massis et al., 2014). Family businesses are the oldest and most important organizational form of entrepreneurial activities in Germany. About 70% of German firms are family-owned (Robertsson, 2021) and considered as the backbone of the German economy (Clauß et al., 2022).

Business Model Innovation

In general, one can argue that a firm's performance relies on its business model (Teece, 2010). They give companies a framework to create, deliver and capture value (Clauß et al., 2020) in a systematic way. Most of the research specifies business model innovation a multidimensional, dynamic process by stressing the different stages of business model innovation (Frankenberger et al., 2013).

2. Research Design and Methodology

2.1 Empirical Setting, Research Design, and Sample

The presented article is grounded on a qualitative research design. According to (Yin, 2014), I consider this study as "an empirical investigation that examines a contemporary phenomenon in depth and in its real-world context, especially when the boundaries between phenomenon and context are not clear". To minimize external variations beyond the phenomenon of interest (Eisenhardt, 1989), I selected 15 traditional family firms operating non-engineering businesses but vary on their individual progress in digital transformation. Cases were selected carefully to maximize similarity and variances across the cases and to improve theory building (Eisenhardt, 2021). Following Eisenhardt (Gehman et al., 2017) "theory building [...] is centered on theory that is testable, generalizable, logically coherent, and empirically valid". However, the pace of digitalization is speedy, so a quantitative research design may not be sufficient or valid enough with respect to data. So, and with the objective of finding relevant, valuable, and reliable data, the decision was taken to prepare and conduct modern science by explicitly selected interviews with C-level managers. Potential interview partners were the ones who had the most promising backgrounds of expertise and experience in a firm's digital transformation along with the power to execute and leadership responsibility. Even though the predictive quality of the data is limited due to the highly dynamic field of research and restricted number of interviews and firms.

2.2 Data Collection

Key data source was embodied by extensive interviews aimed to capture and contrast the direct experiences of the 15 interview partners, all involved in digitalization transformation activities. Interviews took place online or personally from January to February 2022 (see appendix Tab. 1: Overview of family businesses' and interviewees' structure). During the literature research, Christensen's business model framework (Christensen et al., 2016) with its four elements value proposition, profit formula, resources, and processes emerged as the scientific source. Here, 12 semi-structured questions served primarily as interview guidelines and should offer the most open-minded and as well broad coverage about the problem fields and alternative solutions. Answers were mainly recorded, all written down, coded, and then categorized.

2.3 Data Analysis

In line with common practice in inductive multiple-case research (Eisenhardt, 1989; 2021), data analysis primarily was on creating summaries of each case study, integrating and contrasting the transcripts of the interviews and the field notes I collected prior to and after the interviews. During this process of analysis attention was always paid on (Eisenhardt, 1989) "to go beyond

initial impressions” and use of a replication logic to see if and how the single cases may confirm or potentially refute the findings. Moreover, I stepped through multiple readings of the data to design a data structure. Therefore, I iteratively coded 1st order data, created 2nd order themes, and aggregate 2nd order categories helping me in identifying possible hurdles and triggers on business model innovation around family businesses and their ongoing digital transformation. Then, summaries were prepared for each of the pillars value position, profit formula, resources, and processes from (Christensen, 2016)‘s business model framework that has been the basis for the 12 interview questions. After that, columns were developed, recurring contents high-lighted with individual color coding and relationships between the individual recurring topics created. The next step was to systematically select unique keywords based on the recurring topics of the interviews from the summaries and contrast them with the scientific fields of tension classified. Analyzing, evaluating, and matching relationships of recurring contents, the relationships were systematically contrasted upon the basis of selected literature and recurring interview contents. Although this study takes place under dynamic conditions, it is not a dynamic model.

3. Findings

Through an analysis of 15 cases and interviews, patterns could be identified that show potential hurdles about business model innovation of German family businesses in the lens of their digital transformation early 2022. Along with this, these patterns allow some indications what triggers might help overcoming the identified hurdles. Both is illustrated on figure 1 (see appendix).

3.1 Hurdles on business model innovation in German family businesses

In describing hurdles on business model innovation of German family firms from C-level view, I begin with the 2nd order themes time frame and confidence from the enabler culture via CEO’s digital competences and entrepreneurship from leadership as the hub to the 2nd order themes production technology and customer proximity meaning the results to culture and leadership.

Time frame

As said by (FB01), the family business has “spent six years working on a digital business model at its current development level and six years convincing people to get obvious benefits flying and starting market penetration.” That saying indicates time is needed to develop and roll out a business model innovation. Yet, this implies that the family businesses‘ management itself has understood the need for change as a result of the new digital framework conditions and starting business model innovation early enough in terms of thinking and acting across generations. Although family businesses are typically characterized by a tendency to act rather than wait, I

frequently observed that „digitalization ... allows new business models. However, we are still waiting to see whether we will develop one or not.” (FB10). One possible reason could be that the „strategy“ from (FB01) for instance was „born from doing [...] and would never have been written down before, since we would never have thought about it“ or in other words “leadership is practiced operationally rather than strategically at family businesses” (FB08). Assuming that family firms are usually managed operationally rather than strategically, one may conclude that those firms have a hard time with strategic innovations such as business model innovation.

Confidence

Linked to time frame is the second identified 2nd order theme confidence. By their very nature, people tend to appear inert and biased towards change and transformation. This is exemplified by the way inertia and bias effects could complicate realization of needed innovations in firms, because it is just „about 5% of employees who are willing to deal with new, digital issues, while the rest is waiting to see what is going to happen“ (FB01). It appears even more important that people embrace changes to avoid the term “digital transformation being misused as a buzzword and potentially destroying the firm’s corporate culture” (FB08). Specifically for German family businesses with their tendency to technical focus, it seems important to have a organizational culture in which “every employee is allowed to make failures as long as we recognize together, whether it is an individual or systems‘ failure” (FB05). The 2nd order themes time frame and confidence jointly represent the aggregate 2nd order category culture. Within this scope and assisted by the (FB08) comment “we as the management tackle challenges with empathy and an open, confidential atmosphere, by leading with our team and not against it”, culture could be considered as enabler and starting point for business model innovation in the digital world.

CEO’s digital competences

Fitting with (FB03) "in the future, innovation leadership will only be possible once a company has the necessary digital competences [...] and each [or minimum one] executive board member holds these needed competences“. Yet , I found out that there seems „a great deal of uncertainty because you are forced to moving away from your traditional core competences“ (FB01). Since innovation leadership is closely related to business model innovation and „know-how required for new business models goes far beyond what (FB01) family business owns presently as core competences“ it becomes all the more important that „digital transformation is one of our core competences for the future, which is why I, as the firm’s CEO, invest a lot of time in my digital competences“ (FB06). To my observations it seems not enough that „executive board would like to actively address the subject of digital transformation and expects solutions and proposals

to be provided by the company's employees" (FB09). Particularly in case "when you are aiming fundamental changes [...] and the CEO is not part of the team, he will be blocked [latest] on the operational level (FB01), which appears as a risk to many of the family businesses' interviewed.

Entrepreneurship

My findings on CEO's digital competences are related to the 2nd order theme entrepreneurship. In this context I have reviewed that in many cases "even today, the strategic impulses originate to a great extent from the entrepreneur and owner of the family business" (FB09). This applies even when the "next generation, new to leading the company, is focusing more on structuring business and less on following the entrepreneur's typical instincts from the past" (FB09). Yet, it seems slightly "to change as new generation enters the firm as shareholders, who might not have this basic instinct" anymore (FB10). Hence, the typical mindset for family firms continues to apply, according to which "leading a business means making money first, and then at some point, when anything is running well, I might start looking on digital issues" (FB09). In other words, "family's influence is evident by 120% on both the strategic area in operations [...] and with digital projects, there is a conflict of "my entrepreneurial feeling tells me", that it is right to do this project, versus "my entrepreneurial experience, tells me", that something is totally different now and I feel uncomfortable since I have no idea how it will finally end up" (FB08).

Production technology

Following (FB02) "one of the attack strategies is to produce hardware products more and more economically through digitalization. Processes and new manufacturing technologies both play a significant role in this." As added from (FB09) "our defense strategy is built on the fact, that we know well [...] how to master efficiency in production". Such comments can be interpreted in a way that production technology takes a major role for businesses in German family firms both in the industrial age and in the digital world. As mentioned by (FB01) "defending business first means cost efficiency being able to respond to attacks in today's competitive structure" and secondly „digitalization as a technology that we use making our products better and trying to differentiate from our competitors“ (FB04). While "strong production technology is one of our backbones" (FB11) and "the focus on ourselves is rather strong" (FB08) I observed on (FB02) that they are „problem solvers from a one source, starting from the idea up to the delivery“. This regularly includes long value chains, typical for German family businesses, with many and complex processes to manage. So, it should not be surprising that one of "our core competences is a 100-years' history of manufacturing highly complex hardware products and one of the best systems and project managements I have seen so far from a family firm" (FB12).

Customer proximity

Nowadays, for firms it is crucial to take customer's perspective and to understand them well on the basis of their customer insights. But if sales people in the period of digitalization still „need customer proximity with permanent customer contact“ (FB11) in form of face-to-face contacts, it could be questioned. At present, this might be the case, since family businesses often provide highly complex products requiring technical explanations, which means that firms should have physical contacts on both sides. Even though, “our traditional customers are experiencing a generational shift weakening the bricks and mortar stores while simultaneously e-commerce is growing” (FB08) family businesses are very cautious about opening to platforms like Amazon (e.g. FB07) and still rely on the fact that “our customers have been working with us for ages and there are no new customers in the business” (FB02) or “customer proximity and customer loyalty are exceptionally high, since our solutions are developed together with them“ (FB13). Though customer proximity is very high (e.g. FB08) and traditional business models are still valid, it is worth saying that it is exactly this very strong customer proximity that could lead to traditional paths being retained in the future and thus digital opportunities like business model innovation may not being used sufficiently pioneering family firm’s future businesses.

3.2 Triggers on business model innovation inspiring digital transformation

What could happen reviewing digital transformations of family-owned firms, if they continue reinforcing the key findings from 1st order data as potential hurdles to new business models through their behavior? Approaching this, I have “confronted“ the identified hurdles (aggregate 2nd order categories) with the global development of digitalization. Possible triggers identified are: Outside-In Perspectives for value, CEO’s integrational role in operational implementation for leadership and Transformation capabilities for culture.

Outside-In-Perspectives

Re-thinking from the traditionally strong production technology and customer proximity were identified as major hurdles to business model innovation in the context of digitally transforming family businesses. Despite people are typically key for family businesses, I observed at (FB12) that “people are always number two, since the quality of products and processes is our number one priority.” Therefore, it seems more helpful to trigger one’s own business model innovation by following the example of (FB15), where the “overall digital transformation process is geared towards customers’ perspectives” and they are working on multiple value networks at different levels simultaneously. Mastering a company’s digital transformation will sooner or later require advanced cooperation with partners. As told by (FB01) “our strategic network is key to success

for us about digital transformation“ and added by (FB12) “from integrating in networks, you can learn only.” Correspondingly, the „focus is no longer primarily on products but the needs of end-customers of future digital businesses [...] and smart data are a must identifying these needs and match them with our own performances and that of our networks partners“ (FB15), which changes the mindsets to more outside-in perspectives.

CEO's integrational role in operational implementation

When family firms are ready to tackle fundamental changes such as business model innovation, it is important, that the CEO or a member of the executive board holds the digital competences needed. Therefore, the “chief executive officer [or a board member] should be an integral part of the team and deeply involved in digital affairs being able to implement new business models and drive the overall digital transformation” (FB01). Following (FB11) “innovation and digital transformation is a task for all staff and the entire firm. CEO's matter is guiding such processes in the sense of setting right stimuli, highlighting the directions for growth, and taking the right decisions, although not only for him but for all employees.” Even more since „it is crucial, that innovation [...] is anchored in the firms' corporate culture and in every single employee making them successful“ (FB15).

Transformation capabilities

In addition to CEO's digital competences and his integrating role in implementation, confidence takes a key role in family firms. Built through years of experience, “confidence is characteristic for SMEs and family businesses” (FB05). Transforming this level of confidence into the digital world it is not sufficient to state „it is important to break with the attitude that “digitalization is useful only, when we get a direct benefit” (FB13). Instead, it seems to require basic changes in the culture of family firms. “Unlike firms that are tailored to just one leader, extensive interactions with employees and their ideas and concerns demand a great deal of communication from the top management“ (FB07) in the era of digital transformation. As added by (FB02) “for us, the communications concept and communication are the best and most valuable elements of our digital strategy [...] since it allows “picking-up” as many employees as possible wherever the subject of digitalization comes up”. Based on my observations, communication can be a key transformation capability and an especially powerful trigger for digital transformation and business model innovation when the Next Gen is in charge of the family-owned business (e.g. FB02; FB06; FB09)

4. Discussion

In my study, I explored the question why German family businesses have such a hard time with business model innovation in the age of digitalization. The inductive analysis of 15 case studies and C-level interviews indicated hurdles and triggers associated with digital transformation in German family businesses when it comes to business model innovation.

Culture

As pointed out by (FB06) “humans determine more than anything else today’s and tomorrow’s success“. Taking into account that “German people [...] are highly conservative” (FB08) and family-owned firms typically characterized by “tackling challenges not with pressure, but with empathy and an open, confidential atmosphere“ (FB08) towards their teams, it might helpful to adopt family firms’ corporate culture during their digital transformation with some “sensitivity“ to the new digital conditions. Apart from a “generally open and direct communication“ (FB05) it seems beneficial, as stated by (FB02) to have “developed a special communication concept just for the matter of digitalization.” A similar picture emerges from a study published by (Soluk & Kammerlander, 2021), according to which team’s resistance can be overcome by sharing former "concrete" success stories. Moreover, it seems an inspiring opportunity to have „more and more programs [...] identifying new talents within the firm in a sense of knowing them as executive board and guiding innovative projects initiated by these young people, while they become active players in the global development process [...] Making brightest minds new stakeholders is key” (FB15). Thus, the top managers are invited rethinking family businesses’ cultural artifacts, while preparing their cross-generational future.

Leadership

For family business leaders, one of the key subjects on leadership with regard to business model innovation is their role during the digital transformation process. In this process, the leader can be the driving and guiding force, especially if he „personally likes changes and transformation“ (FB15), so that his attitude might be transferred to the whole organization. To succeed, a "digital trinity" of the CEO’s [or at least one] top manager’s digital competences, his openness to value networks and his involving role to implement a strategic repositioning of the business, seems necessary. An open mindset to value networks is important as “working in a networked way is an important success factor, because it connects strategy, markets, customers, and others ... the better you are at networking, the more comprehensive, speedy, agile, and better you will simply perform” (FB11) and be able to leading a family business into a promising future.

Value

As a firm you deliver value to the customers. Following (FB03) there is a “well-known mindset in many German firms with a concept of developing and understanding everything oneself and seeking to control all by 100%“, which could lead to the assumption that it is easier to continue following traditionally successful paths by focussing on cost-efficient production processes and using digitalization for product innovation rather than business model innovation. However, it seems valuable to consider that even given robustness of existing business models should allow a certain openness to business model innovation. Here, it may be an advantage to reflect on the above-average customer proximity of the family firms studied in the light of the new, digital framework conditions and to redesign this towards higher customer value.

Conclusion

Together, digital transformation of firms and profitable business models pose one of the greatest challenges and opportunities for firms such as family businesses of today and tomorrow. In this paper, I studied, why family businesses have such a hard time with business model innovation. An analysis of 15 German family firms by 15 C-level interviews gave me unique insights about these firms‘ hurdles and triggers on business model innovation during digital transformation. My findings indicate that digital transformations of these firms depend above all on the digital attitude and competences of executive boards and shareholders. As business model innovation is a strategic issue and the family firms under review still seem frequently traditionally managed in an operational way, and strategically geared by their entrepreneurs and families, they might struggle in introducing digital business models and adapting to the new framework conditions. Making this even more remarkable is, that innovations are typically characteristic to their DNA. With this in mind, I hope this study can stimulate future research on business model innovation and inspire digital transformation of German family businesses and beyond.

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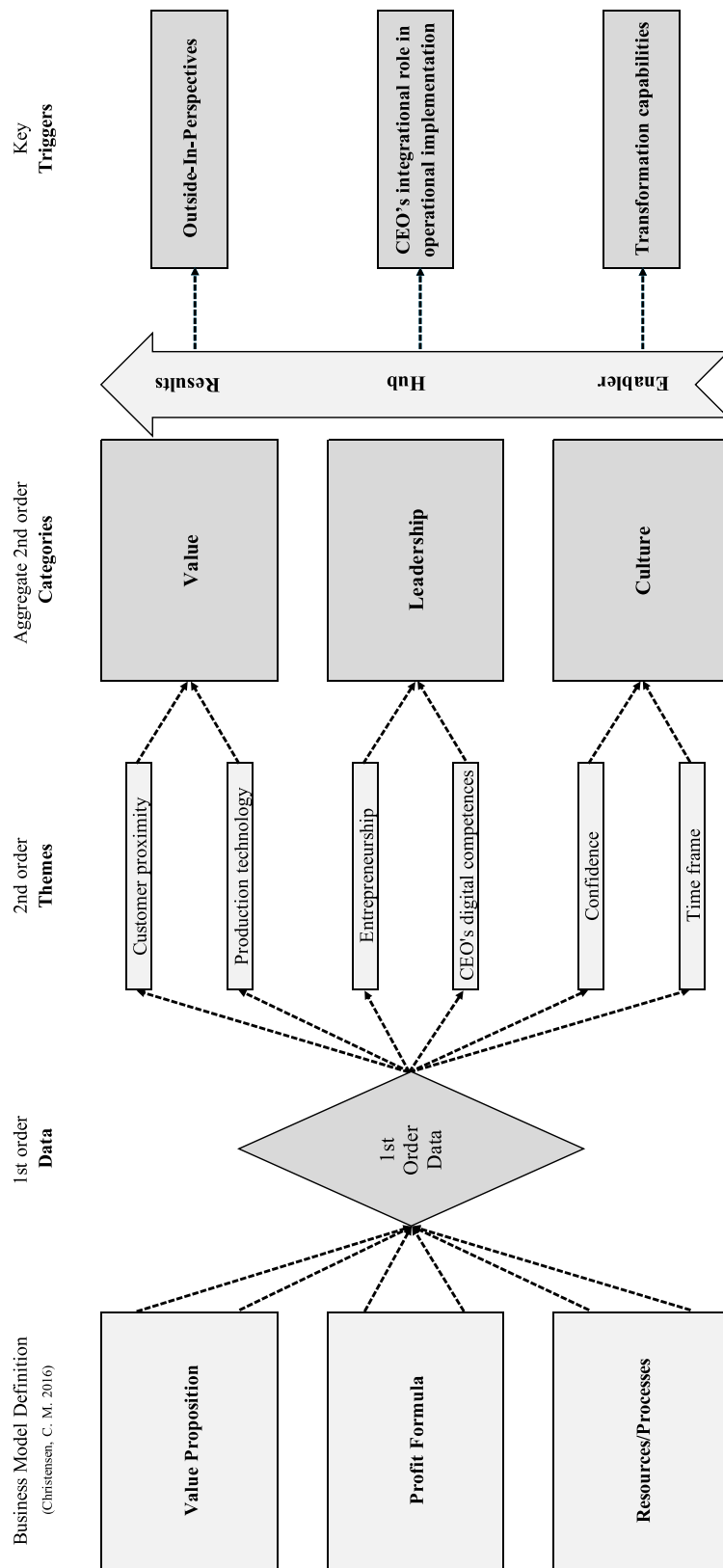
Appendix

Tab. 1: Overview of family businesses' and interviewees' structure

Family Business (FB)	Industry (classification)	Family-owned (share %)	Management type (CEO = family/external)	Revenue 2022 (million €)	People 2022 (number total)	Interview partner (position)	Interview partner (gender)	Interview partner (age)	Interview partner (education)	Interview partner (years of experience)	Interview duration (minutes)
01	Fast-moving consumer goods/ Consumer goods	100	External	< 100	< 500	Chief Executive Officer (CEO)	male	55-64	Diplom-Kaufmann (equivalent to MBA)	> 10	180
02	Automotive	100	External	100-999	500-4,999	Managing Director (COO & Deputy CEO)	male	45-54	Diplom-Ingenieur/ Master in Engineering & MBA	> 15	175
03	Healthcare	100	External	1,000-5,000	5,000-20,000	Member of the Executive Board (CDO)	male	55-64	Dr.-Ing. PhD in Engineering	> 35	65
04	Healthcare	100	External	1,000-5,000	> 20,000	Chief Executive Officer (CEO)	male	55-64	Diplom-Ingenieur/Master in Engineering	> 35	90
05	Raw Materials	100	Family	< 100	< 500	Member of the Executive Board (CFO)	male	≥ 65	Diplom-Kaufmann (equivalent to MBA)	> 25	180
06	Raw Materials	100	External/Family	100-999	500-4,999	Managing Director (COO & CTO)	male	35-44	Master of Business Administration	> 15	120
07	Fast-moving consumer goods/ Consumer goods	100	Family	> 5,000	> 20,000	Managing Director (COO & CTO)	male	55-64	Dr.-Ing. PhD in Engineering	> 25	75
08	Fast-moving consumer goods/ Consumer goods	100	Family	100-999	500-4,999	Managing Director (R&D)	male	55-64	Dr. rer. nat/Doctor of Science	> 35	180
09	Fast-moving consumer goods/ Consumer goods	100	Family	1,000-5,000	500-4,999	Head of Production & Technology Transformation (direct report to CTO)	male	45-54	Diplom-Ingenieur/Master in Engineering	> 20	110
10	Fast-moving consumer goods/ Consumer goods	100	External	100-999	500-4,999	Member of the Executive Board (CTO)	male	55-64	Diplom-Ingenieur/Master in Engineering	> 10	120
11	Automotive	100	External	> 5,000	> 20,000	Member of the Executive Board (R&D)	male	55-64	Diplom-Ingenieur/Master in Engineering	> 35	90
12	Automotive	100	Family	100-999	500-4,999	Chief Executive Officer (CEO)	male	55-64	Diplom-Ingenieur/Master in Engineering	> 35	120
13	Raw Materials	100	External	100-999	500-4,999	Managing Director (CFO)	male	45-54	Diplom-Wirtschaftsinformatiker/ Master in Business Informatics	> 35	90
14	Raw Materials	100	External	< 100	< 500	Head of Business Administration (direct report to CEO)	male	35-44	Diplom-Wirtschaftsinformatiker/ Master in Industrial Engineering	> 10	60
15	Healthcare	100	External	> 5,000	> 20,000	Member of the Executive Board (CSO/CMO)	male	55-64	Diplom-Kaufmann (equivalent to MBA)	> 10	75
Interview duration (average)											115
Interview duration (total)											1,730 = 28,50 h

Source: Own creation

Fig. 1: Emerging patterns on business model innovation in German family businesses



Source: Own creation based on 15 C-level-manager interviews' findings

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