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## Faculteit Bedrijfseconomische Wetenschappen

master in de handelswetenschappen

### **Masterthesis**

***Supply chain management in family firms: The impact of Covid-19 on change management and learning practices***

#### **Sofie Vanden Berk**

Scriptie ingediend tot het behalen van de graad van master in de handelswetenschappen, afstudeerrichting supply chain management

#### **PROMOTOR :**

Prof. dr. dr. Frank LAMBRECHTS



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*This master thesis was written during the COVID-19 crisis in 2020-2021. This global health crisis might have had an impact on the (writing) process, the research activities and the research results that are at the basis of this thesis.*

## **Acknowledgement**

This Master thesis concludes my Master of Management study, specialization Supply Chain Management at the University of Hasselt.

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Sofie Vanden Berk  
Hasselt, June 2021



## **Nederlandse samenvatting**

Het doel van dit artikel is om het supply chain proces in familiebedrijven beter te begrijpen, en om te onderzoeken hoe de Covid-19 crisis het bedrijf en zijn supply chain heeft beïnvloed. Meer bepaald hebben we onderzocht welke wijzigingen er werden doorgevoerd in de supply chain als gevolg van de pandemie. Daarnaast werd er geëvalueerd wat bedrijven hebben moeten leren of afleren in het managen van hun supply chain.

In de academische literatuur betreffende familiebedrijven is er nog weinig kennis ontwikkeld over hoe ze hun supply chain managen, hoe ze reageren op crisissituaties en hoe ze leren. We opteerden daarom om in eerste instantie experts te bevragen over het onderzoeksthema. Op basis van deze informatie werd een semigestructureerde interviewleidraad opgesteld, die vervolgens ingezet werd om informatie te verzamelen bij zeven familiebedrijven in België en Nederland.

Onze resultaten illustreren dat de supply chain van familiebedrijven specifieke kenmerken vertoont. In het selecteren van leveranciers en logistieke partners is na de professionaliteit van de partner, het potentieel om een lange-termijn relatie te ontwikkelen het belangrijkste selectiecriteria. Familiebedrijven zoeken gelijkwaardige partners die ze kunnen vertrouwen, en al is het geen specifiek selectiecriteria, toch blijken veel van hun partners ook familiebedrijven te zijn. Mede door de nadruk op relatievorming blijken veel familiebedrijven nog afhankelijk te zijn van hun leveranciers; 'single sourcing' is nog steeds de dominante vorm van inkopen. Opvallend is ook dat de familie nauw betrokken is bij het managen van de supply chain, en dit vooral in het inkoopproces. Bedrijven die een professionele inkoopmanager in dienst hadden zagen daarvan wel de positieve effecten op hun resultaten. Digitalisatie van de supply chain kwam weinig ter sprake, tenzij met betrekking tot het online verkoopproces. Opvallend was ook dat minder dan de helft van onze respondenten aangaf dat hun bedrijf goed scoorde op vlak van duurzaamheid. Met betrekking tot het belang van outsourcing zagen we erg heterogeen gedrag tussen de familiebedrijven.

De impact van de Covid-19 crisis op het bedrijf en hun supply chain werd door de meerderheid van onze respondenten omschreven als immens. Tegelijkertijd waren er wel aanzienlijke verschillen wat betreft de impact op financiële resultaten, en dit afhankelijk van de sector waarin het bedrijf actief was. In de supply chain hadden alle familiebedrijven af te rekenen met de gevolgen van 'lockdowns' bij supply chain partners, grote onzekerheid over de prijzen van grondstoffen, vertragingen en stijgende kosten met betrekking tot transport en/of beperkingen bij het leveren of verkopen van hun producten. De kleinere bedrijven leken op deze crisis minder voorbereid te zijn dan de grotere.

Ondanks de impact, bleek dat de meerderheid van onze respondenten geen significante wijzigingen in hun supply chain had aangebracht. Het relatie-aspect was daarbij van doorslaggevend belang. Familiebedrijven blijven hun supply chain partners steunen, vooral in moeilijke tijden. Ze geven er de voorkeur aan hun orders niet te annuleren, en hebben daar ook niet de noodzaak toe. Door de vertrouwensrelatie bieden de leveranciers hun bijvoorbeeld vaak voldoende flexibiliteit om hun bestellingen te kunnen verplaatsen naar een later moment. Daarnaast geven vele respondenten aan dat de supply chain te complex is om op korte-termijn veranderingen in door te voeren. Met de

huidige reisbeperkingen is het onmogelijk om potentiële internationale supply chain partners te gaan bezoeken. Familiebedrijven die wel nieuwe supply chain partners zochten door de crisis, doen dit met de nodige voorzichtigheid om hun bestaande relaties niet te schaden.

De familiebedrijven geven aan dat ze door de Covid-19 crisis een aantal routines hebben moeten afleren. De meerderheid van onze respondenten beseft dat 'single sourcing' leidt tot te grote afhankelijkheid, en hebben de intentie om meer met 'dual sourcing' te gaan werken. Daarnaast hebben ze moeten afleren om te strikt te zijn in hun supply chain planning. Naast het afleren, hebben ze ook hun leerervaringen, die al voor de crisis in ontwikkeling waren, kunnen versnellen. Aspecten die verbeterd werden omvatten onder andere het digitaliseren van het verkoopproces en de professionalisering van hun supply chain management.

Hoewel we met deze studie al een eerste inzicht creëren in het effect van Covid-19 op familiebedrijven en hun supply chain, merken we in de interviews dat de crisis nog steeds een enorme impact heeft op de familiebedrijven. De ondernemers zijn nog dagdagelijks bezig om zich hieraan aan te passen. Dit heeft als gevolg dat er nog weinig kon gereflecteerd worden over het effect en de nodige aanpassing in het kader van hun lange-termijn strategie. Toekomstig onderzoek is daarom aangewezen.



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## 1. Introduction

Family firms are organizations dominantly controlled by a family, with the family having the aim to transfer the company across generations (Chua, Chrisman, & Sharma, 1999). They are the dominant form of businesses, create an estimated 70–90% of annual global gross domestic product (GDP) and 50–80% of job growth in the majority of countries worldwide (IFERA, 2003). Family firms represent about one-third of the Fortune 500 and Standard and Poor's 500 (Shleifer & Vishny, 1986), but the majority of these firms is small and medium-sized. Family businesses have specific strengths and weaknesses resulting from family involvement and control, that have an impact on their decision-making processes (Zellweger, 2017).

In creating value for their customers, the capability of family firms to efficiently manage their supply chain is of crucial importance (Jayaram, Dixit, & Motwani, 2014). A supply chain is a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer (Mentzer et al., 2001). Supply chain management refers to a set of beliefs that each firm in the supply chain directly and indirectly affects the performance of all the other supply chain members, as well as ultimately, overall supply chain performance (Cooper, Lambert, & Pagh, 1997). Even though only a limited amount of research has been done on supply chain management in family firms, authors claim that family firms behave and operate differently than non-family firms in their supply chain (Jayaram et al., 2014; Maloni, Hiatt, & Astrachan, 2017). Amongst others, Maloni et al. (2017) suggest that due to the family firms' goal of

socioemotional wealth (SEW) creation – referring to the total stock of affect that the family has vested in the firm (Gomez-Mejia et al., 2007) – these firms may be more apt to place less competent family members in strategic supply chain positions. This may potentially harm the supply chain professionalization process. On the other hand, these authors also suggest that family firms may benefit from the long-term relationships they build with their suppliers.

Due to Covid-19, the business environment family firms currently are operating in, has become more complex (Kraus et al., 2020). Supply chain management practices might be impacted by new realities such as closed borders, factory lockdowns and employees working from home. The combination of these factors could potentially endanger operational excellence in many family firms. According to Maloni et al. (2017) family firms make more use of single/sole sourcing. Single/sole sourcing is defined as fulfillment of all of an organization's needs for a particular purchase item from one vendor by choice (Treleven & Schweikhart, 1988). Family firms are more inclined to prefer this option because of the close relationships they typically want to develop with their suppliers. This might be a high-risk practice in this fast-changing business environment, as it makes the family firm completely dependent on the pricing strategies, the inventories, the schedules, technology and quality of one particular vendor (Treleven & Schweikhart, 1988). To remain competitive, family firms will have to implement change management tactics and fast learning to sustain their competitive advantage. However, Kotlar and Chrisman (2019) argue that "family firms' governance structures, distinctive resources, and particularly, their emphasis on non-

economic goals lead to a lower willingness to engage in organizational change” (p. 29). Moreover, learning practices of family members in the firm are previously described as uneven, nonlinear and unpredictable (Konopaski, Jack, & Hamilton, 2015). As no empirical evidence is available on the impact of the current Covid-19 crisis on the supply chain practices in family firms, the aim of this article is to investigate (1) how family firms have organized their supply chain, (2) how the Covid-19 crisis has impacted the family firm and its supply chain, (3) which changes these firms have made as a result of this external crisis, and (4) what they have learned or unlearned in their supply chain management strategy and relationships.

This article adopts a qualitative research approach to answer the research questions, as it aims to describe a social phenomenon from the inside (Gibbs, 2018). Moreover, extant theory does not adequately capture the complexity of supply chain management in family firms given the current uncertain economic environment. We will execute multiple case studies, as “case studies allow an in-depth investigation of a contemporary phenomenon within its real-life context” (De Massis & Kotlar, 2014, p. 16).

The paper will be structured as follows. In the literature review part, we first discuss the particular characteristics of family firms and review the literature on supply chain management in these businesses. Next, we describe earlier findings on change management and learning in a family firm context. Moreover, we describe our qualitative research project, the methodology used and our findings. We close with a discussion of the findings and recommendations for further research.

## **2. Literature review**

In this literature review we will subsequently discuss the particular characteristics of family firms and the potential impact of the family on supply chain management practices in the firm. Furthermore, we elaborate how a crisis situation may increase the necessity for change management, learning and unlearning in these businesses.

### **2.1 Family firm characteristics**

Family businesses are the dominant form of organizations worldwide (IFERA, 2003). In Belgium specifically, 77% of all companies with personnel are family firms. They account for 33% of the GDP (FBN Belgium, 2020). According to Zellweger (2017), three main approaches can be used to define family businesses. The first one, labelled the family involvement approach, specifies that companies need to meet specific ownership, management and control characteristics to be defined as a family firm. This approach assumes that the family should be able to have an impact on the strategic orientation of the company. Secondly, the essence approach considers the behavior of the people who control the firm (do they behave as a family firm or not), as well as the existence of a transgenerational vision for the business (Chua et al., 1999; Zellweger, 2017). The third approach, namely the identity approach, qualifies a firm as a family business when it defines itself as such. In other words, self-perception is the most important classification criteria (Zellweger, Nason, Nordqvist, & Brush, 2013). In this thesis we use a combination of the family involvement and identity approach as will be further explained in the methodology.

It is vital to recognize that family firms are different from non-family firms. Chrisman,

Sharma, Steier, and Chua (2013) suggest that these differences result from the nature of the goals followed, the governance systems enacted, and the resources available through family involvement. These aspects appear to lead to differences in behaviors and outcomes among family firms and between family and non-family firms (Chrisman et al., 2013).

The uniqueness of the goals in family firms can be explained by their focus on SEW (Gomez-Mejia et al., 2007). In the literature, SEW is mostly conceptualized by the FIBER dimensions proposed by Berrone, Cruz and Gomez-Mejia (2012). The "F" dimension refers to family control and influence. "I" stands for identification of the family members with the firm. "B" reflects the family firms' binding social ties. The "E" dimension emphasizes the emotional attachment of family members, while "R" specifies the importance of the renewal of family bonds through dynastic succession (Berrone et al., 2012). Nevertheless, much uncertainty still exists about the importance of each of the individual dimensions in the development of SEW (Swab, Sherlock, Markin, & Dibrell, 2020). Through an interpretive grounded theory approach, Murphy, Huybrechts, and Lambrechts (2019) uncovered that "SEW originates and is rooted in the early interactions between family members and the family business as they create a sense of belonging and identity with the business" (p. 397).

With regards to the governance system, SEW can result in a specific governance system that favors the deployment of family resources, a more conservative strategy and patient financial capital (Chrisman et al., 2013; Hoffman, Hoelscher, & Sorenson, 2006).

Finally, these specific SEW goals and the particular governance situation affect and are affected by the distinctive resources of the

family firm. As specified in the literature, familiness is an intangible resource, unique to family firms (Habbershon & Williams, 1999).

In the following section, we discuss how these specific family factors can affect the supply chain process in family firms.

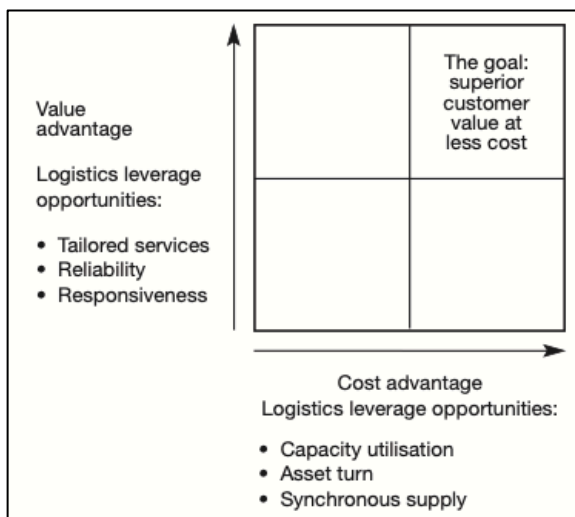
## 2.2 Supply chain management in family firms

### 2.2.1 Supply chain management

Supply chain management refers to "the management of upstream and downstream relationships with suppliers and customers in order to deliver superior customer value at less cost to the supply chain as a whole" (Christopher, 2017, p. 3). It includes purchasing and procurement, production planning and demand management, from point of origin to point of consumption. Its main aim is to achieve linkage and coordination between processes of different entities (suppliers/customers) in the pipeline and the organization itself. Logistics management is part of the supply chain management process and is related to creating a single plan for the flow of products and information throughout the business. As a result, its main focus is on transportation and distribution (Christopher, 2017). Mentzer et al. (2001) describe the upstream and downstream flows more in detail, as they relate it to products, services, finances, and/or information from a source to a customer. However, in this older definition, the emphasis was not explicitly focused on the cost advantages of supply chain management yet. Nevertheless, efficient and effective supply chain management practices are crucial, especially in today's fast changing business environment, as it can improve the overall performance of the firm and its competitive

advantage (Li, Ragu-Nathan, Ragu-Nathan, & Rao, 2006).

According to the literature, five strategic success factors exist in developing and implementing SCM strategies (Acharyulu and Shekbar, 2012; Monczka et al., 2015; Rao Tummala, Phillips, & Johnson, 2006). Building customer-supplier relationships, creating corporate culture, implementing information and communication technology, re-engineering resource flows and identifying performance measurements are identified as key aspects. In order to gain a competitive advantage, a firm needs to create value and cost advantages in its supply chain and logistic process (Christopher, 2017). Figure 1 illustrates how this can be achieved.



**Figure 1:** Gaining competitive advantage in supply chains

Opportunities for better capacity utilization, inventory reduction and closer integration with suppliers will create cost advantages for the company, while tailored services to clients, reliability and responsiveness will increase the firm's value advantages.

### 2.2.2 Supply chain management practices in family firms

Our literature search identified thirteen publications on supply chain management practices in family firms. Five articles provide a conceptual review and include a call for further research. Three articles are qualitative case-study projects, and four papers and a dissertation are quantitative studies. In five of these articles a comparison is made between supply chain management practices in family and non-family firms, while the other papers examine differences within family firms. In the following sections, we summarize the current knowledge on family firms' supply chain practices. Table 1 provides an overview of the studies discussed.

The most frequently discussed supply chain management topic, identified in six out of the eight articles, is the impact family characteristics will have on the development and management of supplier relationships. Magretta (1998) in her interview executed with Victor Fung, the chairman of Li & Fung, Hong Kong's largest export trading company, illustrates that family firm characteristics are able to bring additional value to the supply chain management process. Fung (Magretta, 1998) claims "in the information age, there is an impersonality that seems to say that all the old-world thoughts about relationships don't matter anymore" (p. 112). At Li & Fung, they have developed close and long-term relationships with their suppliers. The brothers claim that it makes a difference to suppliers when they know that you are dedicated to the business, that you have been honoring your commitments for 90 years. The same holds for clients, as through close attention to details, the brothers try to maintain their heritage of customer service. Although this company transformed from a traditional family business into a modern corporation, they have tried to preserve the best of what their father and grandfather had created. They also indicate

**Table 1:** Overview of supply chain studies in family firms (FF's)

Year	Author(s)	Method	Sample	SCM concepts
1998	Magretta	Case study	1 Hong Kong-based trading FF	Relationship management, SCM evolution, Digitalization
2010	Wooi & Zailani	Conceptual	-	Green supply chain initiatives
2011	Memili, Chrisman & Chua	Conceptual	-	Outsourcing
2013	Horgos	Conceptual	-	International procurement, Outsourcing
2014	Jayaram, Dixit & Motwani	Case study	6 Indian manufacturing family SME's	SCM capability, Performance, Information system capability
2014	Smith, Hair & Ferguson	Quantitative	125 US FF in the retail and services sector	Relationship commitment, Trust, Relationship value
2014	Stanley & McDowell	Quantitative	157 family and non-family suppliers of a US-based university	Interorganizational trust, Performance
2017	Maloni, Hiatt & Astrachan	Conceptual	-	Strategic purchasing and supply management, Sourcing strategy, Buyer-supplier relationships, Sustainability, Uncertainty/risk, E-procurement
2018	Gaumer & Shaffer	Conceptual	-	Supplier relations
2018	Núñez-Cacho, Molina-Moreno, Corpas-Iglesias & Cortés-García	Case study	1 Spanish food retailer	The circular economy model
2018	Rose	Quantitative dissertation	352 German FF	Relationship satisfaction, Relationship trust
2019	Pongelli, Calabrò & Basco	Quantitative	1180 European firms	International sourcing
2020	Hendayani & Febrianta	Quantitative	100 family halal food businesses in Indonesia	Supply chain process, Performance

that family life and the company's business spill over into each other. In the family they aim to preserve the intimacies that have been at the hearth of their most successful relationships.

The authors of the five other studies confirm that family firms value the development of a long-term relationship with their suppliers. Smith, Hair, and Ferguson (2014) examined the impact of the three concepts of the F-PEC scale: family power, experience and culture. The three F-PEC dimensions refer to the specific ways in which families influence their firms. Their findings reveal that family power positively relates to

supplier relationship commitment, while family experience and family culture positively affect relationship trust. Rose (2018) confirms that a higher degree of family influence results in more cooperative intentions with suppliers, resulting eventually in better customer-supplier relationships. Gaumer and Shaffer (2018) discuss that relationships with suppliers are important as a failure to nurture these relationships can increase costs. They warn however that in case of a succession, these relationships might be jeopardized and call for more research on this subject. While Maloni et al. (2017) also argue that family firms will develop stronger partnerships with

their suppliers than non-family firms, they indicate that this relationship might become even stronger if both parties in the relationship are family-owned businesses. At the same time, they specify that because of this focus on relationships, family firms are less likely to diversify their risk, resulting in more sole sourcing relationships.

Next to the family characteristics, Jayaram et al. (2014) conclude that additional behaviors might be needed to further support this relationship development process. The authors examine supply chain capabilities, which amongst else refer to operational excellence in strategic vendor partnerships. Their results illustrate that the family business owner's attitude towards growth positively influences her/his risk appetite, and this risk appetite has a positive effect on the firms' SCM capabilities. Secondly, the owner's optimistic attitude towards growth also positively relates to professional management in the family firm, which in its turn positively affects the firms' SCM capability. In other words, the more professionally managed family firms are, the better they are able to develop SCM capabilities.

The sourcing strategy of family firms is a second topic evaluated in the literature. All studies specify and/or empirically illustrate that family firms will outsource less than non-family firms (Horgos, 2013; Maloni et al., 2017; Memili, Chrisman, & Chua, 2011; Pongelli, Calabrò, & Basco, 2019). Especially in international markets, family firms engage less in external procurement (Horgos, 2013; Pongelli et al., 2019). Reasons for this behavior are said to be the risk-aversiveness of family firms, their resistance to change, their aversiveness to potential loss of SEW and transaction cost arguments. At the same time, Horgos (2013) claims that family firms might outsource more as a substitution effect of

foreign direct investments in international markets. Pongelli et al. (2019) further illustrate that family firms seem to be more successful than non-family firms if they do opt for the procurement of resources from foreign suppliers in a global context.

A third topic refers to the digitalization of processes in the supply chain. Magretta (1998) illustrates that the Fung brothers have become an information node, flipping information between 350 customers and 7500 suppliers. CEO Fung indicates in the interview that good supply chain management strips away time and costs from product delivery cycles; it is time sensitive and adds value for the customers. Therefore, management of the information streams is of vital importance. Jayaram et al. (2014) evaluated the information system (IS) capability of Indian family firms. IS capability refers to the use of interorganizational systems for information sharing and/or processing across organizational boundaries. The owner's risk appetite has a positive effect on the firms' IS capability. Maloni et al. (2017) do however expect that family firms will invest more in relational e-procurement applications than in competitive applications. A final and more recent study examines technology as a driver to improve the performance of family businesses' supply chain (Hendayani & Febrianta, 2020). Their results illustrate that technology positively influences certain supply chain components, such as guaranteeing the product's quality and the fulfillment of the customers' requirements. However, technology does not have a positive effect on the overall efficiency of the process.

Sustainability, another important topic within the family business literature, remains relatively underexplored within the context of family firm's supply chain process (Maloni et al., 2017). However, already in 2010, Wooi



and Zailani did discuss the potential advantages of green supply chain management (GSCM) for (family) SME's. GSCM "ranges from green purchasing to integrated supply chains flowing from supplier to manufacturer, to customer and reverse logistics, which is closing the loop" (p. 22). While Wooi and Zailani (2010) argued that due to family firms' risk-aversiveness, they might engage less in green supply chain initiatives, Maloni et al. (2017) argue that family firms are more likely to integrate sustainability in their supply chains than non-family firms. Starting from the SEW perspective, these authors motivate their proposition by referring to the need to protect the family name and reputation, family pride, social bonds with the community and a multigenerational legacy. The case study of Núñez-Cacho et al. (2018) supports the SEW argumentation with regards to the transitioning to a circular economy model in a Spanish family firm.

A final topic discussed in the literature is the topic of performance. Maloni et al. (2017) propose that the relationship between supply chain management and firm financial performance will be lower for family firms than non-family firms. Nevertheless, Magretta (1998) seems to specify that family firms' performance might be dependent on their behavior in the supply chain; she claims, "as companies focus on their core activities and outsource the rest, their success increasingly depends on their ability to control what happens in the value chain outside their own boundaries" (p. 103). The two Fung brothers in the case study significantly transformed their supply chain management system. From a first stage in which they were a regional sourcing agent, they became a manager and deliverer of manufacturing programs in a second stage. In the last stage, they broke up the value chain, which they labeled "dispersed

manufacturing". Jayaram et al. (2014) also discover that family owner-managers are cost conscious and aim to achieve operational excellence in resource utilization in the supply chain. Finally, Stanley and McDowell (2014) state that "two components of family firm social capital, namely organizational efficacy and interorganizational trust, positively influence firm performance" (p. 271).

To summarize, a large range of supply chain topics have been discussed in the family business literature. However, most of the research is of a conceptual or exploratory nature. Moreover, only the studies of Magretta (1998) and Núñez-Cacho et al. (2018) provide a more dynamic perspective on how SCM practices evolve over time. As in today's faster-paced markets, the focus of SCM has shifted to innovation, flexibility and speed (Magretta, 1998), family firms need to be able to adjust their supply chain processes to changing demands. In this paper we will shortly discuss the knowledge of change management in family firms. Furthermore, we will explore how a major disruptive event, namely the Covid-19 pandemic, might impact the supply chain of family firms.

### *2.2.3 Change management and potential Covid-19 implications*

Already in 1983, Beckhard and Dyer Jr. emphasized that the failure of many family firms could have been avoided "if owner/managers better understood the key issues involved in managing change and if they were better equipped with some change strategies to handle the process of adaptation and continuity more effectively" (p. 59). Resistance to change in these family firms resulted from resistance by strong founders having a traditional management style with a fixed set of values and visions for the firm

(Beckhard & Dyer Jr., 1983). More than twenty-five years later, research on organizational change in family firms remains underdeveloped (De Massis, Wang, & Chua, 2019; Kotlar & Chrisman, 2019; Vardaman, 2019). Nevertheless, Kotlar and Chrisman (2019) confirm the early findings, as they indicate that due to differences in goals, governance and resources, family firms might be less willing and able to change than non-family firms. De Massis et al. (2019) nuance this statement by emphasizing that family firms are a heterogeneous group of companies, so merely focusing on family influence might be insufficient to understand their change behaviors. Several authors suggest that the SEW perspective might add value in understanding change processes (Kammerlander & Ganter, 2015; Kotlar & Chrisman, 2019; Vardaman, 2019), as non-economic goals can stimulate and/or prevent change. For instance, the unique set of traditional beliefs and values of the family firm owner about the purpose of the firm might prevent the necessary changes that are needed to adapt to discontinuous technological changes (Kammerlander & Ganter, 2015). At the same time, the aim of transgenerational succession intentions might urge the family firm owner to embrace technological changes. Vardaman (2019) therefore suggests to further explore the idea of SEW conflict in understanding organizational change in family firms.

Currently, family firms are faced with dramatic changes brought about by Covid-19. The degree to which firms are affected relates mostly to the firms' sector (Kraus et al., 2020). In many companies, supply is thrown off course as firms were not prepared for disruptions in the supply chain. As a result, in several sectors firms had to shut down their operations (Kraus et al., 2020). With respect

to the supply chain, the following concerns need to be tackled in further research. First, in many sectors family businesses are confronted with financial upheavals and cash challenges (De Massis & Rondi, 2020). An interesting topic to examine is if due to family firms' strong relationships with their suppliers, more flexibility in payment terms are provided. Secondly, family firms' sourcing in an international market will face larger challenges than those that have developed more local relationships with suppliers. Despite strong relationships, international suppliers could become less reliable and cause disruptions in current manufacturing processes. De Massis and Rondi (2020) even wonder "if FBs' reliance on local value chains constitute a more sustainable model to be mirrored by non-FBs in the 'new normal'" (p. 1728). At the same time, in case of reliance on sole sourcing relationships (Maloni et al., 2017), the family firms' supply chain will be severely affected in case the supplier faces major problems. A third challenge, especially for smaller family firms, is the fact that work routines are changed and will force a culture of digitalization in the supply chain (De Massis & Rondi, 2020; Kraus et al., 2020). The question arises if smaller family firms are able to secure sufficient liquidity to make the necessary changes. Moreover, constraints might exist regarding the human capital able to embrace these digital solutions. This study aims to explore how family firms are changing supply chain processes due to Covid-19, and to develop knowledge on what they have learned from this crisis situation concerning the sustainability of their supply chain.

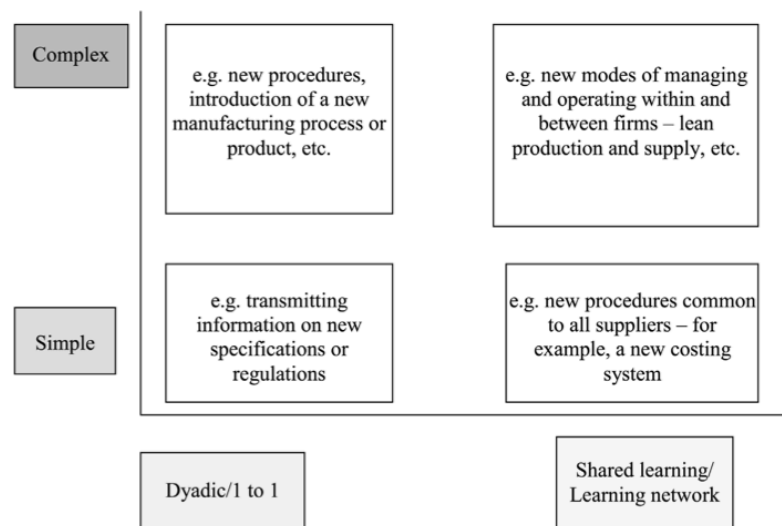
#### *2.2.4 Learning in family firms' supply chain*

Learning refers to "an ongoing process through which knowledge is acquired and

generated” and “through this process changes in behaviors are apparent and can be observed” (Konopaski et al., 2015, p. 349). In this paper, we start from a situated-learning perspective which specifies that learning is socially constructed, or socially situated in everyday practice (Konopaski et al., 2015). Within this stream of literature, a distinction can be made between intra- and interorganizational learning (Holmqvist, 2003a, 2003b). Intraorganizational learning examines the way individuals learn from each other in organized settings, while interorganizational learning mainly concentrates on studying the requirements for successful learning between organizations (Holmqvist, 2003b; Lambrechts et al., 2012)

While some knowledge has been developed on learning in family firms and learning in supply chains, we did not find any study that combines both topics. The learning in family business literature is mainly focused on intraorganizational learning and how different family members learn about the business and its continuity (Hamilton, 2011; Konopaski et al., 2015). The ability of a family firm to become a learning organization has been claimed to depend on the following four levers: (1) creating a learning orientation in the organization, (2) developing learning relationships and practices, (3) stimulating leadership that supports learning and (4) setting up governance mechanisms that enhance learning (Voordeckers & Lambrechts, 2010). Within the supply chain literature, interorganizational learning is the dominant topic as the aim is to upgrade and transfer supply chain practices among the partners involved (Spekman, Spear, & Kamauff, 2002; Bessant, Kaplinsky, & Lamming, 2003). As currently supply chains consist of a constellation of collaborating partners contributing value to the relationship,

Lambrechts et al. (2012) argue that the aim should be to move to the analysis of reconstructive learning. Building on Friedlander (1983), they define reconstructive learning as “an in-depth confrontation of old patterns and the development of radically different new ones. It suggests the construction of new goals, policies, norms, styles rather than simple modification of the old” (p. 628). As illustrated in figure 2, these modifications can range from simple transitions in dyadic relationships to complex changes in large learning networks (Bessant et al., 2003).



**Figure 2:** Different learning types and modes in supply chains

A closely related concept to reconstructive learning is unlearning. In the case of Covid-19, the concept of unlearning may become more important, as it is defined as intentionally discarding obsolete experiences and giving the organization the chance to experience situations in a fresh way (Holmqvist, 2003b). In comparison to reconstructive learning, “unlearning is not part of an internally generated plan to act intelligently in order to sustain variety; rather it is the result of external shocks that cannot be fully controlled” (Holmqvist, 2003b, p. 462). Unlearning is associated with problem-

triggered situations and is examined especially when organizations face crises or environmental turbulence (Brook, Pedler, Abbott, & Burgoyne, 2016). As a consequence of these problems, new routines, roles and standard operating procedures need to be learned in interorganizational partnerships.

The literature on unlearning distinguishes between open-ended and goal-directed unlearning (Grisold, Klammer, & Kragulj, 2020). Goal-directed unlearning assumes that an organization knows the desired end-state of the new knowledge structures that should be implemented. During external crisis situations, open-ended unlearning will be more important, as organizations cannot set clear and explicit outcomes or goals for the process. They are still searching for new opportunities that may arise for the organization (Grisold et al., 2020). For actors in the organization, this might imply that they have to engage in wiping and/or deep unlearning. Wiping implies discarding behavioral patterns. It requires that a person makes deliberate attempts to give up a particular way of thinking and acting. Deep unlearning occurs when people have to change deeply held assumptions and beliefs (Hislop, Bosley, Coombs, & Holland, 2014).

Building on the insights of the literature, the aim of this article is to investigate (1) how family firms have organized their supply chain, (2) how the Covid-19 crisis has impacted the family firm and its supply chain, (3) which changes these firms have made as a result of this external crisis, and (4) what they have learned or unlearned in their supply chain management strategy and relationships.

### **3. Methodology**

In this study, we opted for an explorative research approach, as the literature on supply

chain practices in family firms is still in an early stage of development. Moreover, as specified by Kraus et al. (2020), "the nature and scope of this pandemic as a specific type of crisis are unprecedented. This means that a qualitative methodology is required that can extend existing theory" (p. 1074).

#### **3.1 Sampling**

Case study research is an appropriate method to generate or extend theory as it provides insight by collecting primary data (Westhead and Howorth, 2006). In the case study method "cases are selected because they are particularly suitable for illuminating a phenomenon and for extending relationships and logic among variables" (De Massis, & Kotlar, 2014, p. 17). Therefore, we employ a theoretical sampling technique in which we interview key informants.

In a first stage, we collected data from two experts in the field of family firms and supply chain management. Expert A is the editor-in-chief of a Dutch industry journal focused on cooperation and outsourcing in the supply chain. He has written several articles on family firms. Expert B is the head of procurement and supply chain at a large international consultancy company. In these interviews, our aim was to gain insights in the changes they perceive to have taken place in the supply chain of family firms due to the Covid-19 situation. The information gathered in these interviews is used as an input for the development of a semi-structured questionnaire that is used to explore supply chain changes in family firms.

In a second stage, eleven family firm managers were contacted to be interviewed about the potential changes in their supply chain due to Covid-19. Of these family firms, two persons did not react, one person had

recently sold her company and one person agreed to participate but declined after having received the survey. As a result, seven cases are included in the analysis. The family firms contacted were all majority owned by a family, and the family was also active in the management of the company. As the aim of this research is to explore relationships among family variables and changes in the supply chain management processes, we primarily selected family firm cases who had international supply partners. Our assumption is that these family firms had to adjust their processes more than firms who have a local sourcing policy. This multiple case-study approach provided us with a stronger base for theory building and explanation (De Massis, & Kotlar, 2014). Moreover, it results in a more robust research approach with more generalizable findings than a single case-study (Yin, 2003).

In both stages of the explorative analysis we used interviews as the primary data source for our case studies. Interviews are "a targeted, insightful and highly efficient means by which to collect rich, empirical data, especially when the phenomenon of interest is highly episodic and uncommon" (De Massis, & Kotlar, 2014, p. 19). Although we realize that interviews can have limitations due to poorly articulated questions, response or personal interpretation bias (De Massis, & Kotlar, 2014), the short-term nature of this research project and the limited availability of our family firm respondents do not allow us to do direct observations or to interview multiple respondents within all companies to overcome these biases.

### 3.2 Data analysis

The interviews were recorded and fully transcribed. For the empirical analysis we used

an iterative process of reading, coding and interpretation. An open coding procedure was used (Corbin, & Strauss, 2014) to examine how family firms' supply chain was affected by Covid-19, what was changed and how family firms had to unlearn common supply chain practices. The within case data analysis resulted in common themes that emerged from the data. Afterwards, a cross-case comparison supported us in the process of deriving final conclusions. These structured data collection and analysis procedures helped us to enhance the reliability of our research approach.

## 4. Results

First, we discuss the findings resulting from the expert interviews and specify how their conclusions have affected the interviews with the family firms. Next, we elaborate on the results from the family firm cases.

### 4.1 Expert interviews

To gather information on the impact of Covid-19 on the supply chain of family firms, we contacted both a family firm and a supply chain expert. However, the family firm expert referred us to expert B, the head of supply chain in the consultancy firm. He confirmed that also in practice very little specific knowledge is available on supply chain management practices in family firms.

Expert A and B both described how the supply chain of family firms can differ from the one of non-family firms. Expert B suggested that family firms would operate more in a hands-on way; he described their supply chain processes as less organized and less formalized. He also expected that family firms would work more 'lean' than non-family firms. Expert A related the differences more to the

type of relationships family firms would engage in. He expected family firms to cooperate more with other family firms as they would illustrate more mutual trust. Furthermore, he described the importance of emotions in family firms' decision process. In their purchasing decision, he expected them to focus a bit less on price and rationality and more on feelings and emotions.

In evaluating the more specific characteristics of supply chains in family firms as suggested in the literature, the experts did not always agree. While expert A specified that family firms have the ability to do more in-house and outsource less, he noticed the trend towards more outsourcing during the past twenty years. Coming to an overall conclusion on differences in the supply chain of family firms was perceived as difficult, as there might be differences based on the industry the family firm is operating in. Expert B concluded that family firms have less experience with outsourcing and therefore do more activities in-house. If, however, they decide to outsource, they will select partners more closely situated to their own location. Both experts agree that family firms develop long-term relationships with their supply chain partners. They develop mutually beneficial relationships that go beyond the practices in non-family firms. Improving quality is more important than price. At the same time innovation remains an important aim. Besides, both experts acknowledge that the supply chain process in family firms might be more vulnerable due to single sourcing practices. Expert B suggests that due to the trust-based relationships, family firms do not skim the market. Instead, they often consult colleagues to check for references related to a certain supplier. They often do not have a back-up supplier. While expert A agrees that family firms prefer the freedom of single sourcing, for

standard components he also notices that they work with several suppliers. Single sourcing might also be related to the size and the level of professionalization of the family firm. Expert B believes that the supply chain practices of family firms are less automated. Contrary to what has been suggested in the literature, both experts have doubts on the fact that sustainability would be better integrated in the supply chain practices of family firms in comparison to the one of non-family firms. A remarkable finding is also the contradicting conclusion of both experts on the resilience of family firms' supply chain processes. Expert A suggest that they are more vulnerable due to their single sourcing practices and their more internal orientation, while expert B perceives family firms as having more patient capital – the capacity to invest in long-run return opportunities rather than to focus on quarterly return requirements (Dreux, 1990) - to survive external shocks.

With regards to the Covid-19 crisis, we checked if the experts noticed that family firms had to adjust their supply chain practices. In first instance, they discussed issues that affected all companies. Especially in spring 2020, many companies suffered from stock-outs due to suppliers not being able to deliver. Therefore, firms increased their stocks. For scarce products, such as steel momentarily, expert A was informed that ordering small quantities at a higher price was not a problem. However, ordering large quantities was not an option. For some sectors, such as retailers in the cycling industry, the stock deficiency coincided with a rise in customer demand. In the electronics, automotive and pharma sector, many of the suppliers were situated in Asia, which resulted in logistic problems due to the lockdown in multiple countries. Some machine suppliers couldn't ship the ordered products to their customers, while others

couldn't deliver the necessary services to install the machine on-site. Secondly, with regards to the business implications, expert A indicates that some family firms did not experience any negative results from the Covid-19 crisis and continued on their growth path. Others are heavily impacted in a negative way. Both experts discuss that the firms that relied on single sourcing had to quickly find a second source of supply. Expert A also noticed that this often resulted in higher prices, a loss of time and higher lead times.

Finally, we also discussed the learning outcomes of family firms with regards to their supply chain practices. Both experts propose that family firms have learned to safeguard their stock levels by moving away from single sourcing. Although both our respondents also noticed some anxiety and doubts about sourcing in remote low-cost countries such as China, expert A doubts if they have unlearned doing so. If family firms have developed a close relationship with a supplier in China that is delivering high-quality products, making a change to a supplier in the eastern part of Europe, is not that easy. Sometimes it is also not possible, for instance for electronic components that are mainly produced in Asia. According to the expert, price arguments remain a high priority when making sourcing decisions. Expert B hopes that family firms have realized how uncertainty in their markets and supply chains demands for more proactiveness and flexibility. Further automatization might help them in achieving this result.

These interviews helped us to prepare the interviews with the family firms. We focus both on potential down- and upsides caused by the Covid-19 crisis and the impact this has had on the family firms' supply chain process. Moreover, single sourcing resulting in disruptions in stock and increased prices due

to last-minute purchases seem to have impacted the overall performance of family firms during the current crisis. In the interviews with family firm owners and/or heads of procurement, we will further evaluate these findings.

## 4.2 Family firm interviews

### 4.2.1 Case descriptions

In our sample, four family businesses are Belgian retailers in the clothing, shoes or wellness sector. Three other companies are Dutch machine manufacturers. Following the EU definition on the number of employees, two companies are small (<50 employees), one is medium sized (50 to 249 employees) and the four other companies are large businesses (>250 employees) (EU, 2012). Most of these companies have a growth ambition. The majority of the retailers is active in Belgium and/or the Netherlands, while the other companies have a European or a worldwide market focus. Our cases represent a variety of family generations, including first until fourth generation family businesses. Five out of seven companies are managed by a family CEO, while the other two companies are run by non-family CEO's. Three of the interviewees were females. The companies' family values clearly indicate the people orientation of these family firms. Table 2 provides a detailed overview of the family business cases included in our sample.

The company environment in which the machine manufacturers operate differs from the one of the retailers. Company B emphasized that speed of delivery was crucial to realize a competitive advantage. Company A experienced an increasing demand for servitization; not only the delivery of machines but also the services provided to the customer

**Table 2:** Case description

<b>Case</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>
<b>Founding date of the business</b>	1977	1891	1919	1985	1975	1922	1925
<b>Strategic goal</b>	Further development & Professionalize	Growth (20% per year)	Grow	Grow & Professionalize	Confidential information	Grow	Transformation
<b>Sector</b>	Manufacturer of machinery (B2B)	Manufacturer of machinery (B2B & B2C)	Retailer in clothing industry (B2B & B2C)	Retailer in wellness (B2C)	Retailer in clothing industry (B2C)	Manufacturer of machinery (B2B)	Retailer in shoes industry (B2C)
<b>Employees</b>	40	800	1650	40	1600	70	1500
<b>% Family ownership</b>	>50%	>50%	>50%	>50%	>50%	>50%	100%
<b>Family generation</b>	2 <sup>nd</sup>	4 <sup>th</sup>	3 <sup>th</sup>	1 <sup>th</sup> & 2 <sup>nd</sup>	2 <sup>nd</sup>	4 <sup>th</sup>	3 <sup>th</sup>
<b>Type of CEO</b>	Non-Family	Family	Non-Family	Family	Family	Family	Family
<b>Transgenerational succession intention (TGSi)</b>	Unclear Children too young	Unclear Children too young	Yes But management by external CEO	Transfer in process from 1 <sup>th</sup> to 2 <sup>nd</sup> generation	Confidential information	Yes But children still too young	Yes Preparing transfer to 4 <sup>th</sup> generation
<b>Family values</b>	Loyalty, Customer and employee satisfaction, Shareholder value is not the main goal	Positive impact on employees and environment, Quality, Reusability, Innovation	Ambition, Respect, Passion, Entrepreneurial	People focus, Growth, Collegiality, Participative, Cooperative	Family focus, Continuity	People focus	Connection, Respect, Responsibility, Fun
<b>Position and gender of the interviewee(s)</b>	Male non-family CEO	Male family COO & Male non-family purchase manager	Male family Chairman of the Board	Female family Assistant Managing Director	Female non-family supplier specialist	Male family Managing Director	Female family CEO



are of crucial importance in the sales process. Moreover, this smaller company experienced aggressive purchasing behavior of its clients. Therefore, being an expert in its market and continuous innovation are of major importance to survive. The retailers also perceived increasing market pressure. Company E indicated that customers demand high quality for low prices. Also, company B experienced that professionalization of the company was required to enable further growth. Digitalization is another challenge for these companies.

#### *4.2.2 Supply chain management*

In this section we discuss the characteristics of family firms' supply chain. A summary of the characteristics and the respective quotes of our interviewees are presented in table 3.

##### *4.2.2.1 Level of professionalization*

The interviewees (I) of the case companies illustrate that they have different views of what supply chain management entails. Some companies solely relate supply chain management to purchasing, while others have no supply chain managers. In other companies, such as company G, supply chain management practices are more advanced. I<sub>G</sub> (interviewee of company G) specifies that the divisions purchasing, logistics, finance and merchandising are all important actors in the supply chain. Next to these different views, the level of education of the managers involved in parts of the supply chain process differs. Many of the current managers have grown into purchasing or logistics functions based on their work experience in the company. Others have university degrees, but without a specialization in supply chain management. Nevertheless, the family COO of company B acknowledged that "my firm would

not have been able to grow as much as it did in the past years without the changes made by my purchasing manager". Although this manager was only hired three years ago, the family already sees the positive impact of the changes he made. This senior manager graduated from a specific purchasing post-graduate education program and could build on past work experience in other companies.

With regards to family involvement, family members often take up an important role in the purchasing process. For instance, in company E, one of the family owners is the chief buying officer. I<sub>G</sub> yearly visits the suppliers to negotiate volumes and prices, but also to check the labor conditions of these supplying companies.

##### *4.2.2.2 Supplier location*

The location of the suppliers differs according to the sector our cases companies are active in. The manufacturing companies mainly source within Europe. Company B and F also purchase a small part in Asia. The wellness retailer is dependent on suppliers from the US for its high-quality products, and from China for its standard products. Finally, the retailers in the clothing and shoes industry source from Asian countries such as China, Bangladesh, India, as well as Turkey and to a lesser extent from European countries.

##### *4.2.2.3 Selection criteria for suppliers and logistic partners*

During the interviews, we asked our respondents to indicate the main criteria they used to select a supplier or a logistic partner. Table 4 displays the results of our coding process for this specific topic.

The most important selection aspect for all family firms was the level of professionalism of the partner. Next to the quality of the supplied goods or services, we

**Table 3:** Characteristics of family firms' supply chain process

Characteristics	Quotes
Level of professionalization	<p>"We are an old-fashioned company, so the word supply chain is not used. I just call it purchasing." (F)</p> <p>"We don't really have a defined supply chain and we don't have a supply chain manager. Our activities are divided over the purchasing and logistics divisions, and we are currently working on better connecting both divisions." (E)</p>
Supplier location	<p>"Here in Belgium, there is no producer. It all comes from the US or from China." (D)</p> <p>"We depend on foreign suppliers. Actually, all our components and semi-finished products come from foreign countries. A lot of it comes from Italy. Also, quite a bit from Austria, Germany, ..." (F)</p> <p>"We have a fair number of synthetic shoes. Of those, the production is mostly in China. In Europe, you don't really have those. For the leather, we already have quite a few European suppliers." (G)</p>
Partnerships	<p>"We have few suppliers where we say, well if tomorrow the competitor is ten percent cheaper, we'll go there. No, we don't." (F)</p> <p>"We need products of high quality and custom work after all, so it's also complicated to switch to another supplier. So preferably for as long as possible. It is certainly not strange for us to have relationships of ten to thirty years." (F)</p>
Single sourcing	<p>"In fact, single sourcing happens often, we're bound by it because you work with certain exclusivity... You may know our article X. That's a product that has been in collection for twenty-five years. We always market that in different colors, so that's a fabric that comes from company Y. This supplier has an exclusivity on that, that print is his property. So, I can't have it made anywhere else. I'm bound by that. That's a very uncomfortable position." (C)</p> <p>"Yes absolutely. In the US we only have one supplier for our product." (D)</p>
Outsourcing	<p>"All the turning, milling, cabinetry, sheet-metal work, we outsource those and we prefer to outsource those here in the area." (A)</p>
Sustainability	<p>"All the pieces of our product can be recycled. The product gets a second, third, fourth life because it is so good in quality. This really puts us ahead of our competitors. Fortunately, that is also noticed by different stakeholders. We have already won several awards. We are really proud of it. We try to think green. Packaging, for example, used to be made of foam and adhesive tape and now we are converting it to 100% recyclable cardboard." (B)</p> <p>"We invest too little when it comes to environment and so on" (C)</p> <p>"I can't say that we are the greenest company...it's not the highest priority here in the company" (D)</p> <p>"For example, we developed a trailer, one of our employees took the initiative for that, which actually allows us to transport two products instead of one. Normally you have a van, a trailer and the product. So now we have a van, a trailer and two products. That's an example of sustainability and cost savings." (D)</p>

**Table 4:** Importance of selection criteria for suppliers and logistic partners

Selection criteria	Case results	Quotes
1. Level of professionalism of the supplier	Flexibility (A) Technical competencies (B) Creativity, quality, flexibility (C) Professionalism, volume, service level, marketing support, response time (D) Supply time, quality (F) Quality, correctness in delivery (volume and timing) (G)	"Projects are often under time pressure. So, we like to have suppliers who can adapt to that." (A)  "The fast response time to questions, emails, phone calls, that really does make a difference. I've also had some less-than-perfect experiences, for example, where you ask something and there is no reply. We have then already sold the product to the customer and we then have to make up for it." (D)
2. Type of relationship	Strategic fit (preference for family business), mutual importance, long-term cooperation (B) Long-term relationship, trust, open and honest communication (E) Similarity (F) Trustworthiness (G)	"As we look for strategic fit, we have a preference for family business suppliers". (B)  "I do think that in family business the values or the mindset is slightly different. If you are a family business you are automatically going to have longer relationships and better contacts with suppliers. You're just going to find that more important". (E)  "We don't necessarily select for family businesses, but we still very often end up with companies that look a bit like ours. I would rather buy something from a family business, or just a small one, than from a subsidiary of a multinational with a thousand employees. Partly because I favor those companies more. That's a very important one. If there is little difference in price, we always choose family firms. It's also much easier to do business with companies where you can talk to the owner". (F)
3. Financial parameters	Price when quality of suppliers is the same (A) Financial stability, transparency in cost structure (B) Price (C) Price (F)	"You also want them to be financially stable because otherwise you're running gigantic risks with that as well." (B)  "In order of importance, I would say creativity, quality, flexibility, price, that's about it." (C)
4. Sustainability & labor conditions	Social label, no child labor, safe work environment (C) CSR trajectory at the supplier (E) Sustainability (G)	"We will never work with a supplier if they have not gone through a CSR trajectory. We also work together with a number of partners, such as the Fair Wear Foundation, with whom we actually do these audits. Checking whether the working conditions are appropriate, are the employees paid enough, etc." (E)

also noticed that time-related aspects are crucial for our respondents. Flexibility, service level and reliable lead times are vital to meet client demands and to remain competitive.

Secondly, several interviewees emphasized relationship-related criteria. When looking for new suppliers, similarity or strategic fit was perceived as critical. The family businesses prefer to build long-term relationships in which partners are mutually dependent. In these relationships, trustworthiness should prevail as well as open and honest communication. Although not a specific selection criterion, our interviewees discuss that the emphasis given to these relationship aspects often result in cooperation with other family businesses. According to the majority of our respondents, this focus on relationship aspects in the selection process is what distinguishes family firms from non-family firms. I<sub>G</sub> stipulates "...what you have in a family business is that it's just a little bit more personal, it's just a little bit more amiable, it's a little bit less formal. I<sub>B</sub> indicates "There is a slightly different focus. The loyalty is very much alive. Everyone feels that here. It's more focused on long-term and continuity". However, the Chairman of the Board of company C believes that "A professionally run family business is no different, in terms of supply chain, from any other business". Although his suppliers are also mainly small family businesses, this is not something the company opted for but rather resulted from the fact that the number of suppliers for his products are limited. Despite this statement, this respondent also emphasizes the high mutual dependence with his suppliers and the open conversations they have in difficult times. Moreover, this company outsources fifty percent of its production to a Chinese company in which they participate in the ownership. He states: "That relationship

with the Chinese company is incredibly important and we really have a privileged relationship with it. I myself am a director in that company. To put it in perspective, I've always been in contact with the founder, that man is ten years older than me and he has three sons in that company. Those sons call me: uncle. Yes uncle! Just to point out how that relationship is. We have a premium position there and they do a lot for us".

In third instance, financial criteria were stipulated. If price was specified as a selection criterion, it most definitely did not end up in the first place. Next to price, the financial situation of potential suppliers was also considered.

Finally, specifically in the clothing and shoes sector, companies specified the importance of sustainability and labor conditions. I<sub>C</sub> claims "We have had a social label for twenty years. We have an S8000 label, which has to do with social standards. So, we decided very quickly to go for such a social label. That means that you have to comply with certain standards: no child labor, safe working environment, respect for minimum working hours, a living wage. Many companies have a social charter. But there are very few companies that also have this audited and thus obtain a label. Based on the visit of an auditor, an external person, his audit, you get that label".

#### *4.2.2.4 Long-term partnerships*

All case companies do develop long-term partnerships with their suppliers. As illustrated in table 3, these long-term relationships demand time and energy but are of major importance to safeguard the quality and supply of strategic materials and components. I<sub>E</sub> specifies "I would even dare to say that 95% of our suppliers or partners in terms of transportation/logistics, are long-term. That

also works. I think that's also one of our strengths”.

The long-term partnerships do not only add value to the family businesses, but also to their partners. I<sub>A</sub> illustrates this as follows “A number of our suppliers are really our partners. We develop things together with them. These larger suppliers are also keen to provide some added value. They don't just do that, of course. That way they are guaranteed that we will buy their components”.

#### *4.2.2.5 Single sourcing*

Single sourcing is a practice that is used in all our family firm cases. Only I<sub>G</sub> specifies “It is sometimes tempting to place all your orders with a good supplier but that is actually prohibited in our company. Because if that supplier drops out for any reason, then we have a problem. We always try to spread our risk in that respect”. At the same time, she confesses that they also single source, as “we don't always have lots of options for specialized products. Moreover, we don't want a whole list of suppliers either, because then you just lose out on efficiency. That's not good for the cooperation”. The retailers in the clothing industry are also very dependent on single sourcing relationships.

Nevertheless, I<sub>E</sub> also points to the positive effects of single sourcing, by placing a larger order at the same supplier, efficiency and quality can be improved. In the manufacturing industry, I<sub>F</sub> indicates that dual sourcing is rather difficult for customized products. I<sub>B</sub> specifies that they have the intention to opt for dual sourcing, but that a long development process is needed before a new supplier can be contracted.

#### *4.2.2.6 Outsourcing*

With regards to the outsourcing practices, a lot of heterogeneity exists between the firms, and

this even within a specific sector. Two out of three machine manufacturers outsource a significant part of the production. I<sub>B</sub> explains “We used to do everything ourselves but we are outsourcing more and more. Because that is not our core business. Our partners can do some activities much better, faster and cheaper than we can do it ourselves. All those activities were simply getting in the way of our growth. We really noticed that. So, from that point of view, we started buying more. That make or buy decision, we look at it very carefully. The outsourcing share is just getting bigger. So, we have to approach that professionally with clear agreements”. The third smaller manufacturer only outsources ten to fifteen percent of its production to keep its processes flexible. The outsourcing partners are mainly local or European companies. I<sub>F</sub> illustrates that when making this decision, they also consider their added value to the local environment: “We often outsource very easy activities to workplaces for people with disabilities. We think that's important too. We also want to be good to the environment, especially the local environment”.

Both clothing retailers also differ in their outsourcing behavior. Whereas company E prefers to keep most business activities in-house. Company C outsources production to China and Tunisia. However, to safeguard quality the family is a (co-)owner of these companies.

#### *4.2.2.7 Sustainability*

While six out of seven companies recognize the importance of environmental sustainability practices, only companies B and E have fully integrated sustainable processes in their supply chain. I<sub>E</sub>, a supply chain specialist, indicates “...with regard to the sustainability of the clothing, we are trying to work more with

recycled materials or organic cotton. That is the future, by the way. As a Belgian company, we are a pioneer in this field; we have been working on it for ten years". This company also integrated recycling boxes for clothing in their stores. Yarn is afterwards made from the recycled materials. Moreover, they organize the transport of their products by boat or rail to reduce CO2 emissions. By auditing their suppliers, they also try to make them greener, for instance by stimulating them to reduce the water consumption.

Surprisingly, several of our respondents were very open and honest about the fact that they were not doing enough yet. I<sub>F</sub> states "In terms of sustainability, we are not the most environmentally conscious family in the Netherlands. I say it a bit reluctantly. We're not, but we're also not working on it every day". While company F realizes that sustainability becomes more important every day, the family CEO of this small company indicates that they have less resources available than multinationals. Moreover, he perceives that clients are not willing to pay more for sustainable products. Customers don't think in lifetime cost of machinery and as a manufacturer this seems very difficult to explain. Also, I<sub>G</sub> expresses "We have a couple of sustainable brands that are a bit more expensive. That doesn't sell at all".

All family firms try to accelerate with regards to this topic. Therefore, company C has hired an additional manager to focus on this subject. Company F has placed solar panels and beehives on the rooftop of their new building. Company G is repositioning its brand to offer more sustainable products. Several companies try to combine sustainability with efficiency and cost advantages. I<sub>G</sub> expresses "A very funny example actually. You know that in shoes there are always paper props included. A year

ago, we started asking ourselves why do we do that? Everyone does it, the whole world. We need to take them out and that's a lot of work for our employees in stores. A large part of our business is self-service, so we have to remove the paper props because otherwise they would be all over the store when people start trying on the shoes. But those are tons of paper that are saved. It's one of those little things".

#### *4.2.3 Impact Covid-19 crisis*

##### *4.2.3.1 General impact on the family firm*

Table 5 specifies the different consequences of the Covid-19 crisis on the family firm in general. The most negative impact of the crisis was on the company's performance. This was experienced especially by the clothing and shoes retailers. In multiple countries, stores were closed during the different lockdown periods, and major sales declines were reported. I<sub>G</sub> confessed "The impact is huge on all levels; on a financial level of course, we have lost a lot of sales. That makes it very challenging at the moment. So, corona has been very drastic. Everybody is tired, everybody is tired of it. You have to dig deep to find the courage to continue". Also, machine manufacturers A and F experienced lower sales volumes. I<sub>A</sub> stipulates "The impact has been that for the first two months of last year's lockdown, we had zero contracts coming in. Both in our company and at the clients, people started working from home. Projects were postponed". Currently, for both companies, the international travel restrictions still hinder the normal acquisition process of new customers.

Nevertheless, two of our case companies, B and D, did experience a growth in sales. Although company B experienced a six-week decline in sales at the start of the pandemic, afterwards the demand for their

**Table 5:** Impact of the Covid-19 crisis on the company

Impact on:	Quotes
Company performance	<p>“It has an enormous impact because we realize 90% of our sales with store owners. If you know that the stores today in the Netherlands, Germany, France, America, England, are all closed. Yeah sorry, they do not want to receive goods. They do try to sell something via the Internet, but that can never compensate for what goes through the store. So, we're suffering, yes. We realized 20% less sales in 2020 compared to 2019. We had hoped that 2021 would be better, but it is possible that the stores will be closing again and that is a disaster for us.” (C)</p> <p>“What we've seen in particular is that large customers have scaled back their purchases. That was the biggest obstacle. All the big customers suddenly dropped orders by twenty percent. Finding new customers was also difficult, as I said we do this through fairs.” (F)</p> <p>“We are one of the companies that got a gigantic boost from corona, in the sense that we really don't know what happened to us. A lot of people were unable to go on vacation last year and actually started thinking about how they could take a vacation at home. So there has been a gigantic increase in demand for our product, in the sense that we also had absolutely not enough items to keep up with that demand. We are currently in a situation where certain models, it is now March, are sold out for this year. We were normally a company that invested heavily in marketing, but this year we have completely cut all of our marketing budgets because it's just not necessary anymore.” (D)</p>
Digital strategy	<p>“An advantage was that our web shop, which had already improved in recent years, really went times three during the corona crisis. We hope, of course, that we can keep it that way. I think we would also have taken those steps without corona, but perhaps at a slightly slower pace than now.” (E)</p>
Working conditions	<p>“As a company, we are quite progressive when it comes to personnel and social policies. We like to think along with our employees. That's actually a very positive side effect. We have designed a home working arrangement. Everyone with us has been given a budget for a desk, a chair, monitor, ... also a homework allowance for each day they are at home. So that's positive. The thing that's negative is, on the one hand, that video calling. Of course, that's convenient and we've gained a lot of experience. Meanwhile people are used to consult each other in this way. The downside is that, for certain consultations, it can be good to be able to look each other deeply in the eye. You can't read the body posture anymore. You do miss that.” (A)</p> <p>“It's nice to notice that meetings are easier to plan online. You don't have to be at the office. Nevertheless, it is sometimes better to be able to look someone in the eye. But working from home makes it a bit more flexible, which is nice. On the other hand, you also hear from people who liked being able to work at home now and then, that they miss coming to the office. Especially our sales people, visiting foreign countries, they miss it. Sales-wise it is quite difficult because we did a lot through fairs. So, there is quite an impact.” (F)</p>

product more than recovered. This six-week decline also came at the perfect moment for this company as they could catch up with a backlog of orders. I<sub>B</sub> explains “We were able to make a virtue of a necessity. We pulled our backlog of orders forward so we could continue the production process, and clear the backlog. That all came together very well. The moment that backlog was gone, the lockdown in Spain and Italy was over and orders were coming back in. So, we came through pretty well. Really an advantage that we were able to clear

the backlog of the Netherlands. After that, we didn't have to deal with it anymore. We also had a very nice growth last year”. Finally, company D benefited a lot from the fact that customers weren't able to go on holiday and therefore invested more in a holiday at home effect.

Next to the negative or positive impact on the financial results, some other positive effects have been mentioned during the interviews. Especially, the clothing and shoes retailers have been able to accelerate their

digital strategy. I<sub>C</sub> indicates "You do develop that digital strategy faster. That's for sure. We were already working on that but now we are focused on it". Besides, respondents in all sectors realize that due to online meetings, they have become more efficient and flexible. Company A furthermore explains that Covid-19 has stimulated them to further develop their social personnel policy. Once the work at home measures had to be implemented, personnel did get access to a budget to buy office equipment. Moreover, they all received a working at home allowance.

#### 4.2.3.2 Impact on the supply chain

When studying the impact of Covid-19 on the supply chain process, we evaluated the effect on the purchasing process, transportation, warehousing and delivery to clients. The results are illustrated in table 6.

With regards to purchasing and transportation, only company C experienced limited problems due to Covid-19. Company C benefited from their policy to source from multiple suppliers, situated in different countries. Nevertheless, they noticed an augmented risk that some of their suppliers could go bankrupt.

Although the suppliers of the other companies are situated in Asia, Europe and the United States, all interviewees experienced major supply problems. These problems could be due to the fact that China is an important supplier for the retailers, and Italy for the machine manufacturers. Both countries were amongst the first to be seriously affected by the crisis. Especially for company D, which faces a growing demand for its products, this is a challenge. I<sub>D</sub> explains "The suppliers can't keep up with our demand at all. This works on an allocation basis. Say, we said we want to order a hundred products, they say we will only get eighty and the rest is for 2022. So,

we have to work with what we receive, which does present a challenge for our commercial team because they have to tell our customers that they have to wait seven months before delivery. So that's really a challenge". Company B encountered no major problems for their core products due to their strategic match with their suppliers and their clear agreements. However, for the small components, C-parts such as screws, the delivery time changed from one to twelve weeks. The same company also indicates that currently the availability of raw material still is a major concern.

Companies D and E also experience transportation problems. I<sub>E</sub> indicates "Transport is a disaster. At the beginning of the crisis, stores were closing, but transport was not yet an issue. This began to accumulate from the summer onwards. Since October it has been pure chaos and that is something that is still going on today. There is so much congestion in the ports everywhere with all these corona measures. What shipping companies are doing a lot is taking ships out of service because then they can charge higher prices. We are currently paying three, four times more than what we paid last year. You haven't calculated all that in advance. Also, in terms of transit time, where we used to have delivery times from China of thirty-five days, now we have a boat that left in January and it's still not here at the end of March. Delivery times are now around eighty days, so doubled. The problem with this is also, we have no choice. We can't go and get the products ourselves. We are completely dependent".

For the clothing and shoes retailers, the combination of a high uncertainty in the delivery process and the closing of the stores also resulted in warehousing problems. I<sub>E</sub> explains "You can't do last-minute switching



**Table 6:** Impact of the Covid-19 crisis on the supply chain of family firms

Impact on:	Quotes
Purchasing process	<p>"So, we have all the strategic components under control and now all of a sudden the biggest problem is related to those small "trivial" parts, but without those parts we can't complete our product." (B)</p> <p>"That is still a concern. In that respect, stability has not yet returned. We see that there is some kind of craziness in the raw materials market worldwide, in all the different sectors. Delivery time has gone from four weeks to sixteen weeks. So, we're very happy with the agreements that we have, the inventories in the chain and so on. But even with those agreements, it's still all under pressure." (B)</p>
Transportation time and cost	"Yes, there are delays. Transport from China has become extremely expensive. From the US it is still OK. That is also a bit more expensive but especially from China it has almost become unaffordable at the moment." (D)
Warehousing	"We could send back the trucks, but we could not send back the containers, so they piled up here. The products couldn't go through to the stores because they were closed. Like now, for example. We had to close our stores in the Netherlands in mid-December and they are still open by appointment only. So, it's starting to pile up again seriously in terms of stock. We are starting to run out of space. That does make it very difficult." (G)
Product and service delivery	"I had a meeting with our CEO yesterday. We are facing dilemmas. In Belgium the stores are currently open and we have already delivered collections and we are getting backorders but those goods are blocked for stores in Germany where we are not allowed to deliver at this moment so the big dilemma is: are we going to deliver that to a Belgian customer now with the risk that that German store will open in two weeks and will be angry because we are not delivering his goods. That's kind of an annoying problem." (C)

with collections that were sent out months ago. It's not a flexible industry, there's a lot of time in between design and delivery. It's millions of pieces of stock you're piling up and not getting rid of".

Also, in the delivery to the client, Covid-19 caused some problems. Company A specifies "If we delivered a machine in Russia, of course we couldn't send engineers there to install the machine because of the corona crisis. Then of course you have to wait for your money because the customer has his machine, but it is not yet functional. We did deliver and install within the European Union but even there you have the travel restrictions and on top of that also the quarantine obligation when they come back".

#### 4.2.4 Changes implemented in the supply chain due to the Covid-19 situation

Despite all the perceived problems during the pandemic, five out of seven family firms indicate to have made no substantial changes within their supply chain. In first instance, this can be explained by the fact that the crisis came unexpectedly. I<sub>F</sub>: "When Covid-19 started in Italy, we all thought that after eight weeks it would all be over. That was a bit naive... ". I<sub>A</sub> specifies "You can't really do anything but wait and keep ringing the bell". Secondly, several interviewees also perceive the supply chain as being too complex to make sudden changes. I<sub>F</sub> explains "There weren't many alternatives available either. We looked around for other options but didn't take any action". I<sub>G</sub> indicates "It's a process in which you can't just intervene". Finally, the family factor and the long-term relationships developed with these suppliers prevent our interviewees from making major changes. Both company E and G indicate that they didn't cancel their big purchasing orders, although

they faced a lot of uncertainty with their stores being closed. I<sub>E</sub> clarifies "It was a boost for our suppliers that we didn't let them down. We haven't cancelled anything, and those relationships can simply continue. We are beginning to notice that there is a lot of appreciation for this. That's good for both of us". I<sub>G</sub> confirms this family effect: "We didn't start cancelling our orders or stopped paying them. No. We always consulted with our suppliers and checked whether or not they had already bought the material, if so, then production continued. Other products have been pushed back six months, as we do have a reasonable flexibility there. That helped us a lot. I think that's also a bit of the family business aspect. It also depends a bit on what your company culture is".

Companies that did make changes in their supply chain, mainly opted to add new suppliers. They only decided to do this when their production/sales process was compromised, as they realized that adding new suppliers also resulted in extra costs and potential changes in the manufacturing process. For company D the necessity was mandated by a higher demand than supply. Company B illustrates that when making changes, they did not want to jeopardize existing relationships: "Dual sourcing is the next step though. We have already indicated this to our strategic partners. Because we really need to spread our risks. We are very open about that. We assume that this works best. You notice that suppliers also understand that. They don't like it very much, but they would have done the same the other way around. So, it's about risk management and risk spreading and we are very aware of that".

Other measures taken by a few of our case companies were increasing safety stock, changing the transport mode from ship to rail and more cooperation with international

companies to install the machines on site. Company D also initiated virtual store visits to accommodate customer demand. Moreover, for transportation and installment of the product at the client, unemployed personnel from the event sector were hired on a temporary basis.

#### *4.2.5 Impact on unlearning and learning*

Due to the pandemic, our case companies needed to unlearn certain behaviors. The most important realization is that single sourcing results in too much dependence on their suppliers. Four interviewees therefore specify to consider more dual sourcing in the future. I<sub>B</sub> explains "After a previous success with dual sourcing, introduced during the crisis, we want to do the same for more products. That is really a goal for the coming years". I<sub>F</sub> emphasizes "We are increasingly doing dual sourcing. I do think it's important, it became clear again during the pandemic... A lot of products come from Italy. It was a bit of a shock for us when the first Corona outbreaks occurred. So, we do try to do it, but once again... We do a lot of custom work, sometimes it's just very complicated to get something from two suppliers when something is developed entirely for you. I would say we have about forty percent dual sourcing capabilities now". Also, I<sub>C</sub> reflected on the dependency problem: "We may need to think about the intercontinental dependence of supply chains after all. Maybe think about that dependence but there's not that much choice. Sometimes it is just not possible. You can't find any more seamstresses in Belgium, it's totally unrealistic to bring that production back to Belgium. We have to rely on foreign production".

Another aspect of unlearning in some of our case companies related to being less rigid

with regards to their planning in the supply chain process. I<sub>G</sub> indicates “The business plan that we have today is really a corona child, so to speak. We have started to reconsider a lot of things. You do start looking at everything just a little more critically and we acted on that. You become very agile. You have to be. You push your boundaries time and again”. I<sub>E</sub> confirms “We've learned that we have to be flexible. We're always very data driven and fixated on planning or on schedules and so on. We always set those very strictly and rigorously. That's something we do have to keep in mind. We have to remain flexible so that we can respond quickly to changes, whereas in the past we planned everything in a very short space of time. We have to get away from narrow thinking. We need to widen the scope”.

Overall, the Covid-19 crisis has forced family firms to further professionalize their supply chain process. The following quote nicely summarizes how I<sub>G</sub> thinks about it: “What we have to get rid of is covering things with the cloak of love. We used to have the tendency to say: that store, well we still earn something... We are much stricter about that now. The figures are the figures, the reality is the reality” and “We have learned not to be sentimental. What we have also unlearned, and what we are still working on, is sticking our heads in the sand (laughs). Sometimes we did have the tendency to say, everything is going well anyway, we shouldn't wake sleeping dogs. We don't do that anymore. At some point it will come back to haunt us. We have also become very good at making hard decisions”.

Furthermore, the companies have also learned, or improved the behaviors, that they already executed before the pandemic. The biggest learning achievement for the retailers, has been realized in the field of digitalization.

I<sub>E</sub> explains “We really need to invest in the online aspect and social media. I think without corona, we would have taken those steps too, but maybe a little slower than we did now”. I<sub>C</sub> specifies how he has learned about the advantages of digitalization: “For example, we have a presentation of our new collection twice a year. At the end of June, we present our summer collection 2022, we invite all our representatives from all over the world, so they would come to Belgium. That's about a hundred people to whom we show the collection, we explain it and they get prototypes. Then they go and visit the customers. So, none of that is possible right now. Now what did we do, we made videos, did it digitally. I have to say, you have more control on it. We were able to instruct our salespeople much better. Normally it is an event in a hotel in Brussels. The night before they all go out and have a drink. But now it's much cheaper and much more efficient. You do miss the social contact, but I think in the future we might do it once physically and once digitally. We have learned from it”. The interviewees of the other companies mainly specify to have learned how online meetings can improve the efficiency of their work.

Other learning outcomes for some family firms include developing agreements with suppliers of non-core components and extending cooperation with partners in local markets. I<sub>B</sub>: “We really want to secure deliveries, secure availability and make very good arrangements down to the smallest component”.

## 5. Discussion

The goal of this article is to better understand (1) the supply chain process in family firms, (2) to examine how the Covid-19 crisis has impacted the firm and its supply chain, and (3)

to investigate which changes and (4) learning or unlearning behaviors have occurred in the family firms' supply chain because of the pandemic. Integrating the literature on family firms, supply chain, change management, and learning, with empirical data from two expert interviews and seven family business cases, has resulted in further theory development on supply chain management in family firms.

A major conclusion with respect to the organization of the supply chain in family firms, is that our empirical findings reinforce earlier conclusions in the literature stipulating that family characteristics, goals and behaviors affect this process (Jayaram et al., 2014; Maloni et al., 2017). Applying SEW literature to study supply chain management processes in family firms adds value, as it expands the supply chain literature with family-related factors that affect the supply chain process. More in detail, the following findings extend our knowledge in this field.

First, as in non-family firms, the level of professionalization of the suppliers and logistics partners is a crucial selection criterion. At the same time, the aim to develop long-term partnerships (Margretta, 1998; Smith et al., 2014; Rosa, 2018), to nourish trustworthiness (Smith et al., 2014), and to stimulate honest and open communication within their supply chain, seems to be a core characteristic of family firms' supply chain. As suggested by Maloni et al. (2017) "closer relationships with suppliers that are characterized by strong degrees of cooperation, trust, and commitment can result in not only improved performance but also competitive advantage" (p. 128). Although not an explicit selection criterion, many partners are also family businesses, as they are often perceived as a better strategic fit. This finding provides initial support for the proposition of Maloni et al. (2017), stating that supplier

integration and partnerships will be stronger between family-owned buyers and family-owned suppliers. These long-term partnerships are important both for the smaller and the larger family businesses, and no differences are found based on the geographical distance between the family firm and its suppliers or logistics partners. Also, the non-family CEO and the non-family purchasing specialists seem to have embraced this relationship focus, as their answers did not differ from those of the family CEO's. As such we cannot confirm the impact of non-family management as a potential moderator on the family firm long-term supplier relationship, which was suggested by Jayaram et al. (2017). Nevertheless, this finding adds to the literature on non-family CEO's, and confirms earlier findings of Blumentritt, Keyt, and Astrachan (2007) that successful non-family CEO's need to be able to balance family and business concerns. A cultural fit and shared values also add value within family firms' supply chain management practices.

Secondly, we also confirm the proposition of Maloni et al. (2017), specifying that single sourcing is common practice in family firms. As they suggest: "the more personalized, emotional, and social nature of family businesses will extend the lifespan of its supplier relationships" (p. 129). Although our family firm respondents acknowledge the risk of becoming too dependent, they also value the possibility to improve the quality of their products, to attain volume advantages and to achieve efficiency and flexibility in their cooperation. Given the specialization of certain products, they also stipulate not always to have many partner options to select from.

Thirdly, some authors (Gomez-Mejia et al., 2007) suggested that due to the family firms' goal of SEW creation, these firms may be more apt to place less competent family

members in strategic supply chain positions. We cannot confirm this suggestion, as both our family and non-family respondents seemed to be very knowledgeable on this topic. Nevertheless, especially in the smaller companies, the question can be raised if supply chain management is mainly an operational or a strategic activity. Although we have not been able to get a complete overview of all the responsible people involved in all the aspects of the supply chain process, many interviewees only relate supply chain management to one of its core aspects namely purchasing. Moreover, several respondents indicate that their managers have grown into those functions based on experience. Only the family manager in company B explicitly discussed that his company would not have been able to perform that well if his certified purchase manager would not have been professionalizing part of the supply chain process in the past years. We therefore need to confirm the findings of Jayaram et al. (2014) that family firms' approach to professionalize the supply chain is still nascent and evolving. They still have ample opportunities to further develop their supply chain capabilities.

Fourth, while both the literature (Horgos, 2013; Maloni et al., 2017; Memili et al., 2011) and the experts did not agree on the importance of outsourcing in family firms, our findings illustrate that a lot of heterogeneity exists with regards to this topic in our family business cases. Several companies do however specify the increased need to opt for outsourcing in order to focus on their own core capabilities and to improve flexibility.

Fifth, many opportunities for further digitalization were specified in the academic literature (Jayaram et al., 2014; Maloni et al., 2017) and suggested by the experts. Our interviews mainly discussed this topic in the

context of increased use of webshops and social media. In the manufacturing industry, most companies outsourced all the IT-related components. Although we could have asked more specific questions about this in our interviews, none of the respondents talked about how IT applications or further digitalization could improve the coordination in their supply chain.

Finally, in accordance with Maloni et al (2017) and Núñez-Cacho et al (2018), we expected that family firms would have integrated more sustainable practices in their daily sourcing as well as inbound and outbound logistics activities, but our data does not support this proposition. Only two to three out of seven cases could provide multiple examples of the environmental activities they were executing. All others respondents were very honest that more activities would need to be implemented in the years to come.

To the second part of our research question, all interviewees illustrated that the impact of the Covid-19 pandemic on their company, and the supply chain in specific, was gigantic. In accordance with Kraus et al. (2020), respondents reported that their company experienced an impact on firm performance, digitalization, and working conditions. The impact on the family firms' sales and financial performance mostly relates to the sector they are active in. The companies in the clothing and shoes sector all experienced poor financial results, while two of the other respondents improved their performance. Nevertheless, amongst the case companies only one respondent indicated to be in a financial distress situation, amongst else due to Covid-19. This confirms earlier findings in the literature stating that family businesses achieve strong resilience during or after crisis situations (Amann & Jaussaud, 2012; Chrisman, Chua, & Steier, 2011). We

also observe signs of a tentative digitalization, and strengthened family firm employer-employee relationships. With regards to the impact on the supply chain, all family firms have to deal in one way or another with supplier lockdown effects, uncertainty of prices in raw material markets, delays and increased costs in transportation and/or barriers in delivery and sales of their products. The smaller companies seemed to be less prepared than the larger ones, and indicated, as proposed by De Massis et al. (2019), to also have less resources available to facilitate the necessary changes.

Notwithstanding the enormous impact of the crisis, our study also revealed that the majority of our case companies did not make substantial changes in their supply chain process. Again, the relationship argument is of prime importance in explaining this behavior. As suggested by Berrone et al. (2012), family firms keep supporting their suppliers, even in non-harmonious times. They do not want to cancel their orders. However, due to their long-term relationship with these companies, the family firms are able to receive the flexibility they require to deal with their supplies in this crisis period. Family firms that did add suppliers do this with care, to prevent harming the relationships with their initial partners. While Kotlar and De Massis (2019) argued that they perceive less willingness to change in family businesses in comparison to non-family businesses, our interviewees especially seem to emphasize that making changes to the supply chain is a difficult process (Christopher, 2017). Finding new partners, evaluating their quality and negotiating prices is a process that is hindered due to travel restrictions.

Although the number of changes in the supply chain was limited, companies did unlearn certain routines, and did learn to

improve some existing practices. Both learning and unlearning were mainly experiential; they had to (un)learn through a reflection on what they were doing (Kolb, 2014). The unlearning was mainly open-ended (Grishold et al., 2020), as the family firms are still searching for new dual sourcing agreements that can be further explored for their organization. Moreover, they need to wipe existing behavioral patterns (Hislop et al., 2014), by becoming less dependent on their existing partners and by becoming less strict in their supply chain planning. With regards to learning (Holmqvist, 2003a, 2003b), the focus of our interviewees currently seems to be on intraorganizational learning. They needed to reflect about how to further professionalize their sourcing and logistics process. Moreover, digitalization of the sales process was spurred by the crisis. Interorganizational learning occurred due to the need for more communication between the partnering firms during the crisis situation. However, this type of learning could mainly be described as simple learning on a dyadic level (Bessant et al., 2003).

## **6. Limitations and recommendations for further research**

Although the aim of this thesis was to examine the impact of the Covid-19 pandemic on changes made in the supply chain process of family firms, our findings illustrate that most of our case companies are still fully engaged in dealing with the crisis. For some companies that implies dealing with the challenges of adjusting the supply chain process to growing customer demands. However, for most companies it relates to dealing with high levels of uncertainty in sourcing, finding appropriate transportation options while controlling the

additional costs, reallocating stock in warehouses and dealing with reduced travel, delivery, and sales options. Many interviewees are proud that they have become more agile, that their employees have been so resilient and even that they survived so far. All of them have also unlearned some pre-Covid-19 supply chain behaviors, such as single sourcing, and developed new capabilities, such as digital capabilities for working from home, marketing, and sales. Nevertheless, due to the ongoing pandemic, they still encounter many limitations in executing the intended changes. Therefore, to really grasp the long-term impact of this crisis, further research would be needed to evaluate the long-term impact (Kraus et al., 2020). Moreover, as our interviewees are still so busy in their daily operational and strategic activities to deal with this uncertainty, limited time seems to have been available to reflect and learn or unlearn behaviors. Interviewees were sometimes so surprised by the question on what they had learned that no further questions were asked on the who, how or when of the learning process. As this is a topic of major importance for the strategic developments of these companies, this topic would also merit from further research in a post-Covid-19 time. For instance, we noticed that the current type of learning is mostly of an experiential nature, and future studies could examine which other types of learning would support the family firms in dealing with a crisis situation. More knowledge could also be developed by studying which family or non-family actors initiate learning and how learning outcomes are shared within the family and the firm (Lambrechts et al., 2012). Finally, Bessant et al. (2003) discussed the importance of different types of learning in the supply chain process. Next to simple dyadic learning, more complex forms of learning and learning in

networks with suppliers might be necessary for family firms to face increased level of competition in the market.

Furthermore, our findings on supply chain management in family firms cannot be generalized to the full family business population. While our sampling strategy was to examine the supply chain process of companies with international sourcing strategies, the larger companies are overrepresented in our sample. As the majority of family firms is small and medium-sized, and one of our respondents already indicated that the limitation in resources available impacts the organization of the supply chain as well as the potential changes that could be made due to the Covid-19 situation, more research is needed regarding the specific situation of family SME's. Our findings on differences in the outsourcing behavior of the family firms investigated, suggests that studying heterogeneity (Chua, Chrisman, Steier, & Rau, 2012) in family firms' supply chain processes might further advance our knowledge than by solely comparing this process between family and non-family firms. Besides, as our findings illustrate, some of the experiences described are sector-related, and in our explorative research, only a few sectors are represented.

Finally, while the generation managing the company, and the intention to transfer the family business is an important aspect within the SEW focus of family firms, we could not identify any differences with regards to the organization of the supply chain or their attitudes to change. A large-scale quantitative research project might further improve our knowledge on the impact of this family firm variable.

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