Sustainable management in family-owned small and medium-sized enterprises: Making a case for corporate social responsibility as a strategic instrument for long-term success

DISSERTATION

zur Erlangung des Grades eines Doktors rer. pol.

der Fakultät III – Wirtschaftswissenschaften, Wirtschaftsinformatik und Wirtschaftsrecht der Universität Siegen

vorgelegt von

Christoph Stock

Erstgutachter:
Prof. Dr. Arndt Werner

Zweitgutachter:
Prof. Dr. Dr. Sascha Kraus

Drittgutachterin:
Prof. Dr. Hanna Schramm-Klein

Datum der Disputation:
06.03.2023

Dekan der Fakultät III:
Prof. Dr. Marc Hassenzahl

Acknowledgments (English)

Unlike most Ph.D. students, my journey did not start at a university but in the German Army Infantry School. After graduation from secondary school, I decided to forgo the freedom of civilian life my peers were enjoying, as I always wanted to be a soldier, and enlisted as an officer candidate for thirteen years in the German Armed Forces. An officer's career requires and encompasses matriculation from a German Military University, where I completed my Bachelor's and Master's degrees in Economics. Here, I discovered a thirst for knowledge and a passion for academia and knew I wanted to continue studying and write my doctoral thesis after acquiring my Bachelor's and Master's degrees.

Consequently, after completing my training as an officer and taking up my first post, I started to moonlight as an external research assistant at the University of Siegen.

Professional assignments requiring geographical relocation and a tour of duty did not distract me from my academic goals. I mainly worked nights and weekends, and vacations often fell victim to my desire to submerge myself in the writing of this dissertation.

Obviously, such a journey cannot be accomplished alone, and this thesis reflects the help and knowledge of many people whom I wish to thank for their input and tireless support. This includes the many anonymous reviewers of the conferences I attended and reviewers of the dissertation articles submitted to peer-reviewed journals, who enriched the substance of the manuscript with their constructive criticism and clarified my thought processes.

Specifically, first and foremost, I am immensely grateful to my academic supervisor Prof. Dr. Arndt Werner, whose excellent mentorship made this project possible. As an exotic in academia, he allowed me to conduct my Ph.D. studies under his chair and was the primary source of advice, feedback, and discussion. Without him, I would not have been able to write this dissertation.

Likewise, I want to express my deepest appreciation to Prof. Dr. Dr. Sascha Kraus for his support. His work inspired my research right in the beginning of my academic journey and helped me especially in completing this dissertation.

I would also like to thank Dr. Stefan Hossinger, who enabled me to get my foot in the door and supported me far beyond the initial phase of my dissertation. He not only introduced me to the academic world but also taught me the essentials of scientific work. He is an incredibly talented scientist and an even better friend.

Furthermore, I would like to thank my co-authors Prof. Dr. Sabrina Schell and Laura Pütz, who accompanied me on this journey. The many debates we had along the way were a source of inspiration throughout the writing of the dissertation.

Above all, I would like to thank my family, who have always encouraged me to continue on my chosen path. I thank my father, Stefan Stock, and his companion Alice Schwaab for always believing in me. I also wish to thank my stepfather Helmut Krupp, who set me on the right path when I needed it most and infused me with the ambition to realize my goals and always strive for excellence. I would like to thank my mother, Irmgard Stock, for always being willing to listen and encouraging me to continue my work, especially when times were difficult. Her moral support and optimism buoyed me and helped me overcome the setbacks that constantly arise when working on a dissertation.

Not least, I would like to thank my in-laws Che and Udo Raschendorfer. New ideas for my work have always emerged in our discussions and both of them have always encouraged me not to lose touch with the problems of the practice. In particular, the discussions with Che were a great source of inspiration, as her sharp thinking made me re-examine many of my ideas. The intellectual exchange with her led to a significant improvement of this dissertation. I cannot put into words how grateful I am for her support.

My most significant debt of gratitude, undoubtedly, goes to my beloved wife, Roxy Stock, who probably had to make more extraordinary sacrifices than I did on this journey, allowing me the freedom to follow my passion. Despite the double burden of active service in the Armed Forces and scientific research in every spare minute, her unwavering belief in me and my abilities was the source of all my courage and achievements. I thank her for all the patience, kindness, humor, and support she has given me throughout the time it has taken to write this dissertation. She is the love of my life.

Christoph Stock *Cologne, July 2022*

Acknowledgments (German)

Anders als die meisten Doktoranden begann ich meinen Weg nicht an einer Universität, sondern an der Infanterieschule der Bundeswehr. Da ich schon immer Soldat werden wollte, entschied ich mich nach dem Abitur auf die Freiheiten des zivilen Lebens zu verzichten und trat als Offiziersanwärter für dreizehn Jahre der Bundeswehr bei. Eine Offizierslaufbahn erfordert ein Studium an einer Bundeswehruniversität, an der ich meinen Bachelor- und Masterabschluss in Wirtschaftswissenschaften erwarb. Hier entdeckte ich meine Leidenschaft für die Wissenschaft und beschloss nach meinem Abschluss weiter studieren und eine Dissertation schreiben wollte.

So begann ich nach meiner Offiziersausbildung und dem Antritt meines ersten Offizierspostens mit einer Nebentätigkeit als externer wissenschaftlicher Mitarbeiter an der Universität Siegen.

Berufsbedingte Verpflichtungen, die geografische Ortswechsel und einen Auslandseinsatz mit sich brachten, lenkten mich nicht von meinen akademischen Zielen ab. Ich arbeitete hauptsächlich nachts und an Wochenenden, und Urlaube fielen oft meinem Verlangen mich in die wissenschaftliche Arbeit zu vertiefen zum Opfer.

Natürlich kann eine solche Reise nicht allein bewältigt werden, und diese Arbeit spiegelt die Hilfe und das Wissen vieler Menschen wider, denen ich für ihren Beitrag und ihre unermüdliche Unterstützung danken möchte. Dazu gehören die vielen anonymen Gutachter der Konferenzen, an denen ich teilgenommen habe, und die Gutachter der Fachzeitschriften, in denen die Artikel dieser Dissertation eingereicht wurden. Ihre konstruktive Kritik hat die vorliegenden Manuskripte bereichert und meine Gedankengänge präzisiert.

Insbesondere bin ich meinem Doktorvater Prof. Dr. Arndt Werner zu größtem Dank verpflichtet, da seine hervorragende Betreuung dieses Projekt erst möglich gemacht hat. Als ein Exot in der Wissenschaft erlaubte er mir meine Dissertation an seinem Lehrstuhl zu schreiben und war die erste Anlaufstelle für Ratschläge, Feedback und fachliche Diskussionen. Ohne ihn wäre es mir nicht möglich gewesen diese Dissertation zu schreiben.

Ebenso möchte ich Prof. Dr. Dr. Sascha Kraus meine tiefste Wertschätzung für seine Unterstützung ausdrücken. Seine Arbeit inspirierte mich bereits zu Beginn meiner akademischen Laufbahn und half mir insbesondere in der Zeit der Fertigstellung dieser Dissertation.

Mein Dank gilt auch Dr. Stefan Hossinger, der mir den Einstieg in die Wissenschaft ermöglicht und mich weit über die Anfangsphase meiner Dissertation hinaus unterstützte. Er hat mich nicht nur in die akademische Welt eingeführt, sondern mir auch die Grundlagen des wissenschaftlichen Arbeitens vermittelt. Er ist ein unglaublich begabter Wissenschaftler und ein noch besserer Freund.

Außerdem möchte ich mich bei meinen Co-Autorinnen Prof. Dr. Sabrina Schell und Laura Pütz bedanken, die mich auf meiner akademischen Reise begleitet haben. Unsere vielen Debatten waren eine Quelle der Inspiration.

Vor allem möchte ich mich bei meiner Familie bedanken, die mich immer dazu ermutigt hat, den eingeschlagenen Weg weiterzugehen. Ich danke meinem Vater, Stefan Stock, und seiner Lebensgefährtin Alice Schwaab, dass sie immer an mich geglaubt haben. Ich möchte meinem Stiefvater Helmut Krupp danken, der mich auf den richtigen Weg gebracht hat als ich es am meisten brauchte. Er hat mir beigebracht immer nach Spitzenleistungen zu streben und mir den Ehrgeiz vermittelt, den es benötigt, um meine Ziele zu verwirklichen. Meiner Mutter Irmgard Stock danke ich dafür, dass sie immer ein offenes Ohr für mich hatte und mich ermutigte meine Arbeit fortzusetzen, besonders in schwierigen Zeiten. Ihre moralische Unterstützung und ihr Optimismus haben mir Auftrieb gegeben und mir geholfen, die Rückschläge zu überwinden, die bei der Arbeit an einer Dissertation unvermeindlich sind.

Nicht zuletzt möchte ich mich bei meinen Schwiegereltern Che und Udo Raschendorfer bedanken. In Gesprächen mit ihnen kamen immer wieder neue Ideen für meine Arbeit auf und sie haben mich immer wieder ermutigt, den Bezug zu den Problemen der realen Welt nicht zu verlieren. Insbesondere die Diskussionen mit Che waren eine große Inspirationsquelle, da sie mir mit ihrem klaren Blick immer wieder dabei half meine Ideen zu präzisieren. Der intellektuelle Austausch mit ihr führte zu einer erheblichen Verbesserung dieser Dissertation. Ich kann meine Dankbarkeit für ihre Unterstützung nicht in Worte fassen.

Der größte Dank gebührt zweifellos meiner geliebten Frau Roxy Stock. Um mir die Freiheit zu geben meiner Leidenschaft nachzugehen musste sie auf dieser Reise wahrscheinlich noch größere Opfer bringen als ich. Trotz der Doppelbelastung von aktivem Dienst in den Streitkräften und wissenschaftlicher Forschung war ihr unerschütterlicher Glaube an mich und meine Fähigkeiten die Quelle all meines Mutes und meiner Erfolge. Ich danke ihr für all die Geduld, den Humor und die Unterstützung, die sie mir während der Zeit, in der ich diese Dissertation geschrieben habe, entgegengebracht hat. Sie ist die Liebe meines Lebens.

Christoph Stock *Köln, Juli 2022*

Summary (English)

Family-owned small and medium-sized enterprises (SMEs) are driving forces in many economies worldwide (International Family Enterprise Research Academy, 2003; Memili et al., 2015; Miller and Le Breton-Miller, 2007; Motwani et al., 2006), and in Germany, they enjoy an excellent reputation regarding long-term management orientation (Berghoff, 2006; Pahnke and Welter, 2019; Venohr et al., 2015). For example, recent studies show that German family-owned SMEs coped better than larger companies during the recession triggered by the global financial crisis in 2008 (Berlemann et al., 2021) and that they also showed a high degree of adaptive capacity to the negative consequences of exogenous shocks (e.g., economic standstill) during the current Covid-19 pandemic (Soluk et al., 2021a). The reason for this resides in the family's desire to preserve their business for future generations, and the company often being the main income stream for many of the owning families (Castejón and López, 2016; Chua et al., 1999).

However, the public focus is increasingly shifting towards traditional family-owned SMEs' perceived backwardness compared to technology start-ups, which achieve higher growth rates (Audretsch, 2021; Lehmann et al., 2019), raising the question of how established SMEs can face the challenge of adapting their business to the new environment (European Commission, 2019). This dissertation delves into the sources of family-owned SMEs' success and longevity and examines management tools firms can use to ensure their survival in a globalized economy.

The family firm research *'essence approach'* forms the theoretical basis for examining the management of family-owned SMEs. The essence approach assumes that a family firm is characterized less by the mere presence of an owning family but rather by a specific behavior (e.g., transgenerational orientation) (Chua et al., 1999; Dawson and Mussolino, 2014; Steiger et al., 2015). The consequential evolution of this essence approach has led to new theoretical concepts such as *familiness* (FAM) and *socioemotional wealth* (SEW) becoming very popular among researchers and can now be understood as family firm-specific management drivers.

FAM describes "the unique bundle of resources a particular firm has because of the systems interaction between the family, its individual members, and the business" (Habbershon and Williams, 1999, pp. 11) and can be understood as the economic perspective that family influence involves. SEW indicates "nonfinancial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty" (Gómez-Mejía et al., 2007, p. 106) and can be understood as the emotional component of family influence in a firm.

In terms of management tools, the main focus of this dissertation lies in the concept of *corporate social responsibility* (CSR) and the extent to which family-owned SMEs can use it as a strategic tool to generate positive outcomes. CSR is a company's voluntary contribution to sustainable development beyond legal requirements (Carroll, 1999; Dahlsrud, 2008; Van Marrewijk,

2003) and is associated with many corporate benefits (Aguinis and Glavas, 2012). Companies with higher CSR levels have fewer recruitment problems (Martinez-Conesa et al., 2017; Wagner, 2010), better employee retention (Sen and Cowley, 2013; Voegtlin and Greenwood, 2016). Furthermore, CSR has improved access to financial resources (Cheng et al., 2014), leading firms to a comparatively higher capacity for positive firm outcomes (Aguinis and Glavas, 2012; Kervyn et al., 2012). Antheaume et al. (2013) advocate that family-owned firms conduct sustainable development policies more often, contributing to high longevity.

This dissertation uses different theoretical frameworks to uncover the particularities of family-owned SMEs. The major theory is the Sustainable Family Business Theory (SFBT), which describes family businesses as social systems consisting of the overlapping subsystems of family and firm, and allows for the docking of other theories (i.e., systems theory, resource-based view, and boundary-spanning theory) as a theoretical umbrella framework (Danes et al., 2008; Stafford et al., 1999). This linkage of different theories and approaches allows for a comprehensive picture of the relationship between family and firm-specific antecedents, corporate social responsibility activities, and firm outcomes.

In the context of SMEs, where little public information is available, the survey approach is often the only way to obtain sizeable data sets. While one of the four studies in this dissertation is a systematic literature review and uses already published studies as a data basis, the other three use quantitative empirical methods to test their hypotheses. The basis for these three studies is provided by two surveys of German, privately-owned companies conducted between November 2017 and February 2018 and between January and March 2019. These two data sets were examined by multivariate statistical methods to test the hypotheses.

The lessons that can be drawn from this are threefold. First, a crucial insight is that family businesses should be viewed from a systems theory perspective to utilize the essence approach, given the intersection of the family and business subsystem. Specific family business behavior emerges from the interaction between both subsystems. Second, the dissertation shows that resources from owner families are strategic assets SMEs can use to achieve their business goals and, subsequently, longevity. However, it also indicates that family resources must be actively managed to achieve a positive impact. Third, it shows that CSR should not be understood as a philanthropic tool used solely for altruistic motives but as a strategic tool to achieve long-term success. In particular, since SMEs depend on cooperation with other companies due to resource scarcity, CSR can help build relationships with current or potential cooperation partners and stakeholders.

Establishing effective boundary management in family-owned SMEs is a prerequisite to utilizing the potential of those firms. Internal boundaries lie between the family and the business and can be a barrier to resource exchange. External boundaries are those boundaries with other companies, which can be kept flexible through CSR. The four studies summarized in this dissertation help develop this understanding and motivate managers of family-owned SMEs to develop essential boundary management tools. Based on the theoretical implications, family-owned SME managers can learn the importance of actively managing their business's internal and external boundaries.

In sum, this dissertation helps researchers and practitioners understand the peculiarities of managing family-owned SMEs, showing the advantages and disadvantages they face compared to non-family-owned SMEs and larger corporations and the benefits of using CSR and family influence as strategic assets for their long-term success.

Summary (German)

Kleine und mittlere Unternehmen (KMU) in Familienbesitz sind in vielen Volkswirtschaften weltweit die treibenden Kräfte (International Family Enterprise Research Academy, 2003; Memili et al., 2015; Miller und Le Breton-Miller, 2007; Motwani et al., 2006) und insbesondere in Deutschland genießen sie einen ausgezeichneten Ruf in Bezug auf langfristig orientierte Managementpraktiken (Berghoff, 2006; Pahnke und Welter, 2019; Venohr et al., 2015). So zeigen aktuelle Studien, dass deutsche KMU in Familienbesitz die durch die globale Finanzkrise 2008 ausgelöste Rezession besser bewältigt haben als größere Unternehmen (Berlemann et al., 2021) und auch während der aktuellen Covid-19-Pandemie ein hohes Maß an Anpassungsfähigkeit an die negativen Folgen exogener Schocks (z.B. wirtschaftlicher Stillstand) zeigten (Soluk et al., 2021a). Der Grund hierfür liegt in dem Wunsch der Familie ihr Unternehmen für künftige Generationen zu erhalten, und darin, dass das Unternehmen häufig die Haupteinkommensquelle für viele der Eigentümerfamilien darstellt (Castejón und López, 2016; Chua et al., 1999).

Der öffentliche Fokus verlagert sich jedoch zunehmend darauf, dass traditionelle KMU in Familienbesitz im Vergleich zu Technologie-Start-ups, die höhere Wachstumsraten erzielen, als rückständig wahrgenommen werden (Audretsch, 2021; Lehmann et al., 2019), was die Frage aufwirft, wie etablierte KMU die Herausforderung der Anpassung ihres Unternehmens an das neue Umfeld bewältigen können (European Commission, 2019). Diese Dissertation befasst sich mit den Ursachen für den langfristigen Erfolg von KMU in Familienbesitz und untersucht, welche Managementinstrumente Unternehmen nutzen können, um ihr Überleben in einer globalisierten Wirtschaft zu sichern.

Der *‚essence approach‘* der Familienunternehmensforschung bildet die theoretische Grundlage für die Untersuchung des Managements von KMU in Familienbesitz. Der essence approach geht davon aus, dass ein Familienunternehmen weniger durch das bloße Vorhandensein einer Eigentümerfamilie als vielmehr durch ein bestimmtes Verhalten (z.B. transgenerationale Orientierung) gekennzeichnet ist (Chua et al., 1999; Dawson und Mussolino, 2014; Steiger et al., 2015). Die konsequente Weiterentwicklung des essence approach hat dazu geführt, dass neue theoretische Konzepte wie *familiness* (FAM) und *socioemotional wealth* (SEW) in der Forschung populär geworden sind und mittlerweile als familienunternehmensspezifische Managementfaktoren verstanden werden können.

FAM beschreibt “the unique bundle of resources a particular firm has because of the systems interaction between the family, its individual members, and the business” (Habbershon und Williams, 1999, S. 11) und kann als die wirtschaftliche Dimension von Familieneinfluss verstanden werden. SEW bezeichnet “nonfinancial aspects of the firm that meet the family’s affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the

family dynasty” (Gómez-Mejía et al., 2007, S. 106) und kann als die emotionale Komponente des Familieneinflusses in einem Unternehmen begriffen werden.

Was die Managementinstrumente betrifft, so liegt der Schwerpunkt dieser Dissertation auf dem Konzept von *corporate social responsibility* (CSR) und der Frage, inwieweit KMU in Familienbesitz es als strategisches Instrument zur Erzielung positiver Unternehmensergebnisse nutzen können. CSR ist der freiwillige Beitrag eines Unternehmens zu einer nachhaltigen Entwicklung, der über die gesetzlichen Anforderungen hinausgeht (Carroll, 1999; Dahlsrud, 2008; Van Marrewijk, 2003), und wird mit vielen unternehmerischen Nutzen in Verbindung gebracht (Aguinis und Glavas, 2012). Unternehmen mit einem höheren CSR-Niveau haben weniger Probleme bei der Personalbeschaffung (Martinez-Conesa et al., 2017; Wagner, 2010) und eine bessere Mitarbeiterbindung (Sen und Cowley, 2013; Voegtlin und Greenwood, 2016). Darüber hinaus verbessert CSR den Zugang zu finanziellen Ressourcen (Cheng et al., 2014), was die Wahrscheinlichkeit positiver Geschäftsergebnisse erhöht (Aguinis und Glavas, 2012; Kervyn et al., 2012). Antheaume et al. (2013) vertreten die Auffassung, dass Familienunternehmen häufiger nachhaltige Managementpraktiken betreiben, was ihnen zu langfristigen Erfolg verhilft.

Um die Besonderheiten von KMU in Familienbesitz aufzuzeigen, werden in dieser Dissertation unterschiedliche theoretische Konzepte verwendet. Die wichtigste Theorie ist die Sustainable Family Business Theory (SFBT), die Familienunternehmen als soziale Systeme beschreibt, die aus den sich überschneidenden Subsystemen von Familie und Unternehmen bestehen, und als theoretischer Überbau die Verknüpfung mit anderen Theorien (z.B. der Systemtheorie, der ressourcenbasierten Sichtweise und der Boundary-Spanning-Theorie) ermöglicht (Danes et al., 2008; Stafford et al., 1999). Die Verknüpfung verschiedener Theorien und Ansätze ermöglicht es ein umfassendes Bild der Beziehung zwischen familien- und unternehmensspezifischen Einflussfaktoren, CSR-Aktivitäten und Unternehmensergebnissen zu zeichnen.

Da über KMU nur wenige öffentliche Informationen verfügbar sind, ist häufig die Befragung die einzige Möglichkeit umfassende Daten über diese zu erhalten. Während es sich bei einer der vier Studien in dieser Dissertation um eine systematische Literaturauswertung handelt, die bereits veröffentlichte Studien als Datengrundlage nutzt, verwenden die anderen drei Studien quantitativ empirische Methoden zur Überprüfung ihrer Hypothesen. Die Grundlage für diese drei Studien bilden zwei Befragungen deutscher Unternehmen in privater Hand, die zwischen November 2017 und Februar 2018 sowie zwischen Januar und März 2019 durchgeführt wurden. Zur Überprüfung der Hypothesen wurden diese beiden Datensätze mit multivariaten statistischen Methoden untersucht.

Aus den Ergebnissen lassen sich drei wesentliche Folgerungen ziehen. Zuerst ist eine entscheidende Erkenntnis, dass die Eigenheiten von Familienunternehmen aus der Überschneidung der Subsysteme Familie und Unternehmen entstehen und sie vor dem

Hintergund des essence approach daher aus einer systemtheoretischen Perspektive betrachtet werden sollten. Zweitens zeigt die Dissertation, dass die Ressourcen der Eigentümerfamilien strategische Aktivposten sind, die KMU nutzen können, um ihre Unternehmensziele zu erreichen und in der Folge ihre langfristige Existenz zu sichern. Sie zeigt jedoch auch, dass sie aktiv gemanagt werden müssen, um ihre positive Wirkung entfalten zu können. Drittens zeigt sie, dass CSR nicht als philanthropisches Instrument verstanden werden sollte, das ausschließlich aus altruistischen Motiven heraus eingesetzt wird, sondern als strategisches Instrument zur Erreichung langfristiger Ziele. Da KMU aufgrund der Ressourcenknappheit auf die Zusammenarbeit mit anderen Unternehmen angewiesen sind, kann CSR insbesondere dazu beitragen Beziehungen zu aktuellen oder potenziellen Kooperationspartnern und Stakeholdern aufzubauen.

Die Einrichtung eines effektiven Boundary-Managements in KMU in Familienbesitz ist daher eine Voraussetzung für die Entfaltung des Potenzials dieser Unternehmen. Interne Grenzen liegen zwischen der Familie und dem Unternehmen und können ein Hindernis für den Austausch von Ressourcen darstellen. Externe Grenzen sind solche zu anderen Unternehmen und können durch CSR flexibel gehalten werden. Die vier in dieser Dissertation zusammengefassten Studien tragen zur Förderung dieses Verständnisses bei und sollen Manager von KMU in Familienbesitz motivieren neue Instrumente für das Boundary-Management zu entwickeln. Auf der Grundlage der theoretischen Implikationen können Manager von KMU in Familienbesitz daher lernen, wie wichtig ein aktives Management der internen und externen Grenzen ihres Unternehmens ist.

Zusammenfassend lässt sich sagen, dass diese Dissertation Wissenschaftlern und Praktikern dabei hilft, die Besonderheiten des Managements von KMU in Familienbesitz zu verstehen. Sie zeigt die Chancen und Risiken auf, mit denen KMU in Familienbesitz konfrontiert sind, sowie die Vorteile der Nutzung von CSR und des Einflusses der Familie als strategische Ressource für langfristigen Erfolg.

Table of contents

Acknowledgments (English) ... i
Acknowledgments (German) ... iii
Summary (English) ... v
Summary (German) ... viii
Table of contents ... xi
List of figures ... xiii
List of tables ... xiv
List of abbreviations ... xv

1 Introduction ... 1

1.1 Research motivation ... 1
1.2 Theoretical considerations ... 2
1.3 Research questions ... 6
1.4 Chapter outline ... 10
1.5 Research publication status ... 11

2 Corporate social responsibility in family firms: Current status and future directions of a research field ... 13

2.1 Introduction ... 14
2.2 Theoretical framework ... 16
2.3 Methodology ... 17
2.4 Current research status ... 18
2.4.1 Article characteristic ... 18
2.4.2 Theories in use ... 21
2.4.3 Content findings ... 22
2.5 Future directions of research ... 33
2.6 Synthesis ... 39
2.6.1 Discussion ... 39
2.6.2 Practical implications ... 42
2.6.3 Limitations ... 42
2.6.4 Conclusion ... 43

3 Familiness, organizational identity strength, and corporate social responsibility activities in family-owned small and medium-sized enterprises ... 44

3.1 Introduction ... 45
3.2 Literature overview ... 47
3.3 Theory and hypotheses ... 49
3.3.1 Theoretical framework ... 49
3.3.2 Hypotheses development ... 51
3.4 Methodology ... 55
3.4.1 Data and sample ... 55
3.4.2 Variables ... 56
3.5 Results ... 60
3.6 Conclusion ... 66
3.6.1 Discussion ... 66
3.6.2 Theoretical implications ... 67
3.6.3 Practical implications ... 68

3.6.4 Limitations 69
3.6.5 Future research avenues 69

4 Corporate social responsibility as a driver of digital innovation in small and medium-sized enterprises: The mediation effect of absorptive capacity 71

4.1 Introduction 72
4.2 Theoretical framework 74
4.3 Hypotheses development 75
4.4 Methodology 79
4.4.1 Measures 79
4.4.2 Sample and data 83
4.4.3 Results 83
4.5 Discussion 89
4.6 Conclusion 92

5 The moderating role of socioemotional wealth on post-succession performance in small and medium-sized family firms 93

5.1 Introduction 94
5.2 Theory and hypotheses 96
5.2.1 Post-succession performance in family small and medium-sized enterprises 96
5.2.2 The concept of socioemotional wealth and its relationship to post-succession performance 97
5.2.3 The moderating role of renewal of family bonds through dynastic succession 99
5.2.4 The moderating role of emotional attachment of family member 100
5.2.5 The moderating role of identification of family members with the firm 101
5.3 Methodology 103
5.3.1 Data collection and sample 103
5.3.2 Measures 103
5.4 Results 106
5.5 Discussion and Conclusions 109
5.6 Limitations 111

6 Summary and conclusion 112

6.1 Summary of research questions and responses 112
6.2 Implications for theory and practice 116
6.3 Limitations and future research avenues 118

References 121

Appendix 148

List of figures

Figure 1.1 Sustainable Family Business Model 4
Figure 1.2 Different boundary permeability in a family firm system 5
Figure 2.1 Annual distribution of the 107 reviewed published articles..................................... 20
Figure 2.2 Model of antecedents and outcomes of CSR in family firms 33
Figure 3.1 Conceptual model 55
Figure 3.2 Interaction effects.. 65
Figure 4.1 Conceptual model 79
Figure 4.2 Ordinary least squares quadratic regression results (visualization of the age effect) 89
Figure 5.1 Derived hypotheses 102
Figure 5.2 Moderation effects 109
Figure 6.1 Summary of the examined variables 116

List of tables

Table 1.1 Publication status of the conducted studies 11
Table 2.1 Most influential journals 19
Table 2.2 Research method used 20
Table 2.3 Theories used 21
Table 2.4 Family antecedents 23
Table 2.5 Firm antecedents 26
Table 2.6 Firm outcomes 27
Table 2.7 Contextual factors 29
Table 2.8 Regions from which the research emanated 30
Table 2.9 Corporate social responsibility activities in family firms 32
Table 2.10 Research questions 34
Table 3.1 Variable description 56
Table 3.2 Descriptive statistics and scale reliability 61
Table 3.3 Matrix of correlation 62
Table 3.4 Regression results 63
Table 3.5 Results of the hypotheses testing 65
Table 4.1 Variable description 82
Table 4.2 Descriptives 84
Table 4.3 Matrix of correlation 85
Table 4.4 Regression results 86
Table 4.5 Bootstrap estimation for mediation effects 88
Table 4.6 Results of the hypotheses testing 88
Table 5.1 Descriptive statistics and description of variables 105
Table 5.2 Matrix of correlation 106
Table 5.3 Regression results 108
Table 6.1 Research questions and key findings of the dissertation. 115

List of abbreviations

ACAP	Absorptive Capacity
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CSR	Corporate Social Responsibility
FAM	Familiness
IfM	Institut für Mittelstandsforschung
OI	Organizational Identity
OLS	Ordinary Least Square
PCA	Principal Component Analysis
RMSEA	Root Mean Square Error of Approximation
RQ	Research Question
SEW	Socioemotional wealth
SEW_All	Socioemotional wealth *(overall construct)*
SEW_E	Socioemotional wealth (*emotional attachment of family members)*
SEW_I	Socioemotional wealth (*identification of family members with the firm)*
SEW_R	Socioemotional wealth (*renewal of family bonds though dynastic succession)*
SFBT	Sustainable Family Business Theory
SME	Small and medium-sized enterprise
VHB	Verband der Hochschullehrer

1 Introduction

1.1 Research motivation

A *family firm* is a social system consisting of two interacting subsystems, family and firm (Danes et al., 2008; Frank et al., 2017; Stafford et al., 1999). The owning family increasingly embeds its interests within the firm's management as the overlap of both subsystems increases (Astrachan et al., 2020; Chadwick and Dawson, 2018; Chua et al., 1999; Kuttner et al., 2021; Meier and Schier, 2021; Shanker and Astrachan, 1996; Sharma, 2004). Most family firms are usually small and medium-sized enterprises (SMEs), meaning they have less than 500 employees (International Family Enterprise Research Academy, 2003; Memili et al., 2015; Motwani et al., 2006). Historically, those firms have been highly valued for their business mentality, focusing on high-quality products, long-term embeddedness in local communities, and sustainable, consensus-oriented relationships with their principal stakeholders (De Massis et al., 2018; Venohr et al., 2015). In Germany, family-owned SMEs have traditionally reinforced the economy. Their importance was particularly evident after World War II, where they played a significant role in rebuilding the country's economy and contributing to what was commonly considered the 'German economic miracle' or *Wirtschaftswunder* (Audretsch and Elston, 1997; Berghoff, 2006).

Although family-owned SMEs continue to represent the backbone of the German economy (Berghoff, 2006; Berlemann et al., 2021; Soluk et al., 2021a), the public focus is increasingly shifting towards traditional family-owned SMEs' perceived backwardness compared to technology start-ups, which achieve higher growth rates (Audretsch, 2021; Lehmann et al., 2019). Consequently, policy-makers today often ask when Germany will foster start-ups such as Amazon, Facebook, or Google, which achieved billion-dollar valuations at an accelerated pace (Acs et al., 2017; Pahnke and Welter, 2019). The latter emerged in the Silicon Valley entrepreneurship ecosystem driven by venture capital investment and knowledge spillovers from universities to the commercial sector (Audretsch, 2021). The Silicon Valley entrepreneurship model is often suggested as a best-practice model that Germany should adopt and emulate in developing its technology start-ups (Pahnke and Welter, 2019).

Audretsch (2021) recommends that research refocus, recognize, and emphasize a broader understanding of entrepreneurship and its importance in maintaining a solid and stable economy. While fostering start-ups is necessary, sustainable growth of an economy is achieved through a heterogeneous diverse corporate landscape (Knott, 2003). Family-owned SMEs is one of the best examples of sustainable everyday entrepreneurship (Audretsch, 2021; Lehmann et al., 2019; Pahnke and Welter, 2019), and recent research has shown that this form of entrepreneurship is still relevant today (Berlemann et al., 2021; Knott, 2003; Memili et al., 2015; Soluk et al., 2021a). Berlemann et al. (2021) show that family-owned SMEs performed well during the recession triggered by the 2008 global financial crisis. Likewise, in the current Covid-19 pandemic, Soluk et al. (2021a) show that German family firms, needing to preserve the firm for future generations, developed a high adaptive capacity to the negative consequences of exogenous shocks (e.g., economic lockdown). Although such firms must keep pace with current technological advances, one cannot ignore the stabilizing impact family-owned SMEs have on the German economy.

This dissertation delves into the sources of family-owned SMEs' success and longevity and examines the tools firms can use to ensure their survival in a globalized economy. Since the main difference between a family-owned and a non-family-owned company is that one or more families influence the company (Chua et al., 1999), this dissertation's fundamental assumption is that a critical contributor to success lies in the resources the owning family provides its firm (Barros et al., 2017; Basly and Saunier, 2020; Frank et al., 2017; Habbershon and Williams 1999; Weismeier-Sammer et al., 2013). The more substantial the overlap of family and firm, the greater the influence of the owning family on the firm's management. Although family influence may involve adverse effects—e.g., nepotism (Firfiray et al., 2018)—long-term success plays an essential role in family-owned SMEs, as the business is the primary source of income for the family (Castejón and López, 2016). Therefore, as the influence of the owning family increases, sustainability and longevity are likely key factors in a family firm's management process (Le Breton-Miller and Miller, 2006). The family's economic and socio-emotional needs are examined as management activity drivers and long-term performance indicators when examining family influence as a strategic asset for family-owned SMEs.

This thesis aims to explore, identify and diagnose the reasons for family-owned SMEs' success and survival, and the findings aim at enabling family-owned SME managers to develop strategies to ensure the longevity and long-term success of the firm.

1.2 Theoretical considerations

Different theoretical frameworks have inspired the research summarized in this dissertation. An essential underlying premise of this thesis is that privately-owned family firms differ substantially in their behavior from publicly-listed, non-family-owned firms (Block and Wagner, 2014b; Miller and Le Breton-Miller, 2007). Initially, family firm research primarily relied on family ownership and management (or a combination of both) to identify family firms and explain their differing behavior compared to non-family firms. Nevertheless, since family involvement only describes the owning family's potential ability to exert influence on its business, but not the extent to which they do so (Zellweger et al., 2010), applying this approach leads to ambiguous results (Chua et al., 1999, 2012). Consequently, family firm research has developed the idea that family firms should be defined by their 'essence' instead, which is mainly determined by the vision of the owning family and the transgenerational intentions that influence the behavior of such firms (Dawson and Mussolino, 2014).

The 'essence approach' determines the extent to which a company operates as a family firm by the overlap between the family and firm subsystems. In family-owned SMEs, where the predominant orientation is to keep family and firm separate, there is little to no overlap between these two subsystems. Conversely, in family-owned SMEs, where the owning family has a strong influence on the firm's management, there is usually a more significant overlap. The development of the essence approach has led to the emergence of new theoretical concepts such as familiness (FAM) and socioemotional wealth (SEW), which help to improve understanding of the specifics of the family firm (Barros et al., 2017; Basly and Saunier, 2020; Dawson and Mussonlino, 2014; Frank et al., 2017). The more significant the overlap between the two subsystems, the greater the potential for the development of FAM and SEW, which describe economic (i.e., FAM) and affective (i.e., SEW) perspectives of family influence.

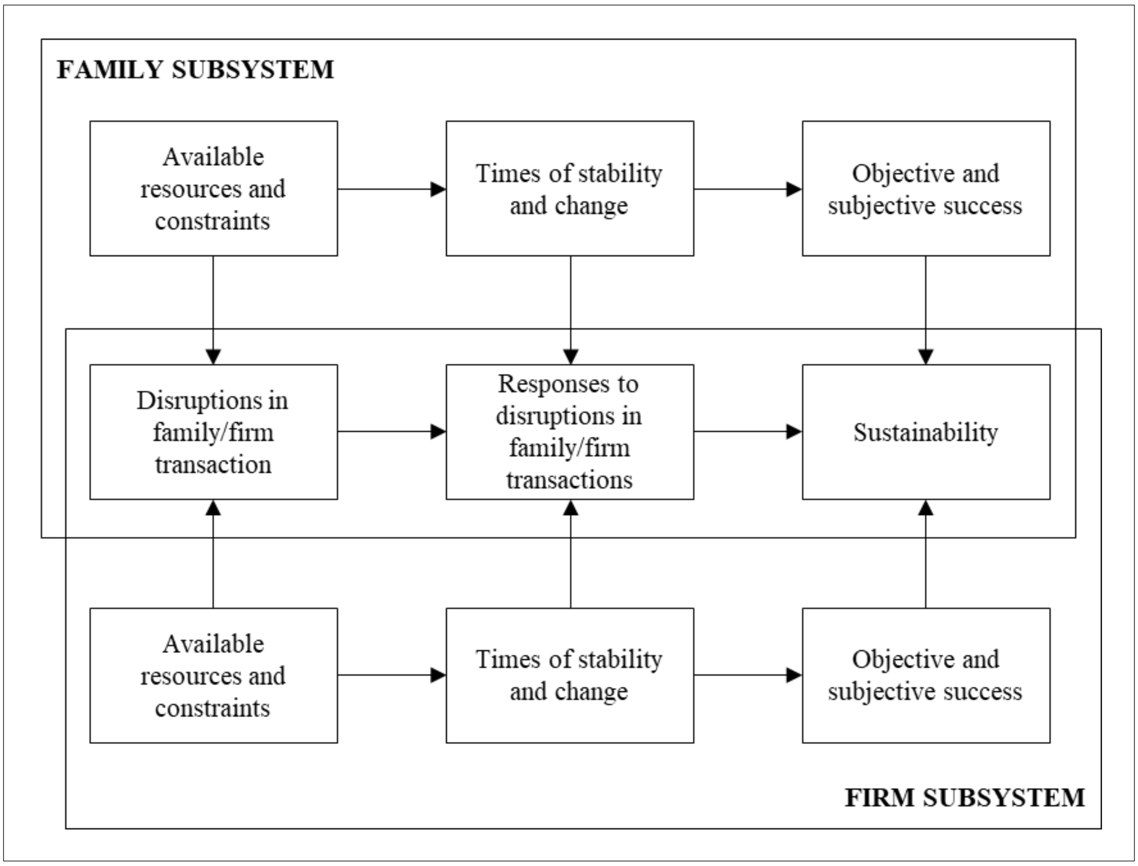
Family resources (e.g., owning families' financial, human, or social capital) are provided to the firm due to the overlap of the family and the firm subsystem (Danes et al., 2008; Stafford et al., 1999). Following a resource-based view, Habbershon and Williams (1999) proposed the concept of FAM, which describes "the unique bundle of resources a particular firm has because of the systems interaction between the family, its members, and the business" (Habbershon and Williams, 1999, pp. 11). Following a systems theoretical perspective, the more significant the overlap between the subsystems family and firm, the greater the exchange between them (Frank et al., 2017)—including their financial, human, and social capital family resources (Weismeier-Sammer et al., 2013). The greater the exchange, the more likely the firm is to build FAM, which, according to Habbershon and Williams (1999), leads to the unique behavior of a family firm, as critical business resources become more accessible to the firm through the family. The theoretical assumption is that family firms have a competitive advantage over other firms due to their unique resource base (i.e., FAM), providing long-term performance enhancement (Habbershon et al., 2003; Weismeier-Sammer et al., 2013).

Gómez-Mejía et al. (2007) realized that owning families benefit financially and affectively from running a firm and developed the concept of SEW. SEW is understood as "nonfinancial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty" (Gómez-Mejía et al., 2007, p. 106) and implies that owning families will neglect business activities if they jeopardize the fulfillment of their affective needs (Gómez-Mejía et al., 2011). Therefore, it is theorized that to preserve SEW, owning families often neglect financially advantageous projects (Gómez-Mejía et al., 2007). The opportunities these projects afford are either misunderstood due to poorly qualified family managers with insufficient technological know-how or bypassed through the fear that non-family managers could gain too much influence within the firm by managing such projects

(Ahrens et al., 2019; Basco and Calabrò, 2017; Calabrò et al., 2018; Kidewell et al., 2012; Martin and Gómez-Mejía, 2016). Accordingly, SEW explains why family firms perform worse than non-family firms (Gómez-Mejía et al., 2011). Although SEW is a newer concept than FAM, it is significantly more popular in the family firm research community (Dawson and Mussolino, 2014).

Stafford et al.'s (1999) Sustainable Family Business Theory (SFBT), explains the effects of both concepts on family firm management; drawing from systems theory and a resource-based view, it assumes that the specific behavior of a family firm system results from the interaction of its subsystems (i.e., family and firm), and the associated resource transactions between them (see Figure 1.1).

Figure 1.1 Sustainable Family Business Model

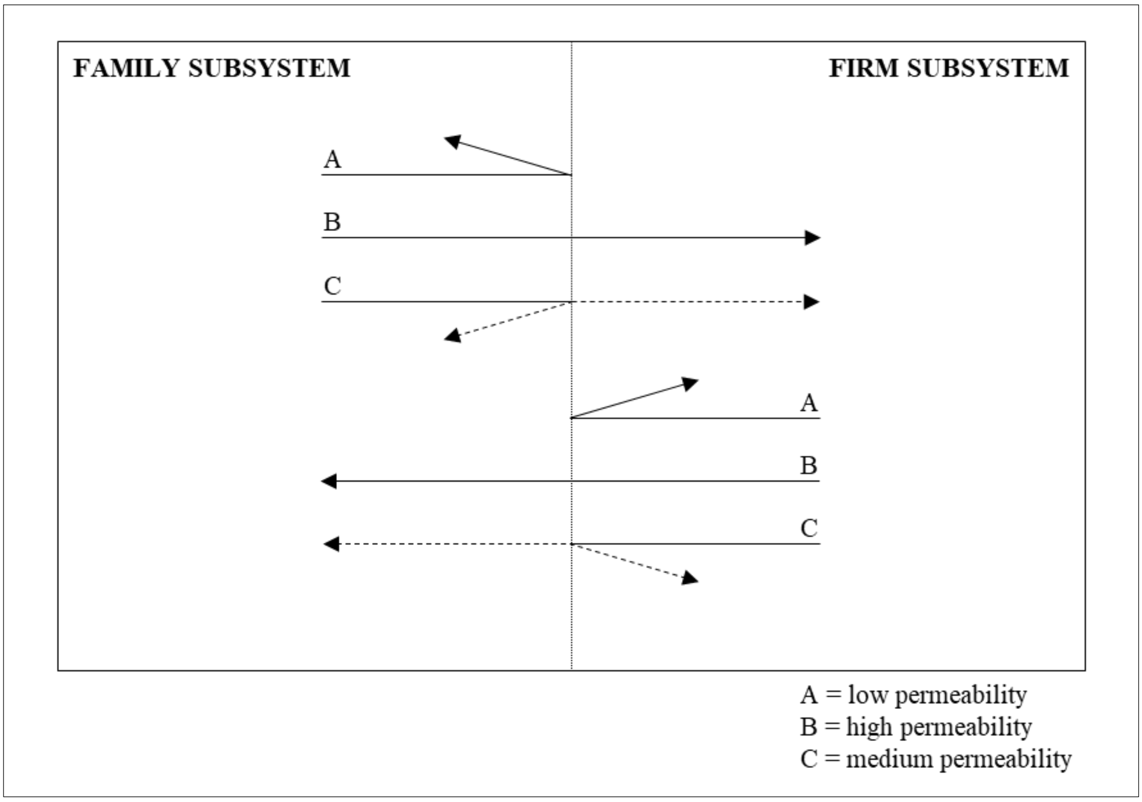


Source: adapted from Stafford et al. (1999)

While the family and firm pursue their specific goals separately, both can benefit from the resources of the other through the symbiosis of the two subsystems. Access to the family's resources can enable the family business to respond to disruptions induced internally (e.g., by employees) and externally (e.g., by customers or society). In addition to the family resources provided through interaction with the family subsystem (i.e., FAM) creating a potential competitive advantage (Habbershon et al., 2003; Weismeier-Sammer et al., 2013), the influence of the owner family's affective needs (i.e., SEW) on the firm's management can also increase, often reducing the performance (Gómez-Mejía et al., 2011). The systems theory perspective of SFBT shows that through the symbiosis of family and firm, there can be positive as well as negative effects on the firm, and therefore, it is necessary to understand how family influence needs to be managed so that it can be used as a strategic asset.

However, to understand and manage the effects of the overlapping family and firm subsystems and the emergence of FAM and SEW, one must be aware of the permeability of the boundaries between the subsystems (Danes et al., 2008). Thus, this dissertation uses the essential 'open and closed' systems theory feature. An 'open system' is characterized by weak system boundaries and a high degree of permeability to external influences, while a 'closed system' has fixed system boundaries and a low degree of permeability to external influences. As social systems, organizations are neither entirely open nor closed; they are between these two states (Hernes and Bakken, 2003). The more the individuals within a system identify with that system, the more the system tends to close itself off from external influences (Ashforth and Mael, 1989), and the more difficult it becomes for the owning family to exert its influence on the management of the firm (see Figure 1.2).

Figure 1.2 Different boundary permeability in a family firm system



Source: adapted from Habbershon et al. (2003) and Sundaramathy and Kreiner (2008)

Tushman's (1977) boundary-spanning theory explains that internal boundary problems also occur at the external boundaries of a firm. He concludes that firms who conduct boundary-spanning activities creating intra- or inter-organizational networks improve their flow of information. Consequently, firms that keep their internal and external boundaries fluid are rewarded by acquiring and assimilating knowledge from outside the organization and internally transforming and exploiting this knowledge more effectively, leading to higher innovation output (Cohen and Levinthal, 1990; Zahra and George, 2018). Thus, family-owned SMEs must deal with the internal system boundaries between family and firm and control the external system boundaries through effective boundary-spanning management.

The synthesis of those different theories and approaches provides a comprehensive picture outlining the specifics of family-owned SMEs. It lays the foundation for an in-depth analysis of family-owned SMEs' challenges under ever-increasing competitive pressure.

1.3 Research questions

Four independently but thematically related studies with a strong focus on German family-owned SMEs comprise the bulk of this dissertation, and the family-owned SMEs' long-term success drivers are answered by examining four sets of pertinent research questions (RQs). In addition to concepts explaining family firm specifics, corporate social responsibility (CSR)—understood as a company's voluntary contribution to sustainable development going beyond legal requirements (Carroll, 1999; Dahlsrud, 2008; Van Marrewijk, 2003)—is a central concept linked to a firm's long-term success (Antheaume et al., 2013; Jain and Jamali, 2016; Le Breton-Miller and Miller, 2016; Samara and Arenas, 2017). General management research has shown that CSR is associated with many corporate benefits (Aguinis and Glavas, 2012), and Antheaume et al. (2013) advocate that family firms conduct sustainable development policies more often, thus contributing to extended longevity levels. Companies with higher CSR levels have fewer recruitment problems (Martinez-Conesa et al., 2017; Wagner, 2010) and better employee retention (Sen and Cowley, 2013; Voegtlin and Greenwood, 2016); CSR has also improved access to financial resources (Cheng et al., 2014), leading to a comparatively increased capacity for positive results (Aguinis and Glavas, 2012; Kervyn et al., 2012).

A look at family firm-related research shows that family firms behave differently from non-family firms concerning CSR (Canavati, 2018; Kuttner and Feldbauer-Durstmüller, 2018; Vazquez, 2018). In identifying the differences between family and non-family firms, most studies focus on ownership structures and argue that the differences are due to the owner's individual needs (Faller and zu Knyphausen-Aufseß, 2018). According to a resource-based view, a family firm is characterized by a specific set of family resources introduced through the owning family within the firm (Chrisman et al., 2005; Habbershon and Williams, 1999; Weismeier-Sammer et al., 2013). Born of a transgenerational mindset, a family firm with long-term goals will often use those resources to create long-lasting relationships with its stakeholders to encourage benevolent behavior towards the company (Casson, 1999; Bammens and Hünermund, 2020; Pan et al., 2018; Zellweger et al., 2012).

As Kuttner and Feldbauer-Durstmüller (2018) note, the outcome angle of CSR in family firms has not yet been sufficiently researched. To better understand CSR in family firms, we need to know how much family firms use their resources strategically to achieve specific outcomes (Choi et al., 2019; Kashmiri and Mahajan, 2014a, 2014b; Maung et al., 2020; Pan et al., 2018) and, moreover, which CSR activities link those antecedents and outcomes leading to the following RQs:

RQ1.1: *Which antecedents drive a family firm's corporate social responsibility?*

RQ1.2: *Which outcomes do family firms realize through corporate social responsibility?*

RQ1.3: *Which of the family firm's corporate social responsibility antecedents and outcomes correspond?*

Considering family-owned SMEs are significant contributors to economic prosperity worldwide (International Family Enterprise Research Academy, 2003; Memili et al., 2015; Miller and Le Breton-Miller, 2007; Motwani et al., 2006), a pressing issue in current CSR-related studies is the lack of specific research and data concerning family-owned SMEs (Campopiano et al., 2014; Castejón and López, 2016; Perrini et al., 2007). While most studies work with samples of large, publicly-listed firms, Block and Wagner (2014b) point out that CSR activities of large, publicly-listed family firms differ from family-owned SMEs. Large firms often generate publicly available data and disclose CSR reports to be perceived as responsible entities. However, family-owned SMEs conduct CSR to strengthen their social capital, as in their relationships with their employees and essential business partners (Russo and Perrini, 2010; Spence et al., 2003; Uhlaner et al., 2004) and do not generate data on this effect. Social capital is often crucial for the resource-scarce SMEs survival to acquire other necessary business resources (e.g., human or financial capital).

Habbershon and Williams (1999) explain that the "unique bundle of resources a particular firm has because of the systems interaction between the family, its members, and the business," and they called this phenomenon familiness (FAM), which gives family-owned companies a competitive advantage (Habbershon and Williams, 1999, p. 11). Those family resources (e.g., family social capital) are provided to the firm due to the overlap of the family and the firm subsystem (Danes et al., 2008; Stafford et al., 1999). The more significant the overlap, the more family resources the owning family provides (Weismeier-Sammer et al., 2013), helping the resource-scarce firm survive. Consequently, family influence increases a firm's FAM associated with family social capital. The business will nurture such family social capital for its benefit; therefore, a family firm with a high measure of FAM will be liable to increase CSR to develop its network.

When defining a family firm using a systems theoretical approach, one must also examine the inter-dependency of the family and firm subsystems regarding their effect on CSR. Following Bingham et al. (2011), we propose that the strength of the firm's organizational identity (OI)—describing how "widely shared and deeply held [firm values] by organizational members" (Kreiner and Ashforth, 2004, p. 8) are—is another crucial factor to be taken into consideration when analyzing a family firm's CSR activities. Systems theory assumes that the stronger the firm's OI and identification of the individuals within the subsystem, the less permeable its system boundaries become (Ashforth and Mael, 1989; Hernes and Bakken, 2003; Sundaramurthy and Kreiner, 2008).

Since members identifying strongly with their organization tend to be more willing to act in its best interests (Davis et al., 1997), it can be assumed that OI strength positively affects CSR. However, as the strength of a firm's OI increases, the less open the firm subsystem becomes, which can hamper the interaction with the family subsystem and, in turn, impede the exploitation of family resources introduced through FAM. Therefore, in studying the relationship between FAM and CSR, it is essential to include OI strength and clarify its consequences. Thus leading to the emergence of the following RQs:

RQ2.1: *Does familiness affect corporate social responsibility activities within family-owned small and medium-sized enterprises?*

RQ2.2: *Does organizational identity strength affect corporate social responsibility activities within family-owned small and medium-sized enterprises?*

RQ2.3: *Does organizational identity strength affect the relationship between familiness and corporate social responsibility activities within family-owned small and medium-sized enterprises?*

When studying the effects of CSR conducted by family-owned SMEs, it is essential to understand the outcomes of CSR linked to innovation (Bocquet et al., 2019; Martinez-Conesa et al., 2017; Wagner, 2010). SMEs are under pressure to keep pace, especially with digital transformation; therefore, generating digital innovation is crucial for those firms (Arendt, 2008; Nambisan et al., 2019; Quinton et al., 2018; Soluk and Kammerlander, 2021; Teece, 2018). However, SMEs often lack the resources to stay innovative (De Massis et al., 2018). Scholars suggest cooperation with innovation partners to acquire external knowledge for innovation development (Brunswicker and Vanhaverbeke, 2015; Spithoven et al., 2013). Tushman (1977) states that such cooperation increases knowledge exchange within and across organizational boundaries deriving the boundary-spanning theory. He concludes that the networks created by boundary-spanning improve the innovative capacity of the companies involved, and the flow of information across intra- or inter-organizational boundaries, is vital to becoming more innovative.

Although current research also observes that CSR positively affects innovation (Bocquet et al., 2019; Martinez-Conesa et al., 2017; Wagner, 2010) and that this effect is mediated

(Surroca et al., 2010; Tang et al., 2012), the mechanisms are still unclear. Following Hossinger et al. (2020), who identified a relationship between CSR and absorptive capacity (ACAP)—describing the ability to leverage external knowledge for commercialization purposes (Cohen and Levinthal, 1990; Zahra and George, 2002)—, ACAP could be the missing link explaining why CSR positively affects business outcomes such as digital innovation. Looking at the combined research findings of CSR, ACAP, and digital innovation, the following RQs are asked:

RQ3.1: *Do corporate social responsibility activities directly affect digital innovation in small and medium-sized enterprises?*

RQ3.2: *Does absorptive capacity mediate the relationship between corporate social responsibility activities and small and medium-sized enterprises' digital innovation?*

One of the most demanding challenges for family-owned SMEs is the generational handover (Cabrera-Suárez et al., 2001; Motwani et al., 2006). The business succession and transfer process tie up many family firm management resources (Bjuggren and Sund, 2005) and a transition often implies a decrease in performance or even the company's decline (Le Breton-Miller et al., 2004). This development is especially true for family-owned SMEs, which, compared to larger companies, often lack the resources necessary to compensate for the possible performance deceleration during a succession (Cabrera-Suárez et al., 2001; Motwani et al., 2006). While most research so far finds a negative relationship between succession in family firms and their post-succession performance (e.g., Ahrens et al., 2019; Pérez-González, 2006; Wennberg et al., 2011), family firms can also emerge strengthened out of the transition phase (Le Breton-Miller et al., 2004; Rau et al., 2019; Werner et al., 2021).

Researchers often use SEW to explain why some family firms have inferior performance to non-family firms, as owning families will usually favor the preservation of their SEW over performance losses (Martin and Gómez-Mejía, 2016). The concept of SEW focuses on the affective, non-economic goals of the owning family and deals with the family-firm identity, in general (Gómez-Mejía et al., 2007)—not just during succession events. However, should the actual survival of the family firm be at risk, and thus the family's ultimate source of SEW, the owning families might make their SEW focus secondary and, in such cases, prioritize economic goals (Martin and Gómez-Mejía, 2016). Accordingly, SEW could have a positive rather than a negative effect on performance during a handover and post-succession performance which are critical milestones for the survival of a family firm. Consequently, the following RQ is posed:

RQ4: *What influence does socioemotional wealth, or components of socioemotional wealth, have on the post-succession performance of family-owned small and medium-sized enterprises?*

1.4 Chapter outline

Chapter 1 introduces the motivation behind this dissertation and the RQs it aims at answering. It provides an overview of the theories studied and each chapter's outline. Chapters 2, 3, 4, and 5 represent the four different manuscripts and form this work's body, and Chapter 6 presents the conclusion. A publication status summary of the four projects executed within this thesis is given in section 1.4, including a breakdown of the author and co-author's work contributions.

Chapter 2 provides a comprehensive overview of current research on CSR antecedents and outcomes in family firms. A systematic literature review analyzes 107 peer-reviewed articles in highly-ranked journals. The review shows that most publications focus on family firm CSR antecedents and lack outcome-oriented research. Outcome-related research focuses mainly on results and only conceptually on family-related outcomes (e.g., family community status, family emotional well-being). Based on these findings, six propositions are derived, encouraging future research.

Chapter 3 uses a comprehensive dataset of 203 German family-owned SMEs and proposes a model in which the effect of FAM on employee-, customer-, and society-related CSR activities is tested. The findings show that an increase in FAM is positively related to all three CSR activities. Although the models show a positive effect of OI strength on employee-, customer-, and society-related CSR activities, the findings show that the FAM influence on employee- and customer-related CSR activities are weaker in those family-owned SMEs characterized by greater degrees of OI strength. These findings help explain how family influence affects the company's behavior, as, for example, in the case of CSR, which is always context-dependent and needs to be examined judiciously.

Chapter 4 moves away from the specific consideration of family influence within family-owned SMEs and explores how SMEs can survive in the context of digital transformation. Continuing from Chapter 3 and interpreting CSR as an ACAP-increasing instrument, the mediating effect of the latter variable on digital innovation is examined. 520 German SMEs were used in a dataset, showing that CSR does act as a knowledge-sharing enabler and, therefore, can support SMEs in acquiring the knowledge resources they need for digital innovation. Furthermore, the study explores the theoretical relationship between CSR and business outcomes. From a practical perspective, it offers suggestions on how family-owned SMEs can better position themselves in an increasingly digitalized economic environment.

Chapter 5 finds that the effect of SEW on family-owned SME performance needs to be considered from a different perspective than the one currently used in family firm research. Based on data drawn from 344 German family-owned SMEs, the study finds that the two individual SEW dimensions—*renewal of family bonds through dynastic succession* and *identification of* *family members with the firm*—are the key drivers that affect post-succession performance. In contrast, *the emotional attachment of family members* seems to have no effect. Thus, the study provides valuable information on how family-owned SMEs can use SEW as a strategic tool to ensure the firm's long-term success.

Chapter 6 summarizes the research questions and the key findings of the dissertation. This chapter concludes the work and findings of the dissertation.

1.5 Research publication status

The chapters of this dissertation are either currently in the publication process or already published in international peer-reviewed scientific journals[1]. Since the research work originated in the context of this dissertation is the result of intense collaboration with different co-authors, it is necessary to outline the contributions of each author to each paper. Table 1.1 provides an overview of the different studies and their publication status.

Table 1.1 Publication status of the conducted studies

	Title	Publication Status	Authors	Reference
Manuscripts used in this dissertation				
1	Corporate social responsibility in family firms: Current status and future directions of a research field.	Under review by *Journal of Business Ethics* (VHB: B)	Stock, C.; Pütz, L.; Schell, S.; Werner, A.	Stock et al. (2022a)
2	Familiness, organizational identity strength, and corporate social responsibility activities in family-owned small and medium-sized enterprises.	Submitted to *Family Business Review* (VHB: B)	Stock, C.; Hossinger, S.; Werner A.	Stock et al. (2022b)
3	Corporate social responsibility as a driver of digital innovation in small and medium-sized enterprises: The mediation effect of absorptive capacity.	Accepted for publication in *International Journal of Entrepreneurial Venturing* (VHB: B)	Stock, C.; Hossinger, S.; Werner, A.; Schell, S.; Soluk, J.	Stock et al. (2022c)
4	The moderating role of socioemotional wealth on post-succession performance in small and medium-sized family firms.	Submitted to *Family Business Review* (VHB: B)	Schell, S.; Stock, C.; Pütz, L.; Werner, A.	Schell et al. (2022)

[1] The VHB-JOURQUAL 3 is a journal ranking of the Association "Verband der Hochschullehrer für Betriebswirtschaft e.V." (VHB).

Chapter 1. The dissertation author wrote this chapter independently.

Chapter 2. The dissertation author was responsible for the research concept, most of the data collection, and paper writing. The original paper contributing to this chapter was presented at the virtually conducted *24th Annual Interdisciplinary Conference on Entrepreneurship, Innovation and SMEs* (G-Forum) 2020 and was nominated for Best Paper Award at this conference. The paper was submitted to the *Journal of Business Ethics* and is currently in the second revision round (revised and resubmitted).

Chapter 3. The dissertation author did the preponderance of the work for this chapter, including the introduction, theoretical framework, hypothesis development, and discussion. The original manuscript was submitted to the *Family Business Review* and is currently being reviewed by the authors for resubmission. A previous version of the study was presented at both the *17th Interdisciplinary European Conference on Entrepreneurship Research* 2019 in Utrecht, Netherlands, and at the *23rd Annual Interdisciplinary Conference on Entrepreneurship, Innovation and SMEs* (G-Forum) 2019 in Vienna, Austria, where the paper won the Family Business and Mittelstand Research Award.

Chapter 4. The dissertation author drafted this paper, including the empirical analysis, and performed most of the revisions required by the *International Journal of Entrepreneurial Venturing*. The original manuscript was accepted for publication on 13 January 2022.

Chapter 5. The dissertation author is responsible for large parts of the introduction, theory, hypothesis, and discussion. It was submitted to the *Family Business Review* and is currently under review. It was accepted at the *41st Babson College Entrepreneurship Research Conference* (online) 2021, the *82nd Annual Meeting of the Academy of Management* 2022 in Seattle, USA, and the *22nd European Academy of Management Conference* 2022 in Winterthur, Switzerland.

Chapter 6. The dissertation author wrote this chapter independently.

2 Corporate social responsibility in family firms: Current status and future directions of a research field

Christoph Stock • Laura Pütz • Sabrina Schell • Arndt Werner

Abstract

This systematic literature review contributes to the lively debate about corporate social responsibility (CSR) in family firms and the associated field of research that has considerably grown in the last few years. In order to conceptualize the research field, we analyzed 107 peer-reviewed articles published in highly ranked journals identifying the main issues examined. The results clearly show there is a lack of research regarding CSR outcomes in family firms. Although considered increasingly important in family firm research, especially the examination of family outcomes (e.g., family community status, family emotional well-being) is missing. Moreover, our analysis shows that there is a black box in regard to the question of how different antecedents and outcomes are interrelated via CSR. This is especially important since firms in general need to know where they should allocate their scarce resource in order to generate the best outcomes. Thus, this literature review not only outlines the current state of research, but also contributes to the current debate of CSR in family firms by discussing how family firms can use CSR activities as strategic management tools. Based on these findings, we identify nine research questions, which we hope will inspire future research.

Keywords: Systematic literature review, family firms, corporate social responsibility, Sustainable Family Business Theory, resourced-based view, antecedents, outcomes.

2.1 Introduction

Many family firms worldwide have been operating successfully for generations—some for more than a century (Ahmad et al., 2020; Koiranen, 2002; Lorandini, 2015). Since transgenerational survival is often the main aim of family firms, longevity plays a critical role in their basic strategies (Giner and Ruiz, 2022; Handler, 1989; Lumpkin and Brigham, 2011). An important contributing factor to this successful longevity are healthy, sustainable stakeholder relationships (Bingham et al., 2011; Ciravegna et al., 2020). Corporate social responsibility (CSR), understood as responsible and sustainable actions towards various stakeholders (Rahman, 2011), can generate loyalty (Iglesias et al., 2020; Servera-Francés and Piqueras-Tomás, 2019), brand recognition (Hur et al., 2014; Lai et al., 2010), and goodwill from those stakeholders (Maung et al., 2020; Noor et al. 2020; Panwar et al., 2014). Therefore, CSR is an invaluable strategic management tool for building solid relationships with key stakeholders (Bingham et al., 2011), thereby increasing competitive advantage (Freeman and McVea, 2005; Harrison et al., 2010).

Prior research agrees that family firms behave differently from non-family firms regarding CSR (Cabeza-García et al., 2017; Cuadrado-Ballesteros et al., 2017; El Ghoul et al., 2016; Fehre and Weber, 2019; Izzo and Ciaburri, 2018). A family firm understood as a social system made of the two subsystems family and firm (Frank et al., 2017), develops its specific behavior through the owning family integrating its goals and values into the firm's day-to-day business decision making (Astrachan et al., 2020; Chadwick and Dawson, 2018; Kuttner et al., 2021; Meier and Schier, 2021; Singh and Mittal, 2019). In order for the firm to be able to achieve these goals, family resources (i.e., financial, human, and social capital) provided by the owning family (Danes et al., 2008; Weismeier-Sammer et al., 2013) can be used to conduct CSR activities (Branco and Rodrigues, 2006), which in turn helps achieve the family's longevity goals (Antheaume et al., 2013; Jain and Jamali, 2016; Le Breton-Miller and Miller, 2016; Samara and Arenas, 2017).

The competitive advantage emerging from family resources integration is called *familiness* (Habbershon and Williams, 1999) and can be a differentiating factor for the business activities of a family firm from those of a non-family firm (Chrisman et al., 2005; Frank et al., 2017; Zellweger et al., 2010). However, family firms' growing research field continuously theorizes about CSR activities being driven by socioemotional wealth (SEW) (Cabeza-García et al., 2017; Dick et al., 2021; Fehre and Weber, 2019; Klein et al., 2018; Kuttner et al., 2021; Preslmayer et al., 2018). SEW summarizes the affective needs of owning families "such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty" (Gómez-Mejía et al., 2007, p. 106). From this perspective, a family firm primarily practices CSR if it helps to maintain the owning family's SEW (Izzo and Ciaburri, 2018; Zientara, 2017).

What we do not know yet is the extent to which family firms are using their resources (i.e., antecedents) strategically to achieve specific outcomes (Choi et al. 2019; Kashmiri and Mahajan, 2014a, 2014b; Maung et al., 2020; Pan et al., 2018). Since the vast majority of family firm research focuses on the SEW narrative (Zientara, 2017), the importance of economic dimensions of family resources (i.e., familiness) remains overlooked. However, since family firms are also run according to business principles and ultimately have to provide for the economic existence of the owning family, it is essential to know how to utilize family firm resources according to the desired family firm outcomes. Following this line of thought, we assume that family resources integrated within the firm are antecedents of CSR and help utilize its firm outcomes more effectively. In order to study this phenomenon, we decided to examine, synthesize, and systemize the growing body of research on family firm's CSR activities to identify the antecedents and outcomes of CSR in family firms. Consequently, we pose the following research questions:

RQ1.1: *Which antecedents drive a family firm's corporate social responsibility?*

RQ1.2: *Which outcomes do family firms realize by conducting corporate social responsibility?*

RQ1.3: *Which of the family firm's corporate social responsibility antecedents and outcomes correspond?*

Following Tranfield et al.'s (2003) systematic literature review approach, we analyzed 107 peer-reviewed research articles regarding CSR in family firms, applying Stafford et al.'s (1999) Sustainable Family Business Theory (SFBT). The SFBT draws from the systems theory and a resource-based view assuming that the specific behavior of a family firm system emerges from the interaction of its subsystems (i.e., family and firm) and the associated resource transaction between those. We find that the probability of CSR activities increases as the owning family's influence on the firm grows and that a firm equipped with family resources can utilize CSR's outcomes better.

Our research findings contribute to a better understanding of CSR in family firms. First, our analysis reveals that family resources integrated into the firm through family influence increase the probability of a firm to conduct CSR activities. Those findings show that family firms can use CSR as a strategic tool as they are rewarded through positive outcomes. This illustrates that family influence within a firm should not be understood as a liability but as a strategic asset. Second, we show that current research often suffers from a misalignment between theory and empirics. While the prevailing assumption of today's family firm research is that family firm's CSR activities are SEW-driven (Preslmayer et al., 2018), CSR outcomes-related studies exclusively examine CSR firm outcomes. Although there is much theorizing about family outcomes that play a significant role in family firm management, we could not identify any empirically related findings. Third, we find that research does not answers the question which (family) firm antecedents are linked to which (family) firm outcomes by which CSR activities. Since our analysis reveals that CSR can be used as a strategic management tool, (family) firms should know how to allocate their resources in order to achieve their desired outcomes. To clarify the catalytic role of CSR in family firms and to enable family firms to deploy their resources for the appropriate CSR activities, we recommend that future research opens this black box and focus on particular CSR activities' mediating effect on (family) firm antecedents and (family) firm outcomes.

The remainder of the paper is structured as follows: We discuss the theoretical framework on which our literature review is based and describe the method used to establish the reviews' article samples. Our research ascertains current research status and identifies subsequent lacunae. We then present an agenda for future research regarding CSR in family firms deriving nine research questions utilizing Stafford et al.'s (1999) SFBT. Finally, we discuss our findings and provide theoretical and practical implications based on our results.

2.2 Theoretical framework

Despite many conceptually and operational attempts to define family firms (Sharma, 2004), there is no generally accepted definition of a family firm (O'Boyle et al., 2012). Criteria used in research literature include ownership shares, participation of several generations, and active management by family members (Shanker and Astrachan, 1996). Chua et al. (1999, p. 25) define a family firm as "a business governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families." We follow this basic definition, which is compatible with Stafford et al.'s (1999) SFBT, and define a *family firm* as a social system made of two subsystems: family and firm. The unique behavior of a family firm results from the fact that the owning family provides the firm with a particular set of family resources (e.g., financial, human, or social capital) that enable the firm to operate more successfully. The stronger the influence of the family within the firm, the more family resources the firm may access (Habbershon and Williams, 1999; Weismeier-Sammer et al., 2013). Those family resources integrated within the firm are described as *familiness*, which is "the unique bundle of resources a particular firm has because of the system interaction between the family, its individual members, and the business." (Habbershon and Williams, 1999, p. 11). Familiness is available regardless of the market situation and can enable a family firm to overcome internal and external disruptions (Danes et al., 2008; Frank et al., 2017; Stafford et al., 1999; Weismeier-Sammer et al., 2013).

For family firms to achieve longevity, these resources can be invested in CSR activities (Antheaume et al., 2013; Le Breton-Miller and Miller, 2016; Pan et al., 2018; Samara and Arenas, 2017). CSR is "[...] a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (Commission of the European Communities, 2001, p. 6), and as such, can support the goals of the owning family by forming strong, sustainable and long-term stakeholder relationships (Richards et al., 2017; Samara et al., 2018). CSR activities must ultimately promote the economic survival of the firm and subsequently be used as a strategic tool. However, since CSR definitions can be vague and leave room for interpretation (Dahlsrud, 2008), a wide range of different concepts—such as corporate citizenship; business ethics; sustainability (Dahlsrud, 2008; Matten and Moon, 2008; Van Marrewijk, 2003)—are applied in research. Elkington's (1998) CSR triple bottom line model focuses on three CSR goals equally: economic-, social-, and environmental-related. Following, engagement in social and environmental goals can also impact firm's economic goals if the CSR activities are used strategically (Porter and Kramer, 2006; Werther and Chandler, 2005).

To holistically understand CSR in family firms we must understand the motivations behind the CSR activities (i.e., antecedents) and its results (i.e., outcomes) (Kuttner and Feldbauer-Durstmüller, 2018; Kuttner et al., 2021). Following the SFBT, family firms with increasing family influence engage in CSR to cultivate their relationships with their stakeholders (Fitzgerald et al., 2010; Stafford et al., 1999), thereby generating positive firm outcomes for the family firm by the use of resources (Kuttner and Feldbauer-Durstmüller, 2018). Considering that an owning family's financial wealth depends on its firm's performance (Holt et al., 2017), we assume that family firm CSR is a strategic tool used to ensure its longevity and then, secondarily, fulfill the emotional needs of the family. For family firms to effectively use CSR as a strategic tool, it is essential to know whether the antecedents also lead to the desired outcomes. This systematic literature review is conducted to gain a better understanding of these issues

2.3 Methodology

To answer our research questions, we applied the Tranfield et al. (2003) methodology, which uses three phases (i.e., planning, conducting, and reporting) for systematic reviewing and collecting of significant scientific contributions in a specific research area. We developed a detailed search strategy and search protocol for English articles in peer-reviewed scientific journals. We then carried out the pre-defined search in the following databases: (1) EBSCO Business Source Elite; (2) Elsevier Science Direct; (3) Emerald; (4) Springer Link; (5) Wiley Online Library; and (6) ISI Web of Science. We searched these databases using a combination (AND conjunction) of two keyword groups. Due to the nascent stage of CSR in family firm research (Kuttner et al., 2021) and the wide range of synonyms regarding CSR (Dahlsrud, 2008; Matten and Moon, 2008; Van Marrewijk, 2003), we decided to apply a wide range of keywords. The first group dealt with the identification of CSR-relevant research using: (CSR OR "corporate social responsibility" OR "social responsibility" OR "corporate responsibility" OR "corporate social"

OR "corporate citizenship" OR "environmental management" OR sustainab* OR "social management" OR "ethic" OR SDG OR "sustainable development goals"). The second group concentrated on the relevant literature concerning family firms: ("family firm*" OR "family business*" OR "family enterprise*" OR "family sme*" OR "family own*" OR "family-own*" OR "family control*" OR "family led" OR "family involve*" OR "family influence*").

By screening all search results that included both a keyword from the CSR and the family firm keyword group in the title or abstract (current analysis covers published research up to December 31st, 2020), we were able to identify 289 studies. We did not consider articles that included one term of both keyword groups each but did not deal with both categories explicitly or implicitly, as was the case with studies dealing with CSR (or one of its synonyms) using family firms for the analysis without addressing their particularities. Studies dealing with the ethical values in family firms, but not their impact on CSR activities or related concepts, were also excluded. After this initial screening, we excluded all articles in journals that were not ranked as "2 or better" by the Association of Business Schools' (2021) Academic Journal Guide. By doing this, 107 articles remained as a finale sample for further in-depth analysis. Two authors read all papers independently and extracted information regarding author(s), year, title, journal, research method, applied theory, geographic scope, and key variables using a data-extraction sheet. To better understand the articles within our sample, we also looked up the number of citations per paper using google.scholar.

The 107 articles were then categorized by whether the key variables analyzed were CSR antecedents or outcomes of family firms, or both CSR antecedent and outcomes. Articles that examined the effect of family firm-specifics on CSR were classified into "antecedents," while articles classified to the "outcome" category examined how family firm-specifics affect CSR's effects. First, we subdivided antecedents and outcomes in a family's and a firm's subcategory as suggested by the SFBT. The SFBT indicates that integrating family and firm resources helps encounter internal and external disruptions (Danes et al., 2008; Stafford et al., 1999). Consequently, we created a subcategory with contextual factors, including institutional settings and community embeddedness, affecting a firm's longevity. All subdivisions were discussed and iteratively organized by two authors during the analysis process. Two other authors were consulted where a disagreement occurred, and categorization was discussed extensively among all authors until consensus was found.

2.4 Current research status

2.4.1 Article characteristic

The 107 reviewed articles were published in 47 journals, mainly of general management, ethics, gender, and social responsibility. It is noteworthy that the journal with the most significant number of publications is the *Journal of Business Ethics*, which is responsible for 20.56% of all publications in our review. We identified a further 14 journals, each publishing at least two articles relevant to our research field. These 14 journals account for 49.53% of all reviewed articles. The remaining 32 journals published one article each, accounting for 29.91% of all reviewed articles. Our citation analysis shows similar results. First, the 107 articles have a general citation count of 11,598. Once again, the *Journal of Business Ethics* stands out covering 23.10% of the citations, followed by *Family Business Review* with 15.28%. Drawing on the Academic Journal Guide (Association of Business Schools, 2021) to evaluate the journal quality ("4" being the highest score and "2" the lowest), 13.08% of the reviewed articles appeared in journals ranked as "4", 56.07% were ranked as "3", and 30.84% ranked as "2" (see Table 2.1).

Table 2.1 Most influential journals

No.	Journal title	AJG ranking	Number of publications	Number of citations
1	Journal of Business Ethics	3	22 (20.56%)	2679 (23.10%)
2	Business Strategy and the Environment	3	9 (8.41%)	467 (4.03%)
3	Family Business Review	3	8 (7.48%)	1772 (15.28%)
4	Journal of Family Business Strategy	2	6 (5.61%)	301 (2.60%)
5	Journal of Cleaner Production	2	5 (4,67%)	137 (1.18%)
6	Entrepreneurship Theory and Practice	4	4 (3.74%)	1461 (12.60%)
7	Asia Pacific Journal of Management	3	3 (2.80%)	79 (0.68%)
8	Journal of Business Research	3	3 (2.80%)	253 (2.18%)
9	Journal of Small Business and Enterprise Development	2	3 (2.80%)	344 (2.97%)
10	International Journal of Research in Marketing	4	2 (1.87%)	217 (1.87%)
TOTAL			65 (60.75%)	7710 (66.48%)

As Figure 2.1 shows, the density of publications on CSR in family firms has increased significantly in the last ten years. One reason for this might be that CSR research in general became more attractive since the global financial crisis of 2007/2008 when corporate entities' mismanagement and irresponsible behavior were revealed and made public (Blodgett et al., 2011). This crisis necessitated a major social reassessment and overhaul of business practices in financial and corporate institutions (Crane et al., 2013). Due to their trans-generational orientation (Giner and Ruiz, 2022; Lumpkin and Brigham, 2011), family firms have been discussed as a countermodel to opportunistic, shareholder-value-oriented, non-family firm management (Blodgett et al., 2011), which could explain increased research activities regarding CSR antecedents in family firms. Researchers would like to learn why family firms differ from non-family firms (Adams et al., 1996; Campopiano and De Massis, 2015; Maung et al., 2020) and what both firms can learn from these differences (Craig and Dibrell, 2006; Kashmiri and Mahajan. 2014b; Samara and Arenas, 2017). However, to understand their specific CSR behavior, it is essential to know what benefits they receive from these activities (Pan et al., 2018; Zientara, 2017). Although it is still a significantly under-researched area, the debate about CSR's family firm outcomes has become more popular in the last ten years (Kuttner and Feldbauer-Durstmüller, 2018).

Figure 2.1 Annual distribution of the 107 reviewed published articles

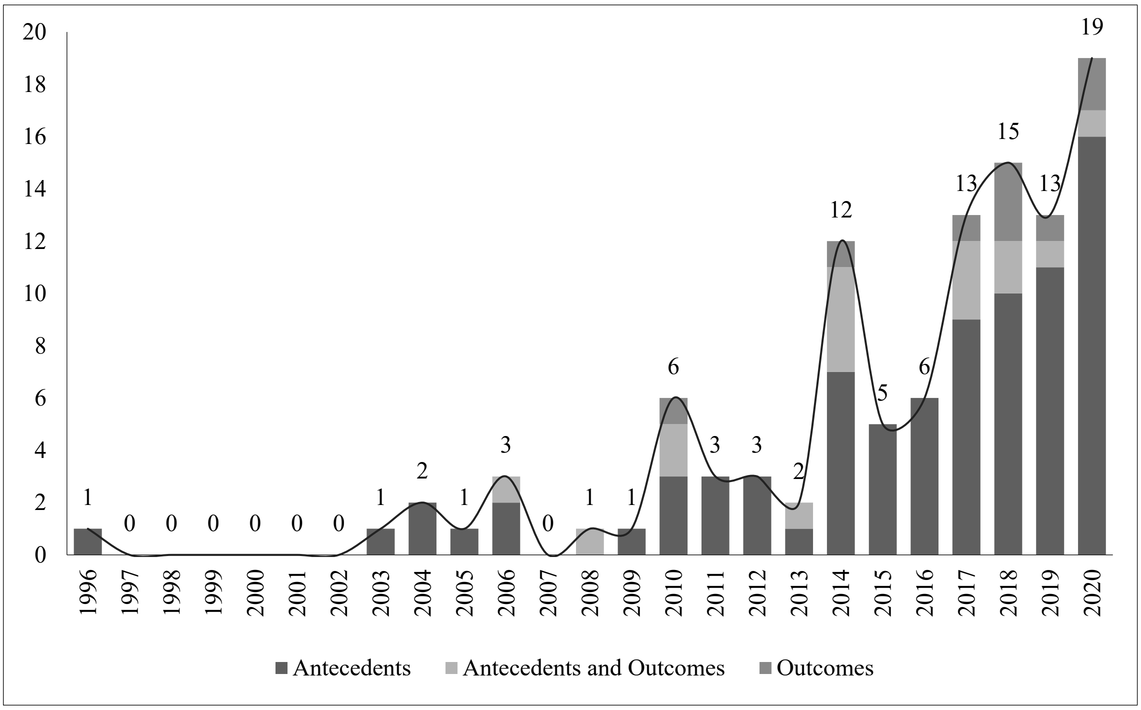


Table 2.2 Research method used

	Antecedent-related	Antecedent- and outcome-related	Outcome-related	TOTAL
Quantitative	70 (65.42%)	14 (13.08%)	8 (7.48%)	92 (85.98%)
Qualitative	8 (7.48%)	1 (0.93%)	0 (0.00%)	9 (8.41%)
Conceptual	4 (3.74%)	1 (0.93%)	1 (0.93%)	6 (5.61%)
TOTAL	82 (76.64%)	16 (14.95%)	9 (8.41%)	107 (100.00%)

When looking at reviewed article's research methods (see Table 2.2), quantitative research stands out. When analyzing large firms, quantitative research mainly draws from longitudinal databases such as the Thomson Reuters databases (e.g., El Ghoul et al., 2016; Martínez-Ferrero et al., 2017; Martínez-Ferrero et al., 2018), KLD data (e.g., Block and Wagner, 2014a, 2014b; Lamb and Butler, 2018; Liu et al., 2017; Kim et al., 2017), annual reports (e.g., Biswas et al., 2019; Sundarasen et al., 2016; Zamir and Saeed, 2020) and S&P 500 firms (e.g., Cui et al., 2018; Kashmiri and Mahajan, 2014b; Wagner, 2010). Quantitative studies examining family-owned small and medium-sized enterprises (SMEs) draw from cross-sectional surveyed data (e.g., Dawson et al., 2020; Peake et al., 2017) as there is little publicly available data on SMEs (Miller and Le Breton-Miller, 2007). Qualitative methods were used for inductive exploration of new research issues and theories. For example, Marques et al. (2014), Aragón-Amonarriz et al. (2019), and Bhatnagar et al. (2020) used semi-structured interviews for their case studies.

2.4.2 Theories in use

In sum, we found 96 different applied theories, giving the impression that the research field's theoretical foundation is fragmented. However, most theories played only a minor role within our sample. When analyzing the applied theories' underlying assumptions, we noted four theories appearing at least once in 52 papers: Principal agency theory, SEW, stakeholder theory, institutional theory (see Table 2.3). Since the theories have some overlaps, 30 studies combine those by drawing from different assumptions to explain a family firm's CSR activities.

Table 2.3 Theories used

Theory	**Representative Studies**
Principal agency theory	Abeysekera and Fernando (2020); Block (2010); Cui et al. (2018); El Ghoul et al. (2016); Labelle et al. (2018); Wiklund (2006)
SEW	Terlaak et al. (2018); Zientara (2017); Graafland (2020); Samara et al. (2018); Lamb and Butler (2018); Cruz et al. (2014)
Stakeholder theory	Ahmad et al. (2020); Bingham et al. (2011); Maggioni and Santangelo (2017); Delmas and Gergaud (2014); Uhlaner et al. (2004)
Institutional theory	Bammens and Hünermund (2020); Campopiano and De Massis (2015); Du et al. (2016); Ge and Micelotta (2019); Kim et al. (2017); Singal (2014)

N = 107 articles

In this regard, twenty-one articles drew on the principal agency theory, focusing on conflicts in the relationship between the principal (mainly the owning family) and the agent (mainly non-family managers), characterized by information asymmetry between the two, where the agent has an information advantage against the principal. The unequal distribution of information among these groups leads to the possibility that the agent may not act in the principal's best interest and behaves opportunistically for personal gain (Eisenhardt, 1989; Jensen and Meckling, 1976). In CSR-related family firm research, the principal agency theory shows that the stronger the control of the owning family (through ownership shares or management), the more successfully the owning family will impose its own goals on the firm. Most of those studies argue that higher information asymmetries increase CSR probability as non-family managers improve their image through CSR (Cuadrado-Ballesteros et al., 2015).

Institutional theory was referred to 16 times and focused on how firms need to adapt to the institutional environment to gain legitimacy while conducting their business (Campopiano and De Massis, 2015; Du et al., 2016; Zamir and Saeed, 2020). Institutional theory is mainly used to examine how specific antecedents affect CSR under different institutional settings. For example, Chen and Cheng (2020) show that the industry in which a company is located influences how family ownership or management affects CSR. The same is true for different cultural contexts (Samara et al., 2018).

Used as a theoretical concept, SEW was applied 15 times. The first article in our sample using SEW was published in 2014, where this concept has gained popularity ever since (Swab et al., 2020). SEW focuses on the family's affective, non-financial goals, such as strengthening the family image (Gómez-Mejía et al., 2007; Labelle et al., 2018; Marques et al., 2014). The most dominant argument among studies influenced by SEW is that the owning family wants to protect its family image and therefore engages in CSR to improve that image, and look good to stakeholders.

The stakeholder theory was used in eleven articles and is one of the fundamental and most dominant theories of general CSR research (Brown and Forster, 2013; Wood, 2010). A vital aspect of this theory is that a company receives resources from its stakeholders (e.g., human resources, information, legitimacy) and must engage in good relations. If a company does not do this, its stakeholders will eventually refuse to cooperate, leading to a decline in performance. CSR-related family firm research assumes that owner families use their firms to pursue financial and non-financial family goals and are more inclined to engage in CSR towards their stakeholders to achieve these goals.

There is a contemporary trend proposing a combination of the four prevailing theories, although, notably, approximately 34% of the articles used no theories at all. However, more recent studies tend towards being theory-driven, indicating that the understanding of family firms has advanced.

2.4.3 Content findings

2.4.3.1 Family firm antecedent

In total, 98 of all articles in our sample (91.59%) dealt with the antecedent angle of CSR in family firms. Of these, 82 articles (76.64%) dealt exclusively with antecedents, while 16 (14.95%) dealt with both antecedents and outcomes simultaneously. Antecedents explain why CSR is being implemented by a firm. Following Stafford et al.'s (1999) SFBT, we subdivided the identified family firm CSR antecedents in family and firm antecedents (see Table 2.4 and 2.5). While family antecedents emerge from the family subsystem, firm antecedents originate from the firm subsystem. From a familiness perspective family firms differ from non-family firms, since they do not only draw resources from the firm subsystem, but also from the family subsystem, which can result in a competitive advantage (Weismeier-Sammer et al., 2013).

Table 2.4 Family antecedents

Family antecedents	**Effect on CSR**			**Representative studies**
Family firm status	5			
	1	(20.00%)	Positive	Gallo (2004)
	1	(20.00%)	Negative	Dekker and Hasso (2016)
	3	(60.00%)	Not clear	Adams et al. (1996); Déniz Déniz and Carbrera Suárez (2005); Graafland et al. (2003)
Family ownership	42			
	24	(57.14%)	Positive	Bammens and Hünermund (2020); Kim et al. (2020); Sahasranamam et al. (2020)
	14	(33.33%)	Negative	Abeysekera and Fernando (2020); El Ghoul et al. (2016); Rees and Rodionova (2015)
	4	(9.52%)	Not clear	Bergamaschi and Randerson (2016); Labelle et al. (2018); Terlaak et al. (2018)
Family management	19			
	11	(57.89%)	Positive	Abeysekera and Fernando (2020); Block (2010); López-González et al. (2019)
	5	(26.32%)	Negative	Block and Wagner (2014a); Graafland (2020); Oh et al. (2019)
	3	(15.79%)	Not clear	Berrone et al. (2010); Cui et al. (2018); Terlaak et al. (2018)
Family ownership and management	16			
	8	(50.00%)	Positive	Dangelico (2017); Dyer and Whetten (2006); Liu et al. (2017)
	3	(18.75%)	Negative	Amann et al. (2012); Chen and Cheng (2020); Craig and Dibrell (2006)
	5	(31.25%)	Not clear	Doluca et al. (2018); Kim and Lee (2018); Iyer and Lulseged (2013)
Socioemotional wealth	5			
	2	(40.00%)	Positive	Dayan et al. (2019); Kallmuenzer et al. (2018)
	0	(0.00%)	Negative	-
	3	(60.00%)	Not clear	Arena and Michelon (2018); Le Breton-Miller and Miller (2016); Zientara (2017)
Family influence	8			
	6	(75.00%)	Positive	Bingham et al. (2011); Ahmad et al. (2020); Fitzgerald et al. (2010)
	0	(0.00%)	Negative	-
	2	(25.00%)	Not clear	O'Boyle et al. (2010); Le Breton-Miller and Miller (2016)

(continued)

Table 2.4 continued

Family antecedents	Effect on CSR			Representative studies
Family generation	9			
	7	(77.78%)	Positive	Dawson et al. (2020); Delmas and Gergaud (2014); Uhlaner et al. (2004)
	0	(0.00%)	Negative	-
	2	(22.22%)	Not clear	Aragón-Amonarriz et al. (2019); Richards et al. (2017)
Family values	11			
	10	(90.01%)	Positive	Aragón-Amonarriz et al. (2019); Marques et al. (2014); Sánchez-Medina and Díaz-Pichardo (2017)
	1	(9.09%)	Negative	Zheng et al. (2017)
	0	(0.00%)	Not clear	-
Family's firm name	3			
	3	(100.00%)	Positive	Kashmiri and Mahajan (2010); Kashmiri and Mahajan (2014a); Uhlaner et al. (2004)
	0	(0.00%)	Negative	-
	0	(0.00%)	Not clear	-

N = 98 antecedent-related articles

Since family firm research deals with family firm specifics, it is not surprising that the subcategory of family antecedents predominates among the antecedent-related CSR research (see Table 2.4). Looking at the articles chronologically, the first four published articles in our sample covering these are those by Adams et al. (1996), Graafland et al. (2003), Gallo (2004) and Uhlaner et al. (2004). While Adams et al. (1996) and Graafland et al. (2003) find no significant differences in regard to CSR between them, Gallo (2004) asked 44 scientists involved in family firm research whether they perceive those firms more socially responsible than non-family firm finding that scientists do perceive family firms as more socially responsible. The study of Uhlaner et al. (2004) is the first in our sample empirically finding family firms to be more inclined to conduct CSR. They conclude that an owning family's influence on a firm leads the firm to establish stronger relationships with its stakeholders and implicitly already theorizes about family resources (i.e., family social capital towards stakeholder) being antecedents for family firm's CSR activities (Uhlaner et al., 2004).

Inspired by these studies, different operationalizations were applied to identify family firm antecedents of CSR with family ownership being the most prominent measure starting in 2006. Although most studies using family ownership as a family antecedent showing positive effects on CSR (e.g., Biscotti et al., 2018; Cordeiro et al., 2020; Kim et al., 2020; Lamb and

Butler, 2018; Sahasranamam et al., 2020; Yu et al., 2015), there is no clear effect direction on CSR activities in the 42 studies using family ownership. The reason for this could be that ownership alone is not sufficient enough to actually influence business decisions since the owning family cannot affect internal decision-making processes directly (Terlaak et al., 2018). Block and Wagner (2014a) therefore conclude that it is much better to examine the influence of owning families on their company through family management, which actually can be observed among the 19 studies within our sample (e.g., Dawson et al., 2020; López-González et al., 2019; Oh et al., 2019). 16 further studies used a combination of family ownership and management (e.g., Dangelico, 2017; Dyer and Whetten, 2006; Chen and Cheng, 2020; Kim and Lee, 2018). However, studies using family management, or a combination of family ownership and family management, are not more likely to find a positive effect on CSR than those using family ownership.

Although many studies regarding CSR in family firms make use of the theoretical assumptions of SEW and criticize the insufficient explanatory power of family ownership and management (e.g., Block and Wagner, 2014b; Graafland, 2020; Marques et al., 2014; Samara et al., 2018), we could only find five articles explicitly dedicated to examining the effect of SEW on family firms CSR activities. Of these, only two actually applied empirical SEW measurements (Dayan et al., 2019; Kallmuenzer et al., 2018), while the other three addressed the issue conceptually pointing out how SEW affects a family firm's CSR activities is highly dependent on contextual factors (Arena and Michelon, 2018; Le Breton-Miller and Miller, 2016; Zientara, 2017).

In line with our theoretical assumption, the eight studies aiming to quantify the actual family influence predominantly found positive effects on CSR (Ahmad et al., 2020; Bingham et al., 2011; Fitzgerald et al., 2010; Samara et al., 2018; Sharma and Sharma, 2011; Uhlaner et al., 2012). These studies argue that as the family influence on day-to-day business increases its opportunity to actually influence internal business decisions also increases (Sharma and Sharma, 2011; Uhlaner et al., 2012). This assumption is further supported by the fact that the nine studies on family generation and the three studies on family's firm name show a very high proportion of studies with positive effects on CSR.

The predominant positive effect of the eleven studies regarding family values on CSR found are further indication of this (e.g., Bhatnagar et al., 2020; Marques et al., 2014; Sánchez-Medina and Díaz-Pichardo, 2017; Zheng et al., 2017). Thus, Le Breton-Miller and Miller (2016) state that especially religious values motivate an owning family to devote their resources to CSR activities. Values emerging from the family subsystem can help to foster management practices (i.e., CSR activities) and therefore understood as a type of family capital having the potential to give the family firm a competitive advantage over non-family firms (Antheaume et al., 2013; Aragón-Amonarriz et al., 2019).

Table 2.5 Firm antecedents

Firm antecedents	Effect on CSR			Representative studies
Financial	2			
	2	(100.00%)	Positive	Block (2010); Singal (2014)
	0	(0.00%)	Negative	-
	0	(0.00%)	Not clear	-
Non-financial (internal)	26			
	22	(84.62%)	Positive	Biswas et al. (2019); Du (2015); Martínez-Ferrero et al. (2017, 2018)
	2	(7.69%)	Negative	Graafland (2020); Madden et al. (2020)
	2	(7.69%)	Not clear	Kim and Lee (2018); Samara et al. (2018)
Non-financial (external)	4			
	3	(75.00%)	Positive	Du (2015); Ge and Micelotta (2019); Martínez-Ferrero et al. (2018)
	0	(0.00%)	Negative	-
	1	(25.00%)	Not clear	Richards et al. (2017)

N = 98 antecedent-related articles

Since a family firm consists not only of a family subsystem but also of a firm subsystem, we also found studies that examined the influence of general firm antecedents on CSR activities in our sample (see Table 2.5). These focus mainly on (internal) non-financial antecedents predominantly examining the effect of governance (e.g., El-Kassar et al., 2018; Campopiano et al., 2014; Terlaak et al., 2018) and non-family management (e.g., Martínez-Ferrero et al., 2017; Oh et al., 2019; Samara et al., 2018) on family firms CSR activities. With only two studies examining the effect of financial antecedents, it is apparent that there is still a need for further research. Regardless of the fact that firm antecedents play a rather minor role in our sample, they show that family firms draw resources from two subsystems (i.e., family and firm). The more resources the family firm system can accumulate from both subsystems, the more likely a family firm is to engage in CSR (Fitzgerald et al., 2010). Consequently, the likelihood of finding a positive effect on CSR activities increases when using an operationalization of the family antecedents better reflects the integration of family resources (i.e., familiness) within the family firm system (Sharma and Sharma, 2011). This is consistent with SFBT, which states that a family firms draws on resources from both the family and the firm in order to respond to internal and external disruptions.

2.4.3.2 Family firm outcomes

In total, 25 studies within our sample (23.36%) examined the outcome side of CSR. Of these, nine articles (8.41%) dealt exclusively with outcomes, while 16 (14.95%) dealt with both antecedents and outcomes simultaneously. As in the case of antecedents, we also subdivided them into family and firm outcomes in accordance to the SFBT. In this regard, no study was found examining family outcomes empirically. The reason for this might be that CSR is a firm level concept and research therefore primarily focuses on firm level outcomes as well. We categorized the outcomes of the firm system according to the firm antecedents as defined by Holt et al. (2017) into financial outcomes, internal and external non-financial outcomes (see Table 2.6). From a familiness perspective, a family firm should be able to better utilize the outcomes of CSR than non-family firms due to their superior resource base (Weismeier-Sammer et al., 2013).

Table 2.6 Firm outcomes

Firm outcomes	Effect of CSR			Representative studies
Financial	17			
	10	(56.25%)	Positive	Ahmad et al. (2020); Niehm et al. (2008); Pan et al. (2018)
	2	(12.50%)	Negative	Choi et al. (2019); Lin et al. (2020)
	5	(31.25%)	Not clear	Dangelico (2017); Doluca et al. (2018); Liu et al. (2017)
Non-financial (internal)	7			
	6	(85.71%)	Positive	Antheaume et al. (2013); Craig and Dibrell (2006); Wagner (2010)
	0	(0.00%)	Negative	-
	1	(14.29%)	Not clear	Doluca et al. (2018)
Non-financial (external)	6			
	3	(57.14%)	Positive	Ahmad et al. (2020); Panwar et al. (2014); Samara and Arenas (2017)
	2	(28.57%)	Negative	Hsueh (2018); Martínez-Ferrero et al. (2018)
	1	(14.29%)	Not clear	Zientara (2017)

N = 25 outcome-related articles

Chronologically, the first outcome-related studies emerged after research on family firm antecedents had already gained momentum. Niehm et al. (2008) were the first to examine financial CSR outcomes (i.e., firm performance), and Wagner (2010) was the first to examine non-financial CSR outcomes (i.e., innovation activities). Interestingly, there is a very balanced relationship between financial and non-financial outcomes compared to antecedents' related research.

Thus, nine studies show that family firms improve their financial outcomes such as cost of capital (Wu et al., 2014) or return on new products (Kashmiri and Mahajan, 2014a), but mainly focus on the firm's general performance (e.g., Adomako et al., 2019; Choi et al., 2019; Kashmiri and Mahajan, 2014b). Internal non-financial outcomes where family firms perform better are internal capabilities (Ahmad et al., 2020), longevity (Antheaume et al., 2013; Samara and Arenas, 2017) or innovation performance (Biscotti et al., 2018; Craig and Dibrell, 2006; Wagner, 2010). External non-financial outcomes are those like firm reputation (Samara and Arenas, 2017; Zientara, 2017), credibility (Hsueh, 2018; Panwar et al., 2014), or customer orientation (Ahmad et al., 2020).

Remarkably, most outcome-related studies found that family firms generate better results from CSR activities than non-family firms indicating that family firms are better in utilizing CSR. One study finding a negative effect in terms of non-financial outcomes is that of Martínez-Ferrero et al. (2018), who analyses the effect of CSR disclosures on information asymmetries between family and minority investors. They find that while CSR disclosures normally reduce the asymmetries between both parties, family owners use their power in order to take advantage out of it and do not inform minority investors adequately. Thus, family ownership reduces the effect between CSR disclosures and information asymmetry (Martínez-Ferrero et al., 2018). This shows that the resources out of the family subsystem does not automatically lead to a better utilization of CSR activities. In this case, it seems rather as if the owning family uses its influence to maintain its power over its own company, and thus its SEW (Zientara, 2017).

Although the idea of empirically examining the extent to which CSR outcomes differ between family and non-family firms is still very young, an increase in research activity can be seen since 2014. This shows that the importance of this research angle is increasingly being recognized (Kuttner and Feldbauer-Durstmüller, 2018). In order to increase the relevance of new outcomes-related studies, we recommend looking at family outcomes. According to the SFBT a family firm consist of the subsystems firm and family (Stafford et al., 1999), and both subsystems profit from the family firm performing well. Even though family outcome's importance was sometimes referred to in the reviewed literature (e.g., Campopiano and De Massis, 2015; Niehm et al., 2008; Zientara, 2017), we did not find research providing empirical information on whether CSR-improved stakeholder relations have an impact on such outcomes. Thus, Déniz Déniz and Carbrera Suárez (2005) already report that owning families are personally affected by the relationships with the stakeholders of the firm, since they are inseparable from it. Furthermore, the findings of Aragón-Amonarriz et al. (2019), who conclude that owning family derives honors from socially responsible behavior, could also act as a starting point for family outcome-related CSR research. We state that it is essential for research on CSR in family firm to extant its scope and start to understand "how organizations influence actors' families" (Jaskiewicz et al., 2017, p. 309).

2.4.3.3 Contextual factors

The SFBT theorizes that a family firm can cope with environmental factors much better than a non-family firm, since it can draw from family resources and therefore becoming more resilient to external disruptions (Stafford et al., 1999). In order to better understand the heterogeneous findings—especially on the antecedents' side of research—research has therefore increasingly looked at factors outside the family firm system. Thus, we devoted a further category to contextual factors (i.e., institutional pressure and community embeddedness), which affect the relationships between family firm antecedents and CSR activities of family firms (see Table 2.7) and are to be located outside the two subsystems family and firm.

Table 2.7 Contextual factors

Contextual factors	Effect on CSR		Representative studies
Institutional pressure	19		
	14 (73.68%)	Positive	Labelle et al. (2018); Maggioni and Santangelo (2017); Zamir and Saeed (2020)
	1 (5.26%)	Negative	López-González et al. (2019)
	4 (21.05%)	Not clear	Cuadrado-Ballesteros et al. (2015); Dayan et al. (2019); Le Breton-Miller and Miller (2016)
Community embeddedness	9		
	9 (85.71%)	Positive	Berrone et al. (2010); Dekker and Hasso (2016); Peake et al. (2017)
	0 (0.00%)	Negative	-
	0 (0.00%)	Not clear	-

N = 107 articles

A fundamental assumption of studies analyzing the effect of institutional pressure on family firms is that owning families are more sensitive to institutional pressure than other non-family owners leading to a greater tendency to implement the requirements of external stakeholders (Ge and Micelotta, 2019). The reason for this is that owning family's assign a higher importance to the firm image, as it partly transfers to them (Amidjaya and Widagdo, 2020; Discua Cruz, 2020; Labelle et al., 2018; Zientara, 2017), especially if the firm shares the same name as they do (Abeysekera and Fernando, 2020; Uhlaner et al., 2004; Kashmiri and Mahajan, 2010) and when the transgenerational orientation is high (Bammens and Hünermund, 2020; Pan et al., 2018). Following the argumentation of the SFBT, an owning family will therefore be more willing to provide family resources to the family firm system in order to meet the institutional pressure for CSR activities.

Although most studies show a positive effect of institutional pressure on CSR activities, it appears evident that how sensitive a family firm reacts to external pressure depends on the region (Ertuna et al., 2019; Ge and Micelotta, 2019; Labelle et al., 2018; Zamir and Saeed, 2020). Thus, while the first studies conducted with US American datasets between 2003 and 2013, the economic relevance of the Asian continent increased over the last years leading to an increase of CSR-related family firm studies applying Asian datasets since 2009 (see Table 2.8). While studies using US American data mostly showed positive effects of family antecedents on CSR, the increasing number of Asian studies in recent years more frequently also show a negative effect (Biswas et al., 2019; El Ghoul et al., 2016; Huang et al., 2009; Muttakin and Khan, 2014).

Table 2.8 Regions from which the research emanated

Region	Before 2001	2001-2005	2006-2010	2011-2015	2016-2020	Total
International	0 (0.00%)	1 (0.93%)	0 (0.00%)	2 (1.87%)	11 (10.28%)	14 (13.08%)
USA	1 (0.93%)	0 (0.00%)	9 (8.41%)	11 (10.28%)	11 (10.28%)	32 (29.91%)
Central-America	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	3 (2.80%)	3 (2.80%)
Australia	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (0.93%)	1 (0.93%)
Europe	0 (0.00%)	3 (2.80%)	0 (0.00%)	6 (5.61%)	13 (12.15%)	22 (20.56%)
Asia	0 (0.00%)	0 (0.00%)	1 (0.93%)	5 (4.67%)	22 (20.56%)	28 (26.17%)
Africa	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (0.93%)	1 (0.93%)
Conceptual	0 (0.00%)	0 (0.00%)	1 (0.93%)	1 (0.93%)	4 (3.74%)	6 (5.61%)
Total	1 (0.93%)	4 (3.74%)	11 (10.28%)	25 (23.36%)	66 (61.68%)	107 (100.00%)

This can be attributed to the fact that the cultural values in the USA—but also other Western countries—are highly stakeholder-oriented and based on “liberal democratic rights, justice and societal structures” (Amann et al., 2012, p. 331) leading to a high institutional pressure for firms to comply accordingly (Campopiano and De Massis, 2015; Dekker and Hasso, 2016). Since the Asian countries have a more shareholder-oriented culture, the social pressure to become CSR compliant has not yet been as strong, as in already in the US or Europe (El Ghoul et al., 2016). Thus, owning families tend to focus stronger on their own financial well-being and consequently more often neglect CSR than non-family firms (e.g., Biswas et al., 2019; Du, 2015; Du et al., 2016; Muttakin and Khan, 2014).

It is noteworthy that the relevance of institutional setting is more pronounced in studies analyzing large firms. For SMEs, studies more usually adopt the idea of community embeddedness. This perspective shifts the focus away from institutions and rather looks at the interpersonal ties of the owning family within their local community. We therefore found nine studies explicitly covering the impact of family community embeddedness on family firm's CSR (e.g. Fitzgerald et al., 2010; Laguir et al., 2016; Peake et al., 2017). These publications argued that family-owned SMEs use CSR as a strategic tool to influence the perception of external stakeholders (i.e., local community) positively which, in turn, leads to closer relationships between them (Lamb et al., 2017; Uhlaner et al., 2012). Interestingly all studies unanimously agree on family firms reacting positively towards it.

As already noted by Block and Wagner (2014a, 2014b), CSR-oriented research is scarce on family-owned SMEs. What can be studied with large, often multinational firms by means of institutional pressure, is with SMEs the pressure of the local community. What is interesting here is that it seems that this pressure also has a strong influence on behavior in developing countries, which is often not observed in large companies. Due to the image spillover from firm to family, an owning family is more motivated to engage in CSR than non-family firms (Kashmiri and Mahajan, 2010). Thus, family-owned SMEs are often found to be more CSR compliant than SMEs that are not family-owned. Overall, it can be said that context helps to better understand the effects of the above mentioned family firm antecedents and to resolve to some extent the heterogeneity.

2.4.3.4 Corporate social responsibility activities

Furthermore, we examined which CSR activities were used in the studies of our samples and to what extent their antecedents and outcomes differed from each other. According to Elkington's (1998) triple bottom line approach, we classified the applied CSR measures into environmental-, economic-, and society-related CSR activities (see Table 2.9).

Environmental-related CSR activities are those that aim to reduce or compensate for environmentally harmful behavior, e.g. by fostering ecologically sustainable innovations (Bammens and Hünermund, 2020), adapting green investment strategies (Dou et al., 2019), or adopt their behavior according to the standards of eco-certifications (Delmas and Gergaud, 2014). Economic-related CSR activities favor those stakeholders who have a direct relation to the value creation of the company, e.g., employees (e.g., Bennedsen et al., 2019; Block, 2010; Cruz et al., 2019; Zheng et al., 2017), customers (e.g., Bingham et al., 2011; Block and Wagner, 2014b; Dangelico, 2017), or suppliers (e.g., Campopiano and De Massis, 2015; Graafland, 2020; Uhlaner et al., 2004). Society-related CSR includes generalized activities such as donations (Bhatnagar et al., 2020), attention to important and pressing issues of the community (Bingham et al., 2011), or the support of non-profit organizations (Uhlaner et al., 2004). Through these activities, firms manage to maintain or even strengthen the relationships with different stakeholders to the extent that they can considerably increase their own competitive position (Wagner, 2010).

Table 2.9 Corporate social responsibility activities in family firms

CSR activity	Effect in family firms			Representative studies
Aggregated CSR	53			
	31	(58.49%)	Positive	Fitzgerald et al. (2010); Gallo (2004); Memili et al. (2020)
	12	(22.64%)	Negative	Biswas et al. (2019); Hsueh (2018); Muttakin and Khan (2014)
	10	(18.86%)	Not clear	Bergamaschi and Randerson (2016); Iyer and Lulseged (2013); Zientara (2017)
Environmental-related CSR	23			
	13	(56.52%)	Positive	Block and Wagner (2014b); Delmas and Gergaud (2014); Terlaak et al. (2018)
	5	(21.74%)	Negative	Amann et al. (2012); Dekker and Hasso (2016); Nadeem et al. (2020)
	5	(21.74%)	Not clear	Adomako et al. (2019); Kim and Lee (2018); Doluca et al. (2018)
Economic-related CSR	20			
	14	(70.00%)	Positive	Cruz et al. (2019); Kashmiri and Mahajan (2014a); López-González et al. (2019)
	4	(20.00%)	Negative	Amann et al. (2012); Nadeem et al. (2020); Zheng et al. (2017)
	2	(10.00%)	Not clear	Campopiano and De Massis (2015); Cruz et al. (2014)
Society-related CSR	12			
	10	(83.33%)	Positive	Bingham et al. (2011); Niehm et al. (2008); Sahasranamam et al. (2020)
	0	(0.00%)	Negative	-
	2	(16.67%)	Not clear	Amann et al. (2012); Kim and Lee (2018); Block and Wagner (2014b)

N = 107 articles

23 articles were allocated to environmental-related CSR (21.30%), 20 to economic-related CSR (18.52%) and twelve articles to society-related CSR (11.11%). Furthermore, we found that with 53 articles (49.07%) the majority of the research is based on CSR measures that do not differentiate between different activities but rather basically average the different activities in one measure (e.g., Gallo, 2004; Hsueh, 2018; Iyer and Lulseged, 2013; McGuire et al., 2012). Looking at the different antecedents and outcomes of the family and firm subsystem through the lens of the different CSR activities, a well balanced view can be identified. None of the CSR activities tend to focus on specific antecedents or outcomes and there are also no major differences in the direction of effect between the activities. It can be concluded that the corresponding CSR activities have not yet been sufficiently differentiated in family firm research. The disproportionately large number of articles that do not distinguish between different CSR activities also shows this.

After all, each CSR activity entails different activities and target groups, which should consequently also result in different antecedents and outcomes.

2.5 Future directions of research

Using the SFBT, we visualized the results of our data sample in Figure 2.2. Our literature review shows that much research has been done on CSR antecedents, especially on family antecedents. Outcome-oriented CSR research accounts for a rather small, but growing part of the research field. We were also able to identify studies focusing on contextual factors and how family firms respond to them in regard to CSR. In terms of the catalytic role of CSR in family firms, we found that research has not yet been sufficiently differentiated to be able to determine which specific CSR activities (i.e., environmental-, economic- or society-related) are driven by which family firms antecedents and which family firm outcomes they promote. To gain further insights, we propose nine research questions for future exploration. Their examination will open those "black boxes" and consequently will lead to clarify important aspects of family firms CSR activities (see Table 2.10).

Figure 2.2 Model of antecedents and outcomes of CSR in family firms

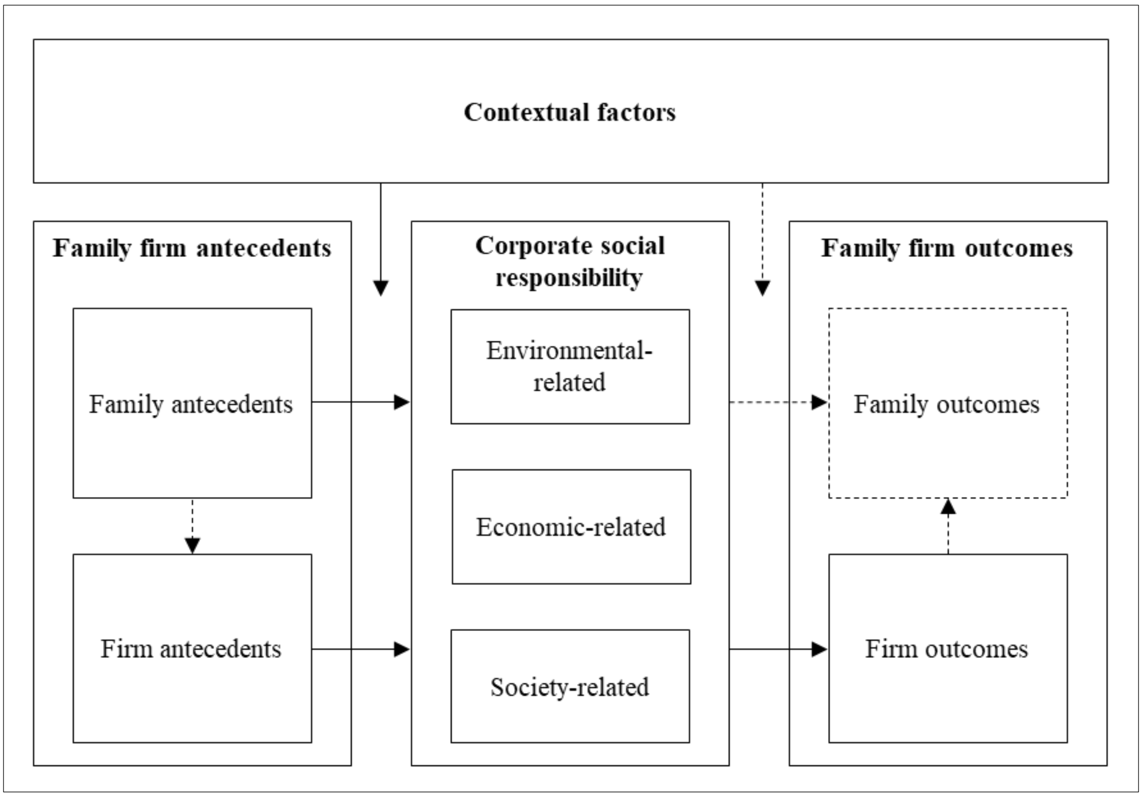


Table 2.10 Research questions

RQ1a	Which firm antecedents (i.e., firm resources) link/forge the association between family antecedents (i.e., family resources) and CSR activities?
RQ1b	Which conflicts can arise during the resource transaction between family and firm subsystem and how does this affect CSR activities?
RQ2	Which family outcomes (i.e., family resources) can an owning family generate through the CSR activities of its firm and how do those affect the family firm's CSR activities in subsequent periods?
RQ3a	Which firm outcomes (i.e., firm resources) link/forge the association between CSR activities and family outcomes (i.e., family resources)?
RQ3b	Which conflicts can arise during the resource transaction between family and firm subsystem and how does this the family firm's CSR outcomes?
RQ4	Which contextual factors affect the relationship between CSR activities and outcomes (i.e., family and firm outcomes) of family firms?
RQ5a	Which CSR activities (e.g., environmental, economic, or society-related) link which antecedents (i.e., family and firm antecedents) and outcomes (i.e., family and firm outcomes)?
RQ5b	How and why do CSR activities link antecedents and outcomes of family firms?
RQ6	How and why do CSR activities increase the longevity of family firms?

Family firm research traditionally focuses on the examination of family antecedents and only marginally includes firm antecedents in their models. The effects of both family and firm antecedents on CSR is mostly examined independently. For example, Marques et al. (2014) show that family involvement (identification and commitment) and family values have a positive effect on CSR activities, but do not examine the extent to which family and firm antecedents interact with each other. Peake et al. (2017), Sharma and Sharma (2011) and Uhlaner et al. (2012) apply similar conceptual frameworks.

Following the SFBT, we know that the higher the influence of the owning family within its firm, the greater the interaction between family and firm, and the more resources can be transferred between both (Stafford et al., 1999). When family resources are transferred to the firm subsystem, familiness is generated providing the family firm with a larger resource base, ultimately leading to a competitive advantage in the long term (Frank et al., 2017; Habbershon and Williams, 1999; Weismeier-Sammer et al., 2013). These theoretical assumptions are implicitly applied in the work of Aragón-Amonarriz et al (2019), who explain that owning families involved within the firm introduce responsible behavior which will eventually being repaid by its stakeholders. According to them, the family's social capital is a key driver for family firms CSR activities and competitiveness.

What has not yet been examined so far is that the permeability of the two subsystem boundaries and how those affect the effectiveness of the resource transaction. Utilizing the system theoretical perspective of the SFBT, we theorize that the permeability of the subsystems boundaries can differ. Depending on how strong the subsystem boundaries are, the impact of family antecedents (i.e., family resources) can be more or less effective on firm antecedents (i.e., firm resources). If the permeability of the subsystems is low, resources can easily be transferred from one subsystem to another, while such a transaction will be more difficult when the permeability of the subsystems boundaries is high (Danes et al., 2008; Hernes and Bakken, 2003). This permeability, however, can change, e.g. if the non-family management wants to preserve their personal power within the firm subsystem and therefore tries to hamper integration of family's resources. This would mean that the potentially positive effect of family resources (i.e., familiness) could not fully unfold, not only on CSR, but also in general.

Thus, although we found that future family firm research should especially focus on the outcome angle of CSR, we believe that the antecedent's angle of research should be developed more sophisticated. In this regard, we also propose to examine which factors could hamper the transaction of family and firm subsystem resources between the subsystems and whether this could affect the CSR activities of family firms.

RQ1a: *Which firm antecedents (i.e., firm resources) link/forge the association between family antecedents (i.e., family resources) and CSR activities?*

RQ1b: *Which conflicts can arise during the resource transaction between family and firm subsystem and how does this affect CSR activities?*

Although family firm research for a long time only focused on the examination of antecedent angle of CSR, more and more studies emerged examining the outcome side of CSR in family firms over the last years. As shown, those findings explicitly deal with financial and non-financial firm outcomes and only theorize about family outcomes without empirically studying them. We explain the empirical focus on firm level outcomes due the fact that CSR is a firm level construct and that it is therefore a natural thing to first address the firm outcomes of CSR in family firms.

It is, however, an assumption of the SFBT that while family and firm share their resources to some extent, the family and the firm pursue their specific goals separately. Thus, Campopiano and De Massis (2015) state that owning families can profit by the image enhancing effect of CSR themselves by an increased family image. Furthermore, Aragón-Amonarriz et al. (2019) conclude that family honorableness is one of the outcomes of family firm's CSR activities, therefore already hinting towards to the fact that CSR also generates family outcomes. However, the question of which family outcomes can be generated or how they are achieved through CSR has not yet examined. Since this stream of research in family firm CSR has not yet been developed, we recommend exploratory (i.e., qualitative) work in this area to determine which family outcomes an owning family is trying to achieve through CSR. Jaskiewicz and Dyer (2017) recommend drawing on the various disciplines of family science. A more sophisticated analysis of what moves a family independently of its firm goals could help to determine what an owning family might hope to achieve through CSR.

Taking a closer look at the implicit assumptions made by the reviewed studies on family outcomes (e.g., family harmony, family well-being), we find indications that a family firm's CSR could also have an impact on the owning family itself (Niehm et al., 2008). We assume that if the owning family would not receive family outcomes through CSR activities, they would not provide more resources to the firm in order to conduct more CSR and would rather use them elsewhere. As the family and the firm are overlapping subsystems mutually affecting each other, the question remains which family outcomes (e.g., family harmony, family well-being) are actually achieved. Following Jaskiewicz and Dyer (2017), the question arises to what extent these family outcomes act in subsequent periods as family antecedents. Thus, positive family outcomes can lead to the prevention of negative family events (e.g., divorce), which enables the owning family to provide more family resources to the family firm in subsequent periods.

RQ2: *Which family outcomes (i.e., family resources) can an owning family generate through the CSR activities of its firm and how do those affect the family firm's CSR activities in subsequent periods?*

Although family outcomes were only implicitly examined, research only implicitly indicate that CSR-related family outcomes are generated through the utilization of firm outcomes (e.g., Aragón-Amonarriz et al., 2019; Campopiano and De Massis, 2015; Déniz Déniz and Carbrera Suárez, 2005; Niehm et al., 2008; Zientara, 2017). It is a fundamental assumption of SFBT that resources can be exchanged between family and firm as soon as the overlap of both subsystems is large enough. This means that the family firm has a larger resource base than a non-family firm, since it can additionally draw from the family resources of the owning family. Since the resource transaction between the two subsystems can also be performed from firm to family, this implies that the owning family can also benefit from the firm's financial and non-financial outcomes of CSR.

However, as in the case of the antecedents it is also important to consider on the outcomes side that boundary permeability of the subsystems can hinder the effectiveness of the resource transaction. For example, there are studies that examine the extent to which majority shareholders withdraw resources from a company at the expense of minority shareholders (Welford, 2007). This so-called tunneling disadvantages minority shareholders, which, due to their limited influence, are not able to protect themselves against the majority shareholders (Dal Maso et al., 2020; Sahasranamam et al., 2020). Therefore, the transfer of firm resources (especially financial or social capital) could lead to the firm subsystem decreasing its permeability in order to hamper the flow of resources to the family subsystem.

Although we propose to put a higher emphasize on firm outcomes, we propose that outcomes-related CSR research should also include how family outcomes are affected by CSR. For example, it could be examined whether an increase in the firm's performance through CSR also leads to an increase in the family's well-being. Another idea would be to examine whether a through CSR improved firm image leads to more social capital for the owning family. In this regard, we also propose to examine to what extent conflicts occur between both family and firm and to what extent this process influences the generation of family outcomes.

RQ3a: *Which firm outcomes (i.e., firm resources) link/forge the association between CSR activities and family outcomes (i.e., family resources)?*

RQ3b: *Which conflicts can arise during the resource transaction between family and firm subsystem and how does this the family firm's CSR outcomes?*

According to the SFBT, family and firm resources are used to overcome not only internal but also external disruptions. In this regard, research has found that family firms are more sensitive to external contextual factors (Uhlaner et al., 2004) and are also more adaptive to them due to their unique set of resources. As for the antecedents of CSR, research has shown that institutional pressure and community embeddedness increase the likelihood that family firms engaging in CSR (Ge and Micelotta, 2019). The greater the pressure from contextual factors to engage in CSR, the more likely family firms are to mobilize their family resources for the firm (e.g., Maggioni and Santangelo, 2017; Berrone et al., 2010; Zamir and Saeed, 2020).

Research shows that this pressure varies greatly from region to region (Ertuna et al., 2019; Labelle et al., 2018). While it tends to be high in the USA and Europe, it tends to be low in Asian countries (Welford, 2007). However, since the economic relevance of the Asian continent increased over the last years and the economic relationships between Asian countries and the Western world became more relevant as well. Muttakin and Khan (2014) found that many Asian firms by now use CSR as a signal to foreign investors that they do have more pronounced governance structures compared to their region competitors (Cordeiro et al., 2018). In this regard, Asian family firms can use their family resources to conduct more CSR and use it as a strategic tool in order to signal Western investors that they are trustworthy business partners (Du et al., 2018).

Our analysis shows that research regarding contextual factors is still at its beginnings and we assume that those could also affect the relationship between CSR activities and its outcomes. For example, different countries and communities may have different expectations of owning family with regard to CSR. Family firms could respond more effectively towards those expectations when expanding or even internationalize than non-family firms, since they have a greater resource base due to family resources. We therefore encourage future research to look for and examine contextual factors affecting the outcomes of CSR in family firms.

RQ4: *Which contextual factors affect the relationship between CSR activities and outcomes (i.e., family and firm outcomes) of family firms?*

A central connection that has not yet been addressed is which CSR antecedents lead to which outcomes. Related to this, the question arises which CSR activities actually link those antecedents and outcomes. Do the firm antecedents also lead to firm outcomes or are there also crossover connections due to the overlap of family and firm, so that, for example, firm antecedents generate family outcomes. Another question is if there is a difference between family and firm antecedents in regard to their effectiveness.

In this regard, it is necessary to consider how and why CSR activities link antecedents and outcomes. Labelle et al. (2018) theorize that family firms are driven by both economic and non-economic goals. They argue that the higher the proportion of family ownership, the more likely it is that firm's business activities will be aligned with the achievement of economic goals. Since they attribute a rather non-economic effect to CSR, they argue and also empirically find that more CSR is conducted at firms with low family ownership, and fewer CSR activities are conducted at firms with higher family ownership. Interestingly, Terlaak et al. (2018) theorize and empirically find exactly the opposite by arguing that family firms place a higher emphasis on non-economic goals when family ownership within the firm increases.

Thus, since many family firms have scarce resources and therefore must use them efficiently in order to survive (Ward, 1997) it is particularly important to understand which CSR activities have to be used. Following Stafford et al.'s (1999) SFBT, a division of family and firm could help clarify these issues. Case studies could be used as a method to identify relationships or disagreements between antecedents and outcomes. Their results could be checked quantitatively afterwards using panel surveys to analyze the long-term effect of the measures. In future research, this black box must be opened up in order to prove which CSR activities help to achieve which goals and whether family resources can help to achieve those or not.

RQ5a: *Which CSR activities (e.g., environmental, economic, or society-related) link which antecedents (i.e., family and firm antecedents) and outcomes (i.e., family and firm outcomes)?*

RQ5b: *How and why do CSR activities link antecedents and outcomes of family firms?*

A central goal of family firms is to ensure that the firm can continue to provide a basis for the family's existence even in later generations. While a handful of family firms achieve this goal, many others do not (Koiranen, 2002). In line with the SFBT, we found that higher family influence leads to a higher propensity of CSR in family firms, which we trace back to family resources integrated within the family firm's resource base. Those help the family firm to respond more effectively to internal and external disruptions and thus also to generate better outcomes out of CSR. Among the outcome-related studies, Antheaume et al. (2013) found that CSR is indeed a factor that positively influences the longevity of family firms, indicating that CSR helps family firms to succeed over generations.

In this context, the study of Pan et al. (2018) is particularly noteworthy, since they find a positive effect of CSR on the post-succession performance of family firms. They theorize that in order to take over successfully, successors of the owning family need to win the support of internal and external stakeholders, which they can do by conducting CSR (Bammens and Hünermund, 2020; Pan et al., 2018). By signaling good intentions to their stakeholders, CSR increases the motivation of the firm's stakeholders to interact (Bingham et al., 2011), helping to facilitate the transfer of the social network from the predecessor to the successor (Aragón-Amonarriz et al., 2019; Pan et al., 2018; Schell et al., 2020). Thus, CSR is a strategic instrument to increase the firm's legitimacy (Chiu and Sharfman, 2011), consequently increasing the probability of a family firm to handover the firm from one generation to another successfully (Pan et al., 2018).

Accordingly, CSR could actually help a family firm to preserve its resource base during the handover of the firm, thus contributing to the longevity of the firm. As this is one of the most crucial issues of family firm research, research proving this assumption empirically would actually create a business case for CSR in family firms. Therefore, it is essential that this assumption will be addressed in future research.

RQ6: *How and why do CSR activities increase the longevity of family firms?*

2.6 Synthesis

2.6.1 Discussion

This systematic literature review has revealed that CSR is still a relatively young phenomenon in family firm research, but has been becoming increasingly relevant over the last years. Three research questions focusing on family firm's CSR antecedents and outcomes, but also on the interaction between both, guided this review. Using Stafford et al.'s (1999) SFBT as a theoretical framework, we examined the CSR antecedents and outcomes of a family firm not only from a family, but also out of a firm perspective. We contribute to the literature through summarizing and integrating our findings in an overarching framework, emphasizing family and firm antecedents and outcomes, as well contextual factors. Thus, we have been able to reveal the current focus of research areas regarding family firm's CSR antecedents and outcomes (see Figure 2.2), and at the same time have shown which research questions need to be addressed in the future. In this regard, our review does contribute to the further develop the research field.

First, our study shows that the strategic decision making in regard to CSR is not exclusively tied to the actual family manager, but also to his/her family and the family resources they provide (Jang and Danes, 2013; Dimov, 2017). The latter depends on the influence the family exerts on the firm. In this regard, the use of family resources (i.e., familiness) is much more pronounced in smaller firms since it is more likely that an owning family exert its influence on smaller firms than on larger ones (Danes and Brewton, 2012). Thus, our results show that more

CSR is implemented when the owning family has a greater influence on the family firm. From a SFBT point of view, we utilized a resource-based view explaining that family resources increase the probability of conducting CSR, which could be suitable for revealing further heterogeneity of family firms. Thus, the different CSR strategies chosen by family firms can be explained by the different levels of family resources provided by the family subsystem.

Second, according to SFBT, as family influence increases, family firms engage in CSR to cultivate their relationships with their stakeholders (Fitzgerald et al., 2010; Stafford et al. 1999) and thereby generate positive firm outcomes and longevity for the family firm by leveraging resources (Kuttner and Feldbauer-Durstmüller, 2018). As in the case of the antecedents-related studies, we consequently also examined the outcomes-related studies from a family and firm perspective. Concerning studies examining the firm outcomes of CSR in family firms, we have found a strong focus on non-financial outcomes, whereas financial outcomes have rarely been researched. In regard to firm outcomes, we therefore recommend future research to assign a higher priority to CSR's financial firm outcomes. Family outcomes that relate to the needs and goals of the owning family (Jaskiewicz et al., 2017; Jaskiewicz and Dyer, 2017; Gómez-Mejía et al., 2007) have not yet been analyzed at all. This is surprising, as the subsystems family and firm form a unit and the outcomes therefore should have a reciprocal influence (Stafford et al., 1999). Further research in this area could pinpoint which family-related goals (Chrisman et al., 2010; Kotlar and De Massis, 2013) family firms can achieve through CSR.

Third, while our literature review has shown that family influence increases the likelihood of CSR activities within family firms, which consequently increase the probability of achieving higher firm outcomes, we could not answer how CSR links those both categories. Thus, the question about the catalytic role of CSR remains a black box. Since family firms need to know which antecedents can help them to achieve their goals (i.e., family and firm outcomes) by which CSR activities, this is a crucial question to answer. If this is not clarified, family firms might not invest the optimum set of family and firm resources into CSR activities, since they do not know if those investments actually lead to the strategic advantage they wanted to generate. This is especially important for family-owned SMEs, which have considerably fewer resources available than their larger competitors. As the field of CSR research continues to advance, family firm researcher, but also those studying non-family firms should remember that research questions require more than an antecedent and an outcome.

Next to contributions regarding family firms, there are also contributions for non-family firms. Since we understand CSR as a strategic management tool to achieve outcomes (Kuttner and Feldbauer-Durstmüller, 2018; Kuttner et al., 2021), non-family firms should also reflect upon their CSR antecedents from a resource-based view. However, the general management literature also lacks in-depth analyses of how desired outcomes are achieved by conducting CSR (Kong et al., 2020). Also in non-family firms, different motivations can lead to different business activities being taken and it is worthwhile to look more deeply at the human element, e.g. of managers. Thus, especially in non-family-owned SMEs, managing partners can have a high psychological ownership acting as an antecedent for the firm's CSR activities (Pierce et al., 2001).

In general, to better integrate the family as an organizational actor into management research, Jaskiewicz et al. (2017) called for a stronger integration of family science into this research. Family science uses knowledge coming "from various disciplines such as psychology, sociology, and education" (Jaskiewicz et al., 2017, p. 309) and, therefore, could provide new theoretical and empirical insights for the explanation of CSR's family outcomes. Since it can be assumed that family firms do not conduct CSR purely out of charity, but also to achieve specific outcomes (Zientara, 2017), this area of research offers many opportunities for future family firm-related studies. Furthermore, a holistic theoretical framework such as Stafford et al.'s (1999) SFBT that takes into account the unity of family and firm as well as a permanent exchange of resources could help. This theory assumes that the resource are transferred between the family and the firm subsystem depending on how much those subsystems overlap (Danes et al., 2008; Fitzgerald et al., 2010). By identifying the reasons for a stronger or weaker resource transaction, it might be possible to explain some of the heterogeneity with respect to family firms CSR behavior.

There is a lot of research about CSR in family firms. However, in current research quantitative empirical approaches dominate research activities on CSR in family firms. In order to develop family firm-specific explanatory approaches for the influence of the family on firm antecedents and the function of translation from drivers to outcomes and the emerge dynamics, we encourage subsequent research to draw more on qualitative empirical research, for example, in the form of case studies and experiments (De Massis and Kotlar, 2014; Lude and Prügl, 2021). In particular, as research in family-owned SMEs is still underrepresented (Miller and Le Breton-Miller, 2007), this approach should be conducted within this type of company. Research in the field of large companies cannot be transferred one-to-one to SMEs (Faller and zu Knyphausen-Aufseß, 2018; Uhlaner et al., 2012), as the involvement and integration of the family is different (Miller and Le Breton-Miller, 2007), which leads to a different use of resources as well as goals (Block and Wagner, 2014b; Niehm et al., 2008). Qualitative empirical research could help to fathom the underlying motivations of family firms in relation to CSR outcomes. We also propose that such research should focus more on the role of the owning family and its individual members. Research considering this could break down the current barriers of the research field and develop it further.

2.6.2 Practical implications

Such findings are also important for practice since family firm's managers can learn that family influence and CSR activities can be beneficial for the firm. First, our study shows that through an owning family's influence on the firm subsystem, family resources (e.g., financial, human, and social capital) are integrated into the firm helping to conduct CSR activities. It is therefore advantageous for the manager of a family firm to allow the owning family to be involved. Nevertheless, we assume that there may be friction between the family and firm subsystem (see research question 1b) and that the integrated family firm resources may therefore not reach their full potential. Although they should allow family resource to be integrated, we recommend that family firm managers monitor the interactions family and firm closely and establish boundary management in the case of tensions between the two. It is also useful to seek outside advice and bring in an independent consultant if the problems are too severe. Our results can be of great relevance not just for the family firms, but also for the economic policy-makers, and consequently the economies of their respective countries. The higher inclination for CSR activities can generate positive financial and non-financial outcomes that help a company to become profitable. In particular, CSR activities that are directly related to business (i.e., economic-related CSR) can be beneficial for the firm. Regardless of the positive effect of family influence, our study shows that it makes sense to conduct CSR if a company wants to be successful in the long run.

2.6.3 Limitations

Following Tranfield et al.'s (2003) systematic literature review approach has helped us to expand the field of research, even if also accompanied by certain limitations. When using a selection of databases, there is the possibility that not all relevant papers have been considered. However, this limitation is counterbalanced in part by the clear description of the databases, which also makes the analysis more comprehensible. Despite our systematic approach for searching and analyzing relevant publications, subjectivity cannot be fully excluded. Nonetheless, this subjectivity has also helped us to identify lacuna, and proffer important questions, which we hope will open up future research of CSR in family firms. Second, we limited our literature search to family firms. It could be that there is some research in the field of family science that could further explore the effects between family and firm as well as CSR activities that has not been considered by this review. Third, our chosen theoretical framework may have an impact on the analysis and evaluation of the articles consulted. Therefore, we have clarified our basis of interpretation by explaining the theory and the underlying mechanism in detail.

2.6.4 Conclusion

We postulate that research on CSR outcomes is necessary to be able to evaluate the effectiveness of family and firm antecedents. It can also provide further insight into the unity of the family and the firm, especially its use of resources to achieve certain goals. These results lead to a better understanding of the heterogeneity of family firms. Likewise, in future research, these approaches can also be applied to non-family firms, since here, too, managers have a connection to the firms and can help determine the success of the firm through their use of resources such as social and human capital, which in turn enhances their reputation. With this literature review, we would like to motivate you to continue looking at the topic of CSR from different perspectives.

3 Familiness, organizational identity strength, and corporate social responsibility activities in family-owned small and medium-sized enterprises

Christoph Stock • Stefan Hossinger • Arndt Werner

Abstract

Family-owned small and medium-sized enterprises (SMEs) are rarely the subject of corporate social responsibility (CSR) research. Using a comprehensive dataset of 203 German family-owned SMEs, this study proposes and tests a model in which familiness (FAM) is a crucial driver of CSR activities. Specifically, our findings reveal that an increase in FAM is positively related to three specific CSR activities: employee-, customer-, and society-related CSR. As hypothesized, our results also show that the FAM effect is weaker on employee- and customer-related CSR activities in family-owned SMEs with a strong organizational identity.

Keywords: Family-owned SMEs, familiness, organizational identity, CSR.

3.1 Introduction

Family firms create organizational practices favoring long-term relationships with internal and external stakeholders to promote the successful management of their firm (Chua et al., 1999; Le Breton-Miller and Miller, 2006; Venohr et al., 2015). These practices often result in increased corporate social responsibility (CSR) activities compared to non-family firms (Canavati, 2018; Faller and zu Knyphausen-Aufseß, 2018; Vazquez, 2018), through which they can increase stakeholder confidence and loyalty (Aguinis and Glavas, 2012; Kervyn et al., 2012). Thereby achieving greater managerial authority (Leoni, 2017), greater employee productivity (Wang et al., 2017), and possibly increased innovation output (Wagner, 2010), facilitating successful economic outcomes (Orlitzky et al., 2003). The financial success is particularly significant for family-owned small and medium-sized enterprises (SMEs), where the firm is often the family's primary income source (Castejón and López, 2016).

Although early research suggested that family-owned SMEs use CSR to further economic goals (Déniz Déniz and Cabrera Suárez, 2005; Niehm et al., 2008; Uhlaner et al., 2012), more recent studies have tended to explain a family firm's motivation in using CSR through the application of socioemotional wealth (SEW) (e.g., Canavati, 2018; Cruz et al., 2014; Fehre and Weber, 2019; Vazquez, 2018; Zientara, 2017). Introduced by Gómez-Mejía et al. (2007), the concept of SEW refers to the owning family's non-economic motives, "such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty" (Gómez-Mejía et al., 2007, p. 106). Since the introduction of this theoretical concept, research has tended to use SEW to explain how owning families promote CSR in the pursuit of non-economic goals, such as legitimizing family control over the firm, or by increasing the owning family's image towards external stakeholders (Cennamo et al., 2012; Cruz et al., 2014; Labelle et al., 2018; Zientara, 2017).

Despite this current focus on SEW and emphasis on non-economic goals, our paper theorizes that familiness (FAM) can also increase the probability of family-owned SMEs conducting CSR to further their economic goals. FAM emphasizes the economic effects of family influence by utilizing a resource-based view (Habbershon and Williams, 1999) and defining a family firm by drawing from the systems theory which states that a family firm is a social system consisting of two subsystems: family and firm (Frank et al., 2017). The greater the FAM, the stronger the influence of the family subsystem upon the firm subsystem. Consequently, FAM increases family resources (i.e., financial, human, or social capital) into the family firm system (Habbershon and Williams, 1999; Weismeier-Sammer et al., 2013). Using the concept of FAM, we challenge the predominant assumption that SEW is the main CSR driver in family-owned SMEs.

Following Bingham et al. (2011), we also propose that the strength of organizational identity (OI)—described as when firm values are “widely shared and deeply held by organizational members” (Kreiner and Ashforth, 2004, p. 8)—is another crucial factor to be taken into consideration when analyzing a family firm’s CSR activities. Although Bingham et al. (2011) did not empirically test their assumptions, they suggested that, due to a stronger OI, family firms with more significant family influence are more CSR-compliant than family firms with less family influence. However, Ashforth and Mael (1989) have argued that the more the individuals within a system identify with it, the more it will close itself to external influences. Based on this, we propose the stronger the firm’s OI, the less open the firm subsystem, which, in turn, will hamper the exploitation of family resources introduced through FAM. In studying the relationship between FAM and CSR, we therefore posit that it is essential to include OI strength and clarify its consequences in the analysis.

To test our hypotheses, we used a dataset of 203 non-publicly listed, family-owned SMEs located in Germany and found empirical evidence that an increase of FAM is positively related to employee-, customer-, and society-related CSR activities. Our results also indicate that an increase of OI strength within those family-owned SMEs weakens the FAM effect on CSR activities towards employees and customers.

Despite representing a large part of the business population in any economy, family firm CSR research often neglects non-publicly listed, family-owned SMEs (Campopiano et al., 2014; Castejón and López, 2016; Perrini et al., 2007). Therefore, our study aims to shed light on this group of firms and contribute to the current heterogeneity debate (Jaskiewicz and Dyer, 2017; Rau et al., 2019) by introducing the FAM perspective, helping to analyze family firm’s economic motives. Furthermore, by accounting not only for the family but also for firm antecedents, we take a closer look at the effects that occur along the boundaries of the two subsystems—family and firm. Thus, our model helps build a better theoretical understanding of family firms by applying comprehensive theories explaining how family influence affects the behavior of a family-owned SME when considering that a family firm is a social system. Our results also show that we need a better understanding of the motives which drive different CSR activities, which is especially important since future research needs to understand CSR activities’ different antecedents and outcomes.

The remainder of the paper is structured as follows: The subsequent section discusses the current research literature and summarizes the empirical findings of prior CSR research in family firms. Based on this review, we develop our theoretical framework and hypotheses, then test using ordinary least squares (OLS) regression. The final section discusses our findings and provides theoretical and practical implications based on our results.

3.2 Literature overview

CSR can be broadly defined as a company's voluntary contribution to sustainable development above and beyond legal requirements (Carroll, 1999; Dahlsrud, 2008; Van Marrewijk, 2003). Carroll (1999) has identified Bowen's (1953) work as the foundation for the current scholarly understanding of CSR. Bowen (1953) emphasized that companies benefiting from conditions set within a social framework must give something back to society and that companies should use their power to assume both economic responsibility and social responsibility. Consequently, CSR-oriented management does not just mean making charitable donations (Fifka and Reiser, 2015) but is also characterized by the sustainable use of all corporate resources (Carroll, 1999; Dahlsrud, 2008; Van Marrewijk, 2003). Thus, CSR includes various activities (Turker, 2009) that help form cooperative networks with internal (i.e., employees) and external (i.e., customers or society) stakeholders (Orlitzky and Benjamin, 2001; Sen et al., 2006; Luo and Du, 2015).

The growing body of CSR research includes many studies that have examined the family ownership or management effect on CSR (e.g., Bingham et al., 2011; Block and Wagner, 2014b; Cuadrado-Ballesteros et al., 2015). Relationships between these factors are often rooted in the level of family involvement: the more significant the family involvement within family firms, the less likely there are to be agency conflicts between the owning family and non-family managers (Fama and Jensen, 1983; Jensen and Meckling, 1976). As agency conflicts decrease, the owning family is better positioned to enforce its interests regarding CSR within the company. Although existing literature has found that family firms are generally more socially responsible than non-family firms, the involvement of an owning family within a firm is not deterministically related to more CSR (Faller and zu Knyphausen-Aufseß, 2018). In this context, the observations of the anthropologist Banfield (1958) are worth mentioning. Banfield (1958) analyzed the behavior of families in a southern Italian town and found that in this family-oriented society, the common good is sacrificed for the immediate family good. The transfer of this observation to the corporate area leads to the conclusion that family firms can have an in-built incentive to ensure that the family always benefits (Cruz et al., 2014; Cui et al., 2018). Following this line of argumentation, family firms use CSR not as a means of altruism but as a strategic tool to pursue economic or non-economic goals (Labelle et al., 2018).

Recently, research has increasingly focused on CSR fulfilling the owning family's non-economic goals, leading to the increased application of the SEW perspective (e.g., Canavati, 2018; Cruz et al., 2014; Fehre and Weber, 2019; Vazquez, 2018; Zientara, 2017). Following the theoretical assumption that family firms are not necessarily economically driven, there is up-to-date empirical evidence of some family firms neglecting the maintenance of good relationships with stakeholders due to their SEW-related concern over a potential loss of family control (Cruz et al., 2014; Cruz et al., 2019; Cuadrado-Ballesteros et al., 2015). This argument shows that SEW can negatively affect CSR activities (Zientara, 2017). However, there is also evidence that SEW can positively affect CSR when motivated by the family's need for an enhanced positive image. Given the positive image spillover from firm to family, owning families concerned about their image more often adopt proactive stakeholder management in their firms (Block and Wagner, 2014b; Cennamo et al., 2012).

However, most of this research is focused on large, publicly listed family firms (Campopiano et al., 2014; Castejón and López, 2016; Perrini et al., 2007), which primarily disclose a great deal of information about their corporate activities to the public (Baumann-Pauly et al., 2013; Perrini et al., 2007). Depending on the law of each country, privately-owned family SMEs often do not have such a disclosure obligation (Laschewski and Nasev, 2021), and as such, they generate less publicly accessible information regarding their CSR activities. This lack of transparency could be why researchers have tended to examine the social behavior of large companies more often (Faller and zu Knyphausen-Aufseß, 2018; Muller, 2020; Karampatsas et al., 2021). However, since the activities of privately-owned family SMEs are generally less visible to the public, they have a vastly different incentive structure to that of larger companies (Baumann-Pauly et al., 2013; Perrini et al., 2007; Soundararajan et al., 2018), and the incentive structure is often directly influenced by the owning family (Campopiano et al., 2014; Castejón and López). Therefore, such companies are more pertinent when studying the family influence on CSR.

When the financial wealth of an SME's owning family is strongly related to that of the firm (Castejón and López, 2016) and the owning families are heavily dependent on the firm's economic success (Fitzgerald et al., 2010; Niehm et al., 2008; Peake et al., 2017), the economic aspects of CSR become a considerably higher priority. In which case, the CSR activities of family-owned SMEs are not exclusively driven by SEW but by the owning family's economic motives (Déniz Déniz and Cabrera Suárez, 2005; Labelle et al., 2018; Uhlaner et al., 2012). Correspondingly, owning families often invest family resources (i.e., financial, human, or social capital) in the firm to galvanize success and ensure the firm's survival with a possible view to generational handover (Weismeier-Sammer et al., 2013). Habbershon and Williams (1999, p. 11) define this phenomenon as FAM describing "the unique bundle of resources a particular firm has because of the systems interaction between the family, its individual members, and the business," which can ultimately affect the family firm's performance positively (Habbershon and Williams, 1999).

Social capital is crucial to acquiring the necessary resources for long-term economic success, particularly for resource-scarce SMEs (Spence et al., 2003; Werner et al., 2018). Social capital refers to an individual's social network and enables the individual to acquire other resources faster due to trust and reciprocity between the actors (Bourdieu, 1986; Putnam, 1995). Individuals can accumulate social capital, and so can organizations (Arregle et al., 2007). Leana and Van Buren (1999, p. 538) have defined this organizational social capital as "a resource reflecting the character of social relations within the firm." In turn, this social capital can help a firm access business-essential resources through its social contacts (Cheng et al., 2014). As this must be sustained, the need for CSR activities to cultivate long-term stakeholder relationships increases with the SME's social capital endowment (Borghesi et al., 2019; Peake et al., 2017; Soundararajan et al., 2018). Considering that CSR helps to form cooperative networks with stakeholders providing the firm with new business opportunities (Fitzgerald et al., 2010; Niehm et al., 2008; Peake et al., 2017), we argue that the CSR activities of family-owned SMEs are driven by the economic rationale of the owning family (Déniz Déniz and Cabrera Suárez, 2005; Labelle et al., 2018; Uhlaner et al., 2012).

3.3 Theory and hypotheses

3.3.1 Theoretical framework

The FAM concept combines a systems theory perspective with a resource-based view (Weismeier-Sammer et al., 2013). The systems theory perspective explains inter-relationships and exchanges between family and firm (Frank et al., 2017), inclusive of financial, human, and social capital family resources (Weismeier-Sammer et al., 2013). The resource-based view explains the success of a family firm through the analysis of its various unique internal attributes, which are resources that competitors may be unable to emulate (i.e., family resources). From the research conducted, FAM emerged as an explanation for why some family firms perform better than non-family firms and indicated the contributing factors are family resources leading to the family firm's enhanced economic success (Habbershon and Williams, 1999).

Stafford et al.'s (1999) Sustainable Family Business Theory (SFBT) also draws on both perspectives and combines them in one theoretical framework. The SFBT proposes that the greater the owning family's influence within the firm, the more significant the overlap between the family and firm subsystems, and the greater the inter-dependencies between them (Danes et al., 2008; Frank et al., 2017). While the family and the firm pursue their specific goals separately, the family firm can access the resources of both subsystems. The family and the firm can profit from each other's resources via the two subsystems' symbiosis. Access to the two subsystems can enable the firm to respond to internally induced (e.g., by employees) and externally induced disruptions (e.g., customers or society). The joint efforts of the family and firm in overcoming these disruptions result in long-term family firm sustainability (Danes et al., 2008; Stafford et al., 1999).

This study focuses on the family's social capital, integrated into the firm through the owning family's presence (Danes et al., 2008) and their involvement (Fitzgerald et al., 2010; Peake et al., 2017). This way, social capital can be developed in both the family's and the firm's subsystems (Arregle et al., 2007), and via the subsystem's overlap, both can exploit each other's social capital endowment (Stafford et al., 1999). Accordingly, as the social capital endowment increases through family involvement (Danes et al., 2008), the need for CSR as an instrument to preserve stakeholder's confidence and loyalty also increases (Borghesi et al., 2019).

However, effective exploitation of the family social capital depends on the permeability of the boundaries between the subsystems (Danes et al., 2008). An essential feature of systems theory is the distinction between open and closed systems. An open system is characterized by weak system boundaries and a high degree of permeability concerning external influence, while a closed system has solid system boundaries and a low degree of permeability concerning external influence. As social systems, firms are neither wholly open nor closed; they are located between these two states (Hernes and Bakken, 2003). The more the individuals within a system identify with that system, the more the system tends to close itself off to external influences (Ashforth and Mael, 1989), and the harder it becomes to exploit the owning family's social capital within the firm.

Although the research literature describes different forms of OI, e.g., individualistic, relational, or collectivistic (Bingham et al., 2011; Brickson, 2007), the OI effectiveness not only depends on its type but on its general strength (Cole and Bruch, 2006; Foreman and Whetten, 2002; Kreiner and Ashforth, 2004) leading Gioia and Thomas (1996) to distinguish between OI type and OI strength. While OI type describes the "who are we as an organization" (Albert and Whetten, 1985, p. 264) and can vary considerably in their characteristics, OI strength describes whether those values are "widely shared and deeply held by organizational members" (Kreiner and Ashforth, 2004, p. 8).

Bingham et al. (2011) assume that the family firm's OI type is mostly stakeholder-friendly, boosting the firm's CSR activities. Regardless of the OI type, OI strength enables the determination of the OI's effectiveness on a firm's CSR activities. Drawing from the systems theory, the SFBT assumes that the subsystem's boundaries are permeable (Danes et al., 2008). Although the SFBT considers boundary permeability a critical element, it does not theorize on permeability factors. However, these factors are crucial when analyzing systems interaction, considering that the more individuals identify with the systems, the more they close themselves off from external influences (Ashforth and Mael, 1989). Consequently, in this study, we use the firm-level concept of OI strength to examine the firm's boundary permeability, thereby strengthening the system theoretical perspective of SFBT by adding the aspect of closed and open systems. Thus, while we theorize that OI strength generally has a positive effect on CSR, we also theorize that the higher the OI strength of the firm, the more the respective system will close itself off towards family resources.

3.3.2 Hypotheses development

3.3.2.1 Familiness and employee-related corporate social responsibility

Firms are mainly dependent on recruiting and retaining highly qualified employees, and SMEs are no exception to this rule (De Massis et al., 2018; Werner et al., 2018). However, they are at a disadvantage compared to larger companies, which benefit from public awareness and increased resources, enhancing their allure to potential applicants. SMEs with low public visibility are often unable to recruit the number of skilled personnel they need (Cable and Turban, 2003). However, in contrast to larger companies and corporations, SMEs often create reciprocal bonds with their employees and invest in them (Fuller and Tian, 2006; Russo and Perrini, 2010; Sen and Cowley, 2013). These investments in creating superior employee relationships help SMEs to overcome their resource constraints, enabling them to prevail even within markets known for high-pressure innovation (De Massis et al., 2018; Werner et al., 2018).

CSR is a crucial element in strengthening and building these unique employee relationships (Sen and Cowley, 2013), this is especially true for employee-related CSR activities, including training opportunities, work-life balance, and generally fair treatment of employees (Turker, 2009). Using CSR as an element of human resource management, SMEs can generate higher productivity and financial performance (Lai et al., 2016; Sels et al., 2006). Therefore, using CSR as a strategic tool, SMEs can acquire a good reputation as an employer (Voegtlin and Greenwood, 2016) and subsequently build up social capital (Sen and Cowley, 2013; Spence et al., 2003).

Since family members feel committed to the employees due to their socialization within the family firm, such firms downsize less often than non-family firms, even in times of crisis (Block, 2010). Consequently, employees tend to develop high trust levels in the owning family (Arijs et al., 2018; Block et al., 2016; Uhlaner et al., 2004). According to the SFBT's resource-based view, the family's employee-related social capital can benefit the firm (Stafford et al., 1999). Correspondingly, we argue that the family's employee-related social capital is integrated within the family firm's system by FAM (Danes et al., 2008). To preserve and exploit this social capital, the firm must cultivate it through CSR (Borghesi et al., 2019). Accordingly, the stronger the FAM, the more the family's employee-related social capital is transferred to the firm; consequently, employee-related CSR activities may increase. Therefore, we propose the following hypothesis:

H1a: *An increase in FAM is positively associated with employee-related CSR of family-owned SMEs.*

3.3.2.2 Familiness and customer-related corporate social responsibility

It is generally acknowledged that high customer loyalty and customer satisfaction contribute considerably to a firm's long-term profitability (Luo and Bhattacharya, 2006; Hur et al., 2014). Unlike their larger counterparts, SMEs often lack the resources to serve mass markets, focusing more on niche markets (De Massis et al., 2018). Therefore, they are more dependent than large firms on nurturing excellent customer relationships (Spence et al., 2003). Positive interactions and trusting relationships established with customers may encourage new and improved products through interactive feedback (Cheng et al., 2014). Thus, superior customer relationships can help to compensate and overcome resource scarcity problems, even helping the SME stay competitive in the long run (De Massis et al., 2018).

Customer-related CSR positively affects customer perception of a firm (Hur et al., 2014; Lai et al., 2010; Luo and Bhattacharya, 2006). This kind of CSR involves transparency towards customers and prioritizes their satisfaction with the firm's products and services (Turker, 2009). High customer satisfaction is positively associated with the respective firm's market value and corporate brand equity (Luo and Bhattacharya, 2006; Hur et al., 2014). Therefore, CSR can be considered a strategic instrument used to build social capital with customers, ultimately helping bind those customers to the company in the long term (Russo and Perrini, 2010; Spence et al., 2003).

Family firm customers often have direct contact with the owning family, thereby enabling the latter to cement strong relationships with their customers (Uhlaner et al., 2004). This effect is often enhanced if the family firm is named after the owning family since the owning family is then considered directly accountable for the customer service (Kashmiri and Mahajan, 2010). Applying the resource-based view of SFBT, we argue that the owning family can transfer customer-related social capital to the firm through FAM (Stafford et al., 1999). The family firm can use this customer-related social capital (Danes et al., 2008) and maintain it through CSR (Borghesi et al., 2019). Thus, the higher the level of FAM within the family firm, the higher the expected level of customer-related CSR. Therefore, we hypothesize the following:

H2a: *An increase in FAM is positively associated with the customer-related CSR of family-owned SMEs.*

3.3.2.3 Familiness and society-related corporate social responsibility

SMEs are often deeply embedded within their local community and seldom relocate their business, resulting in long tenure within their respective community (Niehm et al., 2008; Russo and Perrini, 2010; Uhlaner et al., 2004). For SMEs, this means that building solid relationships with different institutions and organizations (e.g., local government, community banks, or other SMEs) is essential for mutually beneficial cooperation. Moreover, SMEs also draw most of their employees and customers from this source (De Massis et al., 2018). Social capital is extracted from ties within the community, and positive connections with stakeholders can help an SME generate business-critical resources from its regional network (Spence et al., 2003).

CSR activities can enhance social capital (Niehm et al., 2008). Society-related CSR activities that aim to improve future living conditions or protect the local environment can increase external stakeholder's trust in the firm (Turker, 2009), leading to increased reciprocity between the local community and the firm (Fitzgerald et al., 2010; Peake et al., 2017). Therefore, society-related CSR enables SMEs to establish valuable relationships with the community, allowing them access to the strategically relevant resources they often lack (Niehm et al., 2008; Spence et al., 2003).

Owning families are often deeply embedded within their local communities and tend to have strong and unique relationships with these communities (Uhlaner et al., 2004). For example, SME owning family members frequently assume leadership positions to contribute to the community (Fitzgerald et al., 2010). Following the SFBT's resource-based view, the firm and family synergy provides the firm with society-related social capital (Danes et al., 2008; Stafford et al., 1999). CSR activities nurture society-related social capital (Borghesi et al., 2019). Consequently, we expect family-owned SMEs with a high level of FAM to have a greater tendency to invest in society-related CSR activities when compared to those with less FAM. Therefore, we hypothesize the following:

H3a: *An increase in FAM is positively associated with society-related CSR of family-owned SMEs.*

3.3.2.4 The moderating effect of organizational identity strength

When analyzing the family firm's activities, the effects of OI should be considered (Zellweger et al., 2013). Bingham et al. (2011) have argued that the OI differs between family and non-family firms, theorizing that the increased CSR activities toward stakeholders result from a stronger OI introduced into the firm by strong family involvement. Since OI is the "who are we as an organization" (Albert and Whetten, 1985, p. 264), there are different types of OI described in the research literature: e.g., individualistic, relational, or collectivistic (Bingham et al., 2011; Brickson, 2007). The effectiveness of these OI forms mainly depends on their development strength (Cole and Bruch, 2006; Foreman and Whetten, 2002; Kreiner and Ashforth, 2004; Milliken, 1990). Previous literature has shown that organization members identifying strongly with their organization tend to be more willing to act in its best interests (Davis et al., 1997). Therefore, family-owned SMEs with a strongly developed OI are expected to implement more CSR activities than those with a weaker OI. Consequently, we propose that the OI strength of family-owned SMEs has a positive effect on employee-, customer-, and society-related CSR activities:

H1b: *An increase in OI strength is positively associated with employee-related CSR of family-owned SMEs.*

H2b: *An increase in OI strength is positively associated with customer-related CSR of family-owned SMEs.*

H3b: *An increase in OI strength is positively associated with society-related CSR of family-owned SMEs.*

According to the SFBT's systems theory perspective, the effects of the individual family and firm subsystems cannot be considered in isolation and must be analyzed together, allowing a holistic conclusion concerning both processes and their outcomes (Hernes and Bakken, 2003). When analyzing the family firms' systems, an essential factor is the subsystem's boundary permeability (Sundaramurthy and Kreiner, 2008). The more individuals within a system identify with that system, the more the system closes itself off to external influences (Ashforth and Mael, 1989). This refers not only to the exchange of resources but also to the organizational acceptance of these resources. It can be assumed that the stronger the firm's OI, the less open the firm subsystem is towards outside influence and vice versa. A low permeability caused by a strong OI could lead to a low willingness of the firm's members to utilize the family's social capital introduced by FAM, meaning that they would not support activities aimed at maintaining the social capital (Danes et al., 2008). Consequently, a family firm with a comparatively closed firm subsystem may have a more challenging time utilizing the family resources introduced through FAM than a family firm with a comparatively open firm subsystem.

We posit that the firm's OI strength weakens the relationship between FAM and the different CSR activities. For example, if the firm's general OI strength is weak, family social capital can be introduced through FAM and utilized, which leads the family firm to increase its CSR activities to further strengthen the social capital. Conversely, since firms with strong OI have less boundary permeability, the FAM effect may be weaker. Therefore, integrating OI strength into the relationship between FAM and CSR, we derive the following three hypotheses:

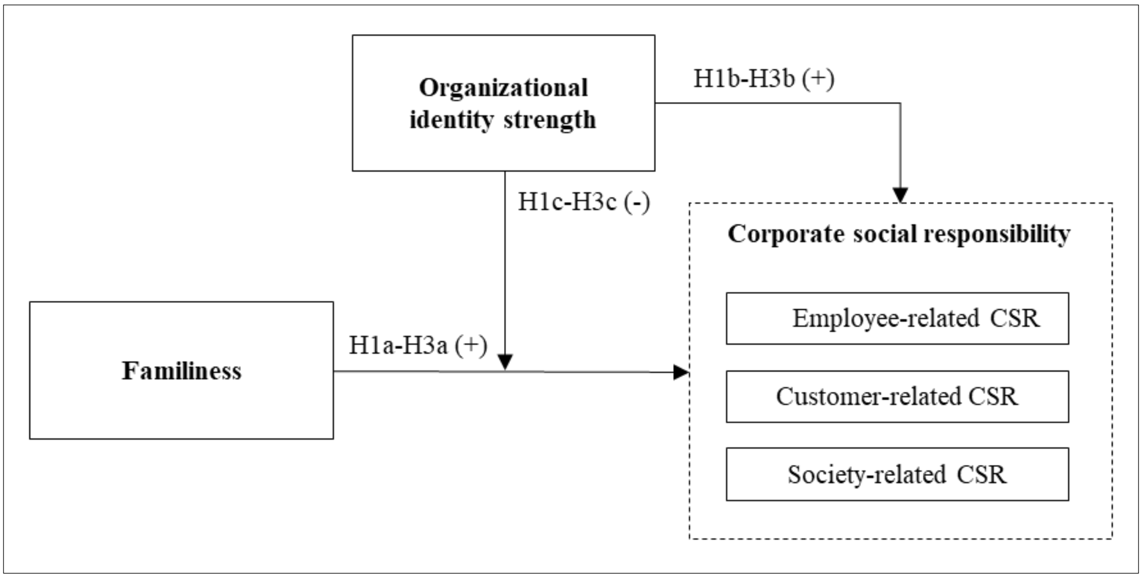
H1c: *An increase in OI strength negatively affects the association between FAM and employee-related CSR of family-owned SMEs.*

H2c: *An increase in OI strength negatively affects the association between FAM and customer-related CSR of family-owned SMEs*

H3c: *An increase in OI strength negatively affects the association between FAM and society-related CSR of family-owned SMEs*

Figure 3.1 illustrates the theorized effects of FAM and OI strength on CSR. Please note that for greater readability, the various CSR activities are aggregated as CSR in general.

Figure 3.1 Conceptual model



3.4 Methodology

3.4.1 Data and sample

Privately-owned SMEs do not have to disclose as much as publicly listed firms (Laschewski and Nasev, 2021), which means that there is little public data on these companies and fewer studies on them (Faller and zu Knyphausen-Aufseß, 2018). Therefore, our empirical analysis is based on a dataset collected between November 2017 and February 2018 through a survey of 23,256 German non-publicly listed firms located in North Rhine-Westphalia. This region is characterized by old, traditionally strong, family-owned SMEs (Block and Spiegel, 2013); with regards to sales and employment development, the region is representative of the whole of Germany. The dataset was further complemented with financial, employment, and industrial sector information obtained from the Bureau van Dijk's pan-European financial database AMADEUS.

Of the 23,256 companies questioned, 22,292 firms refused to participate or did not react to our survey. We received 964 respondents, corresponding to a total response rate of 4.15%. The dataset was adjusted by excluding responses with a) missing values in the interest variables; b) responses not completed by a founder, a managing director, or board member; c) responses for companies not considered by the respondent to be a family firm; and d) responses for companies that did not meet the definition of the *Institiut für Mittelstandsforschung* (IfM, 2016) Bonn for an SME (1–500 staff headcount and an annual turnover of under 50 million euros). After these exclusions, our study comprises a final stock of 203 usable responses.

Before commencing data collection, we ensured the suitability of the questionnaire by employing well-tested scales and consulting independent experts in survey design and methodology. The questionnaire comprised wide-ranging self-reported questions about the company's

CSR activities, organizational structures, and family involvement. As the survey was conducted in Germany, questions were first translated into German and then into English for this article.

To further ensure data quality, we tested for potential non-response bias by comparing the characteristics (e.g., size, age, industry sector, performance) of the respondents with the characteristics of the non-respondents (Armstrong and Overton, 1977; Lambert and Harrington, 1990). No significant mean differences were found between the two.

Since the variables used in the models were mainly from the same data source, we tested for common method bias by performing Harman's single factor test (Podsakoff et al., 2003; Podsakoff and Organ, 1986), revealing a seven-factor solution that explained 74.16% of the overall variance. The first factor accounted for only 18.45% of the explained variance. Furthermore, we applied the confirmatory factor analysis (CFA) marker technique (Williams et al. 2010; Lindell and Whitney 2001). The designated marker variable "firm's hierarchical orientation" was not significantly related to our models' dependent and independent variables (Richardson et al., 2009). Moreover, correlations remained significant after the partial correlation adjustments, and model fit showed only a slight change after the inclusion of the marker variable. Overall, these outcomes indicate that common method bias did not affect this study.

3.4.2 Variables

To measure the variables derived from the hypotheses, we used well-tested scales from prior research. Both the dependent, independent and moderating variables were measured using a self-reported five-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Table 3.1 describes the variables used in our regression models and summary statistics.

Table 3.1 Variable description

Variable	**Description**
Employee-related CSR	Constructed Scale, 6 items, measured on a 5er Likert Scale (1 = strongly disagree, 5 = strongly agree)
Customer-related CSR	Constructed Scale, 2 items, measured on a 5er Likert Scale (1 = strongly disagree, 5 = strongly agree)
Society-related CSR	Constructed Scale, 6 items, measured on a 5er Likert Scale (1 = strongly disagree, 5 = strongly agree)
FAM	Constructed Scale, 20 items, measured on a 5er Likert Scale (1 = strongly disagree, 5 = strongly agree)
OI strength	Constructed Scale, 4 items, measured on a 5er Likert Scale (1 = strongly disagree, 5 = strongly agree)
Manufacturing	Which industry does your company belong to? (1 = manufacturing, 0 = else)

(continued)

Table 3.1 continued

Variable	Description
Construction	Which industry does your company belong to? (1 = construction, 0 = else)
Retail	Which industry does your company belong to? (1 = trade, 0 = else)
Service	Which industry does your company belong to? (1 = services, 0 = else)
1st (founder) generation	How many generations has your company been in family ownership? (1 = 1st (founder) generation, 0 = else)
2nd generation	How many generations has your company been in family ownership? (1 = 2nd generation, 0 = else)
3rd+ generation	How many generations has your company been in family ownership? (1 = 3rd+ generations, 0 = else)
Firm size	How many employees are currently employed in your company? (metric)
Firm age	How old is your company? (metric)
Competitiveness	Constructed Scale, 6 items, measured on a 5er Likert Scale (1 = much worse, 5 = much better)
Business situation	How do you assess the current business situation of your company? (1 = very good, 5 = insufficient)
Market condition	How do you assess the current market conditions in your industry? (1 = very good, 5 = insufficient)
Founder or managing director	What is your current position (1 = founder and managing director, 0 = else)
Board member	What is your current position (1 = part of the executive board, 0 = else)

To assess the validity and reliability, we conducted both a principal component analysis (PCA) and a CFA for each scale used in this study. For the PCA, we pre-defined thresholds greater than 0.50 for the varimax rotation (Costello and Osborne, 2005) to assign the items to specific components. We tested for convergent validity by assessing the composite reliability and χ^2 difference tests. To test for discriminant validity, we calculated the average variance extracted (AVE) of each scale.

3.4.2.1 Dependent variable

We assessed three dependent variables derived from our hypotheses: employee-related CSR, customer-related CSR, and society-related CSR. We measured these different CSR activities using Turker's (2009) established CSR construct and questioned SMEs regarding how their companies were involved in implementing these CSR activities. Fourteen different items were examined, respectively. Six items were about employee-related CSR and focused on the importance of training opportunities and fair treatment of company employees. Two items covered customer-related CSR and focused on the importance of product transparency and customer satisfaction. Finally, six items were about society-related CSR and addressed whether or not the company supported initiatives related to environmental protection and the improvement of life quality. The different items of each subscale were arithmetically averaged to obtain our regression analysis scores and included as our dependent variables.

The results of the PCA revealed that all items of the employee-related CSR activities were loading on one component, with factor loadings ranging from 0.525 to 0.781. The items of the customer-related CSR activities were also loading on one component, providing factor loadings greater than 0.913. All items were loaded again on a single component for the society-related CSR activities, with factor loadings of 0.522 or higher. The reliability coefficient Cronbach's alpha was $\alpha = 0.727$ for the employee-related CSR activities, $\alpha = 0.801$ for the customer-related CSR activities, and $\alpha = 0.777$ for the society-related CSR activities.

Moreover, CFA showed that all items loaded significantly and fully on each of the three CSR activities, with model fit measures ranging from reasonable to good (CFI = 0.912 and RMSEA = 0.076). Raykov's factor reliability coefficient referring to alpha reliability (Fornell and Larcker, 1981) was $p = 0.869$ for the employee-related CSR activities, $p = 0.836$ for the customer-related CSR activities, and $p = 0.790$ for the society-related CSR activities. Thus, all estimators were clearly above the recommended threshold of 0.6 (Bagozzi and Yi, 1988; Fini et al., 2012; Padilla and Divers, 2016), indicating a satisfactory level of reliability. In terms of the validity, the $\chi2$ difference tests comparing the model with the saturated model ($\Delta\chi2 = 120.093$, $p < 0.001$), and comparing the baseline model with the saturated model ($\Delta\chi2 = 876.759$, $p < 0.001$) were significant. This supports convergent validity (Santos and Cardon, 2019). Additionally, AVE by each CSR activity was higher than its shared variance with any other CSR activity in the model. Therefore, discriminant validity is also verified (Baum et al., 2001; Fini et al., 2012; Santos and Cardon, 2019). In sum, we achieved an acceptable degree of validity and reliability for each CSR activity.

3.4.2.2 Independent variables

The main independent variable in our study is FAM, represented by the Family Influence Familiness Scale (Frank et al., 2017). The scale encompasses the following six sub-dimensions: a) four items for ownership, management, and control; b) two items for the performance level of active family members; c) two items for the exchange of information between active family members; d) three items for trans-generational orientation; e) five items for family-employee retention; f) four items for the identity of the family business.

PCA results suggested a six-factor solution supporting the original classification of the Family Influence Familiness Scale from Frank et al. (2017). All items of the aforementioned subscales were loading on one specific component, with rotated factor loadings ranging from 0.561 to 0.851. All 20 items of the original scale were arithmetically averaged to capture FAM as a whole and analyze how the interrelation between the family and the firm affects CSR behavior, thus creating an aggregated FAM index. Cronbach's alpha reliability coefficient was $\alpha = 0.860$ when measuring all the items.

The CFA results show that all items provided standardized loadings on the overall FAM and measured greater than the minimum criterion of 0.300 (Costello and Osborne, 2005). They were also associated with a good model fit for this study's purpose ($CFI = 0.690$, $RMSEA = 0.097$). Additionally, Raykov's factor reliability coefficient was $p = 0.855$, indicating an appropriate degree of reliability. Also, the $\chi 2$ difference tests were significant both for comparing the model with the saturated model ($\Delta\chi 2 = 530.977$, $p < 0.001$), and the comparison of the baseline with the saturated model ($\Delta\chi 2 = 1353.135$, $p < 0.001$). Hence, convergent validity is also supported.

3.4.2.3 Moderating variable

Another central variable in our study is OI strength—the degree of OI development within the firm (Cole and Bruch, 2006; Milliken, 1990). The scale comprises six items, relating to employee attitude towards the company and to the firm's goals and history.

The results of the PCA show a single factor solution. However, two of the six items from the original scale provided factor loading smaller than 0.500 and were consequently eliminated from further consideration. Hence, our final OI strength scale consists of four items, demonstrating factor loadings of 0.650 or higher. The individual items were averaged to obtain the score for further regression analysis.

Moreover, CFA shows that all items provided significant and strong standardized loadings on the overall OI strength measure and were also associated with a good model fit ($CFI = 0.982$, $RMSEA = 0.105$). In terms of scale reliability, Cronbach's alpha was $\alpha = 0.766$, and Raykov's factor reliability coefficient was $p = 0.778$. Thus, the scale can be considered reliable. For discriminant validity, the $\chi 2$ difference tests were significant both for the comparison of the model with the saturated model ($\Delta\chi 2 = 8.563$, $p < 0.001$) and the comparison of the baseline with the saturated model ($\Delta\chi 2 = 360.772$, $p < 0.001$). Therefore, the OI strength scale achieved convergent validity.

3.4.2.4 Control variables

We controlled for several variables that might simultaneously affect CSR in family-owned SMEs. Firstly, we controlled for various industry sectors. According to Soundararajan et al. (2018), industry norms are significant for SMEs when it comes to decisions regarding their CSR activities. Thus, we controlled for the following industry sectors: manufacturing, construction, retail, and services. Accordingly, four dummy variables were created, each representing a specific industry sector. Firms within the service sector served as a reference category for our regression analysis.

We also controlled for the family firm's founder generation. Prior research has shown that a family firm's founder generation can affect the firm's attitude toward CSR (Fehre and Weber, 2019). The family's intention to transfer the business to the next generation (Block and Wagner, 2014b; Chua et al., 1999) can increase family shareholders from generation to generation (Fehre and Weber, 2019). As a result, conflicts of interest can emerge among family owners in later generations (Sharma and Sharma, 2011). This can lead to a decoupling of personal and organizational legitimacy, which ultimately leads to self-interest overshadowing CSR issues' importance (Fehre and Weber, 2019). Three dummy variables were created, each representing a possible generation for the firm's founder. For our regression analysis, we chose firms of three or more generations as a reference category.

Another essential variable for firms regarding CSR is their size and their age. Prior studies have indicated that (compared to larger firms) it is easier for smaller firms to apply and integrate CSR into their daily business due to their less hierarchical structures (Baumann-Pauly et al., 2013). Likewise, prior studies have indicated that older firms may have the advantage of experience over their younger counterparts (Autio et al., 2000), so firm age was included as a further control variable. Using a proxy for firm size, we controlled for the number of employees in metric form. We also controlled a firm's market condition and business situation (Chih et al., 2010; Kashmiri and Mahajan, 2014b). In this regard, firms were asked to evaluate both their current business situation and market condition on a five-point Likert scale. Finally, we controlled for a firm's competitiveness. We also asked firms to assess themselves in comparison with their closest competitor. In this regard, a total of six items (including economic success, the ability to innovate, and the capital endowment) were examined on a five-point Likert scale.

3.5 Results

The descriptive statistics reveal that the firms in our sample had a relatively high degree of FAM (4.0) and OI strength (3.8). In terms of CSR, the firms indicated that customer-related CSR (4.7) was the most important to them, followed by employee-related CSR (3.8) and society-related CSR (3.1). The majority of the firms emanated from the service sector (36.0%), followed by the manufacturing (30.0%), retail (18.2%), and construction sectors (15.8%). Regarding founder generations, 41.9% were first-generation firms, 30.0% were third- or more, and 28.1% were second-generation firms. According to the descriptive statistics, the responding firms were, on average, 48.5 years old and had 34 employees. The firms in our sample assessed their competitiveness as reasonably strong with an average index of 3.5. However, the firms in our sample seemed less optimistic about their current business situation and the market condition, with average indices of 2.2 and 2.3, respectively. Of the respondents in our sample, 63.0% were the founder or managing director of the firm. The remaining 36.9% of the respondents were part of the executive board. The descriptive statistics can be found in detail in Table 3.2. The sixth and seventh columns include Cronbach's alpha and Raykov's factor reliability coefficient, referring to composite validity.

Table 3.2 Descriptive statistics and scale reliability

Variable	Mean	Std. Dev.	Min	Max	Cronbach's alpha	Raykov's factor reliability
Employee-related CSR	3.814	0.735	1	5	0.727	0.869
Customer-related CSR	4.727	0.508	3	5	0.801	0.836
Society-related CSR	3.172	0.946	1	5	0.777	0.790
FAM	4.027	0.587	2	5	0.856	0.855
OI strength	3.854	0.729	1	5	0.766	0.778
Manufacturing	0.300	0.460	0	1	-	-
Construction	0.158	0.365	0	1	-	-
Retail	0.182	0.387	0	1	-	-
Service	0.360	0.481	0	1	-	-
1st (founder) generation	0.419	0.495	0	1	-	-
2nd generation	0.281	0.450	0	1	-	-
3rd+ generation	0.300	0.460	0	1	-	-
Firm size	33.852	69.060	0	450	-	-
Firm age	48.512	58.900	1	566	-	-
Competitiveness	3.534	0.515	1	5	0.718	0.729
Business situation	2.232	0.851	1	5	-	-
Market condition	2.305	0.931	1	5	-	-
Founder or managing director	0.631	0.484	0	1	-	-
Board member	0.369	0.484	0	1	-	-

Note: N = 203

Table 3.3 shows the pair-wise correlations among key variables. The results show weak correlations between the independent variables. We analyzed all the variable histograms and found the errors to be identically and independently distributed with constant variance, with variance inflation factors of less than 2.15 for all variables. Overall, these results suggest the presence of moderate multicollinearity, indicating that changes in one independent variable are not associated with shifts in another independent variable. Thus, the confidence intervals produce reliable probabilities regarding the effects of the independent variables. As a result, the independent variable's statistical significance does not undermine the significance of our empirical models.

Table 3.3 Matrix of correlation

Variable	I	II	III	IV	V	VI	VII	VIII	VIV	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIV	XX
(1) Employee-related CSR	1.000																		
(2) Customer-related CSR	0.211	1.000																	
(3) Society-related CSR	0.603	0.260	1.000																
(4) FAM	0.319	0.233	0.333	1.000															
(5) OI strength	0.447	0.253	0.458	0.200	1.000														
(6) Manufacturing	-0.087	-0.039	-0.002	0.021	-0.026	1.000													
(7) Construction	0.104	-0.020	0.034	0.169	-0.020	-0.284	1.000												
(8) Retail	-0.111	0.028	-0.071	-0.041	0.000	-0.309	-0.204	1.000											
(9) Service	0.094	0.030	0.033	-0.115	0.040	-0.491	-0.324	-0.354	1.000										
(10) 1st (founder) generation	0.104	0.015	0.076	-0.115	0.159	-0.121	-0.093	-0.013	0.196	1.000									
(11) 2nd generation	0.018	-0.052	-0.030	0.070	-0.032	0.045	0.061	-0.039	-0.057	-0.530	1.000								
(12) 3rd+ generation	-0.130	0.036	-0.052	0.055	-0.140	0.086	0.041	0.052	-0.155	-0.556	-0.410	1.000							
(13) Firm size	0.077	-0.004	0.144	0.126	0.044	0.119	0.048	-0.062	-0.101	-0.223	-0.009	0.249	1.000						
(14) Firm age	0.059	0.056	0.106	0.218	-0.002	0.152	0.072	0.018	-0.215	-0.416	-0.013	0.460	0.411	1.000					
(15) Competitiveness	0.155	0.015	0.222	0.054	0.298	-0.044	0.075	0.030	-0.038	-0.057	0.126	-0.062	0.007	0.060	1.000				
(16) Business situation	-0.229	-0.019	-0.259	-0.115	-0.284	-0.014	-0.182	0.187	0.001	-0.079	-0.067	0.150	-0.057	0.046	-0.381	1.000			
(17) Market condition	-0.180	-0.016	-0.138	-0.075	-0.190	-0.054	-0.201	0.243	0.008	-0.075	-0.076	0.155	-0.123	0.053	-0.235	0.679	1.000		
(18) Founder or managing director	0.039	0.161	0.139	0.014	0.174	-0.233	-0.005	0.123	0.127	0.174	-0.021	-0.166	-0.176	-0.153	-0.060	0.028	0.010	1.000	
(19) Board member	-0.039	-0.161	-0.139	-0.014	-0.174	0.233	0.005	-0.123	-0.127	-0.174	0.021	0.166	0.176	0.153	0.060	-0.028	-0.010	-1.000	1.000

Table 3.4 Regression results

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
	Employee-related CSR			Customer-related CSR			Society-related CSR		
Manufacturing[1]	-0.200	-0.216*	-0.194	-0.030	-0.039	-0.013	-0.009	-0.029	-0.026
	(0.126)	(0.125)	(0.126)	(0.093)	(0.092)	(0.093)	(0.147)	(0.144)	(0.145)
Construction[1]	0.071	-0.004	0.016	-0.034	-0.079	-0.055	0.002	-0.098	-0.095
	(0.135)	(0.131)	(0.133)	(0.106)	(0.106)	(0.102)	(0.173)	(0.170)	(0.170)
Retail[1]	-0.217	-0.222	-0.195	-0.008	-0.011	0.022	-0.179	-0.185	-0.181
	(0.148)	(0.141)	(0.142)	(0.097)	(0.095)	(0.092)	(0.198)	(0.185)	(0.191)
1st (founder) generation[2]	0.200	0.207*	0.215*	-0.075	-0.071	-0.061	0.125	0.135	0.136
	(0.129)	(0.125)	(0.124)	(0.085)	(0.085)	(0.086)	(0.154)	(0.146)	(0.147)
2nd generation[2]	0.163	0.140	0.129	-0.080	-0.094	-0.107	0.011	-0.020	-0.022
	(0.120)	(0.117)	(0.114)	(0.091)	(0.088)	(0.085)	(0.151)	(0.143)	(0.143)
Firm size	0.000	0.000	0.000	0.000	0.000	0.000	0.002*	0.002*	0.002*
	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Firm age	0.002*	0.001	0.001	0.001	0.000	0.000	0.002**	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Competitiveness	-0.026	-0.007	-0.007	-0.047	-0.035	-0.035	0.135	0.161	0.161
	(0.098)	(0.096)	(0.096)	(0.073)	(0.071)	(0.071)	(0.128)	(0.119)	(0.120)
Business situation	-0.056	-0.041	-0.053	0.018	0.027	0.013	-0.194**	-0.174*	-0.175*
	(0.087)	(0.084)	(0.084)	(0.055)	(0.053)	(0.052)	(0.093)	(0.089)	(0.091)
Market condition	-0.013	-0.019	-0.009	-0.013	-0.016	-0.004	0.100	0.093	0.094
	(0.077)	(0.072)	(0.072)	(0.048)	(0.049)	(0.050)	(0.082)	(0.078)	(0.078)
Founder or managing director[3]	-0.067	-0.076	-0.069	0.128	0.123	0.131	0.228*	0.217*	0.218*
	(0.101)	(0.100)	(0.099)	(0.083)	(0.083)	(0.082)	(0.116)	(0.115)	(0.115)
OI strength	0.420***	0.373***	0.250***	0.181***	0.153***	0.089**	0.479***	0.415***	0.295***
	(0.077)	(0.075)	(0.053)	(0.059)	(0.054)	(0.034)	(0.089)	(0.089)	(0.066)
FAM		0.284***	0.179***		0.172**	0.108***		0.382***	0.241***
		(0.076)	(0.046)		(0.068)	(0.040)		(0.108)	(0.068)
FAM x OI strength			-0.078**			-0.093**			-0.013
			(0.038)			(0.037)			(0.050)
constant	2.359***	1.362**	3.950***	4.153***	3.548***	4.828***	0.752	-0.586	2.565***
	(0.510)	(0.557)	(0.446)	(0.369)	(0.456)	(0.333)	(0.631)	(0.681)	(0.522)
R-squared	0.252	0.298	0.308	0.093	0.127	0.159	0.271	0.320	0.320
F-test	5.409***	7.576***	8.582***	1.693*	1.842**	2.229***	8.537***	10.039***	9.512***
Obs.	203	203	203	203	203	203	203	203	203

Robust standard errors are in parenthesis; [1]Reference: Service; [2]Reference: 3rd+ generation; [3]Reference: Board member
*** p<0.01, ** p<0.05, * p<0.1

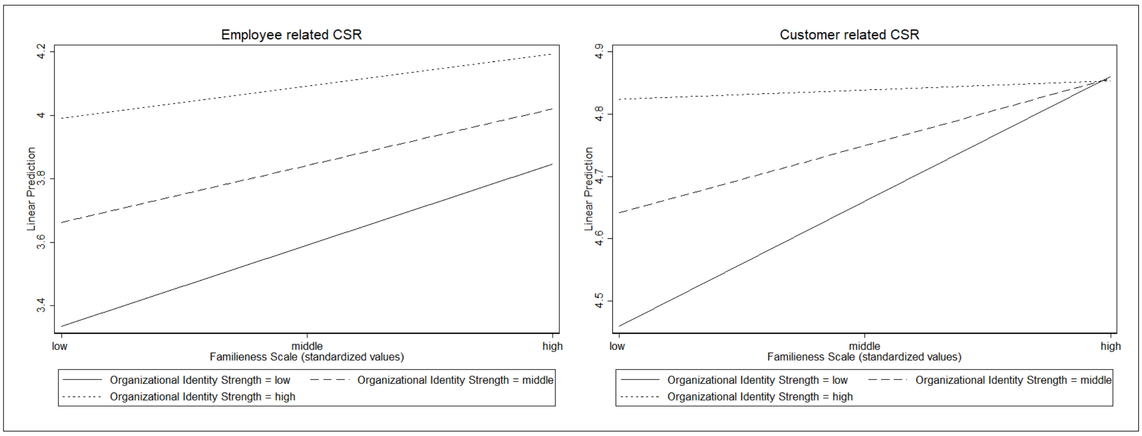
Following the basic procedure for conducting moderation analysis, we empirically tested our research hypotheses through a three-step regression approach. The first step regressed employee-, customer- and society-related CSR on OI strength and the control variables (Models 1, 4, and 7). The second step included our FAM measure (Models 2, 5, and 8). Finally, we included the interaction between FAM and OI strength (Models 3, 6, and 9). Given the nature of our dependent and independent variables, we checked the robustness of the OLS regression results by performing an additional poisson and ordered probit regression. Since the results only changed marginally, we discuss only the OLS regression estimation results. The results of the OLS regression estimation are detailed in Table 3.4.

Regarding controls, our findings align with those of prior research. Concerning the sector differences, our results indicate that family-owned SMEs within the manufacturing sector seem more willing than firms in other industry sectors to engage in CSR activities towards customers. The findings suggest that first-generation firms are more likely than second- or more-generation firms to engage in CSR activities towards their employees and society. Additionally, the regression results suggest that both firm size and age affect the CSR of family-owned SMEs, especially when it comes to CSR activities towards employees and society. However, the impact of firm size and age could not be proven for customer-related CSR activities. Finally, we found that the degree of practiced CSR depended strongly on both a firm's current business situation and its competitiveness.

To test our hypotheses, we regressed OI strength and the controls on the different CSR activities. The results of Models 1, 4, and 7 show that OI strength had a highly significant positive effect on both employee- ($\beta = 0.420$, $p < 0.010$), customer- ($\beta = 0.181$, $p < 0.010$) and society-related CSR activities ($\beta = 0.479$, $p < 0.010$). This outcome fully supports our hypotheses H1b, H2b, and H3b. In Models 2, 5, and 8, we included our FAM measure. The results of Model 2 show that FAM had a highly significant positive effect on employee-related CSR ($\beta = 0.284$, $p < 0.010$). This finding supports Hypothesis H1a and confirms the theoretical assumption that the higher an SME's FAM, the more likely it is to engage in CSR activities towards employees. In a similar vein, the results of Model 5 show that FAM had a highly significant positive effect on the customer-related CSR activities ($\beta = 0.172$, $p < 0.010$), which indicates that the higher an SME's FAM, the more the firm will engage in CSR activities towards customers. This finding confirms Hypothesis H2a. The findings also provide support for Hypothesis H3a: the results of Model 8 reveal a positive correlation between FAM and the society-related CSR activities ($\beta = 0.382$, $p < 0.010$), suggesting that the higher an SME's FAM, the higher the firm's tendency to build social capital via society-related CSR activities. In line with SFBT, the findings indicate that the closer the interrelation between the family and the firm subsystems, the more pronounced the CSR activities.

Models 3, 6, and 9 regressed all variables and the interaction between OI strength and FAM on each CSR activity. For H1c, H2c, and H3c, we hypothesized that OI strength would reduce the effect of FAM on individual CSR activities. For Model 3, the results show a significant negative moderating effect of OI strength on the relationship between FAM and employee-related CSR ($\beta = -0.078$, $p < 0.050$), supporting Hypothesis H1c. Furthermore, the results of Model 6 also show that OI strength has a weakening effect on the relationship between FAM and customer-related CSR ($\beta = -0.093$, $p < 0.050$), confirming Hypothesis H2c. Hypothesis H3c is not sufficiently supported, as the results of Model 9 show an insignificant effect relating to the interaction between FAM and OI strength ($\beta = 0.028$, n.s.). Figure 3.2 presents the results of the moderation hypotheses (H1c, H2c).

Figure 3.2 Interaction effects



In summary, we found support for eight of the nine hypotheses, confirming the theoretical considerations regarding the FAM effect on the CSR activities of family-owned SMEs, including the weakening effect of OI strength on this relationship. Table 3.5 provides an overview of the results of the hypotheses testing.

Table 3.5 Results of the hypotheses testing

H1a:	*An increase in FAM is positively associated with employee-related CSR of family-owned SMEs.*	✓
H2a:	*An increase in FAM is positively associated with customer-related CSR of family-owned SMEs.*	✓
H3a:	*An increase in FAM is positively associated with society-related CSR of family-owned SMEs.*	✓
H1b:	*An increase in OI strength is positively associated with employee-related CSR of family-owned SMEs.*	✓
H2b:	*An increase in OI strength is positively associated with customer-related CSR of family-owned SMEs.*	✓
H3b:	*An increase in OI strength is positively associated with society-related CSR of family-owned SMEs.*	✓

(continued)

Table 3.5 continued

H1c:	*An increase in OI strength negatively affects the association between FAM and employee-related CSR of family-owned SMEs.*	✓
H2c:	*An increase in OI strength negatively affects the association between FAM and customer-related CSR of family-owned SMEs.*	✓
H3c:	*An increase in OI strength negatively affects the association between FAM and society-related CSR of family-owned SMEs.*	×

3.6 Conclusion

3.6.1 Discussion

While most CSR studies have dealt with large, publicly listed family firms and often neglected privately-owned family firms (Campopiano et al., 2014; Castejón and López, 2016; Perrini et al., 2007), this study specifically targeted family-owned SMEs. Moreover, since most of the family firm studies to date argue that non-economic goals drive CSR in family firms (e.g., Canavati, 2018; Cruz et al., 2014; Fehre and Weber, 2019; Vazquez, 2018; Zientara, 2017), this study aimed to show further that economic factors (i.e., FAM) may also be a significant driver of CSR in family firms. Using the SFBT and postulating that a family firm is a social system, we integrated both FAM and the firm's OI strength within our models. Combining the two enabled us to theorize about how incorporating family resources (i.e., social capital) into the company through family influence affects the company's CSR from a resource-based perspective. The integration of OI strength in our models enabled us to examine how the family firm reacts to resource transaction processes from a systems theory perspective.

The results show that family-owned SMEs with higher FAM tend to conduct more employee-, customer- and society-related CSR than those with lower FAM (see Table 3.5). We attribute this finding to the infusion of the family's social capital into the family firm system (Danes et al., 2008) and the need to sustain this social capital through CSR activities (Borghesi et al., 2019). Furthermore, the regression analysis shows that OI strength positively affects all three CSR activities, meaning that the more people identify with their organization, the more likely the family firm will be to conduct CSR. This presumption aligns with the SFBT's resource-based view and supports our assumption that an economic rationale drives family-owned SMEs' CSR activities.

Additionally, by applying boundary permeability aspects to the SFBT, we tested whether and how OI strength affects the FAM and CSR relationship. The results show that OI strength weakens the FAM effect on employee- and customer-related CSR (see Table 3.5). We attribute this finding to the decrease in the firm subsystem's permeability which diminishes as the strength of its OI increases. In such cases, the family subsystem can no longer provide significant family social capital to the subsystem firm, which closes itself to external influences.

However, OI strength did not affect the relationship between FAM and society-related CSR, indicating that theorized mechanisms do not apply to this CSR activity. An explanation why these theorized mechanisms do not apply to society-related CSR could be that owning families use society-related CSR activities predominantly to promote non-economic goals (Cennamo et al., 2012; Cruz et al., 2014; Zientara, 2017). As such, owning families also driven by non-economic goals, often have a strong inclination towards society-related CSR (Block and Wagner, 2014b), possibly resulting in the owning family enforcing society-related CSR activities top-down if necessary and overriding the closed character of the subsystem firm.

3.6.2 Theoretical implications

Frank et al.'s (2017) Family Influence Familiness Scale enables researchers to measure family influence (i.e., FAM) efficiently. This measurement allows a sophisticated economic analysis regarding family influence and is a holistic, refined, and more precise measurement method compared to the traditional binary approach, where firms are classified into family and non-family firms (Frank et al., 2017; Miller and Le Breton-Miller, 2021; Werner et al., 2018). By introducing FAM as a theoretical and empirical construct, we provide a new perspective for CSR-related family firm research and family firm research in general. Compared to SEW, FAM provides a different perspective on family firm business conduct and motivation for CSR activities. The FAM approach allows family firm motivational analysis regarding CSR and uses a more sophisticated resource-based view to explain the heterogeneity observed in family firm research.

Using a systems theory perspective and emphasizing that the effective use of family and firm resources in family firms depends on the interaction between the family and firm subsystems, we show that the FAM effect decreases as OI strength increases. We attribute this decrease to lower firm subsystem permeability. It is important to note that we do not assume that lesser OI strength is beneficial or that it would be beneficial to decrease OI strength; however, this phenomenon illustrates the importance of recognizing the potential tensions along the boundaries between a family firm's subsystems. Therefore, the SFBT helps identify potential efficiency losses regarding resource use, hindering advantages and family firm longevity.

Our solid theoretical framework combines aspects of the systems theory and the resource-based view. Thus, when examining the interaction between family and firm and the processes involved, our study highlights the importance of using comprehensive theories and including aspects such as boundary permeability.

While we find that all three CSR activities studied were positively influenced by FAM and OI strength, the relationship between FAM and CSR was weakened by OI strength in the case of employee- and customer-related CSR activities. The weakening of this relationship through OI strength is a crucial theoretical aspect since owning families might not let a strong OI prevent them from conducting society-related CSR and, as such, seem to be driven by different motives than for employee- and customer-related CSR. Thus, our study highlights motivational variations when considering different individual CSR activities. Following Block and Wagner (2014b), who conclude that different CSR activities should be analyzed, we recommend that CSR research study the motivation behind CSR activities and the desired outcomes.

3.6.3 Practical implications

De Massis et al. (2018) highlighted that solid relationships with internal and external stakeholders help SMEs acquire the resources they need to innovate. Social capital generated by these relationships can be maintained and enhanced through CSR (Fuller and Tian, 2006; Russo and Perrini, 2010; Sen and Cowley, 2013; Spence et al., 2003). Our study offers practical implications for family-owned SME owners who want to use CSR as a strategic instrument to strengthen their social capital and bolster their capacity to acquire other business-essential resources.

Through the symbiosis of the family and firm subsystems, social capital can be transferred from one subsystem to the other (Danes et al., 2008; Stafford et al., 1999). In this manner, social capital can be built up in the family and the firm subsystem (Arregle et al., 2007). Via the subsystem's overlap, both can benefit from each other (Danes et al., 2008; Stafford et al., 1999), which can be especially helpful for family firms whose organizational social capital is low. Until the firm has generated enough social capital through its CSR activities, the owning family can step in and "lend" family social capital, providing the firm with access to the family's social network (Arregle et al., 2007). However, if the firm is too FAM-dependent, this can cause severe problems for the company, particularly regarding generational succession. Therefore, family managers should not rely excessively on the positive effects generated by FAM. Managers should build a solid OI to protect their firm from adverse family events such as divorce, death, or disharmony (Jaskiewicz and Dyer, 2017).

However, as our findings regarding employee- and customer-related CSR activities show, there can be substantial efficiency losses if the firm subsystem becomes increasingly closed towards external influence. In turn, this can affect the family and firm subsystem's joint effort in overcoming adversity together and achieving long-term family firm sustainability (Danes et al., 2008; Stafford et al., 1999). Consequently, family-owned SME managing directors should assess the boundary permeability of their firm and engage in active boundary management where necessary (Sundaramurthy and Kreiner, 2008). Family firms should consider that the system's self-preserving nature can be powerful (Hernes and Bakken, 2003), so much that sometimes problems can only be solved by external impulses such as the hiring of external advisors and mediators (Reay et al., 2013). If family firms are aware of these possible effects, they can take the necessary precautions to hinder efficiency losses, and this not only applies to family-owned SMEs but all privately-owned firms

3.6.4 Limitations

As in any empirical study, this research has its limitations. As the identified determinants are socially desirable activities, there is a risk that the reported behavior may not reflect reality, and the results may be biased (Turker, 2009). Since internal reporting practices often influence data from content analysis or reputational rating, self-reported data are the only possible source of information regarding CSR practices in family-owned SMEs that are not publicly listed (Canavati, 2018). German law does not require privately-owned firms to provide as much public information as publicly listed firms (Laschewski and Nasev, 2021), making it challenging to generate comparable data between family-owned SMEs and large, public family firms. A differential analysis regarding the FAM effect on CSR with a dataset that includes both firm categories would benefit future research projects.

The sample only refers to the year 2018, so the results represent a static viewpoint. A longitudinal study with different observation periods is necessary to determine whether the CSR inclination of family-owned SMEs has changed, or will change, over different eras. It would be interesting to determine how the FAM effect on CSR may change over several years and during growth periods within a family-owned SME. Finally, although the focus on Germany affects the results, the approach can test the results with datasets from different culturally and economically developed regions.

3.6.5 Future research avenues

Our models show that CSR in family-owned SMEs can be explained by economic (i.e., FAM) motives, thereby successfully challenging the presumption that CSR in family-owned SMEs is solely non-economically (i.e., SEW) driven. Although we noted that the economic aspects of CSR are underrated in family firm research, we are aware that both economic and non-economic goals coexist in family firms and consequently affect their CSR activities (Barros et al., 2017; Basly and Saunier 2020; Labelle et al., 2018; Swab et al., 2020). While a SEW-driven family firm will mostly use CSR as an instrument to preserve the status quo, the FAM-driven family firms will put greater emphasis on CSR growth opportunities. Despite the high relevance of both motives, it is noteworthy that most of the research literature focuses on the SEW perspective.

Considering family firm research often acknowledges heterogeneity in family firms, we encourage future research to disentangle this by using both perspectives to differentiate between economic and non-economic motives. It is essential to understand how economic or non-economic goals emerge in family firms and why some family firms are more economically motivated than others. Future research could answer this through an in-depth examination of the family subsystem and by using family science theories (Jaskiewicz and Dyer, 2017) to examine the family values and patterns consequently affecting the family motives and family firm management (Rau et al., 2019).

Whether economically or non-economically driven, we assume that family-owned SMEs do not engage in CSR merely through altruism (Fitzgerald et al., 2010; Peake et al., 2017; Uhlaner et al., 2012) and expect them to generate—or want to generate—various outcomes through their social activities (Soundararajan et al., 2018) making CSR merely the mediator for other desirable outcomes (Surroca et al., 2010). While Aguinis and Glavas (2012) found that CSR affects various internal and external organizational outcomes, such as financial performance or firm capabilities, we noticed a gap in outcome-oriented CSR research regarding family-owned SMEs. Thus, CSR outcomes should be further researched regarding family-owned SMEs using both the SEW- and FAM-perspective.

In summary, our study successfully shows that FAM affects CSR activities towards different stakeholders within family-owned SMEs. Furthermore, we identify the weakening effect of OI strength on this relationship, resulting from the permeability of the firm subsystem. We encourage future researchers to analyze this relationship further and consider including FAM as a measure in their quantitative modeling. We are confident that this research framework provides a solid basis for future research into CSR in family firms and family-owned SMEs in particular.

4 Corporate social responsibility as a driver of digital innovation in small and medium-sized enterprises: The mediation effect of absorptive capacity[2]

Christoph Stock • Stefan Hossinger • Arndt Werner • Sabrina Schell • Jonas Soluk

Abstract

Currently, digital innovation is one of the biggest challenges facing small and medium-sized enterprises (SMEs). This study analyzes how SMEs can achieve higher levels of digital innovation despite their lack of resources. Using a dataset consisting of 520 German SMEs, we propose and test a model in which corporate social responsibility enables knowledge-sharing and supports SMEs in acquiring the resources needed for digital innovation development. As hypothesized, we found empirical evidence for a positive mediation effect in which absorptive capacity links corporate social responsibility and an SME's digital innovation output. In sum, this study helps to explain the relationship between corporate social responsibility and an SME's digital innovation, thus presenting far-reaching implications for SME research and the emerging scholarly debate on digital innovation in resource-constrained organizations.

Keywords: Small and medium-sized enterprises, boundary-spanning theory, digital innovation, corporate social responsibility, absorptive capacity.

[2] As a part of this dissertation, this paper is accepted for publication in *International Journal of Entrepreneurial Venturing*. Received: 15 January 2021 / Accepted: 13 January 2022. © Inderscience Publishers 2022.

4.1 Introduction

Today, one of the most crucial challenges of small and medium-sized enterprises (SMEs) is maintaining competitiveness within a digital economy (Arendt, 2008; Nambisan et al., 2019; Quinton et al., 2018; Soluk and Kammerlander, 2021; Teece, 2018). The digital transformation of the economy increases production efficiency, shortens corporate innovation cycles, and results in a higher competitive intensity (Organisation for Economic Co-operation and Development, 2018). While many new ventures today emerge from a digital entrepreneurial ecosystem (Elia et al., 2020; Le and Tarafdar, 2009; Sussan and Acs, 2017), most long-established SMEs have a competitive disadvantage because their businesses were founded and developed in a non-digital era (Arendt, 2008; Quinton et al., 2018; Soluk and Kammerlander, 2021). Considering that the adoption of digital technologies (including digital products, services, and processes) allows a firm to develop new and profitable businesses and market opportunities (Van Looy, 2021; Yoo et al., 2010), established SMEs face the challenge of adapting their pre-digital business to the new digital environment (European Commission, 2019). Innovation-related research has suggested that resource-scarce SMEs should open up their innovation processes to obtain external knowledge necessary for innovation development (Brunswicker and Vanhaverbeke, 2015; Grama-Vigouroux et al., 2020; Parida et al., 2012; Spithoven et al., 2013).

Chesbrough (2006) defines open innovation as “the use of purposive inflows and outflows of knowledge to accelerate internal innovation and expand the markets for external use of innovation, respectively” (Chesbrough, 2006, p. 1). Since an open innovation process is more challenging to control than a closed innovation process, SMEs must have the ability to leverage external knowledge for commercialization purposes (Grama-Vigouroux et al., 2020). Previous research has called this ability absorptive capacity (ACAP). However, ACAP can only be effective if information flows unequivocally between the firm and its stakeholders (Cohen and Levinthal, 1990; Lewin et al., 2011; Volberda et al., 2010; Zahra and George, 2002). Therefore, a company should find means of signaling trustworthiness to its stakeholders, motivating them to share their knowledge with the company (Bouncken, 2015). Corporate social responsibility (CSR)—a company’s voluntary contribution to sustainable development, above and beyond any legal requirements (Carroll, 1999; Dahlsrud, 2008; Van Marrewijk, 2003)—is often used to this end (Hsueh, 2018; Su et al., 2016; Zerbini, 2017). CSR activities can strengthen the trust between the company and its stakeholders (Du et al., 2011; Spence et al., 2003; Vlachos et al., 2009; Voegtlin and Greenwood, 2016), which, in turn, can increase the firm’s access to their stakeholder’s knowledge (Bouncken, 2015). If firms can internalize this external knowledge, they can improve their innovation output (Bocquet et al., 2019; Martinez-Conesa et al., 2017; Wagner, 2010).

Although there is plenty of research on CSR, ACAP, and innovation within SMEs, researchers have not yet combined all three and studied the relationship and inter-relational dynamics between these three concepts. The same can be said for digital innovation, described as the creation of improved products, services, and business operations through digital technology (Fichman et al., 2014; Van Looy, 2021; Yoo et al., 2010). Examples of digital innovation would be streamlined operation processes based on automated analytics or enhanced user experience by optimizing customer interfaces (Groberg et al., 2016). A crucial feature of digital technology is that digital data can be shared and combined with cooperation partners faster than through non-digital technology (Yoo et al., 2010). Consequently, digital innovation often has dispersed components, and its processes are frequently conducted with loosely organized external partners (Ciriello et al., 2018; Nambisan et al., 2017; Nylén and Holmström, 2015; Soluk et al., 2021b), thereby increasing the relevance of trust-building activities, such as CSR (Holmes and Smart, 2009), and poses the following research questions:

RQ3.1: *Which corporate social responsibility activities affect digital innovation in small and medium-sized enterprises?*

RQ3.2: *Does absorptive capacity mediate the relationship between corporate social responsibility activities and small and medium-sized enterprises' digital innovation?*

We derived a set of hypotheses based on Tushman's (1977) boundary-spanning theory to answer the research questions, explaining the exchange of knowledge across organizational boundaries. To better understand the relationship between CSR activities and digital innovation, we examined 520 German SMEs. We found an ACAP mediation effect between employee- or customer-related CSR and digital innovation, whereas community-related CSR seems to affect an SME's digital innovation directly. Together, these results contribute to SME research in several ways. Primarily, the results show that CSR is a strategic instrument that can be used effectively to achieve economic outcomes. The results also confirm Tushman's (1977) boundary-spanning theory explaining innovation-related issues in established SMEs. Our findings also contribute to the emerging discussion on how SMEs can overcome their resource constraints toward digital innovation by facilitating their network relationship ties with diverse external and internal stakeholders.

In the subsequent section, we discuss the current research literature and summarize the empirical findings of previous research on CSR, ACAP, and digital innovation in SMEs. Based on this review, we illustrate the theoretical framework and hypotheses we developed and then tested using the ordinary least squares regression. The final section discusses our findings and explains their theoretical and practical implications.

4.2 Theoretical framework

Tushman's (1977) boundary-spanning theory assumes that there is a constant exchange of information between different companies and that this exchange extends across the departmental boundaries within a company. Therefore, the theory has both an internal and an external perspective and suggests that people act as gatekeepers, linking the company with its stakeholders (Gould and Fernandez, 1989; Tortoriello et al., 2012). Consequently, they determine the flow of information across intra- or inter-organizational boundaries (Easterby-Smith et al., 2008), affecting the identification and integration of external knowledge within the internal innovation process (Aldrich and Herker, 1977; Fleming and Waguespack, 2007).

The key to acquiring external knowledge lies in knowing how to build better relationships with internal and external stakeholders (De Massis et al., 2018). CSR can then support these relationships (Hsueh, 2018; Spence et al., 2003; Su et al., 2016; Vlachos et al., 2009; Voegtlin and Greenwood, 2016; Zerbini, 2017) by acting as a boundary-spanning instrument. CSR is "the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life" (Holme and Watts, 2000, p. 10). In implementing CSR, a company hopes to induce reciprocal behavior patterns by positively influencing the relationship with stakeholders beyond economic interests (Niehm et al., 2008). El Akremi et al. (2018) distinguish three CSR activities: employee-, customer- and community-related CSR. Employee-related CSR activities aim to improve employee well-being and avoid discrimination (e.g., discrimination based on age, sex, ethnicity, or religion). Customer-related CSR activities focus on product transparency and customer satisfaction above and beyond normal standards. Community-related CSR includes generalized activities, such as investments in humanitarian projects, financial help for social institutions, and even sponsoring the local sports club (El Akremi et al., 2018). By demonstrating good intentions via CSR, a stakeholder's confidence in a company can be strengthened considerably (Kervyn et al., 2012), thus increasing the probability that the stakeholders will share information and ideas with the company (Bouncken, 2015).

Hossinger et al. (2020) argue that CSR can create a knowledge-friendly environment, which, in turn, can increase a firm's ACAP, namely its "ability to recognize the value of new information, assimilate it, and apply it to commercial ends" (Cohen and Levinthal, 1990, p. 128). By following an open innovation approach, Holmes and Smart (2009) show that CSR is positively associated with linking internal with external knowledge and exploring innovation opportunities through idea exchange. It is often argued that CSR is a strong signal for meaningful cooperation (Hsueh, 2018; Su et al., 2016; Zerbini, 2017), and therefore, CSR activities improve the flow of information between stakeholders (Hoi et al., 2018; Ramachandran, 2011; Sen and Cowley, 2013). Consequently, CSR increases an SME’s opportunities to acquire knowledge from external partners and utilize it beneficially (Holmes and Smart, 2009).

While little is known about the relationship between CSR and ACAP, previous research has already shown a positive link between CSR and innovation (Bocquet et al., 2019; Martinez-Conesa et al., 2017; Wagner, 2010). Martinez-Conesa et al. (2017) suggest that CSR leads to improved firm performance via higher innovation rates. According to Martinez-Conesa et al. (2017), CSR enhances recruitment quality, which is an essential contributing factor toward better firm performance. Wagner (2010) also maintains that companies with higher CSR can generate higher rates of socially sustainable innovation through improved recruitment. Technological innovations also seem to be positively affected and encouraged through CSR (Bocquet et al., 2019). Similar insights are revealed in studies with datasets of SMEs from the USA (Niehm et al., 2008) and Europe in general (Lasagni, 2012), indicating that ACAP plays a crucial role in the relationship between CSR and innovation processes within established SMEs.

It is essential to underline the roles of CSR activities and ACAP in digital innovation when considering its increasing relevance for an SME’s long-term business success (Soluk and Kammerlander, 2021) and the idiosyncrasies that distinguish digital innovation from conventional innovation (Nambisan et al., 2019). In defining digital innovation, we follow Yoo et al. (2010, p. 725), who conceptualize digital innovation “as the carrying out of new combinations of digital and physical components” to produce new products, services, and business operations (see also Fichman et al., 2014; Van Looy, 2021). Subsequently, digital innovation can also be a digitalized version of an earlier non-digital product, service, or process (Ciriello et al., 2018; Swanson, 1994). Yoo et al. (2010) argue that a characteristic of digital technology is that digital data and information can be shared and combined with cooperation partners more efficiently when compared to the sharing of analog data and information. The nature of digital innovation allows for knowledge and expertise to be immediately gathered from multiple sources (Ciriello et al., 2018; Nylén and Holmström, 2015), which confirms the relevance of CSR’s boundary-spanning effect.

4.3 Hypotheses development

The components necessary for digital innovation tend to be disseminated, as the digital innovation process is often conducted with loosely organized external partners (Ciriello et al., 2018; Nambisan et al., 2017; Nylén and Holmström, 2015; Soluk et al., 2021b), such as crowdsourcing campaigns or ecosystems (Boudreau et al., 2011; Mollick, 2014; Nambisan, 2017), which make open innovation practices suitable for the development of digital innovation (Urbinati et al., 2020). Therefore, SMEs with scarce resources must open up their innovation process (Brunswicker and Vanhaverbeke, 2015; Grama-Vigouroux et al., 2020; Parida et al., 2012; Spithoven et al., 2013), shifting from a centrally planned innovation process to one decentralized and enriched with ideas, knowledge, and technologies from external stakeholders (Chesbrough, 2006). Despite limited resources, opening up the innovation process and adding information and knowledge from outside the business enables the firm to develop new technologies (Parida et al., 2012; Werner et al., 2018), which facilitates digital innovation processes and outcomes (Ciriello et al., 2018; Nambisan et al., 2017; Nylén and Holmström, 2015; Soluk et al., 2021a). An example of open innovation is developing software by applying open-source development processes. Firms doing this are more innovative than those using less collaborative development methods (Piva et al., 2012).

Given that an open innovation process requires the channeling of information from outside the organization to the inside and vice versa (Chesbrough and Bogers, 2014), both internal (i.e., employees) and external stakeholders (i.e., community members) are relevant innovation resources for the firm (Gassmann et al., 2010). Some actors may have strong ties both within the company and with external stakeholders (i.e., customers), thus having a hybrid role. However, these exchange processes require trust between the collaboration partners (Ceci and Iubatti, 2012; Lowik et al., 2012). The stronger the firm's relationship with its internal and external cooperation partners, the better the information exchange (Lowik et al., 2012). Hence, generating a positive effect on a firm's innovation output is dependent on timely and efficient identification and management of relationship networks (Brunswicker and Vanhaverbeke, 2015; De Massis et al., 2018; Granovetter, 1983; Gurău and Lasch, 2011).

Therefore, the collaboration process with employees, customers, and the community in general (e.g., universities or local authorities) is of utmost importance in a digital innovation process. Employee-related CSR activities can be used strategically to acquire a decent reputation as an employer (Voegtlin and Greenwood, 2016), resulting in an increased willingness to share information and promote innovation (Ko and Choi, 2019). Customer-related CSR positively affects a customer's perception of a firm (Hur et al., 2014; Luo and Bhattacharya, 2006), encouraging interactive feedback and the development of new or improved products or processes (Cheng et al., 2014). Moreover, community-related CSR enables SMEs to establish valuable relationships with the community, allowing them access to the strategically relevant information they often lack (Niehm et al., 2008; Spence et al., 2003). Therefore, employee-, customer- and community-related CSR activities serve as instruments to facilitate trust among collaboration partners, enhancing information sharing in a digital innovation process. Consequently, we hypothesize the following:

H1a: *An increase in employee-related CSR is positively associated with SME's digital innovation.*

H1b: *An increase in customer-related CSR is positively associated with SME's digital innovation.*

H1c: *An increase in community-related CSR is positively associated with SME's digital innovation.*

Digital technological knowledge is a vital resource for companies wanting to enhance the development of digital innovation (Lyytinen et al., 2016; Tiwana and McLean, 2005). However, as SMEs have relatively low visibility compared to larger companies, their reputation is not as widely acknowledged, making them less desirable when recruiting highly qualified employees (Cable and Turban, 2003). Motivating employees working within the company, keeping fluctuation low, and presenting the company in a positive and employee-friendly light can make them more desirable. Furthermore, it is easier for smaller companies to form relationships with their staff than their larger counterparts (Wilkinson, 1999), which is particularly important when applying intra-organizational knowledge exchange (Maurer et al., 2011). Concerning the latter, Lin (2007) emphasizes that a knowledge-sharing climate significantly impacts employees' willingness to share their knowledge with others.

Cohen and Levinthal (1990) argue that the ability to commercialize new knowledge relies on the availability of intra- and inter-organizational networks and on the ability to manage those knowledge streams. The latter's effectiveness is not merely determined by the potential access to outside knowledge but, more importantly, by the actual ability to acquire, assimilate, translate, and exploit it internally. While network relationships are the precondition for knowledge spillovers, ACAP is the determining parameter for the actual usage of this knowledge within the firm (Lichtenthaler and Lichtenthaler, 2009). In this context, the company must create a culture that promotes collaboration (Hossinger et al., 2020). Zahra and George (2002) suggest conducting activities (e.g., fostering social networks) to improve the social integration of internal and external stakeholders, which increases the firm's ACAP by lowering the knowledge-sharing barriers.

Employee-, customer- and community-related CSR activities can draw favorable attention to the firm, thus creating an image of trustworthiness (Du et al., 2011; Niehm et al., 2008; Spence et al., 2003; Vlachos et al., 2009; Voegtlin and Greenwood, 2016) and encouraging internal and external stakeholders to interact with each other and share their knowledge with the company (Holmes and Smart, 2009), thus actively contributing to the innovation process. Therefore, CSR can help strengthen the SME's ability to acquire, assimilate, translate, and exploit external knowledge, thus positively influencing ACAP. We hypothesize the following:

H2a: *An increase in employee-oriented CSR activities is positively associated with SME's ACAP.*

H2b: *An increase in customer-oriented CSR activities is positively associated with SME's ACAP.*

H2c: *An increase in community-oriented CSR activities is positively associated with SME's ACAP.*

Digital innovation is a creative transformation of knowledge requiring appropriate adaptation to a firm's specific business environment and effective use and incorporation of different sources' knowledge and expertise. The decentralized nature of digital innovation complicates the management of specific and diverse independent knowledge streams (Ciriello et al., 2018; Nambisan et al., 2017; Nylén and Holmström, 2015). A firm's acting individuals are required to integrate external knowledge into its digital innovation process to ensure successful knowledge transformation (Tiwana and McLean, 2005). Considering that the significant barriers to the digitization of SMEs are not related to the availability of hard- and software but the shortage of skilled personnel (Arendt, 2008), it is particularly evident that ACAP is a crucial precondition to foster SMEs' digital innovation processes (Zobel, 2017).

Recent literature has shown that CSR can positively affect SMEs' technological innovation (Bocquet et al., 2019). Considering that there is a missing link between CSR and innovation outcomes, Surroca et al. (2010) find that CSR positively affects human capital, reputation, and the organizational culture of a firm, consequently increasing its financial performance. Similarly, Tang et al. (2012) theoretically use ACAP to explain the relationship between CSR and economic outcomes. Since ACAP enables a firm to adapt to changing market requirements more effectively, Kostopoulos et al. (2011) found empirical evidence that ACAP positively affects a firm's innovation performance. Transferring these findings to the phenomenon of digital innovation—which we understand as a new combination of digital and physical components (Fichman et al., 2014; Van Looy, 2021; Yoo et al., 2010)—we argue that the ability to acquire, assimilate, translate, and use external knowledge internally is a critical success factor and mediator toward digital innovation.

Looking through a boundary-spanning lens, we claim that investments in employee-, customer- and community-related CSR activities should positively affect digital innovation by utilizing new external knowledge through ACAP. Specifically, we propose that the CSR activities in which SMEs have invested incentivize employees' interactions and involvement and encourage them to share their knowledge (Fernhaber and Patel, 2012), leading to a positive impact on digital innovation. Furthermore, the consideration of ACAP might lead firms to process novel information and knowledge derived from CSR activities more effectively, which might constitute a mediation concerning the role of ACAP in the CSR digital innovation relationship. Thus, we also follow Surroca et al. (2010) by positing that ACAP is an intangible asset and should at least partially mediate the relationship between CSR and digital innovation and propose the following hypotheses:

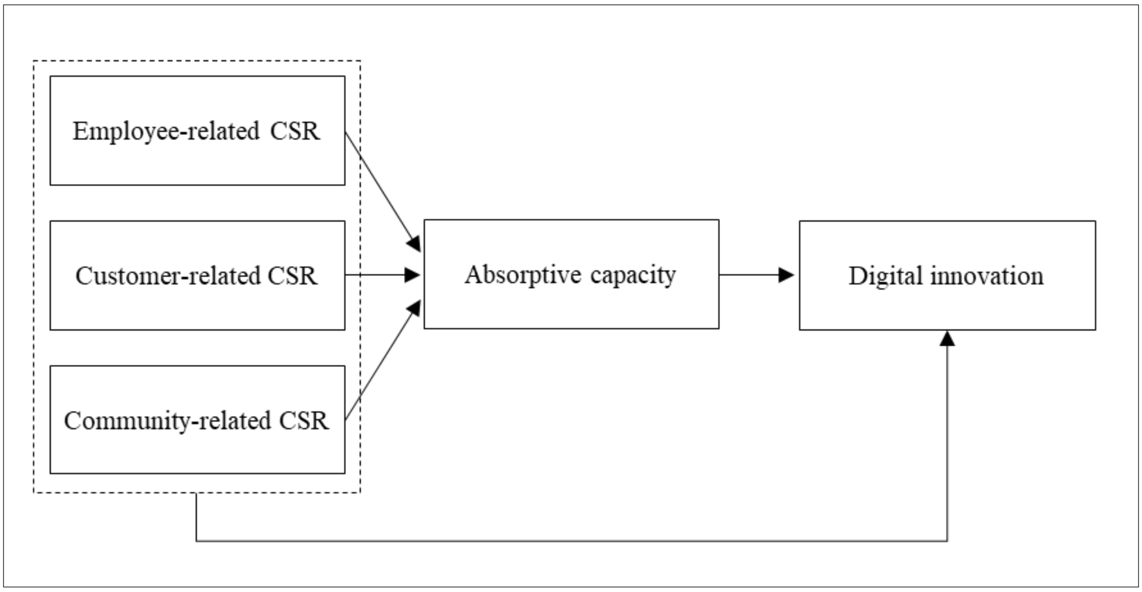
H3a: *ACAP mediates the relationship between SME's employee-related CSR and digital innovation.*

H3b: *ACAP mediates the relationship between SME's customer-related CSR and digital innovation.*

H3c: *ACAP mediates the relationship between SME's community-related CSR and digital innovation.*

The theorized relationships are depicted in Figure 4.1.

Figure 4.1 Conceptual model



4.4 Methodology

4.4.1 Measures

4.4.1.1 Dependent variable

The dependent variable derived from our hypotheses is digital innovation. According to Yoo et al. (2010) and Van Looy (2021), digital innovation is the implementation of new combinations of digital and physical components to create digital products, services, and operations. We used Groberg et al.'s (2016) method to measure an SME's digital innovation performance. This measurement consists of two subscales: 1) digital products and services, and 2) digital operations. The first subscale comprises four items encompassing the breadth of digitized products or services, and determining whether digital goods are created by a firm (Groberg et al., 2016; Porter and Heppelmann, 2014). The second subscale also comprises four items and reflects the adoption of digital technologies that monitor, optimize, and automate a company's operational processes (Groberg et al., 2016; Porter and Heppelmann, 2014). In sum, we examined eight different items ranging from the development of digital products and services to the digitization of processes along the value chain. Following Yoo et al. (2010), we used these subconstructs to identify digital innovation. We measured all items on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The standardized loadings for our digital innovation measure were all above 0.700. Cronbach's alpha referring to instrument reliability was $\alpha = 0.896$, and Raykov's factor reliability coefficient referring to composite reliability was $r = 0.898$. Moreover, confirmatory factor analysis showed that all items loaded significantly and resolutely on each subdimension and were associated with reasonable-to-good measures of model fit (CFI = 0.829, RMSEA = 0.195). Subsequently, we achieved satisfactory validity and reliability for our digital innovation measure. We averaged the individual items to obtain the score for our regression analysis.

4.4.1.2 Independent variable

The independent variables derived from our hypotheses are 1) employee-, 2) customer-, and 3) community-related CSR. We measured these CSR activities with El Akremi et al.'s (2018) established CSR scale. Employee-related CSR, encompassing seven items, deals with issues such as work-life balance, training opportunities, health and safety, discrimination, and employee company support. The way a company treats its customers is reflected by the customer-related CSR subscale, which includes five items. Community-related CSR, also comprising seven items, describes the extent to which a company is engaged in improving local social life in its region. All items were self-reported and measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Principal-component factor analysis showed that the 19 items of the overall CSR measure loaded on three components, with factor loadings of 0.520 or higher. The reliability coefficient Cronbach's alpha is $\alpha = 0.841$ for employee-related CSR, $\alpha = 0.679$ for customer-related CSR, and $\alpha = 0.861$ for community-related CSR. Raykov's factor reliability coefficient $r = 0.822$ for employee-related CSR, $r = 0.682$ for customer-related CSR, and $r = 0.860$ for community-related CSR. Confirmatory factor analysis showed that all items loaded significantly and resolutely on each subdimension and were associated with reasonable-to-good measures of model fit (CFI = 0.885, RMSEA = 0.072). Although Cronbach's alpha narrowly missed the recommended 0.700 threshold for employee-related CSR, the overall confirmatory factor analysis results indicated a reasonable degree of instrument reliability (Taber, 2018). The items were averaged to obtain a score for the various CSR activities.

4.4.1.3 Mediator variable

The mediator variable is ACAP, which organizational research defines as the ability to "acquire, assimilate, transform and exploit external knowledge" (Zahra and George, 2002, p. 186) for commercial ends. ACAP's focus lies on knowledge creation (Matusik and Heeley, 2005) and the method of learning and utilizing knowledge from external stakeholders (Lane and Lubatkin, 1998). Based on this definition, we built on the established ACAP construct designed by Jansen et al. (2005) and adapted by Fernhaber and Patel (2012). This construct consists of two subscales, measuring the potential (through nine items) and the realized ACAP of a company (through

11 items). All items of the subscales were self-reported and measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The standardized loadings for the overall ACAP measure ranged from 0.260 to 0.700, Cronbach's alpha was $\alpha = 0.867$, and Raykov's factor reliability coefficient was $r = 0.872$. Although the standardized loading on the overall ACAP measure was slightly below the minimum criterion of 0.300 in one item (0.260), the scale has been extensively tested and applied in quantitative business research. Moreover, confirmatory factor analysis (CFI = 0.787, RMSEA = 0.080) points to good reliability and fit for this study's purpose. All items were condensed using an average index for our empirical regression analysis.

4.4.1.4 Control variables

We considered several control variables that could simultaneously affect ACAP and digital innovation. We controlled various industry sectors such as manufacturing, construction, trade, services, and crafts. We expected that firms within the manufacturing and service sectors would naturally demonstrate higher levels of innovation and ACAP than firms within the trade or crafts sector. We created six dummy variables, each representing a specific industry sector. If the company was part of the industry sector, the dummy value took 1; if the company was not part of the industry sector, the dummy value took 0. Then we controlled for the firm's size and age. In terms of size, previous studies indicate that a firm's size is positively connected with both a firm's capacity to innovate and its ACAP (Tsai, 2001; Jansen et al., 2005); therefore, we included the number of employees in the metric form. Likewise, previous studies indicate that older firms could have an advantage in experience over younger firms (Autio et al., 2000; Jansen et al., 2005); accordingly, we included the firm's age as a further control. We also controlled for innovation. Previous research indicates that central drivers of ACAP are internal research and development investments and conventional cooperation activities (Cohen and Levinthal, 1990; Mowery et al., 1996). Therefore, as a proxy for research and development activities, we controlled whether the company had introduced new products, services, or processes to the market within the last three years. Furthermore, we controlled for competitiveness. This control reflects a company's comparative competitive advantage. Consequently, we asked firms to provide information about how they assess their economic success, image, capacity for innovation, job security, and wage level compared to their closest competitor. Additionally, we controlled for a firm's business situation (Chih et al., 2010; Kashmiri and Mahajan, 2014b) by asking firms to evaluate their current business situation in terms of total revenue, earnings before interest and taxes, and cash flow. Considering that a firm's awareness of digitization is beneficial for both ACAP (Coronado-Medina et al., 2020) and digital innovation (Groberg et al., 2016), we also controlled for a firm's degree of digitization. Moreover, as assessing a firm's CSR, ACAP, and digital innovation depend on a certain degree of a respondent's position and the related range of tasks within the firm, we controlled whether the respondent was a managing director, board member, or part of the remaining staff. Finally, we added university cooperation in innovation projects to control the firm's innovation engagement with external partners.

Table 4.1 describes the variables we used in our regression models.

Table 4.1 Variable description

Variable	Description
Digital innovation	Constructed Scale, 8 items, measured on a five-point Likert scale (1 = doesn't apply at all to 5 = entirely true), for r a detailed descriptions of all items please see appendix 4.1.
ACAP	Constructed Scale, 21 items, measured on a five-point Likert scale (1 = doesn't apply at all to 5 = entirely true), for a detailed descriptions of all items please see appendix 4.2
Employee-related CSR	Constructed Scale, 5 items, measured on a five-point Likert scale (1 = doesn't apply at all to 5 = entirely true), for r a detailed descriptions of all items please see appendix 4.3.
Customer-related CSR	Constructed Scale, 7 items, measured on a five-point Likert scale (1 = doesn't apply at all to 5 = entirely true), for a detailed descriptions of all items please see appendix 4.3.
Community-related CSR	Constructed Scale, 7 items, measured on a five-point Likert scale (1 = doesn't apply at all to 5 = entirely true), for a detailed descriptions of all items please see appendix 3.
Manufacturing	Which industry does your company belong to? (1 = manufacturing, 0 = else)
Construction	Which industry does your company belong to? (1 = construction, 0 =else)
Trade	Which industry does your company belong to? (1 = trade, 0 = else)
Services	Which industry does your company belong to? (1 = services, 0 = else)
Crafts	Which industry does your company belong to? (1 = crafts, 0=else)
Other sectors	Which industry does your company belong to? (1 = other sectors, 0 = else)
Firm's age	How many employees are currently employed in your company? (metric)
Firm's size	How old is your company? (metric)
Innovation	Has your company introduced new or significantly improved products to the market (i.e., product innovations) and/or has implemented process innovations in the last three years? (1 = yes, 0 = no)
Business situation	Constructed Scale, 3 items, measured on a five-point Likert scale (1 = very good, 5 = insufficient), How do you assess the current business situation of your company in terms of a) total revenue, b) total earnings and c) cash flow.
Competitiveness	Constructed Scale, 5 items, measured on a five-point Likert scale (1 = much worse to 5 = much better),
Degree of digitization	Please compare your company with your most important competitor in terms of the degree of digitization. (Likert scale: 1 = much worse to 5 = much better)
Managing director	What is your current position? (1 = founder and managing director, 0 = else)
Board member	What is your current position? (1 = part of the executive board, 0 = else)
Staff	What is your current position? (1 = staff, 0 = else)
University cooperation	Were the product and/ or process innovations introduced in the last three years developed in cooperation with universities? (1 = yes, 0 = no)

4.4.2 Sample and data

We based our empirical analysis on a dataset collected by surveying 73,023 privately-owned German companies between January and March 2019. We randomly selected all companies using the Bureau van Dijk's AIDA database in its full version. Out of the 73,023 companies we addressed via email, 70,714 did not participate. In total, we received responses from 2,309 privately-owned companies, corresponding to a response rate of 3.16%. We excluded responses leaving the relevant questions unanswered. Furthermore, the SME definition of the *Institut für Mittelstandsforschung* (IfM, 2016) Bonn, whereby the SME must employ less than 500 people and have an annual turnover of under 50 million Euros, led us to exclude those firms not complying with this definition, yielding a sample of 520 German SMEs to estimate the empirical models used to test our hypotheses.

To ensure the quality of the data, we employed well-tested scales from previous research and consulted independent experts in survey design and methodology. We comprehensively surveyed self-reported information provided by the companies regarding their current business and market situations, their ability to recognize, assimilate, and apply new knowledge for commercial ends, and their CSR activities. Since the survey was conducted in Germany, questions were first translated into German and then into English for this article. To further ensure the data quality, we tested for potential non-response bias and common-method bias. Specifically, we tested for non-response bias by comparing the respondents' characteristics (e.g., number of employees and firm age) with those of the non-respondents and found no significant mean differences. We also tested for potential common-method bias by performing Harman's single-factor test (Harman, 1967). The results indicated an eight-factor solution with eigenvalues greater than one, cumulatively explaining 65.46% of the overall variance; the first of these factors accounted for 12.37% of the explained variance. Thus, we can disregard both non-response and common-method bias in this study.

4.4.3 Results

In terms of descriptive characteristics, the responding SMEs are, on average, 49 years old and have 68 employees. In terms of the industry sector, 38% of them are from the service sector, followed by the manufacturing (20%), trade (12%), construction (10%), and crafts (9%) sectors. The remaining 11% is from other sectors. Table 4.2 gives the descriptive characteristics of the variables used in the empirical analysis.

Table 4.2 Descriptives

Variables	Mean	Std. Dev.	Min	Max	Cronbachs α	Raykov's rel.
Dependend variable	3.197	0.943	1	5	0.896	0.898
Digital innovation	3.197	0.943	1	5	0.896	0.898
Mediator variable						
ACAP	3.732	0.503	2.143	4.850	0.867	0.872
Independend variables						
Employee-related CSR	4.097	0.686	1	5	0.841	0.822
Customer-related CSR	4.433	0.548	1	5	0.679	0.682
Community-related CSR	2.563	0.978	1	5	0.861	0.860
Controls						
Manufacturing	0.202	0.402	0	1	-	-
Construction	0.100	0.300	0	1	-	-
Trade	0.123	0.329	0	1	-	-
Services	0.381	0.486	0	1	-	-
Crafts	0.087	0.281	0	1	-	-
Other sectors	0.108	0.310	0	1	-	-
Firm's age	48.921	38.181	1	219	-	-
Firm's size	67.810	89.868	0	500	-	-
Innovation	0.617	0.487	0	1	-	-
Business situation	3.645	0.765	1.333	5	0.833	0.847
Competitiveness	3.554	0.546	1	5	0.706	0.713
Degree of digitization	3.229	0.884	1	5	-	-
Managing director	0.302	0.460	0	1	-	-
Board member	0.535	0.499	0	1	-	-
Staff	0.163	0.370	0	1	-	-
University cooperation	0.060	0.237	0	1	-	-

Notes: Number of obs. = 520

The pair-wise correlations among critical variables show only weak correlations between the independent variables. Moreover, the variance inflation factors range from 1.09 (lowest value) to 3.52 (highest value). Overall, these results suggest the presence of moderate multi-collinearity (Hair et al., 1998). Hence, the confidence intervals produce more reliable probabilities, and the statistical significance of the independent variables is not undermined in the empirical model. Table 4.3 shows the pair-wise correlations among key variables.

We tested our research hypotheses empirically by applying the multiple linear regression approach following Baron and Kenny's (1986) and MacKinnon et al.'s (2007) mediation analysis procedure. Therefore, we estimated five regression models: in Models 1 and 2, we examined the influence of the controls on a company's ACAP and digital innovation; then, in Model 3, we regressed the employee-, customer- and community-related CSR on ACAP; in Model 4, we examined the influence of the different CSR activities on the extent of digital innovation. Finally, in Model 5, we measured both CSR activities and ACAP on digital innovation. We present the estimation results of our five regression models in Table 4.4. The results show supporting evidence for hypotheses 1c, 2a, 2b, 3a, and 3b and the lack of it for hypotheses 1a, 1b, 2c, and 3c.

Table 4.3 Matrix of correlation

Variable	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI
Dependent variable																					
(1) Digital innovation	1.00																				
Mediator variable																					
(2) ACAP	0.42	1.00																			
Independent variables																					
(3) Employee-related CSR	0.28	0.54	1.00																		
(4) Customer-related CSR	0.25	0.46	0.50	1.00																	
(5) Community-related CSR	0.25	0.30	0.41	0.34	1.00																
Controls																					
(6) Manufacturing	-0.05	0.03	0.08	0.12	0.05	1.00															
(7) Construction	-0.11	-0.03	-0.01	-0.01	0.03	-0.17	1.00														
(8) Trade	0.02	0.06	-0.00	0.02	-0.02	-0.19	-0.12	1.00													
(9) Services	0.20	0.02	0.01	-0.02	0.02	-0.39	-0.26	-0.29	1.00												
(10) Crafts	-0.09	-0.06	-0.01	0.06	-0.01	-0.15	-0.10	-0.12	-0.24	1.00											
(11) Other sectors	-0.08	-0.04	-0.09	-0.20	-0.10	-0.17	-0.12	-0.13	-0.27	-0.11	1.00										
(12) Firm's age	-0.05	0.07	0.03	0.08	0.09	0.21	0.15	0.03	-0.26	0.02	-0.05	1.00									
(13) Firm's size	0.06	0.08	0.16	0.10	0.12	0.10	0.09	-0.12	0.00	-0.11	0.01	0.23	1.00								
(14) Innovation	0.35	0.27	0.26	0.28	0.28	0.18	-0.12	0.01	-0.06	0.00	-0.03	0.12	0.11	1.00							
(15) Business situation	0.16	0.31	0.20	0.07	0.14	-0.03	0.14	-0.12	-0.01	-0.01	0.06	0.08	0.08	0.07	1.00						
(16) Competitiveness	0.21	0.40	0.29	0.23	0.25	-0.04	0.02	-0.00	0.05	-0.00	-0.03	-0.00	0.07	0.21	0.43	1.00					
(17) Degree of digitization	0.47	0.29	0.19	0.15	0.17	-0.09	-0.04	-0.00	0.16	0.01	-0.08	-0.05	0.03	0.20	0.17	0.43	1.00				
(18) Managing director	-0.05	-0.01	0.01	0.10	0.11	-0.04	0.05	0.02	-0.03	0.17	-0.12	-0.02	-0.18	0.03	-0.04	0.14	0.04	1.00			
(19) Board member	0.04	0.08	0.05	-0.01	-0.02	-0.01	-0.10	-0.00	0.12	-0.12	0.04	-0.04	0.04	-0.00	-0.03	-0.08	0.05	-0.70	1.00		
(20) Staff	0.01	-0.09	-0.07	-0.11	-0.11	0.06	0.08	-0.02	-0.12	-0.04	0.10	0.08	0.17	-0.03	0.09	-0.06	-0.11	-0.29	-0.47	1.00	
(21) University cooperation	0.18	0.16	0.10	0.11	0.13	0.16	-0.00	-0.09	-0.03	-0.02	-0.04	0.11	0.24	0.20	0.07	0.15	0.16	0.01	-0.03	0.02	1.00

Table 4.4 Regression results

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	ACAP	Digital innovation	ACAP	Digital innovation	
Independent variable					
Employee-related CSR			0.23926***	0.11376*	0.00684
			0.03506	0.06301	0.06536
Customer-related CSR			0.20918***	0.17696**	0.08348
			0.04860	0.07981	0.07505
Community-related CSR			0.00653	0.08750**	0.08458**
			0.02043	0.03913	0.03824
Mediator variable					
ACAP					0.44686***
					0.08554
Controls					
Manufacturing[1]	0.05649	0.03425	-0.07807	-0.07552	-0.04063
	0.07656	0.12820	0.06766	0.12527	0.12057
Construction[1]	-0.01138	-0.03261	-0.10885	-0.12464	-0.07600
	0.08784	0.15537	0.07909	0.15419	0.14874
Trade[1]	0.16080**	0.28506**	0.04879	0.19474	0.17294
	0.07708	0.13763	0.06806	0.13300	0.12638
Services[1]	0.04291	0.34203***	-0.04504	0.26183**	0.28196***
	0.06897	0.11479	0.06125	0.11189	0.10549
Crafts[1]	-0.03116	-0.09146	-0.14854*	-0.18610	-0.11973
	0.09446	0.15593	0.08159	0.14962	0.14697
Firm's age	-0.00028	-0.00516**	-0.00052	-0.00579**	-0.00556**
	0.00148	0.00260	0.00130	0.00257	0.00246
Firm's age * firm's age	0.00000	0.00003*	0.00001	0.00003**	0.00003**
	0.00001	0.00001	0.00001	0.00001	0.00001
Firm's size	0.00006	-0.00001	-0.00030	-0.00030	-0.00017
	0.00020	0.00042	0.00020	0.00042	0.00041
Innovation	0.17241***	0.52744***	0.05756	0.41764***	0.39192***
	0.04287	0.07681	0.03846	0.07924	0.07739
Business situation	0.12918***	0.13940***	0.10544***	0.12234**	0.07522
	0.02981	0.05095	0.02774	0.04982	0.04814
Competitiveness	0.21050***	-0.14484*	0.12231***	-0.21931***	-0.27397***
	0.04546	0.07453	0.04167	0.07443	0.07428
Degree of ditization	0.05720**	0.42465***	0.04585**	0.41424***	0.39375***
	0.02614	0.04540	0.02294	0.04405	0.04254
Managing director[2]	0.06482	-0.20431*	-0.00213	-0.28076**	-0.27981***
	0.06749	0.10975	0.05755	0.11169	0.10789
Board member[2]	0.14381**	-0.13427	0.07882	-0.19253**	-0.22776**
	0.06205	0.09417	0.05057	0.09338	0.09099
University cooperation	0.13020	0.32958***	0.13327*	0.31856**	0.25901**
	0.09477	0.12512	0.07334	0.12375	0.12331
Constant	2.06474***	1.61126***	0.82421***	0.73649*	0.36818
	0.15952	0.29319	0.22096	0.37520	0.34356
R-squared	0.261	0.349	0.449	.384	0.416
F-test	11.890***	19.670***	19.070***	18.790***	22.710***
Number of obs	520	520	520	520	520

Notes: *** p<0.01, ** p<0.05, * p<0.1, robust standard errors in parentheses;
[1]Reference: Other sectors; [2]Reference: Staff

Regarding Model 2, we found that well-performing innovative SMEs with a more pronounced awareness of digitization in the service sector increased their digital innovations. Interestingly, the SME firm size seems to have no significant impact on digital innovation. In Model 4, we found that employee-related CSR ($\beta = 0.114$; p-value = 0.072), customer-related CSR ($\beta = 0.177$; p-value = 0.027), and community-related CSR ($\beta = 0.088$; p-value = 0.026) each provide a positive significant effect on an SME's digital innovation. Thus, following Model 4, hypotheses 1a, 1b, and 1c seem to be supported by the data. Furthermore, the results of Model 3 show significant positive effects for both employee-related CSR ($\beta = 0.239$; p-value = 0.000) and customer-related CSR ($\beta = 0.209$; p-value = 0.000) on SMEs' ACAP. These results confirm both hypotheses 2a and 2b. However, no significant effect was found for community-related CSR ($\beta = 0.007$; p-value = 0.749), leading us to reject hypothesis 2c.

Following the four-step procedure to assess the potential mediation by ACAP (Baron and Kenny, 1986; MacKinnon et al., 2007), the results from Model 5 show that ACAP fully mediates the relationship between employee- or customer-related CSR and digital innovation. As shown in Model 4, employee- and customer-related CSR positively effects an SME's digital innovation. Then, as shown in Model 3, a significant positive relationship was found between employee- or customer-related CSR and SME's ACAP. Next, Model 5 shows that a significant relationship exists between ACAP and digital innovation ($\beta = 0.447$; p-value = 0.000) when controlling for employee-, customer- and community-related CSR. Finally, in Model 5 the coefficients of employee-related CSR ($\beta = 0.007$; p-value = 0.917) and customer-related CSR ($\beta = 0.084$; p-value = 0.267) are no longer significant, which indicates a full mediation. In conclusion, we observed two mediation effects for employee- and customer-related CSR: the relationship between these two CSR activities and digital innovation is mediated by ACAP. Consequently, we found supporting evidence for hypotheses 3a and 3b. Moreover, although a positive relationship between employee- and customer-related CSR and digital innovation initially appears in Model 3, in-depth mediation analysis shows that ACAP is the crucial link between employee- and customer-related CSR to digital innovation. The direct effects of both employee- and customer-related CSR on digital innovation are not significant, and therefore, their effect on digital innovation is fully mediated by ACAP. Thus, ultimately, hypotheses 1a and 1b are not supported by the data.

Moreover, the results from the bootstrap test (MacKinnon et al., 2007) show that the mediation effects are significantly different from zero. The statistical significance was tested with 5,000 bootstrap samples on a 95% bias-corrected confidence interval level. A mediation effect is classified as significant in the bootstrap test if zero is not within the respective range of the bootstrapping confidence intervals. The estimation results show that ACAP mediates the relationship between employee-related CSR and digital innovation, as zero is not within the respective range of the bootstrapping confidence interval (lower limit = 0.060; upper limit = 0.161). This finding strengthens the empirical support for hypothesis 3a.

Furthermore, the bootstrap test shows similar results for the mediating role of ACAP in terms of customer-related CSR. Again, zero is not within the bootstrapping confidence interval (lower limit = 0.049; upper limit = 0.144), further supporting hypothesis 3b. However, we found no empirical support that ACAP mediates the relationship between community-related CSR and digital innovation. The results of the bootstrap test show that zero lies within the respective range of the bootstrapping confidence interval (lower limit = -0.014; upper limit = 0.021). As a result, the mediation effect is insignificant. Therefore, we must reject hypothesis 3c. The results can be found in Table 4.5.

Table 4.5 Bootstrap estimation for mediation effects

	Bootstrap Coef	Bootstrap SE	Lower-level Bootstrap CI	Upper-level Bootstrap CI
Employee-related CSR (indirect effect)	0.107	0.026	0.064	0.168
Customer-related CSR (indirect effect)	0.095	0.027	0.049	0.160
Community-related CSR (indirect effect)	0.003	0.009	-0.015	0.022
TOTAL indirect effect	0.203	0.044	0.130	0.305

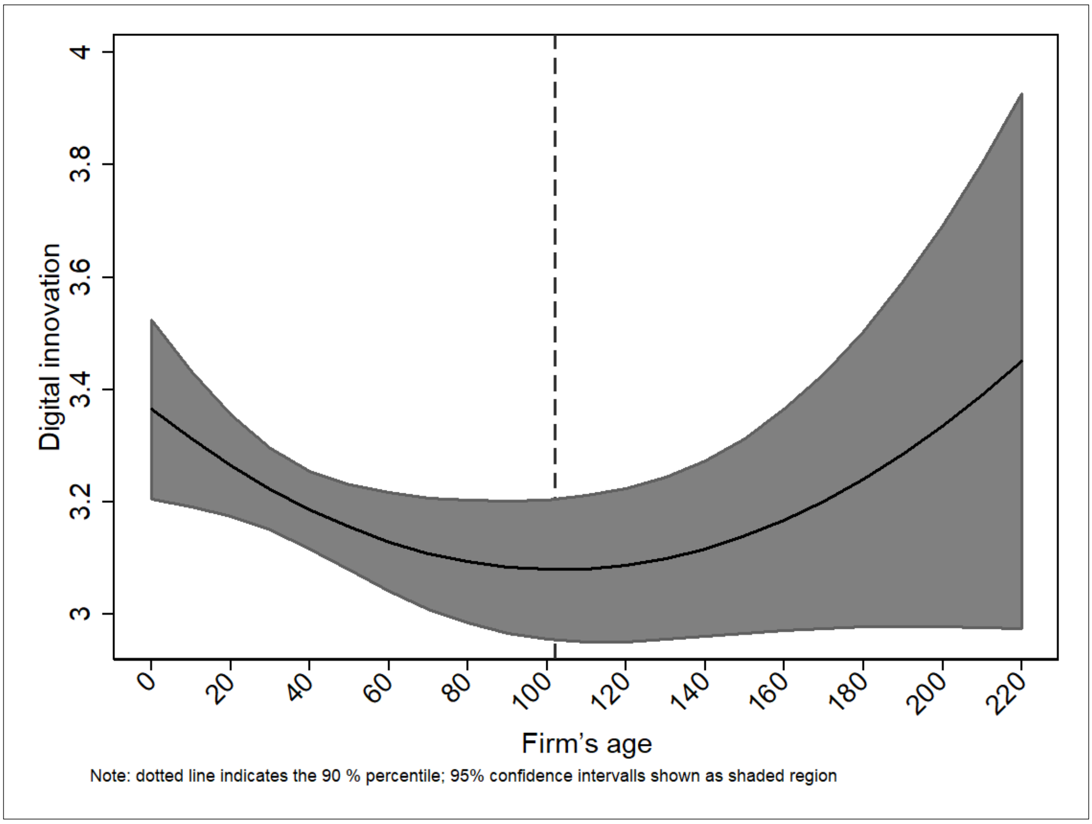
Finally, to check the robustness of our results, we ran the regression models using the path analysis part of the structural equation model known as the structural component, and we obtained the necessary coefficients using a seemingly unrelated regression model. Our main results remained robust. Table 4.6 provides an overview of the hypotheses and their empirical support.

Table 4.6 Results of the hypotheses testing

H1a:	*An increase in employee-related CSR activities is positively associated with SME's digital innovation.*	×
H1b:	*An increase in customer-related CSR activities is positively associated with SME's digital innovation.*	×
H1c	*An increase in community-related CSR activities is positively associated with SME's digital innovation.*	✓
H2a:	*An increase in employee-related CSR activities is positively associated with SME's ACAP.*	✓
H2b:	*An increase in customer-related CSR activities is positively associated with SME's ACAP.*	✓
H2c:	*An increase in community-related CSR activities is positively associated with SME's ACAP.*	×
H3a:	*ACAP mediates the relationship between SME's employee-related CSR activities and digital innovation.*	✓
H3b:	*ACAP mediates the relationship between SME's customer-related CSR activities and digital innovation.*	✓
H3c:	*ACAP mediates the relationship between SME's community-related CSR activities and digital innovation.*	×

Regarding the effects of our control variables, it is worth drawing attention to the age effect on digital innovation. Analytically, we checked for the non-linearity of the relationship by adding quadratic (squared) power terms as a non-linear model (Mitchell, 2012). As shown in Model 5, we found empirical evidence for a significant non-linear relationship (β_{age} = -0.0055; p = 0.024; $\beta_{age*age}$ = 0.00003; p = 0.042). In Figure 4.2, we illustrate the curved nature of the relationships based on the predicted values of Model 5. We found a U-shaped (convex) relationship between the firm's age and digital innovation (see Figure 4.2). We also found that digital innovation decreases with firm's age for most SMEs (i.e., left of the dashed line that indicates the 90% percentile).

Figure 4.2 Ordinary least squares quadratic regression results (visualization of the age effect)



4.5 Discussion

Established SMEs with a scarce resource base often lack the skilled personnel necessary for digital innovation (Arendt, 2008; Soluk and Kammerlander, 2021). Based on a survey of 520 German SMEs, we explored how established SMEs can succeed in a digital economy by examining CSR and ACAP and using these as drivers of digital innovation. We found that employee-, customer- and community-related CSR activities increase the digital innovation possibilities in SMEs. Specifically, the relationships between employee- or customer-related CSR activities and digital innovation are fully mediated by ACAP.

ACAP seems to act as a bridge between both employee- and customer-related CSR activities and digital innovation, which contradicts our assumption that through CSR, increased information flows between a firm and its stakeholders will directly increase the firm's digital innovation. CSR helps a firm build the capabilities to process this new information and apply it to commercial ends. An explanation for this finding may be that through CSR, increased trust between a firm and its employees or customers (Du et al., 2011; Spence et al., 2003; Vlachos et al., 2009; Voegtlin and Greenwood, 2016) results in a higher interaction, thereby improving mutual understanding (Cheng et al., 2014). Increased understanding of employees and customers may allow the firm to better transform stakeholders' loosely expressed thoughts into specific products and processes (Liao et al., 2007). Especially in an open innovation context, CSR can increase trust among stakeholders to facilitate the digital innovation process. Hence, boundary-spanning CSR activities act as strategic tools for SMEs aiming at outperforming competitors.

However, we found no mediating effect for the relationship between community-related CSR and digital innovation, which shows that although community-related CSR activities can positively affect an SME's digital innovation, it is not due to an increase in its ability to acquire, assimilate, transform, and exploit new knowledge. This could be because the community generally does not have enough network ties within the studied SMEs and cannot affect a firm's ACAP. Following Surroca et al. (2010), we believe that other intangible assets mediate the relationship between community-related CSR and digital innovation. Although we have not definitively ascertained the extent of the effect of community-related CSR on digital innovation, we can assume that it is not ACAP.

Our analyses reveal a U-shaped (convex) relationship between firm age and digital innovation. While young SMEs show relatively high levels of digital innovation, these decrease when a firm is aging which is in line with empirical research concerning non-digital innovation, proving that older firms tend to decrease in innovativeness since they tend to engage in lower-risk and, consequently, more incremental innovation (Balasubramanian and Lee, 2008; Coad et al., 2016). We found a similar pattern for digital innovation, proving that new ventures, which tend to be previously founded in a digital ecosystem (Elia et al., 2020; Le and Tarafdar, 2009; Sussan and Acs, 2017), achieve higher levels of digital innovation than older SMEs (Arendt, 2008; Quinton et al., 2018; Soluk and Kammerlander, 2021). Hence, established SMEs need to counteract their decreasing ability to innovate digitally by conducting CSR activities. However, in our data sample, we found a few particularly old SMEs that managed to avoid such a decrease and have exceptionally high levels of digital innovation, thus leading to the U-shaped (convex) relationship between firm age and digital innovation. We encourage future research to explore the key drivers making those firms more successful than others in digital innovation.

Our research enabled us to make essential theoretical contributions. We contributed to the debate on whether CSR generates positive economic business outcomes (Barnett, 2007; Bocquet et al., 2019; Matten and Moon, 2008). By building trust and reciprocity toward different stakeholders, CSR activities positively affect economic outcomes. As previous research has indicated, this effect is not necessarily direct (Surroca et al., 2010; Tang et al., 2012) but is mediated by intangible assets, such as ACAP, in terms of stakeholders with network ties. Our results show that the pathway of achieving economic outcomes through CSR strongly depends on which stakeholder benefits from the respective CSR activity, highlighting the relevance of CSR as a strategic instrument in fostering economic outcomes.

In addition, we provided evidence for the relevance of the boundary-spanning theory, particularly regarding innovation in SMEs. Often, established SMEs do not have the necessary resources to enter new markets successfully when seeking further exploration of market opportunities (Baumbach et al., 2020; Dias et al., 2020). This resource lack also applies to the adoption of new technologies. Using Tushman's (1977) boundary-spanning theory, we provided a new explanation of how SMEs with insufficient resources can manage to acquire, assimilate, transform, and exploit external knowledge sources (i.e., ACAP). The compatibility of the boundary-spanning theory with the concept of open innovation allows a more comprehensive understanding of the economic aspects of CSR and the innovation process of resource-lacking SMEs in general.

Furthermore, we contributed to the ongoing debate on how companies, especially SMEs, can improve their competitive position in a digitally transformed economy (Soluk and Kammerlander, 2021). Specifically, SMEs can overcome their lack of knowledge by opening up their innovation process. We explained how SMEs could accelerate their digital innovation output by fostering proper relationships with their stakeholders (i.e., conducting CSR). Our empirical analyses showed that SMEs could support digital innovations by increasing their ACAP through CSR activities while targeting different stakeholders. Therefore, we increased the theoretical understanding of how SMEs can use their network relations optimally to adapt and be competitively viable within a digital economy.

From a practical standpoint, many SMEs may be unaware that CSR activities can help them efficiently solve future problems related to their resource scarcity, whether digital or non-digital. SMEs should learn to advertise their use of CSR activities and take advantage of them for economic improvement. For example, through sustainability reporting (Hsueh, 2018), CSR activities can signal to stakeholders, thereby encouraging meaningful cooperation (Su et al., 2016; Zerbini, 2017). Moreover, especially since a company's ability to innovate seems to decrease with age (Balasubramanian and Lee, 2008; Coad et al., 2016), resource-scarce SMEs could explicitly evaluate the potential benefits of investing in CSR activities.

Nevertheless, as in any empirical study, some factors limited the results of our analyses. The examined SMEs were ultimately too small to provide accessible, comprehensive, and publicly available information, and due to their size, they were not required to provide detailed reports. Since the determinants of interest are socially desirable, there is also a risk that the reported data may be biased (El Akremi et al., 2018). Furthermore, we are aware that misleading practices (e.g., greenwashing) can cause external parties to doubt the sustainability information promulgated by organizations (Lock and Seele, 2016). However, this enables future research to take a deeper look into how CSR-related greenwashing impacts the processes described in our study.

The implementation of CSR strategies within a company necessitates a significant time lapse before the effects can be assessed. A panel dataset should be used to explore the causal relationship between CSR and its outcomes. However, our study is based on cross-sectional data collected in Germany at a single point in time. That is, even though we are confident that a mediation analysis is the appropriate model to test our research question, we are aware that, from an empirical viewpoint, we have to refer to this model as a causal model in a highly restricted sense. Thus, many alternative explanations could probably be offered with the empirical model we propose—including reverse causality. However, we believe that this is a problem with almost any statistical analysis. Consequently, this means that the causal arguments must be strongly grounded in a set of strong theoretical predictions, which we believe is the case in this study.

Moreover, our study did not consider every feasible predictor from previous studies, thus, omitted variable bias might be an issue. For instance, previous studies indicate that available financial resources, employee commitment, or the amount of time invested is critical for an SME's digital innovation process (Soluk and Kammerlander, 2021). Although our context-related research approach affects the general applicability of our results, it offers the possibility of testing our results using datasets from different cultural and economically developed regions, which can help to understand CSR-related outcomes through comparative studies.

4.6 Conclusion

We identified a growing interest in digital innovation, where current research provides little insight into how established SMEs should position themselves competitively in a digitized economy and remain competitive when hampered by resource constraints. Our study successfully shows that CSR, as a boundary-spanning instrument, can be used to drive digital innovation by increasing ACAP. Especially in an open innovation context, CSR increases the effectiveness of developing digital innovation. Furthermore, the theoretical concept of our study provides a solid basis for future SME-specific CSR and digital innovation research.

5 The moderating role of socioemotional wealth on post-succession performance in small and medium-sized family firms

Sabrina Schell • Christoph Stock • Laura Pütz • Arndt Werner

Abstract

This study focuses on the moderating role of socioemotional wealth (SEW) within family small and medium-sized enterprises (SMEs) by examining whether and to what extent a dynastic succession event influences post-succession performance. Based on data drawn from 344 German family SMEs and relying on a multidimensional scale to account for the heterogeneity in owning families' affective endowment, our key finding is that firms with high SEW after a succession event generate higher post-succession performance than their counterparts with low SEW. In sum, our study identifies SEW in its specific dimensions to be substantial post-succession performance antecedents.

Keywords: Family firms, SMEs, socioemotional wealth, performance, succession.

5.1 Introduction

Family firms regularly face the important challenges of designating and organizing their business dynastic succession. To successfully hand over the firm, strategic decisions have to be made (Cabrera-Suárez et al., 2001; Motwani et al., 2006), successors have to be found (Basco and Calabrò, 2017; Chrisman et al., 1998) and the succession has to be organized operationally (Bruce and Picard, 2006; Sharma et al., 2003). Because the succession process is complex and requires additional resources, which could be otherwise utilized to enhance the firm's performance (Bennedsen et al., 2007), complications during the succession process can quickly threaten the existence of a firm.

This is especially true for small and medium-sized enterprises (SMEs), which are mostly controlled by owning families (Motwani et al., 2006). For example, to preserve control over the firm, the owning families of SMEs tend to appoint less qualified family members as successors rather than more competent non-family candidates (Basco and Calabrò, 2017; Gómez-Mejía et al., 2011), often resulting in performance decline, which may a temporary setback until balance is restored—or also definite (Werner et al., 2021). Although family firm succession often leads to changes affecting the firm's performance (Ahrens et al., 2019; Bennedsen et al., 2007; Chang and Shim, 2015; Pérez-González, 2006; Smith and Amoako-Adu, 1999; Wennberg et al., 2011), this does not mean that family SMEs will always fail after succession, as there are still family firms that have been successfully operating for more than a century (Koiranen, 2002; Martínez-Sanchis et al., 2020).

Succession-related family firm research traditionally focuses on the main actors (i.e., incumbents, successors, and the owning family) to determine which of their traits positively affect the transition process (Le Breton-Miller et al., 2004). Recent research has broadened the field by emphasizing the effect that family dynamics have on succession events (Amore et al., 2021; Chang and Shim, 2015). This scope of research has also encompassed the effects that family conflicts (Ghee et al., 2015; Jayantilal et al., 2016), communications (Daspit et al., 2016; Schell et al., 2020), and intrafamily planning (Calabrò et al., 2018) may have on the post-succession performance of a family firm. In an entrepreneurial context, Werner et al. (2021) examined the succession process and found that after succession, the performance of family SMEs can actually be enhanced. The authors argued that a successor, in seeing new growth opportunities, will consequently readjust the firm's strategy accordingly, thereby increasing the performance of the family firm in the long run.

For explaining a poorer financial performance of family firms than non-family firms, researchers have often drawn from socioemotional wealth (SEW) (Martin and Gómez-Mejía, 2016). SEW describes the "nonfinancial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty" (Gómez-Mejía et al., 2007, p. 106). This implies that controlling the firm is beneficial to the owning family to fulfill the family members' affective and emotional needs. To preserve the firm's SEW, the owning family may make entrepreneurial decisions that are not always economically rational, as they may be based on the non-economic motives of family members (Gómez-Mejía et al., 2011).

Interestingly, however, recent research has provided strong empirical evidence that SEW positively affects family firms' performance (Debicki et al., 2017; Ng et al., 2019; Razzak and Jassem, 2019). The study at hand intends to resolve these ambiguities by arguing that SEW increases the longevity of a family firm by helping to overcome family specific tensions emerging in a succession period. Specifically, we argue that SEW positively affects (i.e., moderates) the relationship between the succession event and post-succession performance (i.e., financial performance in the years after the succession event has taken place) because SEW has a mitigating effect on the intrafamily conflicts related to dynastic succession, which in turn helps the successor initiate new growth impulses. Since this relationship has not yet been examined empirically, this study poses the following overall research question: What influence does SEW have on the post-succession performance in family SMEs?

Drawing on Hauck et al.'s (2016) multidimensional SEW measure, we examine the impact of SEW on post-succession performance through the following three dimensions to verify whether their relevance is upheld: renewal of family bonds through dynastic succession, emotional attachment of family members, and identification of family members with the firm. Based on data collected from 344 German family SMEs, we provide empirical evidence that those firms that manage to keep their level of SEW high after the succession event also generate higher post-succession performance in the long run. Thus, we conclude that SEW is a key driver of the positive relationship between the length of time elapsed since the last succession event and post-succession performance results. Focusing then on the individual SEW dimensions, our results show that the renewal of family bonds though dynastic succession and the identification of family members with the firm are the key drivers that positively moderate post-succession performance. Although hypothesized, we do not find a significant effect between the emotional attachment of family members and post-succession performance.

This study thus provides empirical evidence that SEW can potentially be used as a strategic tool by owning families (Strike, 2012; Swab et al., 2020) to manage a transition event successfully (Le Breton-Miller et al., 2004) and achieve longevity. However, the literature thus far has neglected SEW as an instrument to maintain viability and enhance performance in the context of the often-difficult succession transition phases of family firms. Furthermore, this study provides a new theoretical perspective by showing that the effect of SEW is related to the specific life cycle stage of a family SME. While it is argued that SEW may theoretically have a negative effect on family firm performance (e.g., Martin and Gómez-Mejía, 2016), SEW might partially compensate for this negative effect during a transition phase by lowering the potential for intra-family conflict.

The paper is structured as follows: First, an overview of the applied literature and theories is given. Then, our derived hypotheses are tested and analyzed in seven models by regression analysis. This is followed by a discussion of our results as well as the possible limitations and outlook for future research.

5.2 Theory and hypotheses

5.2.1 Post-succession performance in family small and medium-sized enterprises

It is imperative that family firms going through a succession event continue to maintain and show enhanced performance to remain viable within the market (De Massis et al., 2008; Wennberg et al., 2011). However, the emphasis on both organizational and family goals during the succession process can create tensions within the firm (Minichilli et al., 2014; Zellweger and Astrachan, 2008). For example, Kotlar and De Massis (2013) pointed out that these possibly contradictory goals may also influence the behavior of firm-involved family members in the post-succession phase. Ownership composition changes, and especially in a cousin consortium, ownership can be fragmented (Salvato, 2004; Schulze et al., 2003). The different visions that family members may have about a firm's future can create conflicts during the transition process (Davis and Harveston, 1999; Jayantilal et al., 2016). These conflicts can negatively affect the company and subsequently may have a negative effect on the future development of the family firm's performance after a succession.

Consequently, recent research has begun to focus on factors helping family firms to increase post-succession performance. In this regard, Werner et al. (2021) showed that firm growth rates increase in the post-succession phase as information discrepancies between incumbents and successors inevitably dissolve. However, if the entrepreneurial abilities of a successor are underdeveloped, previous owner involvement may shield the firm from deficits and can help train the successor accordingly (Ahrens et al., 2018). Calabrò et al. (2018) argued that family firms should choose their successors based not on primogeniture but rather on the offspring's actual competence and ability to run the firm. For example, the ability of the successor to take over and expand the incumbent's social capital (i.e., professional network) is a key driver of post-succession performance (Bouguerra et al., 2016).

Nevertheless, many family firms do not survive the third generation (Koiranen, 2002). Therefore, it can be postulated that although the succession event represents a caesura in the life cycle and is crucial factor for longevity, research has not yet been identified why some family SMEs succeed in this phase and why others do not.

5.2.2 The concept of socioemotional wealth and its relationship to post-succession performance

Taking into account that the owning family profits not only financially but also affectively by operating a business, Gómez-Mejía et al. (2007) built on behavioral agency theory, which assumes that executives are primarily loss averse and only secondarily risk averse (Wiseman and Gómez-Mejía, 1998), and created the concept of SEW. SEW is defined as the owning family's affective endowment within the firm, indicating "that personal pride and self-concept of family members tend to be intimately tied to the business" (Gómez-Mejía et al., 2011, p. 654), which the owning family is eager to preserve. It is theorized that to preserve SEW, family members may even neglect financially advantageous projects if they entail the risk of a loss of SEW (Gómez-Mejía et al., 2011).

To better examine the effects of SEW as well as the different SEW tendencies among family firms, a multidimensional measure of SEW was developed by Berrone et al. (2012) using five different dimensions: family control and influence (F), identification of family members with the firm (I), binding social ties (B), emotional attachment of family members (E), and renewal of family bonds to the firm through dynastic succession (R).

When aggregated, those dimensions result in the so-called FIBER scale. The family control and influence dimension refers to the conventional way of separating family firms from non-family firms through family ownership and/or management and identifies the strength of the family's involvement in the business. Identification of family members with the firm expresses the identifying power that the family members have toward the firm. The stronger this dimension is, the greater the individual family members feel attached to their firm and thus the more allegiance they will be prepared to give. Since family members often see the firm as an extension of their own family, they also place a higher value on good, reciprocal stakeholder relations, which are described by the binding social ties dimension of FIBER. The emotional attachment of family members among family members influences managerial decisions within the family business, for example, by securing the life's work of the predecessor, also due to the emotional connection and therefore changes in the company. Furthermore, with the help of the renewal of family bonds through dynastic succession dimension, the transgenerational orientation of family companies, particularly when a successful succession has taken place, is also taken into account (Berrone et al., 2012).

Criticism of the still relatively new FIBER scale is frequently based on the argument that it does not fully meet the theoretical definition and therefore needs to be further improved (e.g., Chua et al., 2015; Miller and Le Breton-Miller, 2014; Schulze and Kellermanns, 2015). In their attempt to validate the FIBER scale, Hauck et al. (2016) provided empirical evidence that the operationalization of both family control and influence and binding social ties does not properly reflect the SEW concept. In their explanation of this finding, they argued that the dimension family control and influence mainly refers to actual control that the business family has over the firm and does not reflect the affective endowment of the owning family. In a related vein, the dimension binding social ties is argued to solely refer to the existence of social relationships while neglecting the affective endowment associated with these relationships. Based on their findings, Hauck et al. (2016) suggested the exclusion of both dimensions and introduced the empirically validated shortened REI scale. Taking this into consideration, the theoretical and empirical analysis of our study relies on the shortened REI scale.

With respect to post-succession performance, family firm research has concentrated on the traits of the corresponding successor (Ahrens et al., 2018, 2019; Calabrò et al., 2018; Schepker et al., 2017). Studies analyzing the impact and effect of contextual factors such as SEW on financial performance are still scarce and the few empirical studies focusing on this relationship have yielded mixed results.

While Schepers et al. (2014) found that SEW negatively moderates the positive relationship between entrepreneurial orientation and performance, recent empirical research showed that SEW is positively related to the family firm's performance (Debicki et al., 2017; Ng et al., 2019). For example, SEW can foster the ability of family owners to make resources available to achieve the company's goals (Razzak and Jassem, 2019). Thus, whether SEW relates positively or negatively to performance depends on the strategic goals of the firm (Martin and Gómez-Mejía, 2016). Relying on the SEW dimensions, which are slightly different from those of the FIBER and REI scales, Debicki et al. (2017) provided empirical evidence that SEW goals emphasizing the importance and continuity of family within the firm can have a strategic impact on the family business and thus lead to positive performance.

Based on the knowledge that when experiencing business succession, family owners provide additional resources to achieve the firm's goals (Ahrens et al., 2019), this is especially true for SEW-driven family firms (Razzak and Jassem, 2019). We therefore argue that SEW can be a stabilizing and strategic element in a period of change such as dynastic succession, and can positively affect post-succession performance. Especially in the long term (i.e. with a greater distance to the succession event), these effects can become apparent benefiting family businesses that manage to maintain SEW through succession. Consequently, we derive the following baseline hypothesis:

> **H1 (baseline):** SEW moderates post-succession performance positively. With an increasing number of years since the last succession took place, performance increases for family firms with high SEW and decreases for family firms with low SEW.

5.2.3 The moderating role of renewal of family bonds through dynastic succession

Since family entrepreneurs have a strong desire to preserve their own entrepreneurial achievements by building an entrepreneurial legacy (Jaskiewicz et al., 2015), it can be assumed that high levels of affective commitment by family members (Sharma and Irving, 2005) are an inherent attribute of an owning family's transgenerational orientation (Casson, 1999; Zellweger et al., 2012). Consequently, family entrepreneurs often wish for their family descendants to take over the business after their death to continue the legacy. Accordingly, the family business becomes part of the family heritage and tradition (Minichilli et al., 2014; Williams Jr et al., 2018). Based on this, Gómez-Mejía et al. (2007) posited the survival of the family dynasty as a central element of SEW. This family-related goal has a high priority in family-influenced firms and a major effect on all corporate activities (Lee and Rogoff, 1996; Zellweger et al., 2012). Taking those insights into consideration, as well as Gómez-Mejía et al.'s (2007) conceptual work, Berrone et al. (2012) further refined the transgenerational orientation of family firms through the *renewal of family bonds to the firm through dynastic succession* as a dimension with which to measure SEW.

The family's desire to build a dynasty can therefore be a crucial element in handing over the family firm successfully. The greater the family's dynastic orientation, the more prone the members will be to support the succession process (Zellweger et al., 2012). Specifically, a successful handover requires family business knowledge (Cabrera-Suárez et al., 2001) and business-specific social capital (Arregle et al., 2007; Schell et al., 2018). Since a strong tendency for the renewal of family bonds motivates and generates intrafamily support even after the succession has formally taken place, a positive association between higher degrees of SEW and post-succession performance can be expected. A strong desire for the renewal of family bonds through dynastic succession can therefore generate the intrafamily support required for a successful handover and subsequently affect the family firm's performance (Daspit et al., 2016).

In sum, we therefore argue that the performance levels that a family business will achieve after a handover depends strongly on the SEW dimension *renewal of family bonds through dynastic succession*. The higher the transgenerational orientation of the family members, the more motivated family members will be to support the succeeding generation to cope with the challenge of the firm's short- and long-term performance during and after succession, which, for example, can be realized by the willingness of owners to invest resources within the company (Razzak and Jassem, 2019). The succession process can be viewed as an entrepreneurial process by both generations (Nordqvist et al., 2013; Werner et al., 2021), which is a long-term and intergenerational investment (Gómez-Mejía et al., 2011). We therefore consider that the transgenerational orientation of the business family, reflected in the renewal of family bonds dimension, positively affects the relationship between the time since the last succession and post-succession firm performance. Consequently, we hypothesize the following:

> **H2a:** *Renewal of family bonds through dynastic succession* positively moderates post-succession performance. With an increasing number of years since the last succession took place, performance increases for family firms with high *renewal of family bonds through dynastic succession* and decreases for family firms with low *renewal of family bonds through dynastic succession*.

5.2.4 The moderating role of emotional attachment of family member

Given that members of the entrepreneurial family are often involved in the family firm as managers, there is an overlap of the family and the firm, which results in the emotions of family members influencing corporate management (Berrone et al., 2010; Craig et al., 2014; Eddleston and Kellermanns, 2007). Such emotions develop dynamically and can include happiness, warmth, tenderness, fear and resentment, insecurity, disappointment or anger (Allen and Meyer, 1990; Carlock and Ward, 2001; Eddleston and Kellermanns, 2007; O'Reilly and Chatman, 1986).

A strong emotional attachment of the family members can facilitate altruism, leading to family members caring for each other, as well as being committed and loyal to the family and to the firm (O'Reilly and Chatman, 1986; Schulze et al., 2003). High emotional attachment within the family can lead to family support, which can be a key success factor in the transition process and beyond (Eddleston and Kellermanns, 2007; Friedman, 1991). However, Eddleston and Kellermanns (2007) found that the succession process can also expose profound emotional problems within the family and can become a field of tension when family members prioritize their personal interests over a successful handover. Subsequently, strong emotional attachment among family members can therefore be helpful to successfully navigate the handing over of the firm (Daspit et al., 2016; Kotlar and De Massis, 2013), influencing family satisfaction and long-term success (Le Breton-Miller et al. (2004). Therefore, the emotional state of the family affects not only the success of the transfer but also ultimately the performance of the company (Eddleston and Kellermanns, 2007).

Hence, we propose that the post-succession performance of a family business after the handover is affected by the SEW dimension *emotional attachment of family members*. The stronger the emotional bonds, the more likely it is that family members will be willing to put aside their own personal goals for the greater good of the family firm (Le Breton-Miller et al., 2004; Meier and Schier, 2016) and will most likely support the successor in maintaining, or even improving, the firm's performance (Debicki et al., 2017; Strike et al., 2015). Again, the extent to which the family was a support or a burden to the successor during the pre- and posttransition phases only becomes apparent further down the line after the handover. This leads us to consider that emotional attachment positively affects the relationship between the time since the last succession and post-succession firm performance. Accordingly, we hypothesize the following:

H2b: *Emotional attachment of family members* positively moderates post-succession performance. With an increasing number of years since the last succession took place, performance increases for family firms with high *emotional attachment of family members* and decreases for family firms with low *emotional attachment of family members*.

5.2.5 The moderating role of identification of family members with the firm

The need for family members to be part of a group is fulfilled through identification. Considering that a great part of a business family's life is naturally centered on the family business, the majority of family members tend to identify themselves strongly with their company (Allen and Meyer, 1990; Kepner, 1983). The family-influenced corporate identity of the family business is usually also shared by non-family members of the firm (Miller and Le Breton-Miller, 2005), which consequently shapes collaboration among organization members (Kepner, 1983). As a result, internal and external stakeholders associate the corporate image with the image of the family, and vice versa (Astrachan and Botero, 2018). Therefore, Gómez-Mejía et al. (2007) concluded that identification with the family firm makes up for a large part of a family's affective needs. Berrone et al. (2012) considered these aspects in the dimension *identification of family members with the family firm*, with a scale they adapted from O'Reilly and Chatman (1986), Allen and Meyer (1990), Carlock and Ward (2001), and Klein et al. (2005).

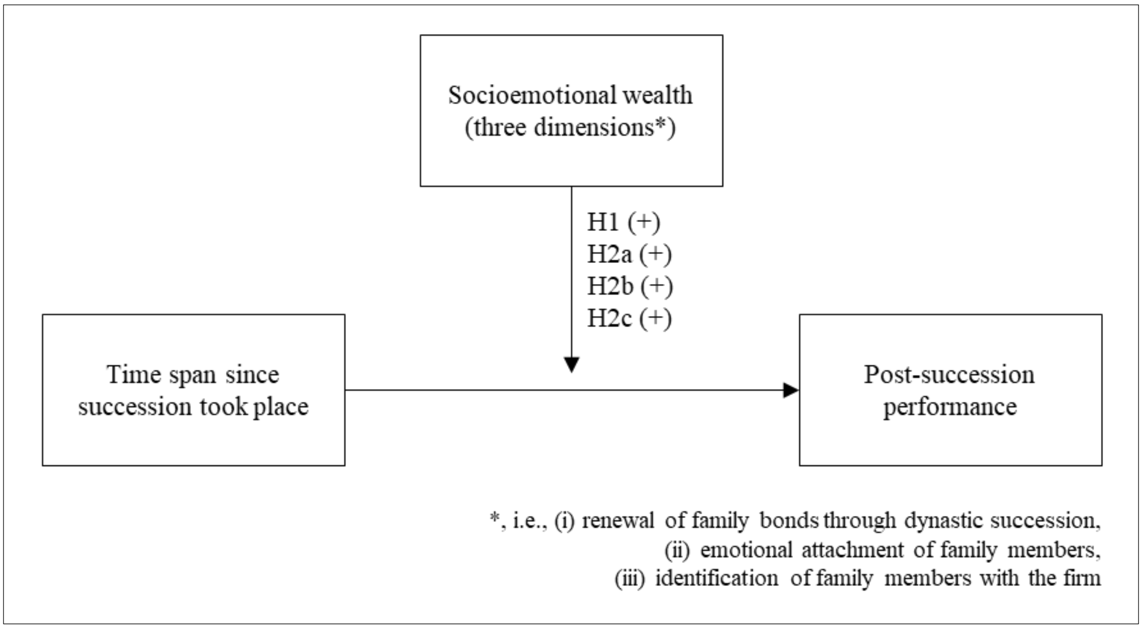
Since family members identify themselves with their business, identification with the family business can be a stabilizing factor for the success of the family firm's transition (Astrachan et al., 2018; Botero et al., 2019), especially if succession plans exist (Werner et al., 2021). Succession plans enable all parties involved to understand the succession process as an entrepreneurial process and thus take advantage of the opportunity to shape the succession positively through entrepreneurial activities (Ahrens et al., 2019; Nordqvist et al., 2013). In terms of strong identification with the family firm, family members will be supportive of the new successor to protect the future viability of the firm, entrepreneurial activities, and consequently their own identity. Accordingly, high levels in this dimension make it easier for family members to put their personal interests on hold (Allen and Meyer, 1990; O'Reilly and Chatman, 1986). Thus, the profound sense of belonging can activate family resources needed for a successful handover and can subsequently result in greater motivation to support the successor to improve the performance of the firm in general (Friedman, 1991; Kidwell et al., 2012; Villalonga and Amit, 2006).

We therefore propose that the post-succession performance of family firms is affected by strong levels of the SEW dimension *identification of family members with the firm*. Potential successors change their role during the succession process (Cater and Justis, 2009), gaining more access to information (Schell et al., 2018; Wolff et al., 2022), more responsibility (Cabrera-Suárez et al., 2001) and thus more room for maneuvers. This can lead to a renewal in enthusiasm and engagement in the family business, which can also have a positive impact on (non-family) employees (Chrisman et al., 2015; De Massis et al., 2008). To protect their own identity, family members will offer more support for successors and will therefore indirectly affect a firm's performance in a positive way (Gallucci et al., 2015). However, this support only becomes apparent over time and after the new generation has taken over, following in the long run of the family firm development. Hence, we consider that identification with the family firm positively affects the relationship between the last succession and the firm's post-succession performance. As a result, we hypothesize the following:

> **H2c:** *Identification of family members with the firm* moderates post-succession performance positively. With an increasing number of years since the last succession took place, performance increases for family firms with high *identification of family members with the firm* and decreases for family firms with low *identification of family members with the firm*.

Figure 5.1 outlines our research framework illustrating that SEW in family SMEs can be divided into different dimensions. The business family and the family business are particularly prone to conflict and crisis during a dynastic succession, which can affect the performance of the business. Through its moderating influence, SEW can have a lasting positive effect on this succession event and therefore positively affect the business as a whole.

Figure 5.1 Derived hypotheses



5.3 Methodology

5.3.1 Data collection and sample

Our data are based on a survey of 73,023 privately-owned German firms that was conducted between January 2019 and March 2019. All firms were randomly selected using the German database AIDA-Bureau van Dijk (full version). Out of the 73,023 companies we addressed via email, 70,714 did not participate. In total, we received responses from 2,309 firms, corresponding to a response rate of 3.16%. Of the 2,309 firms that participated in the survey, 1,697 with incomplete responses were eliminated. Furthermore, the SME definition of the *Institut für Mittelstandsforschung* (IfM, 2016) Bonn, which states that an SME must employ fewer than 500 people and have an annual turnover of under 50 million Euros, led us to exclude 22 firms not complying with this definition. In addition, as the present study examines family firms, responses from 268 non-family firms were not considered in this study. After these exclusions, a final dataset of 344 responses of family firms could be used for the empirical analysis. Prior to data collection, the suitability of our questionnaire was ensured by using well-tested scales and by consulting independent experts on the design and methodology of the survey. As a result, the questionnaire include far-reaching questions on the current situation of the company and its structure, performance and family ownership. As the survey was conducted in Germany, the questions were first translated into German and then back-translated into English for the article.

5.3.2 Measures

5.3.2.1 Dependent Variable

Performance (in our case, *post-succession performance*) can be measured in different ways. Following Covin et al. (1990), we asked the companies to rate their current business situation based on the following three subscales: sales, profit and cash flow. These three subscales were measured on a 5-point Likert-type response scale from 1 ("Very poor") to 3 ("Neutral") to 5 ("Very good"). To obtain a score for each of the four subscales, the respective items were averaged. Principal component analysis showed that the three performance items loaded on one component only, with factor loadings of 0.683 or higher—clearly above the suggested 0.30 as the minimum criterion for an item (Costello and Osborne, 2005). The scale reliability was $p = 0.83$. Cronbach's alpha was 0.83.

5.3.2.2 Independent Variable

To examine the effect of time after succession on the post-succession performance, we composed the independent variable *time span since succession*, which was measured in years after the last formal succession event has taken place. Based on the question "In which year did the last succession of the family business to the next generation took place?”, we calculated the year of the succession, i.e., 2019 (the year of the survey) minus the year of the last succession event (e.g., 2016). The mean value of the *time span since succession* is 9.36, its standard deviation is 0.78 and its range is 0 (i.e., first generational (founder) firms) to 69 years.

5.3.2.3 Moderating Variables

One of the central variables in our models is SEW, which represents the moderation variable. As explained above, we drew on the established and validated shortened REI-SEW scale of Hauck et al. (2016) with the three subdimensions: “renewal of family bonds through dynastic succession”, “emotional attachment of family member” and “identification of family members with the firm”. Each of these dimensions was based on three items and was measured on a 5-point Likert-type response scale ranked from 1 (“Doesn’t apply at all to”) to 3 (“Neutral”) to 5 (“Entirely true”). To obtain a score for each of the three measures, the items of the three scales were averaged. Notably, for the regression analysis, all SEW measures were standardized and centralized. Principal component analysis showed that the three items of renewal of family bonds through dynastic succession loaded on one component only, with factor loadings of 0.475 or higher. The scale reliability was $p = 0.84$. The Cronbach’s alpha was 0.77. The three items of emotional attachment of family members also loaded on one component only, with factor loadings of 0.789 or higher. The scale reliability was $p = 0.89$, and the Cronbach’s alpha was 0.90. Finally, the three items of identification of family members with the firm also loaded on one component only, with factor loadings of 0.715 or higher. Here, the scale reliability was $p = 0.83$, and the Cronbach’s alpha was 0.84.

5.3.2.4 Control Variables

The present study included a set of control variables that may affect SEW and the post-succession performance of family SMEs simultaneously. These variables include industry sector (manufacturing, construction, trade services, crafts, other), firm size (number of employees), firm age (years), firm generational stage (first generation firm, second generation firm, third and more generation firm) and a dummy variable for ownership (with 0 meaning that the share of equity capital owned by the family is less than 50% and 1 meaning 50% or more) and innovation (with 0 meaning that the firm has made no product or process innovations in the last three years and 1 meaning they have).

A description of the variables we used for our regression analysis is shown in Table 5.1.

Table 5.1 Descriptive statistics and description of variables

Variable	Description	Mean	Std. Dev.	Range	Cronbach's Alpha
Performance	Constructed scale, 3 items measured on a 5-point Likert Scale (1=very poor to 5=very good): Please assess the current business situation of your company based on the following characteristics: (a) Turnover (b) Profits (c) Cash flow	3.58	0.78	1-5	0.83
Time distance	Measured in years; i.e., 2019 (the respondents were asked in which year the last succession of the family business to the next generation took place) the year of the last succession event (e.g., 2016)	9.36	11.83	0-69	-
SEW-Dimensions:					
i. Renewal of family bonds through dynastic succession	Constructed Scale, 3 items, measured on a 5-point Likert Scale (1= doesn't apply at all to 5=entirely true)	3.86	0.98	1-5	0.77
ii. Emotional attachment of family member	Constructed Scale, 3 items, measured on a 5-point Likert Scale (1= doesn't apply at all to 5=entirely true)	3.94	0.98	1-5	0.90
iii. Identification of family members with the firm	Constructed Scale, 3 items, measured on a 5-point Likert Scale (1= doesn't apply at all to 5=entirely true)	4.20	0.86	1-5	0.84
iv. Overall SEW construct	Constructed Scale, 9 items, measured on a 5-point Likert Scale (1= doesn't apply at all to 5=entirely true)	3.99	0.81	1-5	0.91
Firm size	How many employees are currently employed in your company? (metric)	63.08	81.94	1-450	-
Firm age	How old is your company? (metric)	54.18	40.43	2-219	-
Innovation	Has your company introduced new or significantly improved products to the market (i.e., product innovations) and/or has implemented process innovations in the last three years? (1=yes, 0=no)	0.65	0.48	0-1	-
Ownership share	What percentage of the equity capital is owned by the family? (1=50% and more, 0=less than 50%)	0.91	0.29	0-1	-
First (founder) generation (ref.)	How many generations has your company been in family ownership? (1=1st generation, 0=else)	0.38	0.49	0-1	-
Second generation	How many generations has your company been in family ownership? (1=2nd generation, 0=else)	0.32	0.47	0-1	-
Third+ generation	How many generations has your company been in family ownership? (1=3rd or more generations, 0=else)	0.30	0.46	0-1	-
Manufacturing (ref.)	Which industry does your company belong to? (1=manufacturing, 0=else)	0.26	0.44	0-1	-
Construction	Which industry does your company belong to? (1= construction, 0=else)	0.12	0.32	0-1	-
Trade	Which industry does your company belong to? (1= trade, 0=else)	0.13	0.34	0-1	-
Services	Which industry does your company belong to? (1= services, 0=else)	0.31	0.46	0-1	-
Crafts	Which industry does your company belong to? (1= crafts, 0=else)	0.12	0.32	0-1	-
Other	Which industry does your company belong to? (1= other, 0=else)	0.06	0.24	0-1	-

5.4 Results

The correlations between the variables are shown in Table 5.2. Notably, there are only weak correlations between the independent variables, and there seems to be no problem concerning multicollinearity.

Table 5.2 Matrix of correlation

Variables	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XVIV
(1) Performance	1.00																		
(2) Time span	-0.02	1.00																	
(3) SEW_All	0.25	-0.01	1.00																
(4) SEW_R	0.25	0.01	0.83	1.00															
(5) SEW_E	0.18	-0.03	0.88	0.53	1.00														
(6) SEW_I	0.21	0.02	0.89	0.60	0.73	1.00													
(7) Firm size	0.18	0.12	0.09	0.19	-0.00	0.05	1.00												
(8) Firm age	0.07	0.47	0.11	0.16	0.01	0.13	0.29	1.00											
(9) Innovation	0.17	-0.02	0.13	0.12	0.09	0.14	0.23	0.11	1.00										
(10) Ownership	0.05	0.07	0.15	0.14	0.13	0.13	0.06	0.05	0.04	1.00									
(11) First gen.	-0.02	-0.63	-0.14	-0.15	-0.07	-0.17	-0.22	-0.55	-0.06	-0.06	1.00								
(12) Second gen.	0.01	0.29	0.00	0.01	-0.02	0.03	-0.01	-0.09	0.04	-0.02	-0.54	1.00							
(13) Third+ gen.	0.00	0.37	0.15	0.15	0.09	0.14	0.25	0.67	0.03	0.08	-0.52	-0.45	1.00						
(14) Manufacturing	0.03	0.08	0.01	0.09	-0.09	0.03	0.13	0.21	0.15	-0.06	-0.17	0.05	0.12	1.00					
(15) Construction	0.14	0.05	0.11	0.11	0.08	0.09	0.12	0.14	-0.15	0.05	-0.10	-0.03	0.14	-0.21	1.00				
(16) Trade	-0.11	0.01	-0.01	-0.11	0.02	0.06	-0.11	0.05	-0.04	0.01	-0.01	-0.08	0.10	-0.23	-0.14	1.00			
(17) Services	-0.03	-0.18	-0.07	-0.05	0.01	-0.15	-0.04	-0.31	0.01	0.07	0.28	-0.06	-0.24	-0.40	-0.25	-0.27	1.00		
(18) Crafts	0.02	0.10	-0.01	-0.06	0.01	0.03	-0.13	0.00	-0.04	-0.04	-0.10	0.14	-0.04	-0.21	-0.13	-0.14	-0.25	1.00	
(19) Others	-0.03	-0.02	0.00	0.03	-0.02	-0.00	-0.01	-0.05	0.01	-0.04	0.05	-0.02	-0.03	-0.15	-0.09	-0.10	-0.17	-0.09	1.00

To empirically test our hypotheses regarding the moderating effect of the different SEW dimensions on the relationship between the time span since succession and post-succession performance in family SMEs, we used linear multiple regression. Based on the described control variables, we analyzed the effect of the dimensions on post-succession performance (model 1) and then added the time span since succession and SEW_R (model 2), SEW_E (model 4), and SEW_I (model 6) to one different model each. Second, the moderating effects of SEW_R, SEW_E and SEW_I proposed in H2a, H2b, and H2c were tested by the interaction terms time span x SEW_R (model 3), time span x SEW_E (model 5), and time span x SEW_I (model 7), respectively. Our baseline hypothesis was tested in models 8 and 9. The results of our regression models are presented in Table 5.3.

Models 2, 4 and 6 fail to show a significant effect of the time span since succession and the post-succession performance of family SMEs. On the other hand, they show significant positive effects of SEW_R (model 2: $\beta = 0.1585$; $p < 0.01$), SEW_E (model 4: $\beta = 0.1263$; $p < 0.01$), and SEW_I (model 6: $\beta = 0.1476$; $p < 0.01$) on the performance measure. This finding indicates that with high levels of these different SEW dimensions, the post-succession performance is also high. These results are consistent with prior findings of Ng et al. (2019) that SEW positively affects firm performance. Furthermore, we also find significant positive effects of firm size and innovation in all seven models. However, firm age, family ownership share and generational stage seem to have no effect on the firm's post-succession performance—all things equal.

For H2a, H2b and H2c, we proposed that SEW_R, SEW_E, and SEW_I would positively moderate the relationship between the time span since succession and post-succession performance. In model 3, we find a significant positive moderating effect of SEW_R on the relationship between time span and post-succession performance (model 3: $\beta = 0.0066$; $p < 0.05$), providing support for H2a. However, the results of model 5 do not show significant results regarding time span x SEW_E, which leads us to reject H2b. Furthermore, the results of model 7 show a weak significant positive moderating effect of SEW_I on the relationship between the time span since succession and post-succession performance (model 7: $\beta = 0.0058$; $p < 0.1$). Because the interaction term time span x SEW_I is weak, we conclude that model 7 provides only partial support for H2c. Last but not least, we find empirical support for our baseline hypothesis (H1) that the time span after the last intra-family business succession event is positively moderated by overall SEW (model 9: $\beta = 0.006$; $p < 0.05$). Figure 5.2 presents the results of our significant moderation hypotheses (H1, H2a, and H2c).

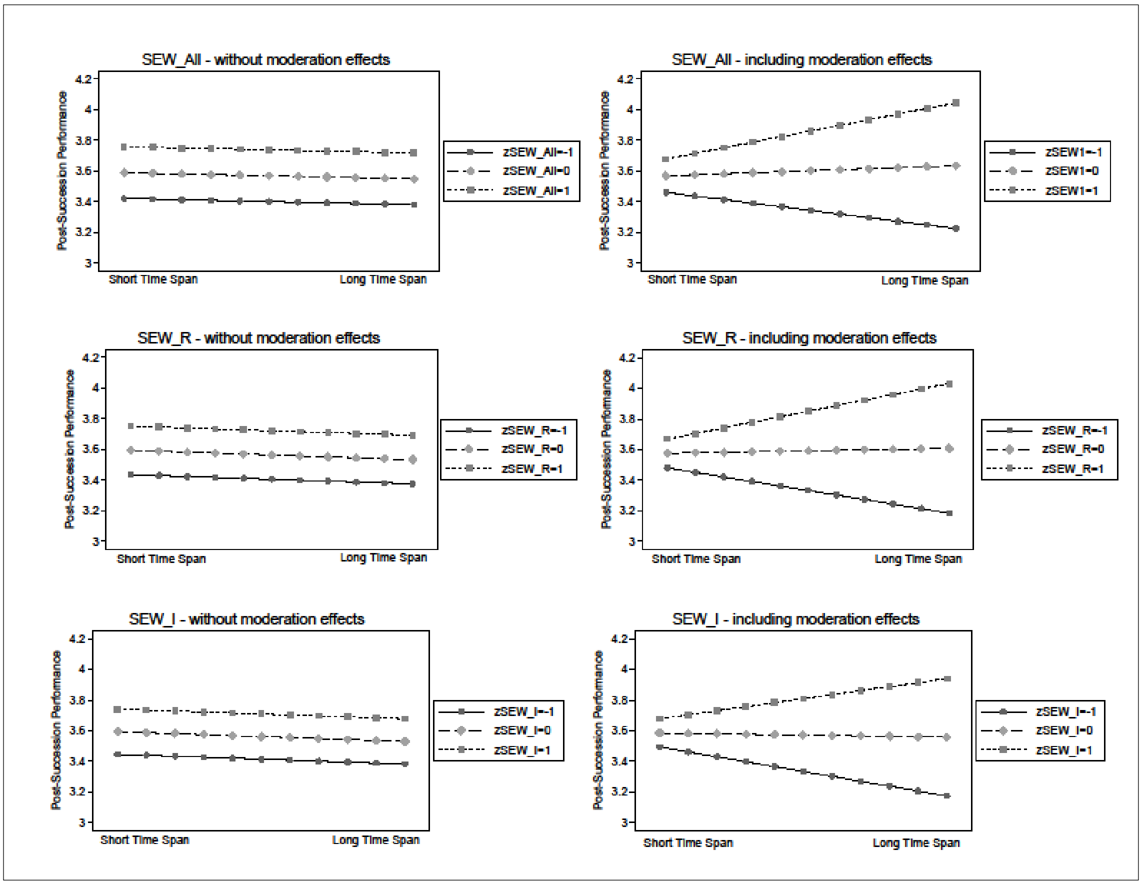
Table 5.3 Regression results

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Controls									
Firm size	0.0012**	0.0010**	0.0010**	0.0013***	0.0013**	0.0012**	0.0013***	0.0012**	0.0013***
	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)
Firm age	0.0013	0.0013	0.0010	0.0018	0.0017	0.0015	0.0012	0.0015	0.0012
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Innovation	0.2538***	0.2245**	0.2258**	0.2176**	0.2243**	0.2043**	0.2202**	0.2026**	0.2202**
	(0.0970)	(0.0960)	(0.0945)	(0.0969)	(0.0967)	(0.0971)	(0.0967)	(0.0967)	(0.0967)
Ownership share	0.1055	0.0427	0.0106	0.0624	0.0471	0.0471	0.0162	-0.0895	-0.0764
	(0.1499)	(0.1488)	(0.1460)	(0.1486)	(0.1478)	(0.1419)	(0.1412)	(0.1220)	(0.1223)
Second generation[1]	-0.0723	-0.0759	-0.0778	-0.0640	-0.0722	-0.0861	-0.0764	-0.2496*	-0.2128
	(0.1061)	(0.1229)	(0.1227)	(0.1206)	(0.1217)	(0.1227)	(0.1223)	(0.1511)	(0.1571)
Third+ generation[1]	-0.1935	-0.2183	-0.2166	-0.2247	-0.2334	-0.2292	-0.2128	0.0319	0.0162
	(0.1436)	(0.1479)	(0.1473)	(0.1541)	(0.1553)	(0.1551)	(0.1571)	(0.1462)	(0.1412)
Construction[2]	0.3283**	0.3053**	0.3032**	0.2741**	0.2787**	0.2888**	0.2879**	0.2728**	0.2879**
	(0.1387)	(0.1379)	(0.1361)	(0.1388)	(0.1387)	(0.1391)	(0.1380)	(0.1378)	(0.1380)
Trade[2]	-0.1651	-0.1093	-0.1005	-0.1901	-0.1855	-0.1867	-0.1782	-0.1623	-0.1782
	(0.1458)	(0.1466)	(0.1467)	(0.1481)	(0.1480)	(0.1463)	(0.1457)	(0.1458)	(0.1457)
Services[2]	-0.0324	-0.0125	-0.0181	-0.0542	-0.0619	-0.0026	-0.0122	-0.0255	-0.0122
	(0.1113)	(0.1082)	(0.1076)	(0.1100)	(0.1101)	(0.1111)	(0.1101)	(0.1085)	(0.1101)
Crafts[2]	0.1015	0.1368	0.1532	0.0796	0.0847	0.0922	0.1051	0.0983	0.1051
	(0.1485)	(0.1422)	(0.1411)	(0.1403)	(0.1396)	(0.1390)	(0.1375)	(0.1379)	(0.1375)
Other[2]	-0.0858	-0.0945	-0.0973	-0.0993	-0.0927	-0.0877	-0.0847	-0.0994	-0.0847
	(0.2240)	(0.2305)	(0.2235)	(0.2291)	(0.2293)	(0.2279)	(0.2283)	(0.2306)	(0.2283)
Independent variable									
Time span since last succession		-0.0012	0.0007	-0.0018	-0.0007	-0.0013	-0.0006	-0.0008	-0.0006
		(0.0039)	(0.0044)	(0.0039)	(0.0042)	(0.0039)	(0.0043)	(0.0038)	(0.0043)
Main term moderator variables									
SEW R		0.1585***	0.0943*						
		(0.0477)	(0.0552)						
SEW E				0.1263***	0.0919*				
				(0.0465)	(0.0533)				
SEW I						0.1476***	0.0922*		
						(0.0479)	(0.0521)		
SEW All								0.1688***	0.1085**
								(0.0476)	(0.0540)
Interaction terms									
Time span x SEW R			0.0066**						
			(0.0029)						
Time span x SEW E					0.0033				
					(0.0026)				
Time span x SEW I							0.0058*		
							(0.0035)		
Time span x SEW All									0.0060**
									(0.0030)
R^2	0.0835	0.1221	0.1348	0.1095	0.1125	0.1174	0.1268	0.1278	0.1384
F value	3.36***	3.81***	4.14***	3.32***	3.22***	3.45***	3.38***	3.76***	3.81***

N = 344. Robust standard errors are in parentheses. [1]Reference: First (founder) generation. [2]Reference: manufacturing; *** p<0.01, ** p<0.05, * p<0.1

The curves of the slopes of the moderation models (right side of Figure 5.2) clearly show that when compared to family firms with an average SEW (i.e., total SEW and SEW in the dimensions (a) renewal of family bonds to the firm through dynastic succession and (b) identification of family members with the company), those with an above average SEW have a higher post-succession performance and those with below average SEW have a lower post-succession performance with increasing time after the last succession event.

Figure 5.2 Moderation effects



In summary, we find some support for our hypotheses, which confirms our theoretical considerations regarding the moderating effect of SEW on the relationship between the time span since succession and post-succession performance in family SMEs. We conclude that the heterogeneous results regarding the post-succession performance in family SMEs can be partly explained by examining them through the lens of SEW—especially in its specific dimensions.

5.5 Discussion and Conclusions

The aim of this study was to understand why some family firms have better post-succession performance than others, especially with an increasing number of years after the succession event. We examined this relationship in the context of different SEW dimensions, namely, *renewal of family bonds to the firm through dynastic succession*, *emotional attachment of family members*, and the *identification of family members with the company* (Berrone et al., 2012; Hauck et al., 2016). While our results provide support for a positive moderating effect for the SEW dimensions *renewal of family bonds* and *identification of family members*, we did not find evidence for a moderating role of *emotional attachment of family members*.

Our study makes several contributions. First, it contributes to the current debate on the heterogeneity of family businesses (Chua et al., 2012; Prügl, 2019). Family businesses perform differently after business succession, and many family businesses still fail after this important stage in their life cycle (Cucculelli and Micucci, 2008; Hauck and Prügl, 2015; Jaskiewicz et al., 2016). The study contributes by examining the moderating role of different SEW dimensions and their role in family business succession, especially in the long run. Family businesses that succeed in the handover process and, above all, in managing this renewal successfully can achieve sustainable performance (Berrone et al., 2012; Gómez-Mejía et al., 2018; Ng et al., 2019). In the context of the debate on heterogeneity in family businesses, the topic of the entrepreneurial family and its particularities has recently been placed in the focus of research (Jaskiewicz and Dyer, 2017). Here, socialization in family businesses and emotional attachment were emphasized (Rau et al., 2019). We found in our study that emotional attachment has no significant influence on post-succession performance with an increasing number of years since the last succession had taken place. We suggest that there could be a counteracting negative effect within emotional attachment between family members on post-succession performance. This can arise, for example, from nepotism and the accompanying preference for family members regardless of their competencies, which nevertheless play a significant role in the succession process (Cabrera-Suárez et al., 2001; Handler, 1994; Le Breton-Miller et al., 2004).

Second, this study contributes to research on business succession (Le Breton-Miller et al., 2004). To date, success factors are still being sought that enable family businesses to make a successful succession and be successful after business succession (Le Breton-Miller et al., 2004; Umans et al., 2020; Zybura et al., 2021). Our study shows that the "renewal of family bonds" during and after business succession can be a key success factor (Berrone et al., 2012). Renewal ensures the long-term orientation of the entrepreneurial family and the family business and can therefore function as a stabilizing factor (Cennamo et al., 2012). However, family firms also have to be able to make decisions in the short term to ensure performance (Allison et al., 2014; Debicki et al., 2017; Stubner et al., 2012; Zellweger, 2007). A particularly high level of emotional attachment does not seem to have any influence. These findings may also contribute to practitioners, especially advisors (Michel and Kammerlander, 2015; Strike, 2013). The preservation of the family legacy and the emphasis on this legacy as well as the goal to successfully hand over a business form the basis for a business succession and can unite the family and influence their decisions (Hammond et al., 2016; Lumpkin et al., 2010).

Third, this study is one of the first to empirically differentiate between the different SEW dimensions, especially R, E and I (Hauck et al., 2016). While in the past, SEW was partly mapped via other proxies, e.g., via F-PEC (Klein et al., 2005) or ownership, the currently developed scales offer a differentiated view. However, the differentiation of the individual dimensions also shows that the different dimensions work in different ways, and it can be worthwhile to differentiate between them to obtain a finer-grained picture (Prügl, 2019). We provide evidence that the R dimension ("renewal of family bonds through dynastic succession") has an influence on post-succession performance, which is not surprising. Interestingly, no significant influence of emotional bonds and only a limited influence of the identification of family members with the family business was found. This provides initial indications that SEW cannot and need not necessarily be an explanatory instrument in its entirety but that differentiation is definitely worthwhile (Prügl, 2019). This can be a starting point for future research on SEW in other contexts, such as strategic decision-making processes.

5.6 Limitations

As with any empirical work, our study comes with a number of limitations, most of which indicate fruitful avenues for further research. The analyzed sample was collected in Germany. The results can vary in other countries due to different cultural conditions as well as different values and attitudes of the family toward the company (Gelfand et al., 2006). Additionally, we only requested data from 2019 (cross-sectional data), so our sample only refers to this point in time. Consequently, our results are not necessarily transferable to other contexts. The results do not show any cause-and-effect relationships. Furthermore, such data are susceptible to bias due to low response or misclassifications due to bias in recalls. In addition, we have only one response per company. For future research, it would be interesting to show the development of the SEW dimensions in the individual years in terms of post-succession performance using a panel dataset. In summary, our study shows important influences on post-succession performance as a result of the nonfinancial goals of the entrepreneurial family. A long-term and stable orientation of SEW can be seen by family businesses as a strategic tool to increase the performance of the company in the long term and to successfully overcome disruptions, such as those in the succession and post-succession process.

6 Summary and conclusion

6.1 Summary of research questions and responses

Using different methodologies, the four studies of this dissertation found answers to the initially proposed research questions.

RQ1.1: *Which antecedents drive a family firm's corporate social responsibility?*

The reviewed research stream focuses on family antecedents dominated by measures using family ownership, family management, or both. However, the methods used to measure family influence have recently become more sophisticated. Concurrently, the more precisely variables can measure family influence and FAM, the more likely it is for the firm to benefit from family resources and positively affect CSR. A focus on CSR firm antecedents was identified, particularly on (internal) non-financial antecedents predominantly examining the effect of governance (e.g., El-Kassar et al., 2018; Campopiano et al., 2014; Terlaak et al., 2018) and non-family management (e.g., Martínez-Ferrero et al., 2017; Oh et al., 2019; Samara et al., 2018). With only two studies examining the effect of firm financial antecedents, it is apparent that further research is still needed.

RQ1.2: *Which outcomes do family firms realize through corporate social responsibility?*

Family firm outcomes were divided between family outcomes (e.g., family well-being, family harmony, SEW) and firm outcomes (e.g., performance, innovation, financial gain). It was found that CSR-related family firm research is primarily concerned with the firm outcomes of CSR. The studies reviewed mainly show that CSR helps family firms achieve increased performance (e.g., Adomako et al., 2019; Choi et al., 2019; Kashmiri and Mahajan, 2014b). Although the reviewed literature occasionally acknowledged the importance of family outcomes (e.g., Campopiano and De Massis, 2015; Niehm et al., 2008; Zientara, 2017), no study provided empirical evidence showing the impact that CSR-improved stakeholder relations have on such outcomes. Thus, the literature review aligns with Jaskiewicz and Dyer (2017) ascertaining a lacuna in family subsystem research. It is theorized that family firms also conduct CSR to generate family outcomes, and the research potential is enormous and should be explored.

RQ1.3: *Which of the family firm's corporate social responsibility antecedents and outcomes correspond?*

The matching effect of CSR between different antecedents and outcomes was examined in response to this question. However, the research literature review could not find a precise answer, and this study could not establish whether specific antecedents, CSR activities, and outcomes are concretely linked. Although there generally seems to be a positive relationship between these three categories, which type of CSR will help achieve which specific outcome in family firms is still unclear. This lack of knowledge may also be since a disproportionately large number of articles do not distinguish between different types of CSR but rather apply aggregated measures. Each CSR activity entails different activities and target groups, resulting in different antecedents and outcomes; therefore, the subject matter invites many research opportunities.

RQ2.1: *Does familiness affect corporate social responsibility activities within family-owned small and medium-sized enterprises?*

When taking a closer look at the behavior of family-owned SMEs concerning CSR, the research showed that FAM is positively related to employee-, customer-, and society-related CSR activities. Thus, the resource exchange between family and firm encourages a family-owned SME with high levels of FAM to increase their CSR activities.

RQ2.2: *Does organizational identity strength affect corporate social responsibility activities within family-owned small and medium-sized enterprises?*

OI strength does have a positive direct effect on employee-, customer-, and society-related CSR activities in family-owned SMEs. The direct positive effect of OI strength on employee-, customer-, and society-related CSR emerges from the more vital identification that organizational members feel towards the subsystem firm, resulting in an increased willingness to invest in CSR (Bingham et al., 2011; Ashforth and Mael, 1989), which will probably be beneficial for the image of the firm long-term (Cennamo et al., 2012; Cruz et al., 2014; Labelle et al., 2018; Zientara, 2017).

RQ2.3: *Does organizational identity strength affect the relationship between familiness and corporate social responsibility activities within family-owned small and medium-sized enterprises?*

An adverse moderating effect for OI strength regarding the relationship between FAM and employee- and customer-related CSR was noted. This effect is attributed to the fact that the system boundaries of the firm subsystem become more robust with increasing OI strength and thus less permeable to external influences (Ashforth and Mael, 1989; Hernes and Bakken, 2003; Sundaramurthy and Kreiner, 2008)—such as FAM. A dampening effect on the FAM effect cannot be identified for society-related CSR activities, indicating that theorized mechanisms do not apply to this type of CSR.

RQ3.1: *Do corporate social responsibility activities directly affect digital innovation in small and medium-sized enterprises?*

It was identified that community-related CSR directly affects digital innovation. Although it can be assumed that CSR has no direct influence on innovation (Surroca et al., 2010), no mediating effect of ACAP between community-related CSR activities and digital innovation was found. Since digital transformation is one of the most urgent entrepreneurial problems of the present day (Nambisan et al., 2019; Teece, 2018), the mechanisms linking this CSR type and digital innovation need to be further examined.

RQ3.2: *Does absorptive capacity mediate the relationship between corporate social responsibility activities and small and medium-sized enterprises' digital innovation?*

The study found that employee-, and customer-related CSR activities positively affect digital innovation, while ACAP fully mediates this relationship. Thus, CSR helps build innovation capabilities by processing new information and effectively applying it to commercial ends. An explanation for this finding may be that through CSR, increased trust between a firm and its employees or customers (Du et al., 2011; Spence et al., 2003; Vlachos et al., 2009; Voegtlin and Greenwood, 2016) results in a higher interaction, thereby improving mutual understanding (Cheng et al., 2014).

RQ4: *What influence does socioemotional wealth, or components of socioemotional wealth, have on the post-succession performance of family-owned small and medium-sized enterprises?*

The research results show that the period since succession does not affect post-succession performance until the moderating role of SEW comes into play. Above-average levels of the SEW dimensions renewal of family bonds through dynastic succession and identification of family members with the firm are the key drivers that affect post-succession performance positively. No effect on the emotional attachment of family members was found, showing that the effect of SEW on post-succession performance cannot be generally validated. In conclusion, although family-owned SMEs with high levels of SEW have lower performance levels, they tend to compensate with longevity.

Table 6.1 provides a brief overview of the principal findings per chapter.

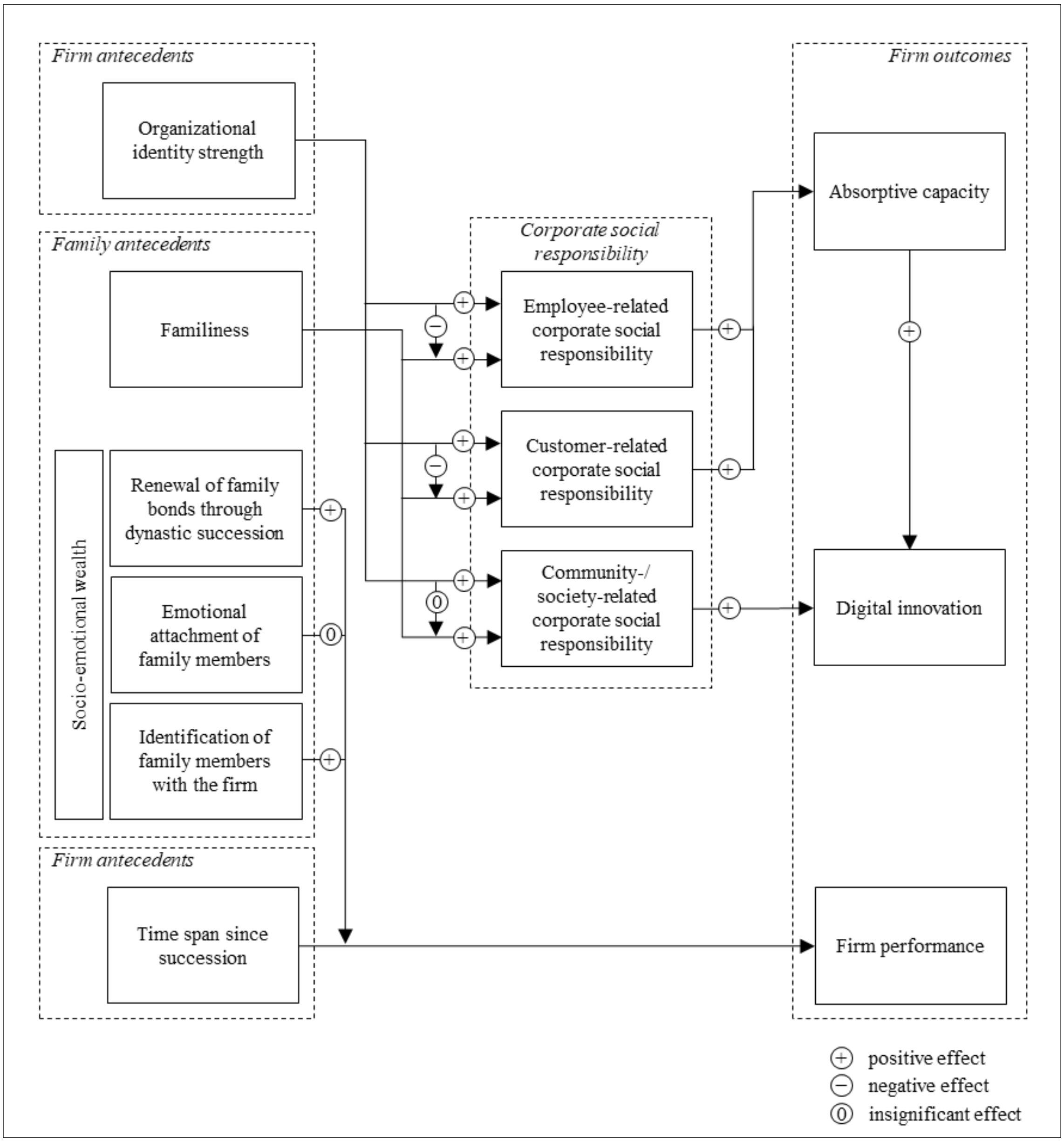
Table 6.1 Research questions and key findings of the dissertation

	Research Question	Key Findings
Chapter 2	**RQ1.1:** *Which antecedents drive a family firm's corporate social responsibility?*	• Research mainly focuses on family antecedents • More differentiated family influence measures (e.g., FIFS, SEW) are rarely applied in family firm-related CSR research
	RQ1.2: *Which outcomes do family firms realize by conducting corporate social responsibility?*	• Regarding family firms, outcome-oriented CSR research is scarce • Most outcome-related research focuses on firm outcomes, while research on family outcomes is scarce • Current research literature does not concretely link specific family firm antecedents, CSR activities, and family firm outcomes
	RQ1.3: *Which of the family firm's corporate social responsibility antecedents and outcomes correspond?*	• Current research literature does not concretely link specific family firm antecedents, CSR activities, and family firm outcomes
Chapter 3	**RQ2.1:** *Does familiness affect corporate social responsibility activities within family-owned small and medium-sized enterprises?*	• FAM affects a family-owned SME's employee-, customer-, and society-related CSR positively
	RQ2.2: *Does organizational identity strength affect corporate social responsibility activities within family-owned small and medium-sized enterprises?*	• OI strength affects a family-owned SME's employee-, and society-related CSR positively
	RQ2.3: *Does organizational identity strength affect the relationship between familiness and corporate social responsibility activities within family-owned small and medium-sized enterprises?*	• OI strength decreases (i.e., negatively moderates) the FAM effect on customer-, and employee-related CSR and does not affect (i.e., moderates) the effect on society-related CSR
Chapter 4	**RQ3.1:** *Do corporate social responsibility activities directly affect digital innovation in small and medium-sized enterprises?*	• Community-related CSR directly affects digital innovation positively
	RQ3.2: *Does absorptive capacity mediate the relationship between corporate social responsibility activities and small and medium-sized enterprises' digital innovation?*	• The positive effect of customer-, and employee-related CSR on digital innovation is fully mediated by ACAP
Chapter 5	**RQ4:** *What influence does socioemotional wealth, or components of socioemotional wealth, have on the post-succession performance of family-owned small and medium-sized enterprises?*	• With an increasing number of years since the last succession took place, performance increases for small and medium-sized family businesses with high SEW and decreases for small and medium-sized family businesses with low SEW • In terms of the specific components of SEW, this holds for the *renewal of family bonds to the firm through dynastic succession* and *identification of family members with the firm*. No effect was found on *emotional attachment of family members*.

6.2 Implications for theory and practice

Although all four studies dealt with different issues of family-owned SMEs, implications for theory and practice can be synthesized from the individual findings, notably when understanding how the owning family's economic and non-economic needs and different CSR activities can be considered as strategic assets of family-owned SMEs. Accordingly, Figure 6.1 summarizes the studies to create a holistic picture. In sum, three sets of findings are derived from the four studies presented in this dissertation leading to theoretical and practical implications.

Figure 6.1 Summary of the examined variables



Firstly, a crucial finding is that family firms should be viewed from a systems theory perspective. As shown in the initial study in Chapter 2, there is no universal definition for a family firm. Consequently, a threshold of family ownership, management, or a combination of both is often used to identify family firms (Chua et al., 1999; O'Boyle et al., 2012; Shanker and Astrachan, 1996; Sharma, 2004). The main drawback of this approach is that it often bundles a heterogeneous group of firms that are difficult to describe generically (Jaskiewicz and Dyer, 2017; Rau et al., 2019). However, studies 2 and 4 subsequently show that understanding a family firm as a social system consisting of overlapping subsystems of family and firm allows us to look at it from the perspective of both the family and the firm. By accepting this explanation of a family firm, we follow the call of Frank et al. (2017) and Stafford et al. (1999) for a greater focus on the systemic character of a family firm. Studies 2 and 4 show that FAM and SEW emerging from the family subsystem significantly and positively impact a family firm's business activities. Study 2, in particular, also shows that the firm subsystem's boundary permeability determines the influence of the family subsystem on the firm subsystem. Overall, these three studies clarify the need to define family firms from a broader view, namely a social system consisting of family and firm.

Secondly, studies 1, 2, and 4 show that FAM and SEW should be understood as strategic assets of family firms. While study 1 shows that family firm research often uses measures reflecting the influence of owning or managing families, study 2 introduces the FAM measure and the concept of a family firm consisting of (at least) two subsystems. These subsystems interact with each other and, depending on how resource spillovers from family to firm and interaction are managed, can lead to more or less success in a family firm. This interaction is essential for resource-scarce SMEs, thus compensating for resource deficiencies through FAM. The results of study 4 also show that SEW, introduced initially to explain a family firm's tendency to mediocre performance, can be a strategic asset in the context of a business handover. Therefore, in understanding why some family firms perform better than others, we should not look at measures such as family ownership or family management but deduce what consequences these have for the development of FAM and SEW in the company. Future research should focus on which strategic assets stem from family influence and empirically map them in models.

Thirdly, studies 1, 2, and 3 show that CSR should not be understood as a philanthropic instrument used solely for altruistic motives but as a strategic instrument for achieving long-term success. Study 1 shows that CSR generates various positive firm and family outcomes driven by family antecedents. Study 2 indicates through the leveraging of the SFBT that CSR helps nurture social capital, which is essential, especially for resource-scarce SMEs. These findings feed directly into study 3, which explicitly shows that CSR helps firms increase innovation capabilities, enabling them to process new information and apply it to commercial ends, thereby increasing their levels of digital innovation. This concept is in line with Surroca et al. (2010), stating that different intangible assets mediate the relationship between CSR and innovation. ACAP seems to be a potent mediator, showing that complete mediation was found for the customer-, and employee-related CSR to digital innovation. To inspire future research, study 1 derived several different research questions showing the potential for future outcome-related CSR research.

On a theoretical level, particularly the findings related to FAM and SEW have the potential to develop the family firm research field further. While most studies use either FAM or SEW to explain family firm behavior, this dissertation considers that family influence does not lead to the one or the other but the development of both phenomena. Depending on the family firm's current situation, either one or the other has a more decisive influence on the family firm's success. Using Stafford et al.'s (1999) SFBT as a framework to categorize the different situations of a family firm, times of stability and change can be identified as the two main phases. Following the SFBT, the findings of this dissertation suggest that while in times of stability, FAM plays a significant role in the family firm's success, it is SEW in times of change (e.g., succession phase). Consequently, the concepts cannot be considered in isolation; therefore family firm theory benefits from using integrated theoretical frameworks that combine the aspects of FAM and SEW to explain the sustainable management in family-owned SMEs.

Using the theoretical implications, family-owned SME managers learn that managing their firm's internal and external boundaries is essential. Internal boundary management helps them leverage the advantages and reduce the disadvantages of family and firm interaction. Study 2 shows that although family influence can positively impact CSR activities, efficiency losses can occur at the firm's subsystem boundaries due to low permeability. Furthermore, study 4 shows that SEW—which seems to harm performance in general—positively affects firm performance in succession. It is essential for a family-owned SME manager to be aware of the advantages and disadvantages of family influence and to be able to align the management of the subsystems accordingly. On the other hand, external boundary management tries to foster the acquisition, assimilation, transformation, and exploitation of external knowledge.

Whether family-owned or non-family-owned, a manager of a resource-scarce SME must promote and utilize cooperation with external stakeholders. Understanding and interpreting the interactions between the family and the firm's subsystems is a prerequisite to establishing effective boundary management in family-owned SMEs. This dissertation may motivate family-owned SME managers to develop vital boundary management instruments that will contribute to the of the company' long-term success.

6.3 Limitations and future research avenues

As with all research, this dissertation is subject to certain limitations. Studies 2, 3, and 4 use cross-sectional data to predict the causal effects of family economic and socioemotional needs on family firm activities and outcomes. Although the empirical analyses were based on extensive theoretical considerations, cross-sectional data always bears the risk of reverse causality. Changes in FAM or SEW over time intervals could not be examined; such changes should be monitored since internal relationships among family members and their involvement within the firm can change.

All analyses are carried out with historical data, and although these characteristics and activities were good practice at the time of data collection, they may not necessarily be applicable or relevant for the future. Moreover, this dissertation study did not have access enabling it to consider all previous study predictors; subsequently, omitted variable bias might be an issue. Although these factors limit the study findings, the findings are based on solid theoretical considerations and verified by superior methodical instruments, thus, limiting the risk of drawing incorrect conclusions.

However, such limitations open further research avenues. By applying panel data, future research could examine whether FAM and SEW change over time, which factors determine an increase or decrease of FAM and SEW, and the causal effect of FAM and SEW on family firm activities and performance. Can FAM and SEW be manipulated (e.g., through boundary management), and is there an interaction between both measures?

The presented research showed that the answers lie in quantitative research that needs to be complemented by qualitative research instruments. Answering such questions could provide crucial practical implications where managers of family-owned SMEs and their advisors could utilize family influence to help SMEs succeed.

Study 1 found that contextual factors affect the relationship between family specifics and CSR, whereas some studies show that data sets from different regions affect the relationship between a family firm and CSR. The datasets in studies 2, 3, and 4 contain only German firms, limiting the findings and implications to this specific region. For example, owning families in most Asian countries where the nations' institutions and corporate governance regulations are often weaker seem not to have inhibitions about risking their image for financial profits (Welford, 2007). As such, they try to maximize their financial wealth, consequently investing less in CSR more often (El Ghoul et al., 2016). Therefore, it can be assumed that regional differences result from the institutional framework and cultural attitudes, e.g., when and whether they place more or less value on SEW preservation. Research examining contextual effects on the relationship between family firm specifics and stakeholder-related activities, or even their outcomes using a multi-national dataset, would promote a deeper understanding of the family-owned firm influence on the economy.

Study 1 also highlighted vast research opportunities regarding CSR-related family firm research outcomes. Study 3 of this dissertation identified a relationship between CSR and digital innovation mediated by ACAP. Nevertheless, family firm antecedents—especially family antecedents (e.g., family harmony, family well-being)—should be linked empirically with the outcome aspect of CSR, and Study 1 indicated possibilities for future research in this regard. This concept aligns with Jaskiewicz and Dyer (2017), who state that the family subsystem's effects and consequences are underresearched. In sum, there are different family and firm outcomes generated by CSR activities, which FAM or SEW could also drive. Future research should focus on those issues to better understand the interactions between these concepts.

In conclusion, given that most SMEs are family-owned, research needs to identify and comprehend the effect families have on their firms. This study shows how CSR, FAM, and SEW can be used as strategic assets for success and longevity by examining the mechanisms between family and firm subsystems. Regardless of its limitations, this dissertation has effectively identified further research avenues and provides valuable theoretical and practical insights for developing a deeper understanding of how resource-poor, family-owned SMEs can be sustainably managed for long-term success.

References

Abeysekera, A. P., & Fernando, C. S. (2020). Corporate social responsibility versus corporate shareholder responsibility: A family firm perspective. *Journal of Corporate Finance, 61*(C), 101370.

Acs, Z. J., Stam, E., Audretsch, D. B., & O'Connor, A. (2017). The lineages of the entrepreneurial ecosystem approach. *Small Business Economics, 49*(1), 1–10.

Adams, J. S., Taschian, A., & Shore, T. H. (1996). Ethics in family and non-family owned firms: An exploratory study. *Family Business Review, 9*(2), 157–170.

Adomako, S., Amankwah-Amoah, J., Danso, A., Konadu, R., & Owusu-Agyei, S. (2019). Environmental sustainability orientation and performance of family and nonfamily firms. *Business Strategy and the Environment, 28*(6), 1250–1259.

Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of Management, 38*(4), 932–968.

Ahmad, S., Siddiqui, K. A., & AboAlsamh, H. M. (2020). Family SMEs' survival: The role of owner family and corporate social responsibility. *Journal of Small Business and Enterprise Development, 27*(2), 281–297.

Ahrens, J.-P., Calabrò, A., Huybrechts, J., & Woywode, M. (2019). The enigma of the family successor–firm performance relationship: A methodological reflection and reconciliation attempt. *Entrepreneurship Theory and Practice, 43*(3), 437–474.

Ahrens, J.-P., Uhlaner, L., Woywode, M., & Zybura, J. (2018). "Shadow emperor" or "loyal paladin"?–The janus face of previous owner involvement in family firm successions. *Journal of Family Business Strategy, 9*(1), 73–90.

Albert, S., & Whetten, D. A. (1985). Organizational identity. *Research in Organizational Behavior, 7*, 263–295.

Aldrich, H., & Herker, D. (1977). Boundary spanning roles and organization structure. *Academy of Management Review, 2*(2), 217–230.

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology, 63*(1), 1–18.

Allison, T. H., McKenny, A. F., & Short, J. C. (2014). Integrating time into family business research: Using random coefficient modeling to examine temporal influences on family firm ambidexterity. *Family Business Review, 27*(1), 20–34.

Amann, B., Jaussaud, J., & Martinez, I. (2012). Corporate social responsibility in Japan: Family and non-family business differences and determinants. *Asian Business & Management, 11*(3), 329–345.

Amidjaya, P. G., & Widagdo, A. K. (2020). Sustainability reporting in Indonesian listed banks: Do corporate governance, ownership structure and digital banking matter? *Journal of Applied Accounting Research, 21*(2), 231–247.

Amore, M.D., Bennedsen, M., Le Breton-Miller, I., & Miller, D. (2021). Back to the future: The effect of returning family successions on firm performance. *Strategic Management Journal, 42*(8), 1432–1458.

Antheaume, N., Robic, P., & Barbelivien, D. (2013). French family business and longevity: Have they been conducting sustainable development policies before it became a fashion? *Business History*, *55*(6), 942–962.

Aragón-Amonarriz, C., Arredondo, A. M., & Iturrioz-Landart, C. (2019). How can responsible family ownership be sustained across generations? A family social capital approach. *Journal of Business Ethics, 159*(1), 161–185.

Arena, C., & Michelon, G. (2018). A matter of control or identity? Family firms' environmental reporting decisions along the corporate life cycle. *Business Strategy and the Environment, 27*(8), 1596–1608.

Arendt, L. (2008). Barriers to ICT adoption in SMEs: How to bridge the digital divide? *Journal of Systems and Information Technology, 10*(2), 93–108.

Arijs, D., Botero, I. C., Michiels, A., & Molly, V. (2018). Family business employer brand: Understanding applicants' perceptions and their job pursuit intentions with samples from the US and Belgium. *Journal of Family Business Strategy, 9*(3), 180–191.

Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research, 14*(3), 396–402.

Arregle, J. L., Hitt, M. A., Sirmon, D. G., & Very, P. (2007). The development of organizational social capital: Attributes of family firms. *Journal of Management Studies, 44*(1), 73–95.

Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review, 14*(1), 20–39.

Association of Business Schools (2021). *Academic Journal Guide*. https://charteredabs.org/academic-journal-guide-2021-view/ (accessed: 13 August 2021).

Astrachan, C. B., Botero, I., Astrachan, J. H., & Prügl, R. (2018). Branding the family firm: A review, integrative framework proposal, and research agenda. *Journal of Family Business Strategy, 9*(1), 3–15.

Astrachan, C. B., & Botero, I. C. (2018). We are a family firm. *Journal of Family Business Management, 8*(1), 2–21.

Astrachan, J. H., Astrachan, C. B., Campopiano, G., & Baù, M. (2020). Values, spirituality and religion: Family business and the roots of sustainable ethical behavior. *Journal of Business Ethics*, *163*(4), 637–645.

Audretsch, D. B. (2021). Have we oversold the Silicon Valley model of entrepreneurship? *Small Business Economics*, *56*(2), 849–856.

Audretsch, D. B., & Elston, J. A. (1997). Financing the German Mittelstand. *Small Business Economics*, *9*(2), 97–110.

Autio, E., Sapienza, H. J., & Almeida, J. G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal, 43*, 909–924.

Bagozzi, R. P. & Yi, Y. (1988). On the evaluation of structural equation models. *Academy of Marketing Science Journal, 16*(1), 74–95.

Balasubramanian, N., & Lee, J. (2008). Firm age and innovation. *Industrial and Corporate Change, 17*(5), 1019–1047.

Bammens, Y., & Hünermund, P. (2020). Nonfinancial considerations in eco-innovation decisions: The role of family ownership and reputation concerns. *Journal of Product Innovation Management, 37*(5), 431–453.

Banfield, E.C. (1958). *The moral basis of a backward society*. Free Press, New York.

Barnett, M. L. (2007). Stakeholder influence capacity and the variability of financial returns to corporate social responsibility. *Academy of Management Review, 32*(3), 794–816.

Baron, R., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.

Barros, I., Hernangómez, J., & Martin-Cruz, N. (2017). Familiness and socioemotional wealth in Spanish family firms: An empirical examination. *European Journal of Family Business, 7*(1–2), 14–24.

Basco, R., & Calabrò, A. (2017). "Whom do I want to be the next CEO?" Desirable successor attributes in family firms. *Journal of Business Economics, 87*(4), 487–509.

Basly, S., & Saunier, P. L. (2020). Familiness, socio-emotional goals and the internationalization of French family SMEs. *Journal of International Entrepreneurship, 18*(3), 270–311.

Baum, J. R., Locke, E. A., & Smith, K. G. (2001). A multidimensional model of venture growth. *Academy of Management Journal, 44*(2), 292–303.

Baumann-Pauly, D., Wickert, C., Spence, L. J., & Scherer, A. G. (2013). Organizing corporate social responsibility in small and large firms: Size matters. *Journal of Business Ethics, 115*(4), 693–705.

Baumbach, S., Oberländer, A. M., Röglinger, M., & Rosemann, M. (2020). Dynamic capabilities for opportunity exploration: Insights from an explorative case study. *International Journal of Entrepreneurial Venturing, 12*(6), 575–616.

Bennedsen, M., Nielsen, K. M., Pérez-González, F., & Wolfenzon, D. (2007). Inside the family firm: The role of families in succession decisions and performance. *The Quarterly Journal of Economics, 122*(2), 647–691.

Bennedsen, M., Tsoutsoura, M., & Wolfenzon, D. (2019). Drivers of effort: Evidence from employee absenteeism. *Journal of Financial Economics, 133*(3), 658–684.

Bergamaschi, M., & Randerson, K. (2016). The futures of family businesses and the development of corporate social responsibility. *Futures, 75*, 54–65.

Berghoff, H. (2006). The end of family business? The Mittelstand and German capitalism in transition, 1949-2000. *Business History Review*, *80*(2), 263–295.

Berlemann, M., Jahn, V. & Lehmann, R. (2021). Is the German Mittelstand more resistant to crises? *Small Business Economics* (online first).

Berrone, P., Cruz, C., & Gómez-Mejía, L. R. (2012). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review, 25*(3), 258–279.

Berrone, P., Cruz, C., Gómez-Mejía, L. R., & Larraza-Kintana, M. (2010). Socioemotional wealth and corporate responses to institutional pressures: Do family-controlled firms pollute less? *Administrative Science Quarterly, 55*(1), 82–113.

Bhatnagar, N., Sharma, P., & Ramachandran, K. (2020). Spirituality and corporate philanthropy in Indian family firms: An exploratory study. *Journal of Business Ethics, 163*(4), 715–728.

Bingham, J. B., Dyer, W. B., Smith, I., & Adams, G. L. (2011). A stakeholder identity orientation approach to corporate social performance in family firms. *Journal of Business Ethics, 99*(4), 565–585.

Biscotti, A.M., D'Amico, E., & Monge, F. (2018). Do environmental management systems affect the knowledge management process? The impact on the learning evolution and the relevance of organisational context. *Journal of Knowledge Management, 22*(3), 603–620.

Biswas, P., Roberts, H., & Whiting, R. (2019). The impact of family vs non-family governance contingencies on CSR reporting in Bangladesh. *Management Decision, 57*(10), 2758–2781.

Bjuggren, P. O., & Sund, L. G. (2005). Organization of transfers of small and medium-sized enterprises within the family: Tax law considerations. *Family Business Review*, *18*(4), 305–319.

Block, J. H. (2010). Family management, family ownership, and downsizing: Evidence from S&P 500 firms. *Family Business Review, 23*(2), 109–130.

Block, J. H., Fisch, C. O., Lau, J., Obschonka, M., & Presse, A. (2016). Who prefers working in family firms? An exploratory study of individuals' organizational preferences across 40 countries. *Journal of Family Business Strategy, 7*(2), 65–74.

Block, J. H., & Spiegel, F. (2013). Family firm density and regional innovation output: An exploratory analysis. *Journal of Family Business Strategy, 4*(4), 270–280.

Block, J. H., & Wagner, M. (2014a). Ownership versus management effects on corporate social responsibility concerns in large family and founder firms. *Journal of Family Business Strategy, 5*(4), 339–346.

Block, J. H., & Wagner, M. (2014b). The effect of family ownership on different dimensions of corporate social responsibility: Evidence from large US firms. *Business Strategy and the Environment, 23*(7), 475–492.

Blodgett, M. S., Dumas, C., & Zanzi, A. (2011). Emerging trends in global ethics: A comparative study of U.S. and international family business values. *Journal of Business Ethics, 99*(1), 29–38.

Bocquet, R., Le Bas, C., Mothe, C., & Poussing, N. (2019). Strategic CSR for innovation in SMEs: Does diversity matter? *Long Range Planning, 52*(6), 101913.

Borghesi, R., Chang, K., & Li, Y. (2019). Firm value in commonly uncertain times: The divergent effects of corporate governance and CSR. *Applied Economics, 51*(43), 4726–4741.

Botero, I. C., Spitzley, D., Lude, M., & Prügl, R. (2019). Exploring the role of family firm identity and market focus on the heterogeneity of family business branding strategies. In E. Memili, & C. Dibrell (eds.), *The Palgrave handbook of heterogeneity among family firms*, 909–932. Springer, Cham.

Boudreau, K. J., Lacetera, N., & Lakhani, K. R. (2011). Incentives and problem uncertainty in innovation contests: An empirical analysis. *Management Science, 57*(5), 843–863.

Bouguerra, A., Yezza, H., & Mzoughi, M.N. (2016). Post-successions performance of family firms: The role of social skills and demographic characteristics of the successor. *Strategic Management Quarterly, 4*(3), 75–86.

Bouncken, R. B. (2015). Ambiguity and knowledge transfer in innovation alliances. *International Journal of Entrepreneurial Venturing, 7*(4), 309–323.

Bourdieu, P. (1986). The forms of capital. In J. E. Richardson (eds.), *Handbook of theory and research for the sociology of education*, 241–258. Greenwood, New York.

Bowen, H. (1953). *Social responsibilities of the businessman*. Harper, New York.

Branco, M. C., & Rodrigues, L. L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics, 69*(2), 111–132.

Brickson, S. L. (2007). Organizational identity orientation: The genesis of the role of the firm and distinct forms of social value. *Academy of Management Review, 32*(3), 864–888.

Brown, J. A., & Forster, W. R. (2013). CSR and stakeholder theory: A tale of Adam Smith. *Journal of Business Ethics*, *112*(2), 301–312.

Bruce, D., & Picard, D. (2006). Making succession a success: Perspectives from Canadian small and medium-sized enterprises. *Journal of Small Business Management, 44*(2), 306–309.

Brunswicker, S., & Vanhaverbeke, W. (2015). Open innovation in small and medium-sized enterprises (SMEs): External knowledge sourcing strategies and internal organizational facilitators. *Journal of Small Business Management, 53*(4), 1241–1263.

Cabeza-García, L., Sacristán-Navarro, M., & Gómez-Ansón, S. (2017). Family involvement and corporate social responsibility disclosure. *Journal of Family Business Strategy, 8*(2), 109–122.

Cable, D. M., & Turban, D. B. (2003). The value of organizational reputation in the recruitment context: A brand-equity perspective. *Journal of Applied Social Psychology, 33*(11), 2244–2266.

Cabrera-Suárez, K., De Saá-Pérez, P., & García-Almeida, D. (2001). The succession process from a resource- and knowledge-based view of the family firm. *Family Business Review, 14*(1), 37–48.

Calabrò, A., Minichilli, A., Amore, M. D., & Brogi, M. (2018). The courage to choose! Primogeniture and leadership succession in family firms. *Strategic Management Journal, 39*(7), 2014–2035.

Campopiano, G., & De Massis, A. (2015). Corporate social responsibility reporting: A content analysis in family and non-family firms. *Journal of Business Ethics, 129*(3), 511–534.

Campopiano, G., De Massis, A., & Chirico, F. (2014). Firm philanthropy in small- and medium-sized family firms: The effects of family involvement in ownership and management. *Family Business Review, 27*(3), 244–258.

Canavati, S. (2018). Corporate social performance in family firms: A meta-analysis. *Journal of Family Business Management, 8*(3), 235–273.

Carlock, R. S., & Ward, J. L. (2001). *Strategic planning for the family business*. Palgrave, New York.

Carroll, A. B. (1999). Corporate social responsibility: Evolution of a definitional construct. *Business & Society, 38*(3), 268–195.

Casson, M. (1999). The economics of the family firm. *Scandinavian Economic History Review, 47*(1), 10–23.

Castejón, P. J. M., & López, B. A. (2016). Corporate social responsibility in family SMEs: A comparative study. *European Journal of Family Business, 6*(1), 21–31.

Cater, J. J., & Justis, R. T. (2009). The development of successors from followers to leaders in small family firms: An exploratory study. *Family Business Review, 22*(2), 109–124.

Ceci, F., & Iubatti, D. (2012). Personal relationships and innovation diffusion in SME networks: A content analysis approach. *Research Policy, 41*(3), 565–579.

Cennamo, C., Berrone, P., Cruz, C., & Gómez-Mejía, L. R. (2012). Socioemotional wealth and proactive stakeholder engagement: Why family-controlled firms care more about their stakeholders. *Entrepreneurship Theory and Practice, 36*(6), 1153–1173.

Chadwick, I. C., & Dawson, A. (2018). Women leaders and firm performance in family businesses: An examination of financial and nonfinancial outcomes. *Journal of Family Business Strategy*, *9*(4), 238–249.

Chang, S.-J., & Shim, J. (2015). When does transitioning from family to professional management improve firm performance? *Strategic Management Journal, 36*(9), 1297–1316.

Chen, Y. L., & Cheng, H. Y. (2020). Public family businesses and corporate social responsibility assurance: The role of mimetic pressures. *Journal of Accounting and Public Policy, 39*(3), 106734.

Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategy Management Journal, 35*(1), 1–23.

Chesbrough, H. (2006). Open innovation: A new paradigm for understanding industrial innovation. In H. Chesbrough, W. Vanhaverbeke, & J. West (eds.), *Open innovation: Researching a new paradigm*, 1–12. Oxford University Press, Oxford.

Chesbrough, H., & Bogers, M. (2014). Explicating open innovation: Clarifying an emerging paradigm for understanding innovation. In H. Chesbrough, W. Vanhaverbeke, & J. West (eds.), *New frontiers in open innovation*, 3–28, Oxford University Press, Oxford.

Chih, H. L., Chih, H. H., & Chen, T. Y. (2010). On the determinants of corporate social responsibility: International evidence on the financial industry. *Journal of Business Ethics, 93*(1), 115–135.

Chiu, S. C., & Sharfman, M. (2011). Legitimacy, visibility, and the antecedents of corporate social performance: An investigation of the instrumental perspective. *Journal of Management*, *37*(6), 1558–1585.

Choi, Y. K., Han, S. H., & Kwon, Y. (2019). CSR activities and internal capital markets: Evidence from Korean business groups. *Pacific-Basin Finance Journal, 55*, 283–298.

Chrisman, J. J., Chua, J. H., De Massis, A., Frattini, F., & Wright, M. (2015). The ability and willingness paradox in family firm innovation. *Journal of Product Innovation Management, 32*(3), 310–318.

Chrisman, J. J., Chua, J. H., Pearson, A. W., & Barnett, T. (2010). Family involvement, family influence, and family-centered non-economic goals in small firms. *Entrepreneurship Theory and Practice*, *36*(2), 267–293.

Chrisman, J. J., Chua, J. H., & Sharma, P. (1998). Important attributes of successors in family businesses: An exploratory study. *Family Business Review, 11*(1), 19–34.

Chrisman, J. J., Chua, J. H., & Steier, L. (2005). Sources and consequences of distinctive familiness: An introduction. *Entrepreneurship Theory and Practice*, *29*(3), 237–247.

Chua, J. H., Chrisman, J. J., & De Massis, A. (2015). A closer look at socioemotional wealth: Its flows, stocks, and prospects for moving forward. *Entrepreneurship Theory and Practice, 39*(2), 173–182.

Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice, 23*(4), 19–39.

Chua, J. H., Chrisman, J. J., Steier, L. P., & Rau, S. B. (2012). Sources of heterogeneity in family firms: An introduction. *Entrepreneurship Theory and Practice, 36*(6), 1103–1113.

Ciravegna, L., Kano, L., Rattalino, F., & Verbeke, A. (2020). Corporate diplomacy and family firm longevity. *Entrepreneurship Theory and Practice, 44*(1), 109–133.

Ciriello, R. F., Richter, A., & Schwabe, G. (2018). Digital innovation. *Business & Information Systems Engineering, 60*(6), 563–569.

Coad, A., Segarra, A., & Teruel, M. (2016). Innovation and firm growth: Does firm age play a role? *Research Policy, 45*(2), 387–400.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly, 35*(1), 128–152.

Cole, M. S., & Bruch, H. (2006). Organizational identity strength, identification, and commitment and their relationships to turnover intention: Does organizational hierarchy matter? *Journal of Organizational Behavior, 27*(5), 585–605.

Commission of the European Communities (2001). *Green paper: Promoting a European framework for corporate social responsibility*. Available at: https://ec.europa.eu/commission/presscorner/api/files/document/print/en/doc_01_9/DOC_01_9_EN.pdf (accessed: 5 May 2020).

Cordeiro, J. J., Galeazzo, A., Shaw, T. S., Veliyath, R., & Nandakumar, M. K. (2018). Ownership influences on corporate social responsibility in the Indian context. *Asia Pacific Journal of Management, 35*(4), 1107–1136.

Cordeiro, J. J., Profumo, G., & Tutore, I. (2020). Board gender diversity and corporate environmental performance: The moderating role of family and dual-class majority ownership structures. *Business Strategy and the Environment, 29*(3), 1127–1144.

Coronado-Medina, A., Arias-Pérez, J., & Perdomo-Charry, G. (2020). Fostering product innovation through digital transformation and absorptive capacity. *International Journal of Innovation and Technology Management, 17*(6), 1–23.

Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research, and Evaluation, 10*(7), 1–9.

Covin, J. G., Slevin, D. P., & Covin, T. J. (1990). Content and performance of growth-seeking strategies: A comparison of small firms in high- and low technology industries. *Journal of Business Venturing, 5*(6), 391–412.

Craig, J., & Dibrell, C. (2006). The natural environment, innovation, and firm performance: A comparative study. *Family Business Review, 19*(4), 275–288.

Craig, J. B., Dibrell, C., & Garrett, R. (2014). Examining relationships among family influence, family culture, flexible planning systems, innovativeness and firm performance. *Journal of Family Business Strategy, 5*(3), 229–238.

Crane, A., Matten, D., & Spence, L. J. (2013). Corporate social responsibility in a global context. In A. Crane, D. Matten, & L. Spence (eds.)*, Corporate social responsibility: Readings and cases in a global context*, 3–26. Routledge, London.

Cruz, C., Justo, R., Larraza-Kintana, M., & Garcés-Galdeano, L. (2019). When do women make a better table? Examining the influence of women directors on family firm's corporate social performance. *Entrepreneurship Theory and Practice, 43*(2), 282–301.

Cruz, C., Larraza-Kintana, M., Garces-Galdeano, L., & Berrone, P. (2014). Are family firms really more socially responsible? *Entrepreneurship Theory and Practice, 38*(6), 2395–1316.

Cuadrado-Ballesteros, B., Rodríguez-Ariza, L., & García-Sánchez, I. M. (2015). The role of independent directors at family firms in relation to corporate social responsibility disclosures. *International Business Review, 24*(5), 890–901.

Cuadrado-Ballesteros, B., Rodríguez-Ariza, L., García-Sánchez, I.-M., & Martínez-Ferrero, J. (2017). The mediating effect of ethical codes on the link between family firms and their social performance. *Innovation and Sustainability, 50*(6), 756–765.

Cucculelli, M., & Micucci, G. (2008). Family succession and firm performance: Evidence from Italian family firms. *Journal of Corporate Finance, 14*(1), 17–31.

Cui, V., Ding, S., Liu, M., & Wu, Z. (2018). Revisiting the effect of family involvement on corporate social responsibility: A behavioral agency perspective. *Journal of Business Ethics, 152*(1), 291–309.

Dahlsrud, A. (2008). How corporate social responsibility is defined: An analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management, 15*(1), 1–13.

Dal Maso, L., Basco, R., Bassetti, T., & Lattanzi, N. (2020). Family ownership and environmental performance: The mediation effect of human resource practices. *Business Strategy and the Environment*, *29*(3), 1548–1562.

Danes, S. M., & Brewton, K. E. (2012). Follow the capital: Benefits of tracking family capital across family and business systems. In A. Carsrud, & M. Brännback (eds.), *Understanding family businesses*, 227–250. Springer, New York.

Danes, S. M., Lee, J., Stafford, K., & Heck, R. K. Z. (2008). The effects of ethnicity, families and culture on entrepreneurial experience: An extension of sustainable family business theory. *Journal of Developmental Entrepreneurship, 13*(3), 229–268.

Dangelico, R. M. (2017). What drives green product development and how do different antecedents affect market performance? A survey of Italian companies with eco-labels. *Business Strategy and the Environment, 26*(8), 1144–1161.

Daspit, J. J., Holt, D. T., Chrisman, J. J., & Long, R. G. (2016). Examining family firm succession from a social exchange perspective: A multiphase, multistakeholder review. *Family Business Review, 29*(1), 44–64.

Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review, 22*(1), 20–47.

Davis, P. S., & Harveston, P. D. (1999). In the founder's shadow: Conflict in the family firm. *Family Business Review, 12*(4), 311–323.

Dawson, A., Ginesti, G., & Sciascia, S. (2020). Family-related antecedents of business legality: An empirical investigation among Italian family owned SMEs. *Journal of Family Business Strategy, 11*(1), 100284.

Dawson, A., & Mussolino, D. (2014). Exploring what makes family firms different: Discrete or overlapping constructs in the literature? *Journal of Family Business Strategy*, *5*(2), 169–183.

Dayan, M., Ng, P. Y., & Ndubisi, N. O. (2019). Mindfulness, socioemotional wealth, and environmental strategy of family businesses. *Business Strategy and the Environment, 28*(3), 466–481.

Debicki, B. J., Van de Graaff Randolph, R., & Sobczak, M. (2017). Socioemotional wealth and family firm performance: A stakeholder approach. *Journal of Managerial Issues, 29*(1), 82–111.

Dekker, J., & Hasso, T. (2016). Environmental performance focus in private family firms: The role of social embeddedness. *Journal of Business Ethics*, *136*(2), 293–309.

Delmas, M. A., & Gergaud, O. (2014). Sustainable certification for future generations: The case of family business. *Family Business Review*, *27*(3), 228–243.

De Massis, A., Audretsch, A., Uhlaner, L., & Kammerlander, N. (2018). Innovation with limited resources: Management lessons from the German Mittelstand. *Journal of Product Innovation Management, 35*(1), 125–146.

De Massis, A., Chua, J. H., & Chrisman, J. J. (2008). Factors preventing intra-family succession. *Family Business Review, 21*(2), 183–199.

De Massis, A., & Kotlar, J. (2014). The case study method in family business research: Guidelines for qualitative scholarship. *Journal of Family Business Strategy*, *5*(1), 15–29.

Déniz, M., & Suárez, M. K. C. (2005). Corporate social responsibility and family business in Spain. *Journal of Business Ethics, 56*(1), 27–41.

Dias, Á. L., Santos, J. M. B. D., & Pereira, R. T. D. F. B. (2020). The role of entrepreneurship on the foundations of dynamic capabilities. *International Journal of Entrepreneurial Venturing, 12*(2), 208–227.

Dick, M., Wagner, E., & Pernsteiner, H. (2021). Founder-controlled family firms, overconfidence, and corporate social responsibility engagement: Evidence from survey data. *Family Business Review*, *34*(1), 71–92.

Dimov, D. (2017). Towards a qualitative understanding of human capital in entrepreneurship research. *International Journal of Entrepreneurial Behavior & Research, 23*(2), 210–227.

Discua Cruz, A. (2020). There is no need to shout to be heard! The paradoxical nature of corporate social responsibility (CSR) reporting in a Latin American family small and medium-sized enterprise (SME). *International Small Business Journal, 38*(3), 243–267.

Doluca, H., Wagner, M., & Block, J. H. (2018). Sustainability and environmental behaviour in family firms: A longitudinal analysis of environment-related activities, innovation and performance. *Business Strategy and the Environment, 27*(1), 152–172.

Dou, J., Su, E., & Wang, S. (2019). When does family ownership promote proactive environmental strategy? The role of the firm's long-term orientation. *Journal of Business Ethics*, *158*(1), 81–95.

Du, S., Bhattacharya, C. B., & Sen, S. (2011). Corporate social responsibility and competitive advantage: Overcoming the trust barrier. *Management Science, 57*(9), 1528–1545.

Du, X. (2015). Is corporate philanthropy used as environmental misconduct dressing? Evidence from Chinese family-owned firms. *Journal of Business Ethics, 129*(2), 341–361.

Du, X., Pei, H., Du, Y., & Zeng, Q. (2016). Media coverage, family ownership, and corporate philanthropic giving: Evidence from China. *Journal of Management & Organization, 22*(2), 224–253.

Du, X., Zeng, Q., & Chang, Y. (2018). To be philanthropic when being international: Evidence from Chinese family firms. *Journal of Management & Organization, 24*(3), 424–449.

Dyer, W. G., & Whetten, D. A. (2006). Family firms and social responsibility: Preliminary evidence from the S&P 500. *Entrepreneurship Theory and Practice, 30*(6), 785–802.

Easterby-Smith, M., Lyles, M. A., & Tsang, E. W. (2008). Inter-organizational knowledge transfer: Current themes and future prospects. *Journal of Management Studies, 45*(4), 677–690.

Eddleston, K. A., & Kellermanns, F. W. (2007). Destructive and productive family relationships: A stewardship theory perspective. *Journal of Business Venturing, 22*(4), 545–565.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1), 57–74.

El Akremi, A., Gond, J.-P., Swaen, V., De Roeck, K., & Igalens, J. (2018). How do employees perceive corporate responsibility? Development and validation of a multidimensional corporate stakeholder responsibility scale. *Journal of Management, 44*(2), 619–657.

El Ghoul, S., Guedhami, O., Wang, H., & Kwok, C. C. Y. (2016). Family control and corporate social responsibility. *Journal of Banking & Finance, 73*, 131–146.

Elia, G., Margherita, A., & Passiante, G. (2020). Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process. *Technological Forecasting and Social Change, 150*, 119791.

El-Kassar, A.-N., ElGammal, W., & Fahed-Sreih, J. (2018). Engagement of family members, corporate governance and social responsibility in family-owned enterprises. *Journal of Organizational Change Management, 31*(1), 215–229.

Elkington, J. (1998). Partnerships from cannibals with forks: The triple bottom line of 21st-century business. *Environmental Quality Management, 8*(1), 37–51.

Ertuna, B., Karatas-Ozkan, M., & Yamak, S. (2019). Diffusion of sustainability and CSR discourse in hospitality industry: Dynamics of local context. *International Journal of Contemporary Hospitality Management, 31*(6), 2564–2581.

European Commission (2019). *Digital economy and Society Index Report 2019: Integration of digital technology*. Available at: https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=59979 (accessed: 19 January 2020).

Faller, C. M., & zu Knyphausen-Aufseß, D. (2018). Does equity ownership matter for corporate social responsibility? A literature review of theories and recent empirical findings. *Journal of Business Ethics, 150*(1), 15–40.

Fama, E., & Jensen, M. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*(2), 301–325.

Fehre, K., & Weber, F. (2019). Why some are more equal: Family firm heterogeneity and the effect on management's attention to CSR. *Business Ethics: A European Review, 28*(3), 321–334.

Fernhaber, S. A., & Patel, P. C. (2012). How do young firms manage product portfolio complexity? The role absorptive capacity and ambidexterity. *Strategic Management Journal, 33*(13), 1516–1539.

Fichman, R. G., Dos Santos, B. L., & Zheng, Z. E. (2014). Digital innovation as a fundamental and powerful concept in the information systems curriculum. *Information & Management, 38*(2), 329–353

Fifka, M. S., & Reiser, D. (2015). Corporate social responsibility in between governmental regulation and voluntary initiative: The case of Germany. In S. O. Idowu, R. Schmidpeter, & M. S. Fifka (eds.), *Corporate social responsibility in Europe: United in sustainable diversity*, 125–135. Springer, Cham.

Fini, R., Grimaldi, R., Marzocchi, G. L., & Sobrero, M. (2012). The determinants of corporate entrepreneurial intention within small and newly established firms. *Entrepreneurship Theory and Practice, 36*(2), 387–414.

Firfiray, S., Cruz, C., Neacsu, I., & Gomez-Mejia, L. R. (2018). Is nepotism so bad for family firms? A socioemotional wealth approach. *Human Resource Management Review*, *28*(1), 83–97.

Fitzgerald, M. A., Haynes, G. W., Schrank, H. L., & Danes, S. M. (2010). Socially responsible processes of small family business owners: Exploratory evidence from the national family business survey. *Journal of Small Business Management, 48*(4), 524–551.

Fleming, L., & Waguespack, D. M. (2007). Brokerage, boundary spanning, and leadership in open innovation communities. *Organization Science, 18*(2), 165–180.

Foreman, P., & Whetten, D. A. (2002). Members' identification with multiple-identity organizations. *Organization Science, 13*(6), 618–635.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equational models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Frank, H., Kessler, A., Rusch, T., Suess-Reyes, J., & Weismeier-Sammer, D. (2017). Capturing the familiness of family business: Development of the Family Influence Familiness Scale (FIFS). *Entrepreneurship Theory and Practice, 41*(5), 709–742.

Freeman, R. E., & McVea, J. (2005). A stakeholder approach to strategic management. In M. A. Hitt, R. E. Freeman, & J. S. Harrison (eds.), *The Blackwell handbook of strategic management*, 189–201. Blackwell, Oxford.

Friedman, S. D. (1991). Sibling relationships and intergenerational succession in family firms. *Family Business Review, 4*(1), 3–20.

Fuller, T., & Tian, Y. (2006). Social and symbolic capital and responsible entrepreneurship: An empirical investigation of SME narratives. *Journal of Business Ethics, 67*(3), 287–304.

Gallo, M. A. (2004). The family business and its social responsibilities. *Family Business Review, 17*(2), 135–148.

Gallucci, C., Santulli, R., & Calabrò, A. (2015). Does family involvement foster or hinder firm performance? The missing role of family-based branding strategies. *Journal of Family Business Strategy, 6*(3), 155–165.

Gassmann, O., Enkel, E., & Chesbrough, H. (2010). The future of open innovation. *R&D Management, 40*(3), 213–221.

Ge, J., & Micelotta, E. (2019). When does the family matter? Institutional pressures and corporate philanthropy in China. *Organization Studies, 40*(6), 833–857.

Gelfand, M. J., Nishii, L. H., & Raver, J. L. (2006). On the nature and importance of cultural tightness-looseness. *Journal of Applied Psychology, 91*(6), 1225–1244.

Ghee, W.Y., Ibrahim, M.D., & Abdul-Halim, H. (2015). Family business succession planning: Unleashing the key factors of business performance. *Asian Academy of Management Journal, 20*(2), 103–126.

Giner, B., & Ruiz, A. (2022). Family entrepreneurial orientation as a driver of longevity in family firms: A historic analysis of the ennobled Trenor family and *Trenor y Cía*. *Business History*, *64*(2), 327–358.

Gioia, D. A., & Thomas, J. B. (1996). Identity, image, and issue interpretation: Sensemaking during strategic change in academia. *Administrative Science Quarterly, 41*(3), 370–403.

Gómez-Mejía, L. R., Cruz, C., Berrone, P., & De Castro, J. (2011). The bind that ties: Socioemotional wealth preservation in family firms. *Academy of Management Annals, 5*(1), 653–707.

Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly, 52*(1), 106–137.

Gómez-Mejía, L. R., Patel, P. C., & Zellweger, T. M. (2018). In the horns of the dilemma: Socioemotional wealth, financial wealth, and acquisitions in family firms. *Journal of Management, 44*(4), 1369–1397.

Gould, R. V., & Fernandez, R. M. (1989). Structures of mediation: A formal approach to brokerage in transaction networks. *Sociological Methodology, 19*, 89–126.

Graafland, J. (2020). Family business ownership and cleaner production: Moderation by company size and family management. *Journal of Cleaner Production*, *255*, 120120.

Graafland, J., Van de Ven, B., & Stoffele, N. (2003). Strategies and instruments for organising CSR by small and large businesses in the Netherlands. *Journal of Business Ethics, 47*(1), 45–60.

Grama-Vigouroux, S., Saidi, S., Berthinier-Poncet, A., Vanhaverbeke, W., & Madanamoothoo, A. (2020). From closed to open: A comparative stakeholder approach for developing open innovation activities in SMEs. *Journal of Business Research, 119*, 230–244.

Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory*, *1*, 201–233.

Groberg, M., Vetter, H. M., & Flatten, T. C. (2016). A measurement instrument for digitization: Scale development and impact on new product performance. *Academy of Management Proceedings, 2016*(1), 13027.

Gurău, C., & Lasch, F. (2011). Open innovation strategies in the UK biopharmaceutical sector. *International Journal of Entrepreneurial Venturing, 3*(4), 420–434.

Habbershon, T. G., & Williams, M. L. (1999). A resource-based framework for assessing the strategic advantages of family firms. *Family Business Review, 12*(1), 1–25.

Habbershon, T. G., Williams, M., & MacMillan, I. C. (2003). A unified systems perspective of family firm performance. *Journal of Business Venturing*, *18*(4), 451–465.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis*. Prentice Hall, New Jersey.

Hammond, N. L., Pearson, A. W., & Holt, D. T. (2016). The quagmire of legacy in family firms: Definition and implications of family and family firm legacy orientations. *Entrepreneurship Theory and Practice, 40*(6), 1209–1231.

Handler, W. C. (1989). Methodological issues and considerations in studying family businesses. *Family Business Review, 2*(3), 257–276.

Harman, H. H. (1967). *Modern factor analysis*. University of Chicago Press, Chicago.

Harrison, J. S., Bosse, D. A., & Phillips, R. A. (2010). Managing for stakeholders, stakeholder utility functions, and competitive advantage. *Strategic Management Journal, 31*(1), 58–74.

Hauck, J., & Prügl, R. (2015). Innovation activities during intra-family leadership succession in family firms: An empirical study from a socioemotional wealth perspective. *Journal of Family Business Strategy, 6*(2), 104–118.

Hauck, J., Suess-Reyes, J., Beck, S., Prügl, R., & Frank, H. (2016). Measuring socioemotional wealth in family-owned and-managed firms: A validation and short form of the FIBER scale. *Journal of Family Business Strategy, 7*(3), 133–148.

Hernes, T., & Bakken, T. (2003). Implications of self-reference: Niklas Luhmann's autopoiesis and organization theory. *Organization Studies, 24*(9), 1511–1535.

Hoi, C. K., Wu, Q., & Zhang, H. (2018). Community social capital and corporate social responsibility. *Journal of Business Ethics, 152*(3), 647–665.

Holme, R., & Watts, P. (2000). *Corporate social responsibility: Making good business sense*. World Business Council for Sustainable Development, Geneva.

Holmes, S., & Smart, P. (2009). Exploring open innovation practice in firm-nonprofit engagements: A corporate social responsibility perspective. *R&D Management, 39*(4), 394–409.

Holt, D. T., Pearson, A. W., Carr, J. C., & Barnett, T. (2017). Family firm(s) outcomes model: Structuring financial and nonfinancial outcomes across the family and firm. *Family Business Review, 30*(2), 182–202.

Hossinger, S. M., Scholz, T. M., Stein, V., & Werner, A. (2020). What enhances SMEs absorptive capacity?. In S. Hossinger (eds.), *Knowledge transfer through academic spin-offs and university to industry cooperations*, 149–172. Available at: https://dspace.ub.uni-siegen.de/bit-stream/ubsi/1775/4/Dissertation_Stefan_Marc_Hossinger.pdf (accessed: 16 May 2021).

Hsueh, J. W. J. (2018). Governance structure and the credibility gap: Experimental evidence on family businesses' sustainability reporting. *Journal of Business Ethics*, *153*(2), 547–568.

Huang, Y. C., Ding, H. B., & Kao, M. R. (2009). Salient stakeholder voices: Family business and green innovation adoption. *Journal of Management & Organization, 15*(3), 309–326.

Hur, W., Kim, H., & Woo, J. (2014). How CSR leads to corporate brand equity: Mediating mechanisms of corporate brand credibility and reputation. *Journal of Business Ethics, 125*(1), 75–86.

IfM (2016). *SME-definition of IfM Bonn*. Available at: https://en.ifm-bonn.org/definitions/sme-definition-of-ifm-bonn/. (Accessed: 12 April 12 2021).

Iglesias, O., Markovic, S., Bagherzadeh, M., & Singh, J. J. (2020). Co-creation: A key link between corporate social responsibility, customer trust, and customer loyalty. *Journal of Business Ethics, 163*(1), 151–166.

International Family Enterprise Research Academy (2003). Family businesses dominate: International Family Enterprise Research Academy (IFERA). *Family Business Review*, *16*(4), 235–240.

Iyer, V., & Lulseged, A. (2013). Does family status impact US firms' sustainability reporting? *Sustainability Accounting, Management and Policy Journal, 4*(2), 163–189.

Izzo, M. F., & Ciaburri, M. (2018). Why do they do that? Motives and dimensions of family firms' CSR engagement. *Social Responsibility Journal, 14*(3), 633–650.

Jain, T., & Jamali, D. (2016). Looking inside the black box: The effect of corporate governance on corporate social responsibility. *Corporate Governance: An International Review, 24*(3), 253–273.

Jang, J., & Danes, S. M. (2013). Role interference in family businesses. *Entrepreneurship Research Journal*, *3*(3), 367–390.

Jansen, J. J. P., Van Den Bosch, F. A. J., & Volberda, H. W. (2005). Managing potential and realized absorptive capacity: How do organizational antecedents matter? *Academy of Management Journal, 48*(6), 999–1015.

Jaskiewicz, P., Combs, J. G., & Rau, S. B. (2015) Entrepreneurial legacy: Toward a theory of how some family firms nurture transgenerational entrepreneurship. *Journal of Business Venturing, 30*(1), 29–49.

Jaskiewicz, P., Combs, J. G., Shanine, K. K., & Kacmar, K. M. (2017). Introducing the family: A review of family science with implications for management research. *Academy of Management Annals, 11*(1), 309–341.

Jaskiewicz, P., & Dyer, W. G. (2017). Addressing the elephant in the room: Disentangling family heterogeneity to advance family business research. *Family Business Review, 30*(2), 111–118.

Jaskiewicz, P., Heinrichs, K., Rau, S. B., & Reay, T. (2016). To be or not to be: How family firms manage family and commercial logics in succession. *Entrepreneurship Theory and Practice, 40*(4), 781–813.

Jayantilal, S., Jorge, S. F., & Palacios, T. M. B. (2016). Effects of sibling competition on family firm succession: A game theory approach. *Journal of Family Business Strategy, 7*(4), 260–268.

Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.

Kallmuenzer, A., Nikolakis, W., Peters, M., & Zanon, J. (2018). Trade-offs between dimensions of sustainability: Exploratory evidence from family firms in rural tourism regions. *Journal of Sustainable Tourism, 26*(7), 1204–1221.

Karampatsas, N., Aktas, N., & Witkowski, A. (2021). Do firms adjust corporate social responsibility engagement after a focal change in credit ratings? *Business & Society* (online first).

Kashmiri, S., & Mahajan, V. (2010). What's in a name? An analysis of the strategic behavior of family firms. *International Journal of Research in Marketing*, *27*(3), 271–280.

Kashmiri, S., & Mahajan, V. (2014a). A rose by any other name: Are family firms named after their founding families rewarded more for their new product introductions? *Journal of Business Ethics*, *124*(1), 81–99.

Kashmiri, S., & Mahajan, V. (2014b). Beating the recession blues: Exploring the link between family ownership, strategic marketing behavior and firm performance during recessions. *International Journal of Research in Marketing, 31*(1), 78–93.

Kepner, E. (1983). The family and the firm: A coevolutionary perspective. *Organizational Dynamics, 12*(1), 57–71.

Kervyn, N., Fiske, S. T., & Malone, C. (2012). Brands as intentional agents framework: How perceived intentions and ability can map brand perception. *Journal of Consumer Psychology, 22*(2), 166–176.

Kidwell, R. E., Kellermanns, F. W., & Eddleston, K. A. (2012). Harmony, justice, confusion, and conflict in family firms: Implications for ethical climate and the "fredo effect.". *Journal of Business Ethics, 106*(4), 503–517.

Kim, A., & Lee, Y. (2018). Family firms and corporate social performance: Evidence from Korean firms. *Asia Pacific Business Review, 24*(5), 693–713.

Kim, J., Fairclough, S., & Dibrell, C. (2017). Attention, action, and greenwash in family-influenced firms? Evidence from polluting industries. *Organization & Environment, 30*(4), 304–323.

Kim, K., Haider, Z. A., Wu, Z., & Dou, J. (2020). Corporate social performance of family firms: A place-based perspective in the context of layoffs. *Journal of Business Ethics, 167*(2), 235–252.

Klein, J., Cruz, C., & Milanov, H. (2018). Is social responsibility really "corporate"? The impact of family foundations on CSR. *Academy of Management Proceedings, 2018*(1), 17136.

Klein, S. B., Astrachan, J. H., & Smyrnios, K. X. (2005). The F-PEC scale of family influence: Construction, validation, and further implication for theory. *Entrepreneurship Theory and Practice, 29*(3), 321–339.

Knott, A. M. (2003). Persistent heterogeneity and sustainable innovation. *Strategic Management Journal*, *24*(8), 687–705.

Ko, Y. J., & Choi, J. N. (2019). Overtime work as the antecedent of employee satisfaction, firm productivity, and innovation. *Journal of Organizational Behavior, 40*(3), 282–295.

Koiranen, M. (2002). Over 100 years of age but still entrepreneurially active in business: Exploring the values and family characteristics of old Finnish family firms. *Family Business Review, 15*(3), 175–187.

Kong, Y., Antwi-Adjei, A., & Bawuah, J. (2020). A systematic review of the business case for corporate social responsibility and firm performance. *Corporate Social Responsibility and Environmental Management*, *27*(2), 444–454.

Kostopoulos, K., Papalexandris, A., Papachroni, M., & Ioannou, G. (2011). Absorptive capacity, innovation, and financial performance. *Journal of Business Research, 64*(12), 1335–1343.

Kotlar, J., & De Massis, A. (2013). Goal setting in family firms: Goal diversity, social interactions, and collective commitment to family-centered goals. *Entrepreneurship Theory and Practice, 37*(6), 1263–1288.

Kreiner, G. E., & Ashforth, B. E. (2004). Evidence toward an expanded model of organizational identification. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 25*(1), 1–27.

Kuttner, M., & Feldbauer-Durstmüller, B. (2018). Corporate social responsibility in family firms–status quo and future directions. *International Journal of Business Strategy*, *18*(1), 47–68.

Kuttner, M., Feldbauer-Durstmüller, B., & Mitter, C. (2021). Corporate social responsibility in Austrian family firms: Socioemotional wealth and stewardship insights from a qualitative approach. *Journal of Family Business Management, 11*(2), 238–253.

Labelle, R., Hafsi, T., Francoeur, C., & Ben Amar, W. (2018). Family firms' corporate social performance: A calculated quest for socioemotional wealth. *Journal of Business Ethics, 148*(3), 511–525.

Laguir, I., Laguir, L., & Elbaz, J. (2016). Are family small- and medium-sized enterprises more socially responsible than nonfamily small- and medium-sized enterprises? *Corporate Social Responsibility and Environmental Management, 23*(6), 386–398.

Lai, C., Chiu, C., Yang, C., & Pai, D. (2010). The effects of corporate social responsibility on brand performance: The mediating effect of industrial brand equity and corporate reputation. *Journal of Business Ethics, 95*(3), 457–469.

Lai, Y., Saridakis, G., & Stewart, J. (2016). Human resource practices, employee attitudes and small firm performance. *International Small Business Journal, 35*(4), 470–494.

Lamb, N. H., & Butler, F. C. (2018). The influence of family firms and institutional owners on corporate social responsibility performance. *Business & Society, 57*(7), 1374–1406.

Lamb, N. H., Butler, F. C., & Roundy, P. (2017). Family firms and corporate social responsibility: Exploring "concerns.". *Journal of Strategy and Management, 10*(4), 469–487.

Lambert, D. M., & Harrington, T. C. (1990). Measuring nonresponse bias in customer service mail surveys. *Journal of Business Logistics, 11*(2), 5–25.

Lane, P. J., & Lubatkin, M. (1998). Relative absorptive capacity and interorganizational learning. *Strategic Management Journal, 19*(5), 461–477.

Lasagni, A. (2012). How can external relationships enhance innovation in SMEs? New evidence for Europe. *Journal of Small Business Management, 50*(2), 310–339.

Laschewski, C., & Nasev, J. (2021). Limits of private firms' disclosure avoidance–evidence from enforcing financial statements publication in Germany. *Journal of Accounting and Public Policy, 40*(6), 106872.

Le, T. T., & Tarafdar, M. (2009). Business ecosystem perspective on value co-creation in the web 2.0 era: Implications for entrepreneurial opportunities. *International Journal of Entrepreneurial Venturing, 1*(2), 112–130.

Leana, C. R., & Van Buren, H. J. (1999). Organizational social capital and employment practices. *Academy of Management Review, 24*(3), 538–555.

Le Breton-Miller, I., & Miller, D. (2006). Why do some family businesses out-compete? Governance, long-term orientations, and sustainable capability. *Entrepreneurship Theory and Practice, 30*(6), 732–746.

Le Breton-Miller, I., & Miller, D. (2016). Family firms and practices of sustainability: A contingency view. *Journal of Family Business Strategy, 7*(1), 26–33.

Le Breton-Miller, I., Miller, D., & Steier, L. P. (2004). Toward an integrative model of effective FOB succession. *Entrepreneurship Theory and Practice, 28*(4), 305–328.

Lee, M. S., & Rogoff, E. G. (1996). Research note: Comparison of small businesses with family participation versus family businesses without family participation: An investigation of differences in goals, attitudes, and family/business conflict. *Family Business Review, 9*(4), 423–437.

Lehmann, E. E., Schenkenhofer, J., & Wirsching, K. (2019). Hidden champions and unicorns: A question of the context of human capital investment. *Small Business Economics*, *52*(2), 359–374.

Leoni, G. (2017). Social responsibility in practice: An Italian case from the early 20th century. *Journal of Management History, 23*(2), 133–151.

Lewin, A. Y., Massini, S., & Peeters, C. (2011). Microfoundations of internal and external absorptive capacity routines. *Organization Science, 22*(1), 81–98.

Liao, S. H., Fei, W. C., & Chen, C. C. (2007). Knowledge sharing, absorptive capacity, and innovation capability: An empirical study of Taiwan's knowledge-intensive industries. *Journal of Information Science, 33*(3), 340–359.

Lichtenthaler, U., & Lichtenthaler, E. (2009). A capability-based framework for open innovation: Complementing absorptive capacity. *Journal of Management Studies, 46*(8), 1315–1338.

Lin, C. M., Chen, C. C. S., Yang, S. Y., & Wang, W. R. (2020). The effects of corporate governance on credit ratings: The role of corporate social responsibility. *Emerging Markets Finance and Trade, 56*(5), 1093–1112.

Lin, H.-F. (2007). Knowledge sharing and firm innovation capability: An empirical study. *International Journal of Manpower, 28*(3/4), 315–332.

Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology, 86*, 114–121.

Liu, M., Shi, Y., Wilson, C., & Wu, Z. (2017). Does family involvement explain why corporate social responsibility affects earnings management? *Journal of Business Research, 75*, 8–16.

Lock, I., & Seele, P. (2016). The credibility of CSR (corporate social responsibility) reports in Europe. Evidence from a quantitative content analysis in 11 countries. *Journal of Cleaner Production, 122*, 186–200.

López-González, E., Martínez-Ferrero, J., & García-Meca, E. (2019). Corporate social responsibility in family firms: A contingency approach. *Journal of Cleaner Production, 211*, 1044–1064.

Lorandini, C. (2015). Looking beyond the Buddenbrooks syndrome: The Salvadori firm of Trento, 1660s-1880s. *Business History*, *57*(7), 1005–1019.

Lowik, S., Van Rossum, D., Kraaijenbrink, J., & Groen, A. (2012). Strong ties as sources of new knowledge: How small firms innovate through bridging capabilities. *Journal of Small Business Management, 50*(2), 239–256.

Lude, M., & Prügl, R. (2021). Experimental studies in family business research. *Journal of Family Business Strategy*, *12*(1), 100361.

Lumpkin, G. T., & Brigham, K. H. (2011). Long-term orientation and intertemporal choice in family firms. *Entrepreneurship Theory and Practice, 35*(6), 1149–1169.

Lumpkin, G. T., Brigham, K. H., & Moss, T. W. (2010). Long-term orientation: Implications for the entrepreneurial orientation and performance of family businesses. *Entrepreneurship & Regional Development, 22*(3–4), 241–264.

Luo, X., & Bhattacharya, C. B. (2006). Corporate social responsibility, customer satisfaction, and market value. *Journal of Marketing, 70*(4), 1–18.

Luo, X., & Du, S. (2015). Exploring the relationship between corporate social responsibility and firm innovation. *Marketing Letters, 26*(4), 703–714.

Lyytinen, K., Yoo, Y., & Boland, R. J. (2016). Digital product innovation within four classes of innovation networks. *Information Systems Journal, 26*(1), 47–75.

MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology, 58*(1) 593–614.

Madden, L., McMillan, A., & Harris, O. (2020). Drivers of selectivity in family firms: Understanding the impact of age and ownership on CSR. *Journal of Family Business Strategy, 11*(2), 100335.

Maggioni, D., & Santangelo, G. D. (2017). Local environmental non-profit organizations and the green investment strategies of family firms. *Ecological Economics, 138*, 126–138.

Marques, P., Presas, P., & Simon, A. (2014). The heterogeneity of family firms in CSR engagement: The role of values. *Family Business Review, 27*(3), 206–227.

Martin, G., & Gómez-Mejía, L. (2016). The relationship between socioemotional and financial wealth: Re-visiting family firm decision making. *Management Research, 14*(3), 215–233.

Martinez-Conesa, I., Soto-Acosta, P., & Palacios-Manzano, M. (2017). Corporate social responsibility and its effect on innovation and firm performance: An empirical research in SMEs. *Journal of Cleaner Production, 142*, 2374–2383.

Martínez-Ferrero, J., Rodriguez-Ariza, L., & Garcia-Sanchez, I. (2017). The strength of the board on sustainability assurance decisions. *Journal of Small Business and Enterprise Development, 24*(4), 863–886.

Martínez-Ferrero, J., Rodriguez-Ariza, L., Garcia-Sanchez, I.-M., & Cuadrado-Ballesteros, B. (2018). Corporate social responsibility disclosure and information asymmetry: The role of family ownership. *Review of Managerial Science, 12*(4), 885–916.

Martínez-Sanchis, P., Aragón-Amonarriz, C., & Iturrioz-Landart, C. (2020). How the pygmalion effect operates in intra-family succession: Shared expectations in family SMEs. *European Management Journal, 38*(6), 914–926.

Matten, D., & Moon, J. (2008). "Implicit" and "explicit" CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Academy of Management Review, 33*(2), 404–424.

Matusik, S. F., & Heeley, M. B. (2005). Absorptive capacity in the software industry: Identifying dimensions that affect knowledge and knowledge creation activities. *Journal of Management, 31*(4), 549–572.

Maung, M., Miller, D., Tang, Z., & Xu, X. (2020). Value-enhancing social responsibility: Market reaction to donations by family vs. non-family firms with religious CEOs. *Journal of Business Ethics, 163*(4), 745–758.

Maurer, I., Bartsch, V., & Ebers, M. (2011). The value of intra-organizational social capital: How it fosters knowledge transfer, innovation performance, and growth. *Organization Studies, 32*(2), 157–185.

McGuire, J., Dow, S., & Ibrahim, B. (2012). All in the family? Social performance and corporate governance in the family firm. *Journal of Business Research, 65*(11), 1643–1650.

Meier, O., & Schier, G. (2016). The early succession stage of a family firm: Exploring the role of agency rationales and stewardship attitudes. *Family Business Review, 29*(3), 256–277.

Meier, O., & Schier, G. (2021) CSR and Family CEO: The Moderating Role of CEO's Age. *Journal of Business Ethics, 174*(3), 595–612.

Memili, E., Patel, P. C., Koç, B., & Yazıcıoğlu, İ. (2020). The interplay between socioemotional wealth and family firm psychological capital in influencing firm performance in hospitality and tourism. *Tourism Management Perspectives*, *34*, 100651.

Michel, A., & Kammerlander, N. (2015). Trusted advisors in a family business's succession-planning process–an agency perspective. *Journal of Family Business Strategy, 6*(1), 45–57.

Miller, D., & Le Breton-Miller, I. (2007). Kicking the habit: Broadening our horizons by studying family businesses. *Journal of Management Inquiry*, *16*(1), 27–30.

Miller, D., & Le Breton-Miller, I. (2005). Management insights from great and struggling family businesses. *Long Range Planning, 38*(6), 517–530.

Miller, D., & Le Breton-Miller, I. (2014). Deconstructing socioemotional wealth. *Entrepreneurship Theory and Practice, 38*(4), 713–720.

Miller, D., & Le Breton-Miller, I. (2021). Brief reflections on family firm research and some suggested paths forward. *Journal of Family Business Strategy*, *12*(1), 100410.

Milliken, F. J. (1990). Perceiving and interpreting environmental change: An examination of college administrators' interpretation of changing demographics. *Academy of Management Journal, 33*(1), 42–63.

Minichilli, A., Nordqvist, M., Corbetta, G., & Amore, M. D. (2014). CEO succession mechanisms, organizational context, and performance: A socio-emotional wealth perspective on family-controlled firms. *Journal of Management Studies, 51*(7), 1153–1179.

Mitchell, M. N. (2012). *Interpreting and visualizing regression models using Stata*. Stata Press, Texas.

Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing, 29*(1), 1–16.

Motwani, J., Levenburg, N.M., Schwarz, T.V., & Blankson, C. (2006). Succession planning in SMEs: An empirical analysis. *International Small Business Journal, 24*(5), 471–495.

Mowery, D. C., Oxley, J. E., & Silverman, B. S. (1996). Strategic alliances and interfirm knowledge transfer. *Strategic Management Journal, 17*(S2), 77–91.

Muller, A. (2020). When does corporate social performance pay for international firms? *Business & Society, 59*, 1554–1588.

Muttakin, M. B., & Khan, A. (2014). Determinants of corporate social disclosure: Empirical evidence from Bangladesh. *Advances in Accounting, 30*(1), 168–175.

Nadeem, M., Gyapong, E., & Ahmed, A. (2020). Board gender diversity and environmental, social, and economic value creation: Does family ownership matter? *Business Strategy and the Environment*, *29*(3), 1268–1284.

Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice, 41*(6), 1029–1055.

Nambisan, S., Lyytinen, K., Majchrzak, A., & Song, M. (2017). Digital innovation management: Reinventing innovation management research in a digital world. *MIS Quarterly, 41*(1), 223–238.

Nambisan, S., Wright, M., & Feldman, M. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Research Policy, 48*(8), 103773.

Ng, P. Y., Dayan, M., & Di Benedetto, A. (2019). Performance in family firm: Influences of socioemotional wealth and managerial capabilities. *Journal of Business Research, 102*, 178–190.

Niehm, L. S., Swinney, J., & Miller, N. J. (2008). Community social responsibility and its consequences for family business performance. *Journal of Small Business Management, 46*(3), 331–350.

Noor, S., Saeed, A., Baloch, M. S., & Awais, M. (2020). CSR permanency, family ownership, and firm value: Evidence from emerging economies. *Corporate Social Responsibility and Environmental Management, 27*(5), 2135–2149.

Nordqvist, M., Wennberg, K., & Hellerstedt, K. (2013). An entrepreneurial process perspective on succession in family firms. *Small Business Economics, 40*(4), 1087–1122.

Nylén, D., & Holmström, J. (2015). Digital innovation strategy: A framework for diagnosing and improving digital product and service innovation. *Business Horizons, 58*, 57–67.

O'Boyle, E. H., Pollack, J. M., & Rutherford, M. W. (2012). Exploring the relation between family involvement and firms' financial performance: A meta-analysis of main and moderator effects. *Journal of Business Venturing, 27*(1), 1–18.

O'Boyle, E. H., Rutherford, M. W., & Pollack, J. M. (2010). Examining the relation between ethical focus and financial performance in family firms: An exploratory study. *Family Business Review*, *23*(4), 310–326.

Oh, W.-Y., Chang, Y. K., & Jung, R. (2019). Board characteristics and corporate social responsibility: Does family involvement in management matter? *Journal of Business Research, 103*, 23–33.

O'Reilly, C. A., & Chatman, J. (1986). Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology, 71*(3), 492–499.

Organisation for Economic Co-operation and Development (2018). *Towards the implementation of the G20 roadmap for digitalisation: Skills, business dynamics and competition*. Available at: http://www.oecd.org/g20/OECDreport_Implementation_G20_Roadmap.pdf (accessed: 19 January 2020).

Orlitzky, M., & Benjamin, J. D. (2001). Corporate social performance and firm risk: A meta-analytic review. *Business & Society, 40*, 369–396.

Orlitzky, M., Schmidt, F. L., & Reynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies, 24*(3), 403–441.

Padilla, M. A., & Divers, J. (2016). A comparison of composite reliability estimators. *Educational and Psychological Measurement, 76*(3), 436–453.

Pahnke, A., & Welter, F. (2019). The German Mittelstand: Antithesis to Silicon Valley entrepreneurship? *Small Business Economics, 52*(2), 345–358.

Pan, Y., Weng, R., Xu, N., & Chan, K. C. (2018). The role of corporate philanthropy in family firm succession: A social outreach perspective. *Journal of Banking & Finance, 88*, 423–441.

Panwar, R., Paul, K., Nybakk, E., Hansen, E., & Thompson, D. (2014). The legitimacy of CSR actions of publicly traded companies versus family-owned companies. *Journal of Business Ethics, 125*(3), 481–496.

Parida, V., Westerberg, M., & Frishammar, J. (2012). Inbound open innovation activities in high-tech SMEs: The impact on innovation performance. *Journal of Small Business Management, 50*(2), 283–309.

Peake, W. O., Cooper, D., Fitzgerald, M. A., & Muske, G. (2017). Family business participation in community social responsibility: The moderating effect of gender. *Journal of Business Ethics, 142*(2), 325–343.

Pérez-González, F. (2006). Inherited control and firm performance. *American Economic Review, 96*(5), 1559–1588.

Perrini, F., Russo, A., & Tencati, A. (2007). CSR strategies of SMEs and large firms: Evidence from Italy. *Journal of Business Ethics, 74*(3), 285–300.

Pierce, J. L., Kostova, T., & Dirks, K. T. (2001). Toward a theory of psychological ownership in organizations. *Academy of Management Review*, *26*(2), 298–310.

Piva, E., Rentocchini, F., & Rossi-Lamastra, C. (2012). Is open source software about innovation? Collaborations with the open source community and innovation performance of software entrepreneurial ventures. *Journal of Small Business Management, 50*(2), 340–364.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management, 12*(4), 531–544.

Porter, M. E., & Heppelmann, J. E. (2014). How smart, connected products are transforming competition. *Harvard Business Review, 92*(11), 11–64.

Porter, M. E., & Kramer, M. R. (2006). Strategy and society: The link between corporate social responsibility and competitive advantage. *Harvard Business Review, 84*(12), 78–92.

Preslmayer, C., Kuttner, M., & Feldbauer-Durstmüller, B. (2018). Uncovering the research field of corporate social responsibility in family firms: A citation analysis. *Journal of Family Business Management, 8*(2), 169–195.

Prügl, R. (2019). Capturing the heterogeneity of family firms: Reviewing scales to directly measure socioemotional wealth. In E. Memili, & C. Dibrell (eds.), *The Palgrave handbook of heterogeneity among family firms*, 461–484. Springer, Cham.

Putnam, R. D. (1995). Bowling alone. *Journal of Democracy, 6*(1), 65–78.

Quinton, S., Canhoto, A., Molinillo, S., Pera, R., & Budhathoki, T. (2018). Conceptualising a digital orientation: Antecedents of supporting SME performance in the digital economy. *Journal of Strategic Marketing, 26*(5), 427–439.

Rahman, S. (2011). Evaluation of definitions: Ten dimensions of corporate social responsibility. *World Review of Business Research, 1(*1), 166–176.

Ramachandran, V. (2011). Strategic corporate social responsibility: A "dynamic capabilities" perspective. *Corporate Social Responsibility and Environmental Management, 18*(5), 285–293.

Rau, S. B., Werner, A., & Schell, S. (2019). Psychological ownership as a driving factor of innovation in older family firms. *Journal of Family Business Strategy, 10*(4), 100246.

Razzak, M.R., & Jassem, S. (2019). Socioemotional wealth and performance in private family firms: The mediation effect of family commitment. *Journal of Family Business Management, 9*(4), 468–496.

Reay, T., Pearson, A. W., & Dyer, W. G. (2013). Advising family enterprise: Examining the role of family firm advisors. *Family Business Review, 26*(3), 209–214.

Rees, W., & Rodionova, T. (2015). The influence of family ownership on corporate social responsibility: An international analysis of publicly listed companies. *Corporate Governance: An International Review, 23*(3), 184–202.

Richards, M., Zellweger, T., & Gond, J. P. (2017). Maintaining moral legitimacy through worlds and words: An explanation of firms' investment in sustainability certification. *Journal of Management Studies*, *54*(5), 676–710.

Richardson, H. A., Simmering, M. J., & Sturman, M. C. (2009). A tale of three perspectives: Examining post hoc statistical techniques for detection and correction of common method variance. *Organizational Research Methods, 12*, 762–800.

Russo, A., & Perrini, F. (2010). Investigating stakeholder theory and social capital: CSR in large firms and SMEs. *Journal of Business Ethics, 91*(2), 207–221.

Sahasranamam, S., Arya, B., & Sud, M. (2020). Ownership structure and corporate social responsibility in an emerging market. *Asia Pacific Journal of Management, 37*(4), 1165–1192.

Salvato, C. (2004). Predictors of entrepreneurship in family firms. *The Journal of Private Equity, 7*(3), 68–76.

Samara, G., & Arenas, D. (2017). Practicing fairness in the family business workplace. *Business Horizons*, *60*(5), 647–655.

Samara, G., Jamali, D., Sierra, V., & Parada, M. J. (2018). Who are the best performers? The environmental social performance of family firms. *Journal of Family Business Strategy*, *9*(1), 33–43.

Sánchez-Medina, P. S., & Díaz-Pichardo, R. (2017). Environmental pressure and quality practices in artisanal family businesses: The mediator role of environmental values. *Journal of Cleaner Production*, *143*, 145–158.

Santos, S. C., & Cardon, M. S. (2019). What's love got to do with it? Team entrepreneurial passion and performance in new venture teams. *Entrepreneurship Theory and Practice, 43*(3), 475–504.

Schell, S., Hiepler, M., & Moog, P. (2018). It's all about who you know: The role of social networks in intra-family succession in small and medium-sized firms. *Journal of Family Business Strategy, 9*(4), 311–325.

Schell, S., Wolff, S., & Moog, P. (2020). Contracts and communication among family members: Business succession from a contractual view. *Journal of Small Business Management* (online first).

Schepers, J., Voordeckers, W., Steijvers, T., & Laveren, E. (2014). The entrepreneurial orientation–performance relationship in private family firms: The moderating role of socioemotional wealth. *Small Business Economics, 43*(1), 39–55.

Schepker, D. J., Kim, Y., Patel, P. C., Thatcher, S. M. B., & Campion, M. C. (2017). CEO succession, strategic change, and post-succession performance: A meta-analysis. *The Leadership Quarterly, 28*(6), 701–720.

Schulze, W. S., & Kellermanns, F. W. (2015). Reifying socioemotional wealth. *Entrepreneurship Theory and Practice, 39*(3), 447–459.

Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2003). Exploring the agency consequences of ownership dispersion among the directors of private family firms. *Academy of Management Journal, 46*(2), 179–194.

Sels, L., De Winne, S., Delmotte, J., Maes, J., Faems, D., & Forrier, A. (2006). Linking HRM and small business performance: An examination of the impact of HRM intensity on the productivity and financial performance of small businesses. *Small Business Economics, 26*(1), 83–101.

Sen, S., Bhattacharya, C. B., & Korschun, D. (2006). The role of corporate social responsibility in strengthening multiple stakeholder relationships: A field experiment. *Journal of the Academy of Marketing Science, 34*(2), 158–166.

Sen, S., & Cowley, J. (2013). The relevance of stakeholder theory and social capital in the context of CSR in SMEs: An Australian perspective. *Journal of Business Ethics, 118*(2), 413–427.

Servera-Francés, D., & Piqueras-Tomás, L. (2019). The effects of corporate social responsibility on consumer loyalty through consumer perceived value. *Economic research-Ekonomska istraživanja, 32*(1), 66–84.

Shanker, M. C., & Astrachan, J. H. (1996). Myths and realities: Family businesses' contribution to the US economy–a framework for assessing family business statistics. *Family Business Review, 9*(2), 107–123

Sharma, P. (2004). An overview of the field of family business studies: Current status and directions for the future. *Family Business Review, 17*(1), 1–36.

Sharma, P., Chrisman, J. J., & Chua, J. H. (2003). Predictors of satisfaction with the succession process in family firms. *Journal of Business Venturing, 18*(5), 667–687.

Sharma, P., & Irving, P.G. (2005). Four bases of family business successor commitment: Antecedents and consequences. *Entrepreneurship Theory and Practice, 29*(1), 13–33.

Sharma, P., & Sharma, S. (2011). Drivers of proactive environmental strategy in family firms. *Business Ethics Quarterly, 21*, 309–334.

Singal, M. (2014). Corporate social responsibility in the hospitality and tourism industry: Do family control and financial condition matter? *International Journal of Hospitality Management, 36,* 81–89.

Singh, S., & Mittal, S. (2019). Analysis of drivers of CSR practices' implementation among family firms in India. *International Journal of Organizational Analysis, 27*(4), 947–971.

Smith, B. F., & Amoako-Adu, B. (1999). Management succession and financial performance of family controlled firms. *Journal of Corporate Finance, 5*(4), 341–368.

Soluk, J. & Kammerlander, N. (2021). Digital transformation in family-owned Mittelstand firms: A dynamic capabilities perspective. *European Journal of Information Systems, 30*(6), 676–711.

Soluk, J., Kammerlander, N., & De Massis, A. (2021a). Exogenous shocks and the adaptive capacity of family firms: exploring behavioral changes and digital technologies in the COVID-19 pandemic. *R&D Management, 51*(4), 364–380.

Soluk, J., Miroshnychenko, I., Kammerlander, N., & De Massis, A. (2021b). Family influence and digital business model innovation: The enabling role of dynamic capabilities. *Entrepreneurship Theory and Practice, 45*(4), 867–905

Soundararajan, V., Jamali, D., & Spence, L. J. (2018). Small business social responsibility: A critical multilevel review, synthesis and research agenda. *International Journal of Management Reviews, 20*(4), 934–956.

Spence, L. J., Schmidpeter, R., & Habisch, R. (2003). Assessing social capital: Small and medium sized enterprises in Germany and the U.K. *Journal of Business Ethics, 47*(1), 17–29.

Spithoven, A., Vanhaverbeke, W., & Roijakkers, N. (2013). Open innovation practices in SMEs and large enterprises. *Small Business Economics, 41*(3), 537–562.

Stafford, K., Duncan, K. A., Dane, S., & Winter, M. (1999). A research model of sustainable family businesses. *Family Business Review, 12*(3), 197–208.

Steiger, T., Duller, C., & Hiebl, M. R. (2015). No consensus in sight: An analysis of ten years of family business definitions in empirical research studies. *Journal of Enterprising Culture*, *23*(1), 25–62.

Strike, V.M. (2012). Advising the family firm: Reviewing the past to build the future. *Family Business Review, 25*(2), 156–177.

Strike, V. M. (2013). The most trusted advisor and the subtle advice process in family firms. *Family Business Review, 26*(3), 293–313.

Strike, V. M., Berrone, P., Sapp, S. G., & Congiu, L. (2015). A socioemotional wealth approach to CEO career horizons in family firms. *Journal of Management Studies, 52*(4), 555–583.

Stubner, S., Blarr, W. H., Brands, C., & Wulf, T. (2012). Organizational ambidexterity and family firm performance. *Journal of Small Business & Entrepreneurship, 25*(2), 217–229.

Su, W., Peng, M. W., Tan, W., & Cheung, Y. L. (2016). The signaling effect of corporate social responsibility in emerging economies. *Journal of Business Ethics, 134*(3), 479–491.

Sundaramurthy, C., & Kreiner, G. E. (2008). Governing by managing identity boundaries: The case of family businesses. *Entrepreneurship Theory and Practice, 32*(3), 415–436.

Sundarasen, S. D., Je-Yen, T., & Rajangam, N. (2016). Board composition and corporate social responsibility in an emerging market. *Corporate Governance: The International Journal of Effective Board Performance, 16*(1), 35–53.

Surroca, J., Tribó, J., & Waddock, S. A. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic Management Journal, 31*(5), 463–490.

Sussan, F., & Acs, Z. J. (2017). The digital entrepreneurial ecosystem. *Small Business Economics, 49*(1), 55–73.

Swab, R. G., Sherlock, C., Markin, E., & Dibrell, C. (2020). "SEW" what do we know and where do we go? A review of socioemotional wealth and a way forward. *Family Business Review, 33*(4), 424–445.

Swanson, E. B. (1994). Information systems innovation among organizations. *Management Science*, *40*(9), 1069–1092.

Taber, K. S. (2018). The use of cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education, 48*(6), 1273–1296.

Tang, Z., Hull, C. E., & Rothenberg, S. (2012). How corporate social responsibility engagement strategy moderates the CSR-financial performance relationship. *Journal of Management Studies, 49*(7), 1274–1303.

Teece, D. J. (2018). Profiting from innovation in the digital economy: Enabling technologies, standards, and licensing models in the wireless world. *Research Policy, 47*(8), 1367–1387.

Terlaak, A., Kim, S., & Roh, T. (2018). Not good, not bad: The effect of family control on environmental performance disclosure by business group firms. *Journal of Business Ethics, 153*(4), 977–996.

Tiwana, A., & McLean, E. R. (2005). Expertise integration and creativity in information systems development. *Journal of Management Information Systems, 22*(1), 13–43.

Tortoriello, M., Reagans, R., & McEvily, B. (2012). Bridging the knowledge gap: The influence of strong ties, network cohesion, and network range on the transfer of knowledge between organizational units. *Organization Science, 23*(4), 1024–1039.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management, 14*(3), 207–222.

Tsai, W. (2001). Knowledge transfer in intra-organizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of Management Journal, 44*(5) 996–1004.

Turker, D. (2009). Measuring corporate social responsibility: A scale development study. *Journal of Business Ethics, 85*(4), 411–427.

Tushman, M. L. (1977). Special boundary roles in the innovation process. *Administrative Science Quarterly, 22*(4), 587–605.

Uhlaner, L., Berent-Braun, M., Jeurissen, R., & de Wit, G. (2012). Beyond size: Predicting engagement in environmental management practices of Dutch SMEs. *Journal of Business Ethics, 109*(4), 411–429.

Uhlaner, L. M., van Goor-Balk, H. A., & Masurel, E. (2004). Family business and corporate social responsibility in a sample of Dutch firms. *Journal of Small Business and Enterprise Development, 11*(2), 186–194.

Umans, I., Lybaert, N., Steijvers, T., & Voordeckers, W. (2020). Succession planning in family firms: Family governance practices, board of directors, and emotions. *Small Business Economics, 54*(1), 189–207.

Urbinati, A., Chiaroni, D., Chiesa, V., & Frattini, F. (2020). The role of digital technologies in open innovation processes: An exploratory multiple case study analysis. *R&D Management, 50*(1), 136–160.

Van Looy, A. (2021). A quantitative and qualitative study of the link between business process management and digital innovation. *Information & Management, 58*, 103413.

Van Marrewijk, M. (2003). Concepts and definitions of CSR and corporate sustainability: Between agency and communion. *Journal of Business Ethics, 44*(2/3), 95–105.

Vazquez, P. (2018). Family business ethics: At the crossroads of business ethics and family business. *Journal of Business Ethics, 150*(3), 691–709.

Venohr, B., Fear, J., & Witt, A. (2015). Best of German Mittelstand–the world market leaders. In F. Langscheidt, & B. Venohr (eds.), *Lexikon der deutschen Weltmarktführer*, 5–22. GABAL, Offenbach a. M..

Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value? *Journal of Financial Economics, 80*(2), 385–417.

Vlachos, P. A., Tsamakos, A., Vrechopoulos, A. P., & Avramidis, P. K. (2009). Corporate social responsibility: attributions, loyalty, and the mediating role of trust. *Journal of the Academy of Marketing Science, 37*(2), 170–180.

Voegtlin, C., & Greenwood, M. (2016). Corporate social responsibility and human resource management: A systematic review and conceptual analysis. *Human Resource Management Review, 26*(3), 181–197.

Volberda, H. W., Foss, N. J., & Lyles, M. A. (2010). Perspective–absorbing the concept of absorptive capacity: How to realize its potential in the organization field. *Organization Science, 21*(4), 931–951.

Wagner, M. (2010). Corporate social performance and innovation with high social benefits: A quantitative analysis. *Journal of Business Ethics, 94*(4), 581–594.

Wang, L.-H., Lin, C.-H., Kao, E. H., & Fung, H.-G. (2017). Good deeds earn chits? Evidence from philanthropic family controlled firms. *Review of Quantitative Finance and Accounting, 49*(3), 765–783.

Ward, J. L. (1997). Growing the family business: Special challenges and best practices. *Family Business Review*, *10*(4), 323–337

Weismeier-Sammer, D., Frank, H., & von Schlippe, A. (2013). Untangling 'familiness': A literature review and directions for future research. *The International Journal of Entrepreneurship and Innovation*, *14*(3), 165–177.

Welford, R. (2007). Corporate governance and corporate social responsibility: Issues for Asia. *Corporate Social Responsibility and Environmental Management, 14*(1), 42–51.

Welter, F., Baker, T., Audretsch, D. B., & Gartner, W. B. (2017). Everyday entrepreneurship–a call for entrepreneurship research to embrace entrepreneurial diversity. *Entrepreneurship Theory and Practice*, *41*(3), 311–321.

Wennberg, K., Wiklund, J., Hellerstedt, K., & Nordqvist, M. (2011). Implications of intra-family and external ownership transfer of family firms: Short-term and long-term performance differences. *Strategic Entrepreneurship Journal, 5*(4), 352–372.

Werner, A., Schell, S., & Haunschild, L. (2021). How does a succession influence investment decisions, credit financing and business performance in small and medium-sized family firms? *International Entrepreneurship and Management Journal, 17*(1), 423–446.

Werner, A., Schröder, C., & Chlosta, S. (2018). Driving factors of innovation in family and non-family SMEs. *Small Business Economics, 50*(1), 201–218.

Werther, W. B., & Chandler, D. (2005). Strategic corporate social responsibility as global brand insurance. *Business Horizons, 48*(4), 317–324.

Wiklund, J. (2006). Commentary: "Family firms and social responsibility: Preliminary evidence from the S&P 500.". *Entrepreneurship Theory and Practice, 30*(6), 803–808.

Wilkinson, A. (1999). Employment relations in SMEs. *Employee Relations, 21*(3), 206–217.

Williams, L. J., Hartman, N., & Cavazotte, F. (2010). Method variance and marker variables: A review and comprehensive CFA marker technique. *Organizational Research Methods, 13*(3), 477–514.

Williams, R. I., Pieper, T. M., Kellermanns, F. W., & Astrachan, J. H. (2018). Family firm goals and their effects on strategy, family and organization behavior: A review and research agenda. *International Journal of Management Reviews, 20*, 63–82.

Wiseman, R.M., & Gómez-Mejía, L.R. (1998). A behavioral agency model of managerial risk taking. *The Academy of Management Review, 23*(1), 133–153.

Wolff, S., Schell, S., & Moog, P. (2022). Information asymmetries in intrafamily business succession, *BRQ Business Research Quarterly, 25*(2), 173–192.

Wood, D. J. (2010). Measuring corporate social performance: A review. *International Journal of Management Reviews, 12*(1), 50–84.

Wu, S., Lin, F., & Wu, C. (2014). Corporate social responsibility and cost of capital: An empirical study of the Taiwan stock market. *Emerging Markets Finance & Trade, 50*, 107–120.

Yoo, Y., Henfridsson, O., & Lyytinen, K. (2010). Research commentary–the new organizing logic of digital innovation: An agenda for information systems research. *Information Systems Research, 21*(4), 724–735.

Yu, A., Ding, H. B., & Chuang, H. M. (2015). Corporate social responsibility performance in family and non-family firms: The perspective of socio-emotional wealth. *Asian Business & Management*, *14*(5), 383–412.

Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review, 27*(2), 185–203.

Zamir, F., & Saeed, A. (2020). Location matters: Impact of geographical proximity to financial centers on corporate social responsibility (CSR) disclosure in emerging economies. *Asia Pacific Journal of Management, 37*(1), 263–295.

Zellweger, T. M. (2007). Time horizon, costs of equity capital, and generic investment strategies of firms. *Family Business Review, 20*(1), 1–15.

Zellweger, T. M., & Astrachan, J. H. (2008). On the emotional value of owning a firm. *Family Business Review, 21*(4), 347–363.

Zellweger, T. M., Eddleston, K. A., & Kellermanns, F. W. (2010). Exploring the concept of familiness: Introducing family firm identity. *Journal of Family Business Strategy, 1*(1), 54–63.

Zellweger, T. M., Kellermanns, F. W., Chrisman, J. J., & Chua, J. H. (2012). Family control and family firm valuation by family CEOs: The importance of intentions for transgenerational control. *Organization Science, 23*(3), 851–868.

Zellweger, T. M., Nason, R. S., Nordqvist, M., & Brush, C. G. (2013). Why do family firms strive for nonfinancial goals? An organizational identity perspective. *Entrepreneurship Theory and Practice, 37*(2), 229–248.

Zerbini, F. (2017). CSR initiatives as market signals: A review and research agenda. *Journal of Business Ethics, 146*(1), 1–23.

Zheng, W., Wu, Y. C. J., Chen, X. C., & Lin, S. J. (2017). Why do employees have counterproductive work behavior? The role of founder's Machiavellianism and the corporate culture in China. *Management Decision, 55*(3), 563–578.

Zientara, P. (2017). Socioemotional wealth and corporate social responsibility: A critical analysis. *Journal of Business Ethics, 144*(1), 185–199.

Zobel, A. K. (2017). Benefiting from open innovation: A multidimensional model of absorptive capacity. *Journal of Product Innovation Management, 34*(3), 269–288.

Zybura, J., Zybura, N., Ahrens, J.-P., & Woywode, M. (2021). Innovation in the post-succession phase of family firms: Family CEO successors and leadership constellations as resources. *Journal of Family Business Strategy, 12*(2), 100336.

Appendix

Appendix 2.1 Content analysis of family firm specific antecedents of CSR (chapter 2)

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Abeysekera and Fernando (2020)	Family ownership; family management; founder name	-	Agency theory	Quantitative	232 firms (9-year panel)	L	USA	Family ownership and management are negatively related to CSR strength. If the family firm is named after the founder, this positively moderates the effect between family ownership and CSR concerns. During the financial crisis, family firms were associated with a lower CSR strength than non-family firms.
Adams et al. (1996)	Family firm status	-	-	Qualitative	444 firms (cross-sectional)	N/A	USA	There exist few differences in ethics-related behavior between family firms and non-family firms. Non-family firms, unlike family firms, have formal codes of ethics. Family firms pass on their ethical views informally through the corporate culture. Differences in ethical behavior arise from the company type.
Amann et al. (2012)	Family ownership and management (combined)	-	-	Quantitative	200 firms (cross-sectional)	N/A	Japan	CSR ratings in terms of human resource management and environmental protection are higher for non-family firms than for family firms and that there is no significant relationship between family firms/non-family firms regarding of CSR ratings of governance and social contribution.
Amidjaya and Widagdo 2020	Family ownership (also moderator); foreign ownership (also moderator); corporate governance	-	Agency theory; institutional theory	Quantitative	31 firms (5-year panel)	N/A	Indonesia	Family ownership, foreign ownership and corporate governance have a positive effect on sustainability reporting. Family ownership weakens the effect of corporate governance, foreign ownership has no moderating effect on corporate governance.
Aragón-Amonarriz et al. (2019)	Family social capital; family commitment; family values	-	-	Qualitative	3 firms (13 interviews)	S M	Mexico	In order to maintain responsible family ownership across generations, family firms must preserve their family social capital, consisting of a cognitive, structural, and relational dimension.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Arena and Michelon (2018)	Family values; family control; family identity; firm age	-	SEW	Quantitative	167 firms	N/A	Italy	High expression of the family control and influence dimension leads to lower environmental disclosure compared to non-family firms, with the effect weakening over the life cycle. Middle-aged family firms with high family identity provide more environmental disclosure, for example to protect and enhance the reputation and image of the business, whereas old family firms with high family identity provide less environmental disclosure.
Bammens and Hünermund (2020)	Family ownership (mediated by company reputation motive); family values and transgenerational intention (moderator family ownership-reputation)	-	Institutional theory	Quantitative	4,009 firms (cross-sectional)	S M L	Germany	Family ownership has a positive effect on the introduction of eco-innovations, partly due to the focus on the company reputation (mediator). This effect is highest when the family has transgenerational intentions.
Bennedsen et al. (2019)	Family management	-	-	Quantitative	2600 firms (5-year panel)	S M L	Denmark	Company characteristics, such as its policy/environment and incentives and corporate culture have a strong influence on employee absenteeism. Likewise, employee selection has a small influence on absenteeism. Overall, family firms have lower employee absenteeism.
Bergamaschi and Randerson (2016)	Family ownership	-	-	Theoretical	-	-	-	A family firm can be divided into the three subsystems family; ownership; and business. Depending on which subsystem is the dominant one, the family firm will follow a different CSR pattern.
Berrone et al. (2010)	Family ownership; family control	-	-	Quantitative	194 firms (4-year panel)	N/A	USA	Family firms have a better environmental performance to protect their SEW compared to non-family firms. This is particularly the case at the local level. This effect is independent of whether the family member serves as CEO or CEO and board chair.
Bhatnagar et al. (2020)	Family values; family religion	-	SEW; agency theory	Qualitative	14 firms (24 interviews)	N/A	India	The Hindu beliefs of Dharma (duty to society) and Karma (right to act without expecting rewards) influence CSR-related philanthropy of family firms. Depending on the intensity of the belief regarding dharma and karma, different CSR patterns dominate in the family firms.
Bingham et al. (2011)	Family involvement; founder involvement	-	Stakeholder theory; organizational identity theory	Quantitative	706 firms (15-year panel)	L	USA	Family firms demonstrate more CSP social initiatives than non-family firms, This effect becomes even greater with increasing family and/or founder involvement.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Biswas et al. (2019)	Family ownership; corporate governance (mediator)	-	-	Quantitative	N/A (16-year panel)	N/A	Bangladesh	The relationship between corporate governance guidelines and CSR reporting is mediated by the quality of corporate governance. Since family firms have a lower quality of corporate governance, they also have a lower level of CSR reporting.
Block (2010)	Family ownership; family management	-	Social identity theory; agency theory	Quantitative	414 firms (9-year panel)	L	USA	Family firms downsize less than non-family firms. The decisive factor here is whether the company is family-owned or family-managed, as the positive effect can only be demonstrated in family-owned companies. Compared to non-family firms, family firms only downsize when this is necessary to protect their employees, and thus act more socially responsibly than non-family firms
Block and Wagner (2014a)	Family ownership; family management	-	SEW	Quantitative	399 firms (9-year panel)	L	USA	Family ownership as well as founder ownership reduces CSR concerns, whereby founder ownership has a stronger influence. Family management, as well as founder management, increases CSR concerns. In this case, family management has the stronger effect.
Block and Wagner (2014b)	Family ownership	-	-	Quantitative	286 firms (11-year panel)	L	USA	Family ownership has a positive effect on diversity-, employee-, environmental-, and product-related aspects of CSR performance and a negative impact on community-related CSR. The latter is a consequence of the owner family supporting the community through private rather than business channels.
Blodgett et al. (2011)	Family values; ethical values	-	-	Quantitative	172 firms (cross-sectional)	N/A	International (intercontinental)	Comparing mission statements, U.S. family firms have more ethical values than international family firms and non-family firms in the U.S.. U.S. family firms focus on "integrity" and "honesty", while international family firms focus on "environmentalism", "globalism", and "CSR". An increase in the ethical values of family firms around the world has occurred over time.
Cabeza-García et al. (2017)	Family ownership; governance; foreign ownership (moderator)	-	SEW	Quantitative	105 firms (7-year panel)	L	Spain	Family firms have a lower commitment to CSR reporting than non-family firms. With regard to the second-largest shareholder, foreign ownership moderates this effect negatively, while the presence of a second family even increases this effect.
Campopiano et al. (2014)	Family ownership; family management	-	Stewardship theory	Quantitative	130 firms (cross-sectional)	S M	Italy	Family ownership has a positive effect on the company's philanthropic involvement, while family involvement in management has a negative effect. Family owners invest more in their business to build reputation and be a better steward in the community to support the longevity of the business.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Campopiano and De Massis (2015)	Family ownership and family management; institutional setting; community embeddedness		Institutional theory; grounded theory	Qualitative	98 firms (cross-sectional)	M L	Italy	Through CSR, family firms try to positively enhance their reputation. For this reason, they are less influenced by institutional settings and focus more on the expected social outcomes of CSR. Since they focus their CSR less on institutional requirements and more on the interests of the stakeholders to be influenced, the variance of their CSR reports is higher.
Campopiano et al. (2019)	Family management	-	Self-construal theory	Quantitative	63 family firms (cross-sectional)	L	International (intercontinental)	Female members on the board of family businesses exert a positive influence on CSR if they are not family members of the controlling family. In contrast, they only have a positive influence on philanthropic engagement if they are family members of the controlling family
Chen and Cheng (2020)	Family ownership and/or management (combined); mimetic pressure from industry (moderator)	-	Agency theory; neo-institutional theory	Quantitative	N/A (4-year panel)	L	Taiwan	Public family firms acquire CSR assurances less frequently than non-family firms. This relationship is positively moderated by mimetic pressure from industry peers
Cordeiro et al. (2018)	Family ownership	-	Neo-Institutional Theory	Quantitative	500 firms (4-year panel)	L	India	Family ownership and multinational ownership have a positive impact on a firm's CSR rating. State ownership, on the other hand, leads to a decline in CSR ratings.
Cordeiro et al. (2020)	Board gender diversity; family ownership (moderator)	-	SEW; agency theory; resource dependency theory	Quantitative	751 firms (6-year panel)	L	USA	Board gender diversity is positively associated with corporate environmental performance. This relationship is positively moderated by family ownership, but also by being a dual-class firm.
Cruz et al. (2014)	Family ownership and management (combined); national CSR standards (moderation); industry CSR standards (moderation); declining performance (moderation)	-	Organizational identity theory; SEW approach; stakeholder theory	Quantitative	598 firms (4-year panel)	L	International (Europe)	Family firms conduct more CSR towards external stakeholders, less CSR towards internal stakeholders, and are at the same time less sensitive to national CSR standards or those of their industry (moderation). Family firms place their corporate survival above their SEW and their CSR activities are therefore more sensitive to declining performance than those of non-family firms (moderation).
Cruz et al. (2019)	Family management; non-family/family female directors	-	-	Quantitative	152 firms (5-year panel)	L	USA	Women in boards of family firms affect CSP positively. This effect can be observed for outsider non-family and insider family women directors.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Cuadrado-Ballesteros et al. (2015)	Independent directors; family ownership (moderator)	-	-	Quantitative	575 firms (7-year panel)	N/A	International (intercontinental)	Due to a higher proportion of independent directors in a firm's board, a firm discloses more CSR. Owning families, on the other hand, use their position to influence independent directors to make fewer CSR disclosures. Thus, family ownership negatively moderates this relationship.
Cuadrado-Ballesteros et al. (2017)	Family ownership; formal code of ethics	-	-	Quantitative	547 firms (9-year panel)	N/A	International (intercontinental)	Due to less formalization, family firms tend to use less formal codes of ethics than non-family firms, which mediates the negative relationship between family ownership and CSP.
Cui et al. (2018)	Family ownership; family management (moderator); long-term incentive compensation (moderator)	-	Behavioral agency theory	Quantitative	177 firms (8-year panel)	L	USA	Family management positively moderates the positive effect of family ownership on the CSR performance. Family and non-family CEOs are incentivized to increase CSR through long-term incentive compensation (moderation), although the effect is lower for family CEOs than for non-family CEOs.
Dal Maso et al. (2020)	Family ownership; human resource practices (mediator)	-	Agency theory	Quantitative	4,932 firms (14-year panel)	N/A	International (intercontinental)	Listed family firms have lower environmental performance than non-family firms. The study shows that this negative effect is mediated by a lower investment in employee training and development practices. This is due to a stronger bargaining power of the dominant coalition and a lower firm performance. due to less investment in training and development.
Dawson et al. (2020)	Family management; family generation	-	Signaling theory; ability perspective; willingness perspective	Quantitative	161 family firms (2-year panel)	S M	Italy	Business legality increases with the level of family involvement in management. Likewise, the level of generation has a positive influence.
Dayan et al. (2019)	Family values; firms capabilities (mediator)	-	Mindfulness theory	Quantitative	150 family firms (cross-sectional)	N/A	United Arab Emirates	Mindfulness in protection the SEW dimensions "identification of family members with the firm" and "binding social ties" influences the environmental strategy of family firms. They have a positive effect on production of sustainable products and processes. This effect is positively mediated by the capabilities of the company.
Dekker and Hasso (2016)	Family firm status; social embeddedness (moderator)	-	-	Quantitative	1452 firms (longitudinal)	S M	Australia	Private family firms have a lower environmental orientation than non-family firms. By contrast, when family firms are strongly embedded in the social community, they exhibit a higher level of environmental orientation.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Delmas and Gergaud (2014)	Family values (heir succession intention; moderator of quality motivation, market motivation, and eco-certification)	-	Stakeholder theory	Quantitative	231 firms (cross-sectional)	N/A	USA	Using wineries as examples, it is shown that the intention to pass on the family business to the next generation has a positive effect on the adoption of eco-certificates. In this context, passing on the business moderates the effect of market motivation and quality motivation on eco-certification positives.
Déniz and Suárez (2005)	Family value	-	-	Quantitative	112 firms (2-year panel)	S M	Spain	Depending on the owning family' value, family firms tend to adopt a classic, socio-economic, or philanthropic approach to CSR. Most family firms in the sample followed a philanthropic approach, through which they tried to maintain broad relationships with society.
Dou et al. (2019)	Family ownership; family commitment (moderator); long term orientation (mediator)	-	Strategic reference point theory; organizational identity theory; SEW preservation perspective	Quantitative	454 family firms (cross-section)	N/A	China	In family owned businesses, commitment and long term orientation is needed to implement a proactive environmental strategy. In family owned businesses, commitment and long term orientation is needed to implement a proactive environmental strategy. The mediation effect of long-term orientation is only significant if the level of family commitment is high.
Discua Cruz (2020)	Family values; family religion	-	Stewardship theory; paradox theory	Qualitative	1 firm (interviews)	M	Honduras	In line with their family values and religion, the owning family of Honduran firm AsphaCo frequently engaged in CSR activities towards the community and employees. Since they did not engage in CSR to better represent their firm, they preferred to keep it anonym and not report it publically.
Du (2015)	Corporate environmental misconduct; CEO's political network (moderator)	-	-	Quantitative	3,008 family firms (cross-sectional)	N/A	China	Family-owned firms use corporate philanthropic giving to distract from their corporate environmental misconduct. Since politically well-connected CEOs can avoid high personal penalties due to their political contacts, this effect is negatively moderated by the CEO's political network..
Du et al. (2016)	Media coverage; family ownership (moderator)	-	Institutional theory; instrumental stakeholder theory	Quantitative	733 family firms (7-year panel)	N/A	China	Due to the higher visibility that comes with more media coverage, managers of family firms conduct more philanthropic giving. As the dependency on stakeholders decreases with family ownership, there is a negatively moderating effect of family ownership between media coverage and corporate philanthropic giving.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Dyer and Whetten (2006)	Family ownership and management (combined)	-	Self-interest theory; social identity theory	Quantitative	261 firms (10-year panel)	L	USA	In terms of social initiatives there are no differences between family firms and non-family firms. Family firms are more likely to avoid social concerns than non-family firms.
El Ghoul et al. (2016)	Family ownership	-	Agency theory	Quantitative	335 firms (10-year panel)	N/A	International (Asia)	In order to achieve personal benefits, increasing family ownership allows family owners to divert the firm resources to activities that bring them financial benefits. Furthermore, this is particularly true for family firms with greater agency problems and from countries with weak institutions.
El-Kassar et al. (2018)	Audit committee; family management (moderator)	-	Stakeholder theory; agency theory	Quantitative	203 employees of family fiirms (cross-sectional)	Employees	Lebanon	Audit committees have a positive impact on CSR practices in the areas of health, refugees, community, and environment. In addition, family management has a positive moderating effect on the impact of CSR towards community, the environment, and health.
Ertuna et al. (2019)	Family values; state regulations	-	Institutional logics theory	Qualitative	2 firms (case study)	N/A	Turkey	This study compares the CSR logics of a local hotel and a hotel chain. The local hotel adapts its CSR logic to local conditions and embeds it in the organization. The CSR logic of the hotel chain, which is specified by the headquarters, is only partially adopted and varies in its interpretation and implementation. Local needs and priorities are only implemented to a limited extent. The sustainability strategies in both companies are shaped by the family or the family headquarters.
Fitzgerald et al. (2010)	Attitude towards community; community vulnerability; family firm resources	-	Sustainable family business theory	Quantitative	334 family-firm households (2-year panel)	S M	USA	Members of the owning family with a very positive attitude towards their local communities were more willing to support their local community. Those with higher education were more likely to do so by taking leadership positions in the community, while individuals with more household assets and profit companies were more likely to provide financial assistance to their communities.
Gallo (2004)	Family firm status	-	-	Quantitative	44 academics (cross-sectional)	People working on uni-versity in-stitu-tions	International (intercontinental)	Family firms fulfill their responsibility to create wealth and provide products for society to a high degree. But there must be a greater focus on sustainable and long-term execution, otherwise they will only be generated for one generation.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Ge and Micelotta (2019)	Firm visibility; political linkages; family ownership and management (moderator)	-	-	Quantitative	3,075 firms (cross-sectional)	N/A	China	Firms that are more sensitive to institutional pressure due to firm visibility and political linkages are more likely to engage in philanthropy and further donate larger amounts. While family ownership has no effect on the giving behavior, it does moderate the relationship between institutional pressure and the amount of philanthropic giving positively.
Graafland et al. (2003)	Family firm status; firm size	-	-	Quantitative	111 firms (cross-sectional)	S L	Netherlands	Family firms and non-family firms show very similar patterns regarding to the use of instruments such as codes of conduct, ISO certification, social reporting, social handbooks, and confidential. These instruments are influenced by the size of the company.
Graafland (2020)	Family ownership; family management; firm size (moderator)	-	SEW	Quantitative		S M L	International	The relationship between ownership of a family firm and environmentally friendly production is stronger for small than for large firms and is moderated by the involvement of family members in the management of the firm in a non-linear way. Differences between family and non-family firms is greater in small firms with family and non-family managers. Likewise, the best environmental performance is achieved in family firms managed by families and non-family members.
Huang et al. (2009)	Family ownership and management (moderator: negative (regulatory stakeholder pressure; market shareholder pressure); positive (pressure from internal stakeholders)	-	-	Quantitative	235 firms (cross-sectional)	N/A	Taiwan	Using the chemical, electronics and information technology industries, it is shown that there is a positive correlation between the degree of natural environmental pressure from stakeholders and the introduction of green innovations. The moderating effect of family firms leads to a negative effect of regulatory stakeholder pressure and market shareholder pressure on green innovations and a positive one of pressure from internal stakeholders. These differences are explained by organizational culture and core values.
Iyer and Lulseged (2013)	Family ownership and management (combined)	-	Agency theory; legitimacy theory; stakeholder theory	Quantitative	397 firms (cross-sectional)	L	USA	There is no statistically significant difference in the probability of CSR disclosure (sustainability reporting) between family firms and non-family firms.
Kallmuenzer et al. (2018)	Family values; community embeddedness/ stakeholder pressure	-	Random utility theory	Quantitative	152	S M	Austria	Family firms in rural tourism are motivated by environmental and social considerations after a financial security, which give a greater benefit than a greater financial profit, through the family conditional SEW dynamics and the resulting CSR increase.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Kim and Lee (2018)	Family ownership and management (combined); family CEO; family firm type	-	Agency theory	Quantitative	200 firms (3-year panel)	S M L	South Korea	Family firms have a lower CSP than non-family firms, which is even lower when a family firm is managed by a family CEO. Chaebols (family-run or controlled conglomerate) have a higher CSP than non-cheabol firms.
Kim et al. (2017)	Top management attention to the natural environment; family ownership and management	-	Behavioral theory; institutional theory	Quantitative	97 firms (10-year panel)	N/A	USA	Family influence has a positive moderating effect on the relationship between top management's attention to the natural environment and proactive environmental action.
Kim et al. (2020)	Family ownership; population size (moderator)	-	Place theory	Quantitative	2,000 firms (14-year panel)	L	USA	Family ownership reduces the probability of layoffs. The size of the population of the location in which the company operates has a negative moderating effect on this relationship.
Labelle et al. (2018)	Family ownership; family control; stakeholder/shareholder-oriented economy	-	SEW; agency theory	Quantitative	1,264 firms (cross-sectional)	N/A	International (intercontinental)	Family firms have a lower CSP than non-family firms. In family firms, family control (voting rights) up to 36% increases the CSP in family firms, whereas family control more than 37% decreases their CSP. Family firms operating in stakeholder-oriented countries pay more attention to social issues than those operating in more shareholder-oriented countries.
Lamb and Butler (2018)	Family ownership; family management; founding family presence	-	Stewardship theory; SEW; multiple agency theory	Quantitative	153 firms (13-year panel)	N/A (Fortune 500)	USA	Family ownership and the presence of a family CEO increase CSR strength. In terms of CSR concerns, the presence of a family CEO and a founding family has a negative effect.
Le Breton-Miller and Miller (2016)	Being a family firm	-	-	Conceptual	-	-	-	There is no single answer as to whether family businesses operate more sustainably than non-family businesses. Characteristics that positively influence sustainability are: long-term orientation, reputation and agency costs. A negative effect can result from the following factors: family conflicts, SEW, and exploitation of smaller shareholders at the expense of sustainability. Important mediating roles (both positive and negative) could be family values, educational background, organizational factors, governance arrangements and environmental forces.
López-González,et al. (2019)	Family ownership; family management (moderator); market munificence (moderator)	-	SEW; agency theory; stakeholder theory; institutional theory	Quantitative	956 firms (9-year panel)	L	International (intercontinental)	Family ownership has a positive effect on CSR performance. This relationship is positively moderated by family management and family directors on the board of directors, but negatively moderated by high market munificent.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Madden et al. (2020)	Family ownership; Family firm age (moderator)	-	Socioemotional selectivity theory	Quantitative	1,436 firms (8-year panel)	L	USA	Family ownership positively affects investments in CSR activities. As family firms age, they become more selective and invest less heavily in CSR activities. Family firms age therefore acts as a moderator of the relationship between family ownership and CSR.
Maggioni and Santangelo (2017)	Environmental non-profit organizations (substitutes for environmental regulations)	-	Stakeholder theory; organization science	Quantitative	2,275 firms (cross-sectional)	S M L	Italy	Environmental non-profit organizations operating in the same local context influence family businesses more than non-family businesses to implement more green investment strategies. This is due to their scarcity of resources, risk aversion and local roots, which makes family businesses more sensitive to their pressure. Environmental non-profit organizations can serve as a substitute for sustainability compliance in sectors with low regulation.
Marques et al. (2014)	Family involvement; family values	-	Stewardship theory; SEW	Qualitative	12 firms (interviews)	N/A	Spain	In family firms with family CEOs, but more frequently in family firms with a high family ownership, the values of identification and commitment are particularly evident. These have a strong impact on workplace- and community-related CSR.
Martínez-Ferrero et al. (2016)	Family ownership; managerial discretion	-	Agency theory	Quantitative	1,275 firms (8-year panel)	N/A	International (intercontinental)	Family firms are taking more CSR measures to meet stakeholder demands and thereby gain greater discretionary power, for example to compensate for the manipulation of profits.
Martínez-Ferrero et al. (2017)	Board size; board independency; family ownership (moderator)	-	Agency theory; institutional theory	Quantitative	536 firms (8-year panel)	N/A	International (intercontinental)	In stakeholder-oriented countries, board size and board independence have a positive effect on sustainability assurance, which is further positively moderated by family ownership. Board size and board independence also have a positive effect on sustainability reports provided by professional accountants, which are not influenced by family ownership.
McGuire et al. (2012)	Family ownership and family management; corporate governance (moderator)	-	-	Quantitative	473 firms	L	USA	Family firms are less likely than non-family businesses to engage in negative or socially harmful activities. In general, corporate governance is not related to the social performance of the company. However, it has a moderating effect on the relationship between family control and social performance.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Memili et al. (2020)	Family ownership; long term orientation (moderator)	-	Psychological capital theory	Quantitative	192 family firms (cross-sectional)	S M	Turkey	Using data of the hospitality and tourism industry, it is shown that SEW has a negative effect on firm performance (sales) and that family firm psychological capital mitigates this effect. Likewise, this effect can be mitigated by a long-term orientation, if non-financial strengths (family firm psychological capital) are used and the effects of financially focused goals are minimized.
Muttakin and Khan (2014)	Family ownership	-	Legitimacy theory	Quantitative	135 firms (5-year panel)	L	Bangladesh	Family ownership has a negative effect on CSR disclosures. Export oriented sectors, firm size and industry sectors also have a positive effect on CSR disclosures.
Nadeem et al. (2020)	Family ownership; board gender diversity	-	Stakeholder theory; gender socialization theory	Quantitative	399 firms (10-year panel)	L	UK	Board gender diversity has a positive effect on stakeholder value creation. This effect can be observed for economic, social and environmental performance. Even though female directors of family firms are associated with environmental value creation, they have no impact on economic and social value creation.
Oh et al. (2019)	Family management; outside directors' ownership (moderator); board educational diversity (moderator)	-	-	Quantitative	290 firms (5-year panel)	L	South Korea	Outside directors' ownership, as well as board educational diversity, have a positive moderating effect on CSR in firms with low family management but a negative moderating effect on CSR in firms with high family management.
Peake et al. (2017)	Owning family's duration in a community; owning family's community satisfaction; female management (moderator)	-	Social capital theory	Quantitative	279 family firm households (2-year panel)	S	USA	The owning family's duration in a community is positively associated with their participation in community development activities. The greater the level of dissatisfaction with the community, the greater the willingness to participate in the work of supporting community development. Female management moderates the relationship between community satisfaction and participation in community development.
Rees and Rodionova (2015)	Family ownership; liberal/coordinated market economy	-	-	Quantitative	3,893 firms (11-year panel)	N/A	International (intercontinental)	Closely held equity and family ownership have a negative impact on environmental, social, and governance (ESG) performance. In terms of governance control, closely held equity shows no impact on environmental and social rankings, whereas family ownership continues to have a negative impact. These results are found in liberal market economies and coordinated market economies, whereas the latter generally reflects weaker performance and considerable diversity.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Richards et al. (2017)	Family influence; domestic world or civic-green world rhetoric; multi-generation control (whether one family had been the firm's main blockholder for at least two generations)	-	-	Quantitative	86 firms (cross sectional)	N/A	International (intercontinental)	Using the coffee, tea, and chocolate industry as an example, the study shows that investment in sustainability certificates depends on the chosen legitimacy principles and the reflection of identity orientation, the "civic and green" world and the "domestic" world. The domestic dependency of the companies has a negative impact on investments for sustainability certifications, because the legitimacy communication takes place in a different way. The methods of legitimacy depend on the generational integration of the family firm. Multi-generational family firms can better integrate socially responsible attributes through its long-term stakeholder relationships and therefore do not need sustainability certifications.
Sahasranamam et al. (2019)	Family ownership; business group owned (moderator)	-	Agency theory; institutional theory	Quantitative	N/A (8-year panel)	L	India	Family ownership is positively related to community-related CSR. There is no significant moderating effect of business group ownership in this relationship.
Samara et al. (2018)	Family ownership; family management; family commitment; generation of management; outside directors	-	SEW	Qualitative	146 family firms (cross-sectional)	N/A	International (intercontinental)	Family firms show positive SEW and higher environmental social performance when 100% of the business is in family hands, when the first generation is still involved in management, when the board is dominated by family members, and when family involvement in management is low. When many family members are involved in management, the negative effects of SEW become visible and less social performance is performed. Non-Anglo-Saxon countries focus more on long-term stakeholder welfare and less on managerial compensation to firm profitability. Therefore, they achieve high social performance (a) when family-dominated management is complemented by a board of family and non-family members, (b) when business ownership is shared with external parties and non-family board members mediate conflicts between them, and (c) when there is shared business ownership and the top management team is dominated by the first generation.
Sánchez-Medina and Díaz-Pichardo (2017)	Family values; environmental values (mediator); environmental pressure	-	Sustainable family business theory	Quantitative	72 family firms (cross-sectional)	S	Mexico	Environmental pressure leads to the introduction of quality practices in artisanal family firms through the formation of environmental values. This effect is completely mediated by the environmental values of the owner family.

(continued)

Appendix 2.1 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Sharma and Sharma (2011)	Family influence; family values; relationship conflict (negative moderator)	-	Theory of planned behavior	Conceptual	-	-	-	High family involvement has a positive effect on the exercise of the proactive environmental strategy. This intention is increased if there are low relationship conflicts within the controlling family in the family business, as resources for implementation can then be better provided.
Terlaak et al. (2018)	Family ownership; family management	-	SEW	Quantitative	259 firms (7-year panel)	L	South Korea	Family ownership and the propensity of a business group to disclose environmental performance information have a U-shape relationship. This U-shape is moderated and strengthened by the presence of a family CEO.
Uhlaner et al. (2004)	Family firm status; family generation; community embeddedness; firm size; family firm name includes family's surname	-	Stakeholder theory	Quantitative	42 family firms (cross-sectional)	S M	Netherlands	The family character of the business most frequently impacts employee, client, and supplier relationships. Statistically significant interaction effects are reported for the following moderator variables: generation of the owner; company tenure in the community; community size; company size; and inclusion of the family surname in the business name.
Uhlaner et al. (2012)	Family influence (power, experience, culture); number of owners (moderator)	-	Theory of planned behavior	Quantitative	689 firms (2-year panel)	S M	Netherlands	SMEs with a greater family influence are more likely to engage in environmental management practices. This increases in family firms with larger business-owning families (moderation).
Wiklund (2006)	Family ownership	-	Agency theory	Conceptual	-	-	-	Family firms show more positive CSR behavior, due to the bond between the family and the company.
Yu, et al. (2015)	Family ownership; majority ownership; independent directors	-	SEW	Quantitative	229 firms (5-year panel)	N/A	Taiwan	Family firms have a better CSR performance than non-family firms. SEW, measured by the majority shareholding and the proportion of independent directors on the board, has a positive effect on CSR.
Zamir and Saeed (2020)	Closeness to financial markets; family ownership (moderator); family commitment	-	Legitimacy theory; institutional theory	Quantitative	649 firms (6-year panel)	N/A	International (intercontinental)	Firms located closer to the financial centers have a higher CSR disclosure rates compared to their more distant counterparts. This effect is positively moderated by family ownership and being a listed company. The negative effect of distance on CSR disclosure is stronger in countries with higher income inequality.
Zheng et al. (2017)	Family values; Machiavellian corporate culture (low organisational justice, psychological contract violation, low trust)	-	Social information processing theory; grounded theory	Qualitative	Single case study	L	China	The study examines why employees exhibit counterproductive work behavior. This is caused, among other things, by Machiavellian corporate culture, which is characterized by low trust and strong control, as well as psychological contract violations, as these factors leads to the idea of mutual exploitation.

Notes: N/A = Not available; S = Small; M = Medium; L = Large (listed

Appendix 2.2 Content analysis of family firm specific outcomes of CSR (chapter 2)

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Adomako et al. (2019)	-	Firm performance (insignificant)	Resource-based view theory	Quantitative	253 firms (cross-sectional)	S M	Ghana	Environmental sustainability orientation shows no significant impact on performance in family businesses, but is enhanced in non-family businesses.
Hsueh (2018)	-	External non-financial outcomes	Source credibility theory	Quantitative	Study 1: 167 NGO's (cross-sectional) Study 2: 335 stakeholder	N/A	International (intercontinental)	Family firms have a larger credibility gap in publishing sustainability reporting than non-family businesses. This gap can be reduced by an independent assurance service. Family businesses derive greater value with reasonable assurance than non-family
Lin et al. (2020)	-	Credit rating (moderated by family ownership)	Agency theory	Quantitative	1,475 firms (9-year panel)	L	Taiwan	CSR has a moderating and partial mediation effect between corporate governance and credit rating. However, this connection could not be established for family firms.
Martínez-Ferrero et al. (2018)	-	Information asymmetry (moderated by family ownership)	Agency theory	Quantitative	548 firms (7-year panel)	N/A	International (intercontinental)	CSR disclosures reduce information asymmetry, which in turn also positively effects the level of CSR disclosures. Family ownership has a negative moderating effect on the relationship between CSR and information asymmetry, reversing the original negative effect. The effect between information asymmetry and CSR is negatively moderated by family ownership, reversing the original effect in family firms.
Maung et al. (2020)	-	Financial market reaction (moderated by family management)	Signaling theory	Quantitative	N/A (10-year panel)	N/A	USA	The financial markets react positively to the donations of religious CEOs and are further positively moderated by is the presence of a founder or family CEO.
Pan et al. (2018)	-	Financial outcomes; post-succession performance	-	Quantitative	885 firms (9-year panel)		China	Family firms exhibit more corporate philanthropy when the handover to the second generation is imminent. In the process, better market and accounting performance is achieved in addition to generally poor performance, indicating a strategic deployment.
Panwar et al. (2014)	-	External non-financial outcomes	-	Quantitative	278 US residents (cross-sectional)	-	USA	Firm outsiders perceive the legitimacy of CSR measures of family-owned firms as higher than those of publicly listed firms.
Samara and Arenas (2017)	-	Internal non-financial outcomes; long-term family firm survival and success; firm reputation	-	Conceptual	-	-	-	Family firms that promote fairness in the workplace can benefit by preserving their reputation and enhancing the long-term survival of the business.
Wagner (2010)	-	Innovation with high social benefits (moderated by family owner-	-	Quantitative	252 firms (11-year panel)	L	USA	There is a positive link between CSP and innovation with high social benefits. This relationship is positively moderated by family ownership.

Notes: N/A = Not available; S = Small; M = Medium; L = Large (listed

Appendix 2.3 Content analysis of family firm specific antecedents and outcomes of CSR

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Ahmad et al. (2020)	Family involvement (family commitment; family continuity; family control; family enrichment)	Financial outcomes (financial strength); internal non-financial outcomes (internal capabilities; strategic perspective; learning & growth), external non-financial outcomes (customer orientation)	Stakeholder theory; transaction cost economics theory	Quantitative	489 owner & executives of 150 family firms (cross-sectional)	S M	Pakistan	Family involvement in the company (through family commitment, continuity, control, enrichment) has a positive influence on the sustainable survival of the company (financial strength, customer orientation, internal capabilities, strategic perspective, learning & growth). This effect is partially mediated by CSR.
Antheaume et al. (2013)	Family values; community embeddedness	Internal non-financial outcomes (longevity)	Grounded theory	Qualitative	17 family firms (6 interviews)	M L	France	Longevity of family firms is promoted by interdependencies and the networking of different areas, the embedding of the family in the business as well as the embedding of the business in society and the passing on of capital to the next generation. Sustainable development is preferred to short-term profits.
Biscotti et al. (2018)	Family ownership; environmental management systems (knowledge management)	Internal non-financial outcomes (environmental product innovation)	Social identity theory; institutional theory	Qualitative	262 firms (10-year panel)		International	The EMAS-certified environmental management system has a moderating effect in family businesses on the knowledge management practices of employee training and development and, through this, on green product innovation. The ISO 14001 certified environmental management system does not lead to proactive behavior in family and non-family businesses.
Choi et al. (2019)	Family ownership; being a chaebol firm (moderator)	Firm performance	-	Quantitative	198 (6-year panel)	L	South Korea	Family ownership has a negative effect on corporate social performance (CSP). This effect is lower (moderation) in chaebol (family-run or controlled conglomerate) firms than in non-chaebol firms.
Craig and Dibrell (2006)	Family ownership and management	Financial performance (firm performance); internal non-financial outcomes (firm innovation)	Stewardship theory	Quantitative	396 firms (cross-sectional)	S M	USA	Family firms are better able to promote environmentally friendly policies than non-family firms, although non-family businesses place more emphasis on this. In family businesses, this leads to improved business innovation and higher financial performance.
Dangelico (2017)	Family ownership and management	Green product development (differentiation); radicalness or market performance of green products (not significant)	-	Quantitative	188 firms (cross-sectional)	S M L	Italy	Family firms show a positive effect on the differentiation of green product developments. They show no significance in the radicality or market performance of green product.

(continued)

Appendix 2.3 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
Doluca et al. (2018)	Family ownership and management (no significant difference (but stabilizing effect over time))	Financial outcomes (stabilizing; economic performance); internal non-financial outcomes (stabilizing; environmental product/process innovation)	Stakeholder theory; institutional theory	Quantitative	633 firm observations (longitudinal 2001, 2006, 2011, 2016)	S M L	Germany	Compared to non-family firms, family firm show fewer environment-related activities and fewer beneficial product, process and organizational innovations and services at the beginning of the study. In the process of the study, a convergence process can be identified, as family businesses are catching up with non-family firms. Family firms also show less volatility in their environmental behavior.
Kashmiri and Mahajan (2010)	Family name	Financial outcomes; return on assets (performance)	-	Quantitative	130 family firms (5-year panel)	L	USA	Family firms that carry the family name compared to family businesses without the family name have higher corporate citizenship, representation of their customers' voice on the top management team, higher strategic focus (resource allocation to advertising), and better performance (higher return on investment). Performance is mediated by higher corporate citizenship and stronger strategic focus.
Kashmiri and Mahajan (2014a)	Family management; family name; ethical product-related behavior (mediator)	External non-financial outcomes; financial outcomes (increasing of the abnormal stock returns)	-	Quantitative	107 family firms (3-year panel) (1,294 product introduction announcements)	L	USA	Family firms that bear the founder's name have higher abnormal stock returns surrounding the firm's new product introductions compared to family firms without the founder's name. This effect is mediated by the ethical behavior of the firms, including the fact that they are less involved in product-related controversies.
Kashmiri and Mahajan (2014b)	Family ownership and management (combined)	Firm performance	-	Quantitative	275 firms (10-year panel)	L	USA	CSR mediates the relationship between family ownership/management and firm performance. In contrast to non-family firms, family firms do not reduce their CSR during a recession, which results in higher firm performance.
Liu et al. (2017)	Family ownership and family management (combined)	Accrual-based earnings management; real earnings management	-	Quantitative	N/A (8-year panel)	L	USA	Family firms tend to have a higher CSR performance than non-family firms and have less accrual-based earnings management and real earnings management. Furthermore, the positive effect of CSR on earnings management described in the research is attributable to family involvement.
Niehm et al. (2008)	Family firm size	Subjective business performance; objective financial performance	-	Quantitative	221 family-firm households (2-year panel)	S	USA	The size of a family firm has a positive impact on the CSR dimension “community support,” which in turn has a positive effect on the objective (financial) performance of the firm. In contrast, the CSR dimension “commitment to the community” is positively linked to forms’ subjective performance.

(continued)

Appendix 2.3 continued

Authors (year)	Antecedents	Outcomes	Theory	Method	Sample size	Sample firm size	Country of research	Key findings
O'Boyle et al. (2010)	Family involvement	Financial outcomes (financial performance)	-	Quantitative	526 family firms (cross-sectional)	S M	USA	The ethical focus of a company mediates the relationship between family involvement and financial results. The factors value congruence and participative continuance have a positive effect on ethical focus, while ownership and control and professionalism show a negative effect.
Singal (2014)	Family ownership and management (combined)	Financial performance	Instrumental theory	Quantitative	534 firms (11-year panel)	N/A	USA	Family firms have a better financial and CSR performance than non-family firms, whereby the higher CSR performance in family firms is triggered by their better financial performance. Family firms continue to invest more in mitigating concerns than in positive initiatives to build strengths in CSR performance. Family firms' higher CSR inclination further has a positive impact on their future financial performance.
Wu et al. (2014)	Family ownership	Costs of capital	-	Quantitative	482 firms (4-year panel)	N/A	Taiwan	Firms with CSR awards have lower cost of capital. Family firms with CSR have lower cost of capital than do non-family firms with CSR.
Zientara (2017)	SEW	Family firm reputation	SEW	Theoretical	-	-	-	Due to SEW orientation, family firms use an instrumental and selective CSR approach rather than a holistic or normative one. This often leads to socially responsible behavior towards external stakeholders, but irresponsible behavior towards internal stakeholders. Family firms pick those CSR initiatives that serve their own interests, like improving the firm's image and reputation.

Notes: N/A = Not available; S = Small; M = Medium; L = Large (listed

Appendix 3.1 Measurement of corporate social responsibility (chapter 3)

Question: *Please indicate to what extent you agree with the following statements: (1 = strongly disagree; 5 = strongly agree)*

Employee-related corporate social responsibility

1. Our company encourages its employees to participate to voluntary activities.
2. Our company policies encourage the employees to develop their skills and careers.
3. The management of our company primarily concerns with employees' needs and wants.
4. Our company implements flexible policies to provide a good work and life balance for its employees.
5. The managerial decisions related with employees are usually fair.
6. Our company supports employees who want to acquire additional education.

Customer-related corporate social responsibility

7. Our company provides full and accurate information about its products to its customers.
8. Customer satisfaction is highly important for our company.

Society-related corporate social responsibility

9. Our company participates to the activities which aim to protect and improve the quality of the natural environment.
10. Our company makes investments to create a better life for future generations.
11. Our company implements special programs to minimize its negative impact on the natural environment.
12. Our company targets a sustainable growth which considers to the future generations.
13. Our company supports the non-governmental organizations working in the problematic areas.
14. Our company contributes to the campaigns and projects that promote the well-being of the society.

source: Turker (2009)

Appendix 3.2 Measurement of familiness (chapter 3)

Question: *Please indicate to what extent you agree with the following statements: (1 = strongly disagree; 5 = strongly agree)*

In our family business we take great care …

1. that only family members are owners of the firm.
2. that the firm's management consist exclusively of family members.
3. that several family members are involved in the firm's management.
4. that family control and independence are maintained.
5. that family members working in the company have at least the same qualifications as non-family employees.
6. that family members working in the company show at least the same performance as non-family employees.
7. that family member working in the company know about important events in the company.
8. that all family members working in the company are also able to make use of informal communications.
9. to think in generations.
10. to avoid selling the company to non-family members.
11. that the company is passed on to the next generation.
12. that family members working in the company are confident for the employees.
13. to have a reliable permanent staff.
14. to secure our employees' jobs also in times of crisis.
15. to safeguard furthering and developing our employees.
16. that the family members working in the company have a lively exchange with non-family employees.
17. that the family gives a face to the company.
18. that our family business is socially active in the community/region.
19. to always market our family business as such.
20. to convey the history of our company to our employees.

source: Frank et al. (2017)

Appendix 3.3 Measurements of organizational identity strength (chapter 3)

Question: *Please indicate to what extent you agree with the following statements:*
(1 = strongly disagree; 5 = strongly agree)

1. Our employees have a sense of pride in the goals of this company.
2. Our employees think that this company occupies a unique place in its market.
3. Our employees know the history of this company.
4. This company seems to have no feeling for its history. *(reverse scale)*
5. This company has no well-defined objectives. *(reverse scale)*
6. When our employees talk about this company, they usually do so with great enthusiasm.

source: Milliken (1990) adapted by Cole and Bruch (2006)

Appendix 3.4 Measurements of competitiveness (chapter 3)

Question: *Please assess the following aspects of your company compared to your main competitor:*
(1 = much worse; 5 = much better)

1. The economic success is …
2. The company image is …
3. The ability to innovate is …
4. The job security is …
5. The wage level is …
6. The capital endowment is …

source: self-developed

Appendix 4.1 Measurement of digital innovation (chapter 4)

Question: *Please indicate to what extent you agree with the following statements: (1 = strongly disagree; 5 = strongly agree)*

Digital products and services
1. Our company offers digital services or products.
2. Our company leverages digital technologies to complement its existing offerings.
3. Our company enriches its current products or services with digital technologies.
4. Our company adapts its business model according to digital, commercial opportunities.

Digital operations

5. Our company has digitized processes along the value chain.
6. Our company continuously optimizes and streamlines operation processes based on automated analytics.
7. Our company provides tools for digital collaboration.
8. Our company optimizes its operation processes within the ecosystem by securing data compatibility.

source: Groberg et al. (2016)

Appendix 4.2 Measurement of absorptive capacity (chapter 4)

Question: *Please indicate to what extent you agree with the following statements: (1 = strongly disagree; 5 = strongly agree)*

1. We have frequent interactions with other in the industry to acquire new knowledge related to product development.
2. Employees are engaged in cross-functional work.
3. We collect information through informal means (e. g. lunch or social gatherings with customers and suppliers, trade partners and other stakeholders).
4. We are hardly in touch with other firms and stakeholders in the industry. *(reverse scale)*
5. We organize special meetings with customers, suppliers, or third parties to acquire new knowledge on process, product, logistics and distribution related innovation.
6. We operations regularly approach third parties outside the industry (such as professional organizations) to gather information.
7. We are slow to recognize shifts in the environment (e. g. competition, regulation and demography). *(reverse scale)*
8. We are able to quickly identify new opportunities to meet our customer needs.
9. We quickly analyze and interpret changing market demands.
10. We regularly consider the consequences of changing market demands in terms of new products.
11. Employees record and store newly acquired knowledge for future reference.
12. We quickly recognize the usefulness of new external knowledge to existing knowledge.
13. Our employees hardly share practical experiences with each other. *(reverse scale)*
14. We laboriously grasp the opportunities from new external knowledge. *(reverse scale)*
15. Departments periodically meet to discuss consequences of new product development and other process or organization innovation.
16. It is clearly known how activities within and between departments should be performed.
17. We are less responsive to customer complaints. *(reverse scale)*
18. We have a clear division of roles and responsibilities.
19. We constantly consider how to better exploit knowledge.
20. We have difficulty implementing new products and new processes. *(reverse scale)*
21. Our employees speak a common language regarding our innovation practices.

source: Jansen et al. (2005) adapted by Fernhaber and Patel (2012)

Appendix 4.3 Measurement of corporate social responsibility (chapter 4)

Question: *Please indicate to what extent you agree with the following statements: (1 = strongly disagree; 5 = strongly agree)*

Community-oriented corporate social responsibility

1. Our company invests in humanitarian projects in poor countries.
2. Our company provides financial support for humanitarian causes and charities.
3. Our company contributes to improving the well-being of populations in the areas where it operates by providing help for schools, sporting events, etc.
4. Our company invests in the health of populations of developing countries (e. g., vaccination, fight against AIDS).
5. Our company helped NGOs and similar associations such as UNICEF, the Red Cross, and emergency medical services for the poor.
6. Our company gives financial assistance to the poor and deprived in the areas where it operates.
7. Our company assist populations and local residents in case of natural disasters and/or CSR.

Employee-oriented corporate social responsibility

8. Our company implements policies that improve the well-being of its employees at work.
9. Our company promotes the safety and health of its employees
10. Our company avoids all forms of discrimination (age, sex, handicap, ethnic or religious origin) in its recruitment and promotion policies.
11. Our company supports equal opportunities at work (e. g., gender equality policies).
12. Our company encourages employees' diversity in the workplace.
13. Our company helps its employees in case of hardship (e. g., medical care, social assistance).
14. Our company supports its employees' work and life balance (e. g., flextime, part-time work, flexible working, arrangements).

Customer-oriented corporate social responsibility

15. Our company checks the quality of goods and/or services provided to customers.
16. Our company is helpful to customers and advises them about its products and/or services.
17. Our company respect its commitments to customers.
18. Our company invests in innovations which are to the advantage of customers.
19. Our company ensures that its products and/or services are accessible for all its customers.

source: El Akremi et al. (2018)

Appendix 5.1 Measurements of socioemotional wealth (chapter 5)

Question: *Please indicate to what extent you agree with the following statements: (1 = strongly disagree; 5 = strongly agree)*

Renewal of family bonds through dynastic succession
1. Continuing the family legacy and tradition is an important goal for my family business.
2. Family owners are less likely to evaluate their investment on a short-term basis.
3. Successful business transfer to the next generation is an important goal for family members.

Emotional attachment of family members
4. In my family business, the emotional bonds between family members are very strong.
5. Strong emotional ties between family members help us maintain a positive self-concept.
6. In my family business, family members feel warmth for each other.

Identification of family members with the firm
7. Family members have a strong sense of belonging to my family business.
8. My family business has a great deal of personal meaning for family members.
9. Family members are proud to tell others that we are part of the family business.

source: Hauck et al. (2016)

Appendix 5.2 Measurements of performance (chapter 5)

Question: *Please assess the current business situation of your company based on the following characteristics: (1 = strongly disagree; 5 = strongly agree)*

1. Turnover.
2. Profits.
3. Cash flow.

source: Covin et al. (1990)