CEOs' Personality and Abilities matter:
Their Influence on SME Behavior and Performance

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Hard (Vorarlberg), 2nd August 2016 Dominik Burger

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List of Abbreviations

α	alpha (Cronbach's alpha; reliability coefficient)
ANOVA	analysis of variance
AVE	average variance extracted
β	beta (standardized regression coefficient)
BLRI	Barrett-Lennard Relationship Inventory
$\chi 2$	chi-square value observed
CEO	chief executive officer
cf.	confer (compare)
CFI	comparative fit index
CI	confidence interval
C.I.	competitive intensity
CR	composite reliability
df	degrees of freedom
ed.	editor
edn	edition
eds	editors
e.g.	exempli gratia (for example)
et al.	et alii/aliae/alia (and others)
F	F value observed
H	hypothesis
i.e.	id est (in other words; that is)
IRI	Interpersonal Reactivity Index
LL	lower limit
M	mean value
MANCOVA	multivariate analysis of covariance
MANOVA	multivariate analysis of variance
N	number of observations (sample size)
n/a	not applicable/available
n.s.	not specified
OLS	ordinary least squares
p	probability (significance level)
p.	page

PIMS	Profit Impact of Market Strategy
PLS	partial least squares
pp.	pages
r	Pearson’s correlation
R^2	coefficient of determination
RESET	regression equation specification error test
RFQ	regulatory focus questionnaire
RMSEA	root mean square error of approximation
RQ	research question
RSQS	Retail Service Quality Scale
SD	standard deviation
SE	standard error
SEM	structural equation modeling
SERVQUAL	service quality
SFSO	Swiss Federal Statistical Office
SJR	SMImago Journal Rank
SLFS	Swiss Labor Force Survey done by the SFSO
SLR	systematic literature review
SME	small and/or medium-sized enterprise
SOCO	Selling Orientation-Customer Orientation
SSCI	Social Science Citation Index
STATENT	“Statistique Structurelle des Entreprises” (Structural Business Statistics of the SFSO)
T	T value observed
UL	upper limit
U.S.	United States of America
VHB	“Verband der Hochschullehrer für Betriebswirtschaft” (German Academic Association for Business Research)
VHB-JOURQUAL	journal ranking of the VHB based on quality assessments of their members
VIF	variance inflation factor
vs.	versus
Z	Z value observed

Abstract

This dissertation including three distinct papers investigates what roles personal characteristics and abilities of chief executive officers (CEOs) play in the exploration, exploitation, and performance of small and medium-sized enterprises (SMEs). The dissertation thereby focuses on one aspect of CEOs' characteristics, namely, their regulatory focus (promotion focus and prevention focus), and one interpersonal ability of CEOs, namely, their empathy.

The first paper investigated how CEOs' promotion and prevention focus affect their firm's exploration and exploitation. The analysis of 152 survey responses from CEOs in Switzerland revealed that CEOs' promotion focus positively affects the firm's exploration and exploitation, while CEOs' prevention focus is negatively associated with the firm's exploration but not significantly related to its exploitation. The positive relationships between CEOs' promotion focus and the firm's exploration/exploitation activities are enhanced when competition is intense.

The second paper developed a research agenda on CEOs' empathy with customers based on a systematic review of 36 empirical journal articles on salesperson empathy. Amongst others, the paper encourages scholars to analyze whether CEOs' empathy mediates the link between their regulatory focus and the firm's performance, which was addressed by the third paper of this dissertation.

The third paper analyzed how CEOs' regulatory focus relates to firm performance through empathy. The analysis of 133 survey responses from CEOs in Switzerland revealed that CEOs' empathy mediates the positive relationship between their promotion focus and the firm's performance. CEOs' prevention focus is negatively related to empathy, and CEOs' empathy does not mediate the negative relationship between their prevention focus and the firm's performance.

Summing up, the dissertation shows that CEOs' regulatory focus, especially their promotion focus, influences the firm's exploration and exploitation. In addition, the dissertation reveals that CEOs' promotion focus affects the firm's performance, and that this effect is mediated by their empathy for customers. As such, CEOs' personal characteristics and abilities play an important role in the exploration, exploitation, and performance of SMEs. In other words, CEOs' personality and abilities matter and influence SMEs' behavior and performance.

Zusammenfassung

Die vorliegende, drei Beiträge umfassende Doktorarbeit untersucht, welche Rolle Persönlichkeitseigenschaften und Kompetenzen von Geschäftsführern (CEOs) bei der Exploration, Exploitation und Performance von Klein- und Mittelunternehmen (KMU) spielen. Der Fokus liegt auf der Persönlichkeitseigenschaft des regulatorischen Fokus (Annäherungs- und Vermeidungsfokus) und interpersonalen Fähigkeit der Empathie.

Im ersten Artikel wurde untersucht, wie sich der Annäherungs- und Vermeidungsfokus von CEOs auf die Exploration und Exploitation des Unternehmens auswirken. Die Auswertung von 152 Umfrageantworten von Schweizer CEOs ergab, dass der Annäherungsfokus von CEOs die Exploration und Exploitation des Unternehmens positiv beeinflusst. Der Vermeidungsfokus von CEOs wirkt sich auf die Exploration des Unternehmens negativ aus, hat jedoch keinen Einfluss auf dessen Exploitation. Der positive Zusammenhang zwischen dem Annäherungsfokus und der Exploration/Exploitation wird bei intensivem Wettbewerb verstärkt.

Der zweite Artikel entwickelte eine Forschungsagenda für die Empathie von CEOs gegenüber ihren Kunden – basierend auf einer systematischen Analyse von 36 empirischen Zeitschriftenartikeln zur Verkäuferempathie. Der Beitrag empfiehlt unter anderem zu prüfen, ob die Empathie der CEOs den Zusammenhang zwischen ihrem regulatorischen Fokus und der Unternehmensperformance vermittelt.

Im dritten Artikel wurde demnach untersucht, wie der regulatorische Fokus von CEOs über ihre Empathie auf die Unternehmensperformance wirkt. Die Auswertung von 133 Umfrageantworten von Schweizer CEOs ergab, dass die Empathie der CEOs den positiven Zusammenhang zwischen ihrem Annäherungsfokus und der Unternehmensperformance vermittelt. Zwischen dem Vermeidungsfokus von CEOs und ihrer Empathie sowie der Unternehmensperformance besteht ein negativer Zusammenhang. Letzter wird durch die Empathie von CEOs nicht erklärt.

Die Ergebnisse zeigen, dass der regulatorische Fokus von CEOs, insbesondere ihr Annäherungsfokus, die Exploration und Exploitation des Unternehmens beeinflusst. Die Resultate zeigen zudem, dass der Annäherungsfokus von CEOs auf die Unternehmensperformance wirkt und dass dieser Effekt von ihrer Empathie vermittelt wird. Folglich spielen Charaktereigenschaften und Fähigkeiten von CEOs eine bedeutende Rolle in der Exploration, Exploitation und Performance von KMU.

1. Introduction

1.1. Topic and Structure of the Cumulative Dissertation

The author of this cumulative dissertation has been working for the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen. In order to contribute to entrepreneurship theory and small and medium-sized enterprises (SMEs), the Institute deals with, among others, corporate entrepreneurship, customer-integrated innovation management, and managing SMEs. Regarding the latter, Fueglistaller et al. (2013) and Fueglistaller and Burger (2016) argue that the attitude (i.e., identity and values) and willingness of an entrepreneur or chief executive officer (CEO) determine his/her abilities and actions, such as reflexive cognition (Rosenberg, 1990), communication, and decision-making, which in turn can influence the behavior and performance of SMEs.

In this regard, this cumulative dissertation investigates what roles personal characteristics and abilities of CEOs play in the exploration, exploitation, and performance of SMEs. In SMEs, CEOs possess high degrees of managerial discretion (Finkelstein and Hambrick, 1990) and tend to have direct and frequent contact with employees and managers on all levels (Bierly and Daly, 2007; Man et al., 2002). As such, CEOs' personal characteristics, such as their attitudes, demographics, and personality, might strongly affect the firm's exploration (e.g., developing new products) and exploitation (e.g., cost-cutting activities) (Lubatkin et al., 2006) through decision-making and action (Hambrick and Mason, 1984). SME CEOs not only frequently interact with employees but also with customers (cf. Fueglistaller and Halter, 2006; Pfohl, 2006). In the marketing and sales function, for example, CEOs negotiate with or even sell to customers (cf. Kazanjian, 1988; Müller et al., 2012). Marketing and sales have also been shown to be an important driver of SME performance (e.g., Peterson and Lill, 1981). As such, CEOs' abilities, especially their interpersonal skills, can strongly contribute to the firm's performance (cf. Baron and Markman, 2000, 2003).

This dissertation focuses on one aspect of CEOs' characteristics, namely, their regulatory focus, and one interpersonal ability of CEOs, namely, their empathy. In order to explore the roles of CEOs' regulatory focus and empathy in the exploration, exploitation, and performance of SMEs, the dissertation including three distinct papers is structured as follows: Chapter 1 introduces the relevant terms and definitions and presents the research gaps and questions. Chapter 2 provides an overview of the three dissertation papers. The Chapters 3, 4, and 5 are dedicated to each of the papers. Chapter 6 revisits and answers the dissertation's research questions, discusses this dissertation's theoretical and practical contributions, limitations, and related avenues for future research, and draws the final conclusion. Table 1 depicts the structure of the cumulative dissertation.

Table 1. Structure of the Cumulative Dissertation.

Chapter 1	Introduction • Topic and Structure of the Cumulative Dissertation • Terms and Definitions − Small and Medium-Sized Enterprises (SMEs) − CEOs' Regulatory Focus and Empathy − SMEs' Exploration, Exploitation, and Performance • Research Gaps and Questions
Chapter 2	Overview of the three Dissertation Papers • Methodological and Analytical Approach • Key Characteristics of the three Papers
Chapter 3	Exploration and Exploitation in Established SMEs: The Effect of CEOs' Regulatory Focus (Paper 1)
Chapter 4	CEO-Customer Interactions in SMEs: A Research Agenda on Antecedents, Outcomes, and Moderators of CEO Empathy (Paper 2)
Chapter 5	CEO Regulatory Focus and SME Performance: The Mediating Role of Empathy (Paper 3)
Chapter 6	Concluding Chapter • Revisiting the Research Questions of the Cumulative Dissertation • Theoretical Contributions • Practical Contributions • Limitations and Future Research • Conclusion

1.2. Terms and Definitions

1.2.1. Small and Medium-Sized Enterprises (SMEs)

In 2013, 99.8% of the Swiss privately held firms represented SMEs, which had more than two thirds of the employees on their payrolls (Fueglistaller et al., 2016). However, despite their economic importance, it is particularly SMEs' collaboration with large firms that constitutes the backbone of the economy (Fueglistaller and Halter, 2006).

In SMEs, for example, low levels of hierarchies are common (cf. Kammerlander et al., 2015). The CEO possesses high degrees of managerial discretion (Finkelstein and Hambrick, 1990) and usually has direct contact with workers and managers (Bierly and Daly, 2007; Man et al., 2002). Furthermore, the CEO tends to interact with customers on a regular basis and knows their customers intimately (cf. Fueglistaller and Halter, 2006; Klemz and Boshoff, 2001; Pfohl, 2006).

With regard to quantitative criteria, SMEs are defined, for example, by the number of employees, turnover, and balance sheet total (cf. Fueglistaller et al., 2016). For the purpose of this cumulative dissertation, SMEs are defined as firms with up to 500 employees (Dickson et al., 2006).[1]

1.2.2. CEOs' Regulatory Focus and Empathy

1.2.2.1. CEOs' Regulatory Focus

Regulatory focus theory (Higgins, 1997; Higgins et al., 2001) intends to explain how individuals differ in their goal-directed behavior and underlying motivations (cf. Kammerlander et al., 2015). "Chronic regulatory focus" refers to a stable personality trait (Higgins, 1989; Hmieleski and Baron, 2008) that is formed through individual experiences (Higgins and Silberman, 1998). More specifically, an individual's history of success with a certain regulatory behavioral strategy orients him/her toward using that strategy to achieve future goals (Higgins et al., 2001; Kammerlander et al., 2015). Goal-directed behavior is regulated by two distinct motivational dimensions (Higgins et al., 2001), namely, a promotion focus and prevention focus.

Individuals with a high promotion focus are motivated by the need for growth and advancement (Crowe and Higgins, 1997; Kammerlander et al., 2015) and thus aim to maximize achievements (Brockner et al., 2004; Johnson et al., 2015). The presence of achievements produces positive feelings of joy among promotion-focused individuals, whereas absence of achievements causes negative feelings of sadness (Idson et al., 2000; Kammerlander et al., 2015). Furthermore, individuals with a high promotion focus tend to have an independent self-view (Higgins and Spiegel, 2004; Keller and

[1] Defining SMEs as firms with up to 500 employees is due to the author's endeavor to get his work published in academic journals mainly located in the United States (U.S.), where a threshold of 500 employees is usually applied (cf. U.S. Small Business Administration, 2016). In contrast, for example, the European Commission (2003) recommends a cap of 249 employees (see also Fueglistaller et al., 2016). Regarding this, the vast majority of the SMEs sampled in this cumulative dissertation employ less than 250 workers (see Tables 6 and 21).

Pfattheicher, 2013), i.e., they define themselves by their personal goals or hopes and view their selves as being distinct and separate from others (Cross et al., 2000; Lee et al., 2000; Uskul et al., 2009). In contrast, individuals with a high prevention focus are motivated by the need for security and responsibility (Crowe and Higgins, 1997; Kammerlander et al., 2015) and thus aim to prevent potential failures (Brockner et al., 2004; Johnson et al., 2015). The absence of failures produces positive feelings of calmness among prevention-focused individuals, whereas presence of failure causes negative feelings of tension (Idson et al., 2000; Kammerlander et al., 2015). Moreover, individuals with a high prevention focus tend to have an interdependent self-view (Higgins and Spiegel, 2004; Keller and Pfattheicher, 2013), i.e., they define themselves by their social responsibilities or obligations and thus view their selves as being connected to others (Cross et al., 2000; Lee et al., 2000; Uskul et al., 2009). Table 2 summarizes the two dimensions of regulatory focus.

Table 2. Dimensions of Regulatory Focus.

Dimension	Description
Promotion focus	• Individuals with a high promotion focus … − tend to have an independent self-view, − are driven by the need for growth and advancement, and thus − maximize achievements. • Presence of achievements creates positive feelings (joy), absence of achievements leads to negative feelings (sadness).
Prevention focus	• Individuals with a high prevention focus … − tend to have an interdependent self-view, − are driven by the need for security and responsibility, and thus − aim to avoid failures. • Absence of failures creates positive feelings (calmness), presence of failures leads to negative feelings (tension).

Sources: Brockner et al. (2004), Cross et al. (2000), Crowe and Higgins (1997), Higgins and Spiegel (2004), Idson et al. (2000), Johnson et al. (2015), Kammerlander et al. (2015), Keller and Pfattheicher (2013), Lee et al. (2000), and Uskul et al. (2009).

Individuals' promotion focus and prevention focus constitute two orthogonal motivational systems (Higgins et al., 2001). Studies conducted by Higgins et al. (2001) reveal a low correlation between promotion and prevention focus, suggesting that the two dimensions of regulatory focus are mutually independent. As such, individuals can have different combinations of high or low degrees of promotion and prevention focus (e.g., Higgins and Silberman, 1998; Idson et al., 2000; Kammerlander et al., 2015; Markovits, 2013). In a professional context, for example, CEOs can exhibit high levels of promotion and prevention focus, such as when attracting new customers while at the same time surveying existing customers' satisfaction (cf. Fueglistaller et al., 2014, 2015; Lubatkin et al., 2006).

1.2.2.2. CEOs' Empathy

Research on interindividual differences in social interactions widely describe empathy as a personality trait or stable ability, which is either cognitive or emotional and either unidimensional or multidimensional (Buchheimer, 1963; Duan and Hill, 1996; Wieseke et al., 2012). Cognitive empathy refers to an individual's intellectual understanding of another's internal state (Fueglistaller et al., 2014, 2015; Hogan, 1969; Wieseke et al., 2012). The underlying efforts to understand another's thoughts or feelings are generally labeled as "perspective taking" (Bernstein and Davis, 1982; Dymond, 1949; Woltin et al., 2011). Individuals high in perspective taking are able to see others' points of view, to anticipate the reactions of others, and to address others' opinions or needs (Devoldre et al., 2010; Wieseke et al., 2012). In contrast, emotional empathy refers to an individual's affective response to another's emotional situation (Eisenberg and Strayer, 1987; Fueglistaller et al., 2014, 2015; Wieseke et al., 2012). Affective responses to another's welfare are commonly labeled as "empathic concern" (Woltin et al., 2011). Individuals high in empathic concern are able to show apprehensiveness for the perceived welfare of others, resulting in helping behaviors (Coke et al., 1978; Wieseke et al., 2012).[2] Table 3 contains a summary of the two dimensions of empathy.[3]

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[2] Empathic concern differs from emotional contagion in that the latter refers to an individual experiencing another's emotions (Gladstein, 1983), which may result in automatic synchronization of facial expressions or movements with those of the other (Hatfield et al., 1994). As such, emotional contagion constitutes a simple expression of emotion sharing (Decety and Jackson, 2004) that takes the form of identification rather than that of empathy with others (De Waal, 1996).

[3] Only few scholars (e.g., Stanghellini and Rosfort, 2013) refer to a further dimension, namely, conative empathy, which is based on an individual's personal experiences and consists in a reflective understanding of the other by analogy (Galbusera and Fellin, 2014): "I look inside myself for stored experiences to make them resonate with those of the other" (Stanghellini and Rosfort, 2013: 342).

Table 3. Dimensions of Empathy.

Dimension	Description
Cognitive empathy (Perspective taking)	• Individuals high in cognitive empathy are able to … − take others' points of view, − foresee the reactions of others, and − address others' needs or opinions.
Emotional empathy (Empathic concern)	• Individuals high in emotional empathy are able to … − affectively respond to others' emotions, and − show concern for the perceived welfare of others.

Sources: Bernstein and Davis (1982), Coke et al. (1978), Devoldre et al. (2010), Dymond (1949), Eisenberg and Strayer (1987), Fueglistaller et al. (2014, 2015), Hogan (1969), Wieseke et al. (2012), and Woltin et al. (2011).

Although conceptually distinct, perspective taking and empathic concern constitute two interrelated empathy dimensions (Dietz and Kleinlogel, 2014; Duan and Hill, 1996). Studies conducted by Davis (1980, 1983) reveal a positive correlation between perspective taking and empathic concern, suggesting that cognitive and emotional empathy are interdependent. As such, taking another's perspective may lead to an increased ability to show concern for the other (Coke et al., 1978).

Scholars increasingly regard empathy as a multidimensional construct including cognitive and emotional components (Decety and Jackson, 2004; Kerem et al., 2001; Wieseke et al., 2012).[4] Hence, for the purpose of this cumulative dissertation, an SME CEO's empathy is defined as his/her ability to understand and emotionally respond to a customer's thoughts and feelings in face-to-face interactions (e.g., negotiations and sales encounters) (Davis, 1983). As such, CEO empathy is understood as containing a cognitive dimension, namely, perspective taking, and an emotional dimension, namely, empathic concern (Wieseke et al., 2012).

Defining CEO empathy as an ability implies that empathy develops through social interactions and increases with age (Decety and Jackson, 2004; Gladstein, 1983; Mead, 1934). Regarding non-overt characteristics, for example, both the independent self-view, resulting from a promotion focus, and the interdependent self-view, resulting

[4] For further and detailed descriptions of empathy, it is referred to Duan and Hill (1996) and Gladstein (1983) who provide comprehensive reviews of the literature on empathy from social and developmental psychology, counseling, and psychotherapy. Those interested in the neurological literature on empathy may refer to Decety and Jackson (2004) and Preston and De Waal (2002).

from a prevention focus, enable perspective taking and empathic concern (Trautwein et al., 2014), which is explained in more detail in Section 5.3.3.[5]

1.2.3. SMEs' Exploration, Exploitation, and Performance

The extant literature in the fields of management and entrepreneurship emphasizes the need for CEOs to engage in both exploration and exploitation (e.g., Gedajlovic et al., 2012; Kammerlander et al., 2015; Raisch et al., 2009). Exploration is associated with "search, experimentation, and variation," whereas exploitation refers to "productivity and efficiency through choice, execution, and variance reduction" (Lavie et al., 2010: 110). Exploratory firm activities include developing new products, attracting new customers, or venturing into new markets, while quality-improving activities and attempts to increase the level of automation constitute examples of exploitative firm activities (Lubatkin et al., 2006). This cumulative dissertation follows extant research (Knott, 2002; Lavie et al., 2010) in assuming that exploration and exploitation are complementary firm activities. Scholars have theorized and empirically found that engaging in both exploration and exploitation positively affects firm performance (e.g., He and Wong, 2004). On the one hand, exploratory activities are future-oriented and open up new business opportunities (Raisch and Birkinshaw, 2008). On the other hand, exploitative activities are important to harvest short-term efficiency gains (March, 1991).

Attempts to simultaneously engage in exploratory and exploitative firm activities create substantial challenges (Kammerlander et al., 2015), as the two sets of activities are distinct and require different knowledge and skills (March, 1991). The challenges related to engaging in exploration as well as exploitation are particularly salient for SMEs (Lubatkin et al., 2006), as SMEs often lack the resources needed to engage in "structural ambidexterity," i.e., to build separate units for the pursuit of explorative and exploitative activities (e.g., O'Reilly and Tushman, 2004). As such, in order to be able to explore and exploit at the same time, SMEs might engage in leadership-based contextual ambidexterity (Lubatkin et al., 2006; Patel et al., 2013), which refers to key decision makers' "behavioral capacity to simultaneously demonstrate alignment and

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[5] Such a notion is in line with Fueglistaller et al. (2013) and Fueglistaller and Burger (2016) who argue that an entrepreneur's or CEO's attitude (i.e., identity and values) and willingness determine his/her cognition and actions, such as reflexive cognition (Rosenberg, 1990), communication, and decision-making.

adaptability" (Gibson and Birkinshaw, 2004: 209), and which is likely to be influenced by CEO personality.

1.3. Research Gaps and Questions

This cumulative dissertation strives to address specific research gaps and questions. First, as mentioned above, engaging in both exploration and exploitation is generally challenging for firms (Lavie et al., 2010), particularly for resource-constrained SMEs (e.g., Rothaermel and Alexandre, 2009). Therefore, researchers have recently studied environment-, firm-, and top management team-level drivers of firms' simultaneous pursuit of explorative and exploitative activities (e.g., Gedajlovic et al., 2012; Hill and Birkinshaw, 2014; Lavie et al., 2010). However, determinants that relate to the personality of the CEO are still poorly understood (e.g., Gibson and Birkinshaw, 2004; Raisch et al., 2009). As a CEO's regulatory focus affects his/her preferred strategies for approaching goals (cf. Wallace et al., 2010), it is likely to also affect the firm's exploration and exploitation. This influence depends on the environment (Lanaj et al., 2012), in particular the competition in the firm's market, as it alters CEOs' perceptions of how well they achieve their goals. Therefore, the first paper of this dissertation seeks to examine the following research questions: *How does the CEO's regulatory focus affect the respective firm's exploration and exploitation? How does competitive intensity moderate these relationships?*

Second, the relevance of empathy has been recognized in various research fields (cf. Homburg et al., 2009). In the fields of marketing, sales, and service, salesperson empathy has been intensively investigated (e.g., Agnihotri and Krush, 2015; McBane, 1995; Wilder et al., 2014). Recently, scholars have begun studying entrepreneurs' and top managers' empathy in the SME context. Camuffo et al. (2012) provided evidence that entrepreneurs' empathy increases the firm's performance. Goel et al. (2013) found that CEOs' empathy enhances the socio-emotional wealth of their family-owned firms. However, more empirical research is still needed, as it is not yet understood how CEOs' empathy affects customer emotions, decision quality, or firm performance, and when these effects are of greatest magnitude. Furthermore, it is not yet known which factors predict CEOs' empathy, such as their personal characteristics and professional experience. In order to direct empathy research in the SME context, the second paper aims to develop a research agenda on the CEO's empathy with customers based on a systematic review of the antecedents, outcomes, and moderators of salesperson empathy. The research agenda also provides the basis for the third paper of this dissertation. The following research questions are addressed by the second paper: *What are the antecedents, outcomes, and moderators of the salesperson's empathy? What future directions can be derived for the research on the SME CEO's empathy with customers?*

Third, extant research reveals that CEOs' regulatory foci affect the performance of their SMEs, and that these relationships are moderated by environmental dynamism (Wallace et al., 2010). However, previous research has not examined any mediating mechanisms in the link between CEOs' regulatory focus and the firm's performance, such as their interactions with and behavior toward customers as one of the firm's major stakeholders. As such, it is not yet known through which mechanisms CEOs' regulatory focus affects the performance of their SMEs. The third paper addresses this issue by examining the mechanism of how CEOs' regulatory focus influences firm performance. As suggested by the second paper of this dissertation, CEO empathy is introduced as a mediator in the regulatory focus-firm performance link. The third paper aims to examine the following research questions: *How is the CEO's regulatory focus related to his/her empathy? How does the CEO's empathy influence the respective firm's performance? Does the CEO's empathy mediate the relationship between his/her regulatory focus and the respective firm's performance?*

Against the background of the above presented research gaps and questions for each of the papers, this dissertation explores the following overall research question: *What roles do the CEO's regulatory focus and empathy play in the exploration, exploitation, and performance of SMEs?* Table 4 gives an overview of the research questions of the cumulative dissertation.

Table 4. Research Questions of the Cumulative Dissertation.

Overall Research Question (RQ): *What roles do the CEO's regulatory focus and empathy play in the exploration, exploitation, and performance of SMEs?*	
Paper 1: Exploration and Exploitation in Established SMEs: The Effect of CEOs' Regulatory Focus (Chapter 3)	
RQ 1.	*How does the CEO's regulatory focus affect the respective firm's exploration and exploitation?*
RQ 2.	*How does competitive intensity moderate these relationships?*
Paper 2: CEO-Customer Interactions in SMEs: A Research Agenda on Antecedents, Outcomes, and Moderators of CEO Empathy (Chapter 4)	
RQ 3.	*What are the antecedents, outcomes, and moderators of the salesperson's empathy?*
RQ 4.	*What future directions can be derived for the research on the SME CEO's empathy with customers?*
Paper 3: CEO Regulatory Focus and SME Performance: The Mediating Role of Empathy (Chapter 5)	
RQ 5.	*How is the CEO's regulatory focus related to his/her empathy?*
RQ 6.	*How does the CEO's empathy influence the respective firm's performance?*
RQ 7.	*Does the CEO's empathy mediate the relationship between his/her regulatory focus and the respective firm's performance?*

2. Overview of the three Dissertation Papers

2.1. Methodological and Analytical Approach

With regard to the research questions 1 and 2 of this cumulative dissertation, the first paper hypothesizes that CEOs' regulatory focus affects the respective firm's exploration and exploitation, and that these effects are moderated by competitive intensity. The paper is based on survey responses provided by 153 CEOs of Swiss SMEs. The survey data covered, amongst others, CEO characteristics, firm characteristics and performance, and firms' behavior (exploration and exploitation). The response rate of 14.8% is comparable to those found in studies using similar samples of entrepreneurs and top executives (e.g., Patel et al., 2013; Zellweger et al., 2012). To test the hypotheses, the paper employs multivariate regression models built on ordinary least squares (OLS). Furthermore, it conducts numerous robustness tests to scrutinize the findings from the regressions. In a post-hoc test, the paper sheds light on exploration and exploitation for CEOs with different combinations of promotion and prevention focus (Lanaj et al., 2012), thereby applying contrast analysis. For further details about the methodological and analytical approach, it is referred to Sections 3.5 and 3.6.

Regarding the research questions 3 and 4 of this dissertation, the second paper conducts a systematic review of 36 empirical journal articles on salespersons' empathy in order to derive a research agenda on antecedents, outcomes, and moderators of SME CEOs' empathy with customers. A systematic literature review (SLR) (e.g., David and Han, 2004; Newbert, 2007) differs from a traditional narrative review by being more explicit in the selection and evaluation of studies (cf. David and Han, 2004). In conducting the SLR, the paper searches the databases ABI/INFORM Complete (ABI) and Business Source Premier (EBSCO) by means of a Boolean keyword search (see, e.g., Henry et al., 2016; Pittaway and Cope, 2007). To review the searched articles on salesperson empathy, the paper uses a thematic reading guide with an appropriate coding system (Henry et al., 2016). Further and detailed information about the SLR of salesperson empathy is contained in Section 4.4.

With respect to the research questions 5–7 of this dissertation, the third paper hypothesizes that CEOs' empathy mediates the relationship between their promotion and prevention focus and the performance of their firms. The paper relies on survey responses provided by 133 CEOs of Swiss SMEs. The survey data included CEO characteristics and abilities, firm characteristics and performance, as well as other factors. The response rate of 12.3% is in line with other studies targeting CEOs and entrepreneurs (e.g., Hmieleski et al., 2010, 2012; Kammerlander et al., 2015). In order to test the main effects, the paper calculates multivariate regressions based on OLS. To test the mediating effects of CEO empathy, the paper employs a simple indirect effects approach (cf. Hmieleski et al., 2010, 2012), thereby using statistical methods provided by Preacher and Hayes (2004, 2008). The paper also conducts several robustness checks to scrutinize the regression results. For more details about data collection and data analysis, it is referred to Sections 5.4 and 5.5.

Figure 1 shows the theoretical models of the three dissertation papers, thereby illustrating the relationships of the theoretical constructs of the cumulative dissertation. As indicated, the constructs can be grouped into characteristics, abilities/behaviors, and outcomes/performance. The underlying assumption is that personal characteristics relate to individual/firm abilities and behaviors, which ultimately contribute to customer interaction or performance related outcomes. This is in alignment with, for example, Fueglistaller et al. (2013) who argue, amongst others, that an entrepreneur's or CEO's attitude influences his/her actions, such as communication with customers and decision-making, which in turn can contribute to customer value creation (Belz and Bieger, 2006) and firm performance.

2.2. Key Characteristics of the three Dissertation Papers

The three dissertation papers address specific research gaps, focus on selected theoretical constructs, adopt different methodological and analytical approaches, and offer contributions to theory and practice. Table 5 presents the key characteristics of the papers and thereby also informs about authorship and publication status.

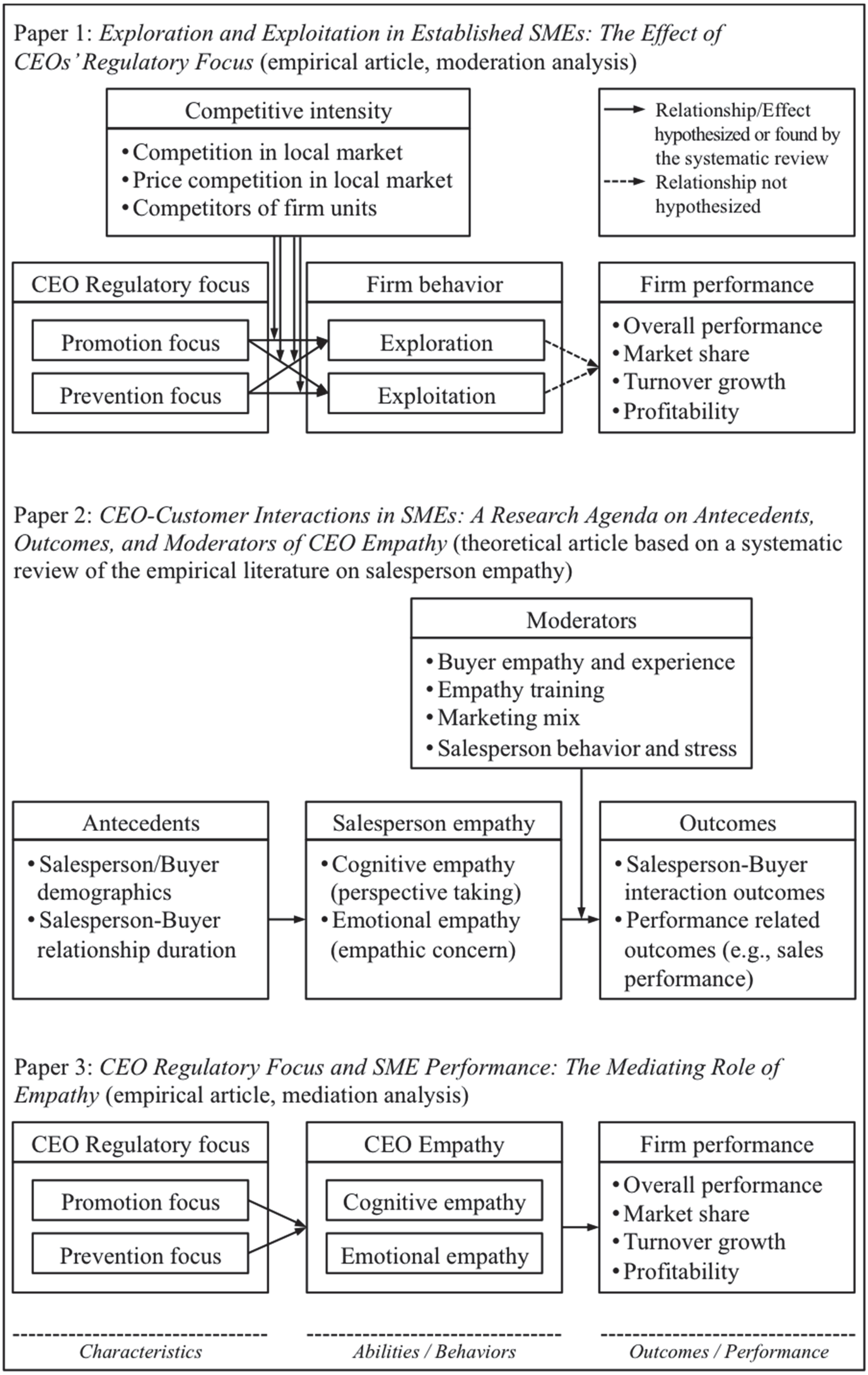

Figure 1. Theoretical Framework of the Cumulative Dissertation.

Table 5. Key Characteristics of the three Dissertation Papers.

Authorship	Research Gap	Main Theoretical Constructs	Methodological and Analytical Approach	Contributions	Publication Status
Paper 1: Exploration and Exploitation in Established SMEs: The Effect of CEOs' Regulatory Focus (Chapter 3)					
Nadine Kammerlander, Dominik Burger, Alexander Fust, and Urs Fueglistaller	CEO regulatory focus as antecedent to exploration and exploitation of SMEs, as well as the interplay of CEO regulatory focus and competitive intensity	Regulatory focus; Exploration and exploitation; Competitive intensity; Firm performance	Empirical article; 153 survey responses from CEOs of Swiss SMEs; OLS regression (moderation analysis); robustness checks; post-hoc test (contrast analysis)	Regulatory focus, firm behavior (exploration, exploitation), SME, and entrepreneurship literature. Practice: CEO recruitment and self-monitoring; management-buy-in.	Published in Journal of Business Venturing (VHB ranking: A). Accepted at Academy of Management Meeting 2013.
Paper 2: CEO-Customer Interactions in SMEs: A Research Agenda on Antecedents, Outcomes, and Moderators of CEO Empathy (Chapter 4)					
Dominik Burger, Urs Fueglistaller, and Alexander Fust	The role of SME CEOs' empathy with customers; research agenda on antecedents, outcomes, and moderators of CEO empathy	Empathy	Theoretical article; research agenda on CEO empathy derived from a systematic review of 36 empirical papers on salesperson empathy	SME, marketing, sales, and service literature. Practice: SME performance; CEO self-monitoring and decision-making.	To be submitted to International Small Business Journal (VHB ranking: C) in 2016. Accepted at Institute for Operations Research and the Management Sciences Annual Meeting 2013 and Rencontres de St-Gall 2016.
Paper 3: CEO Regulatory Focus and SME Performance: The Mediating Role of Empathy (Chapter 5)					
Dominik Burger	Mediating mechanism of the link between CEO regulatory focus and SME performance; relationship between CEO regulatory focus and empathy as well as CEO empathy and SME performance	Regulatory focus; Empathy; Firm performance	Empirical article; 133 survey responses from CEOs of Swiss SMEs; OLS regression; indirect effects models (mediation analysis); robustness checks	Regulatory focus, empathy, SME, and entrepreneurship literature. Practice: CEO hiring, controlling behaviors, and training.	Submitted to Journal of Small Business Management (VHB ranking: B). Accepted at International Council for Small Business World Conference 2015 and Institute for Small Business and Entrepreneurship Conference 2015.

3. Exploration and Exploitation in Established SMEs: The Effect of CEOs' Regulatory Focus (Paper 1)

3.1. Abstract

Based on theory of regulatory focus and organizational ambidexterity, we hypothesize that the level of engagement in exploration and exploitation in a small or medium-sized enterprise (SME) is affected by the respective CEO's chronic regulatory focus. In our analysis of survey responses from CEOs in Switzerland, we find that the CEO's level of promotion focus positively affects the firm's engagement in both, exploration and exploitation, while the CEO's prevention focus is negatively associated with the firm's exploration but not significantly related to its exploitation. The positive associations between a CEO's promotion focus and the firm's exploration/exploitation activities are enhanced under conditions of intense competition.

3.2. Executive Summary

Established businesses often excel in harvesting existing opportunities (exploitation). For instance, they improve the reliability of production processes, reduce material cost, or optimize the firm's internal routines. However, anecdotal evidence as well as scholarly studies have consistently shown that such exploitation is a required yet insufficient condition for long-term business success. In order to prevail across time, firms also need to be entrepreneurial and search for new business opportunities (exploration). Pursuing both sets of activities – exploitation and exploration – has been found to be challenging for firms, in particular for small- and medium-sized businesses (SMEs).

In this paper, we argue that the CEO's personality, in particular his/her (chronic) regulatory focus, affects whether the firm invests in exploration and/or exploitation, and analyze how those relationships are moderated by an important environmental determinant, namely competitive intensity. Regulatory focus is a quite stable disposition of individuals that develops in early childhood and that determines which types of goals an individual follows as well as how s/he tries to attain those goals. More specifically, regulatory focus consists of two independent dimensions: (1) promotion focus, which is associated with an individual's focus on gains and advancements as well as the desire to maximize the number of achieved "hits," and (2) prevention focus, which is associated with an individual's desire to avoid failure and to minimize the number of "losses."

We theorize that a high level of promotion focus motivates CEOs to increase the respective firm's level of both, exploration and exploitation (H1a–b). The underlying rationale is that such CEOs require a steady stream of (small and large) accomplishments in order to avoid negative emotions. Moreover, we argue that a high level of prevention focus motivates CEOs to decrease efforts in exploration and to increase efforts in exploitation (H2a and H2b) as such CEOs aim to invest only in activities that fulfill their needs of safety. While exploitative efforts such as quality-enhancing activities serve to fulfill such needs, exploration is likely seen to conflict with such desires. Previous studies have drawn attention to the interplay of regulatory focus with the context and situational stimuli; thus we argue that competitive intensity strengthens the positive relations between promotion focus and exploration (H3a) as well as exploitation (H3b). Further, we hypothesize that the negative relationship between prevention focus and exploration is weakened (H4a) and that the positive relationship between prevention focus and exploitation is strengthened (H4b) under competitive intensity.

We test the hypotheses based on 153 survey responses of CEOs of Swiss SMEs collected in 2012. We find support for our hypotheses H1a, H1b, H2a, H3a, H3b, and tentative support for hypothesis H4b. Hypotheses H2b and H4a were rejected. Several robustness tests were conducted to increase the reliability of the analyses. Based on a recent typology of individuals with high/low promotion/prevention focus, we further empirically investigated the exploration and exploitation activities of "achievers," "rationalists," "conservatives," and "indifferents."

This paper intends to make three contributions to research, especially with regard to entrepreneurial firm behavior: First, the study contributes to entrepreneurship literature by revealing the CEO's promotion and prevention focus as important determinants of entrepreneurial activities in established firms. Second, the study advances research on organizational ambidexterity by drawing attention to CEO personality, in particular regulatory focus, as important yet so far neglected antecedent of organizational ambidexterity. Third, this study also contributes to research on regulatory focus by empirically studying different combinations of high/low promotion and prevention focus and by investigating the interplay of regulatory focus and competitive intensity.

3.3. Introduction

A major challenge for all established companies is the need to continually explore novel business activities and thereby remain entrepreneurial throughout the organizational life cycle (Bracker and Pearson, 1986; Hornsby et al., 2009; Zahra and Covin, 1995). An abundant body of extant research shows that, over time, incumbent firms tend to focus their attention on exploiting existing products and processes, thereby reducing their entrepreneurial activities, and, ultimately, becoming stagnant (e.g., Koberg et al., 1996; March, 1991; Rosenbusch et al., 2011). However, a critical determinant of long-term success is the firm's ability to pursue opportunities oriented toward the long-term (i.e., engage in exploratory activities) while at the same time harvesting short-term efficiency gains arising from the refinement of existing products and processes (i.e., engaging in exploitative activities) (Choi et al., 2008; Gedajlovic et al., 2012; Lavie et al., 2010).

As exploration and exploitation require different sets of capabilities, engaging in both sets of activities is generally challenging for firms (Lavie et al., 2010), especially for resource-constrained small and medium-sized enterprises (SMEs) (Rothaermel and Alexandre, 2009; Voss and Voss, 2013). Thus, scholars have recently identified several environment-, firm-, and top management team-level drivers of firms' concurrent engagement in exploration and exploitation (e.g., Gedajlovic et al., 2012; Hill and Birkinshaw, 2014; Lavie et al., 2010). Despite these advancements, determinants that relate to the personality of the CEO are still poorly understood (Gibson and Birkinshaw, 2004; Raisch et al., 2009; Smith and Tushman, 2005). This is surprising in light of the strong influence of the CEO's personality on firm behavior in general (e.g., Hambrick and Mason, 1984; Nadkarni and Herrmann, 2010) and on innovation in particular (Gerstner et al., 2013). Given the authority structures and low levels of hierarchies common in SMEs, the influence of CEOs in SMEs is even stronger (Bierly and Daly, 2007; Man et al., 2002) than in larger organizations.

In this paper, we focus on one important yet understudied facet of the CEO's personality, his or her chronic regulatory focus (Brockner and Higgins, 2001). Chronic regulatory focus refers to an individual's motivational sets that determine his or her goals as well as how that person aims to accomplish those goals (Stam et al., 2010). As "one of the most comprehensive motivation theories" (Kark and Van Dijk, 2007: 503), regulatory focus theory has been applied to study various entrepreneurial phenomena

(Brockner et al., 2004; Burmeister-Lamp et al., 2012; Wu et al., 2008), such as venture creation (McMullen and Shepherd, 2002), entrepreneurial opportunity recognition and decision-making (Crowe and Higgins, 1997; Tumasjan and Braun, 2012), as well as venture and SME performance (Hmieleski and Baron, 2008; Wallace et al., 2010). Chronic regulatory focus, which refers to a relatively stable personality trait (Higgins, 1997; Higgins et al., 2001)[6], is well suited for explaining decision-making and actions among CEOs (Das and Kumar, 2011; Worthy et al., 2007), as individuals are inclined to "direct their attention toward issues consistent with their regulatory preferences" (Chiaburu, 2010: 462). More specifically, a CEO's chronic regulatory focus orientation affects his/her attention to specific issues, his/her preferred strategies for achieving goals, and his/her resource-allocation patterns (Wallace et al., 2010). As such, it is likely to also affect the firm's exploration and exploitation activities. This influence of chronic regulatory focus depends on the environmental context (Lanaj et al., 2012) since the environment, in particular the competition in the firm's market, alters CEOs' perceptions of how well they achieve their goals. We therefore aim to examine the following research questions: (1) *How does the CEO's chronic regulatory focus affect the respective organization's levels of exploration and exploitation?* and (2) *How does competitive intensity moderate those relationships?*

Regulatory focus comprises two distinct and mutually independent dimensions: the promotion focus and the prevention focus. Individuals with high levels of promotion focus are driven to maximize achievements, whereas individuals with high levels of prevention focus strive to meet their obligations and avoid failures (Brockner and Higgins, 2001; Idson et al., 2000). Based on the extant literature on regulatory focus theory and research on organizational ambidexterity, we hypothesize that high levels of promotion focus among CEOs have positive effects on firms' exploration and exploitation. In addition, we argue that as the CEO's prevention focus increases, the level of exploration decreases and the level of exploitation increases. Furthermore, we suggest that these relationships are moderated by the competitive intensity in the firm's environment. We test our hypotheses using survey responses provided by CEOs of Swiss SMEs.

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6 Besides the chronic element of regulatory focus, there is also a more malleable, situational element of regulatory focus that can, for instance, be affected by framings of task specifics (Van Dijk and Kluger, 2011), by leadership style of supervisors, or by work climate (Wallace et al., 2009) – elements, which are often manipulated in laboratory settings. Following previous entrepreneurship research (e.g., Bryant 2009), the focus of this paper is on the more stable, chronic regulatory focus.

Our study contributes to the literature in several ways. First and foremost, we advance the entrepreneurship literature by revealing how CEO characteristics, especially the CEO's promotion focus, affect established firms' engagement in both, exploratory (i.e., entrepreneurial) and exploitative activities – firm behavior that is often associated with superior long-term performance (He and Wong, 2004; Lubatkin et al., 2006; Patel et al., 2013). In other words, our results contribute to a better understanding of the determinants of entrepreneurial firm behavior in later stages of the firm's life cycle. In addition, we contribute to the entrepreneurship literature and research on SMEs by providing further evidence of the substantial influence of CEO personality, especially chronic regulatory focus, on entrepreneurial firm behavior not only in the early venturing phases as proposed by prior studies (Higgins et al., 2001; Tumasjan and Braun, 2012) but also in established SMEs.

Second, we advance research on organizational ambidexterity (e.g., Raisch and Birkinshaw, 2008), which focuses on the antecedents and implications of a firm's engagement in both, exploration and exploitation. In particular, we reveal the promotion focus of CEOs as an important antecedent of ambidextrous firm activities. As such, our findings complement the body of so far identified important managerial antecedents of organizational ambidexterity (Lavie et al., 2010).

Third, we not only study how the CEO's promotion and prevention foci independently affect firm behavior, but – in a post-hoc analysis – we also compare four generic types of CEOs (CEOs with high/low promotion and high/low prevention focus) and study their respective firms' exploration and exploitation behaviors. In this regard, we follow a recent call by Lanaj et al. (2012: 1026) to take into account the fact that "people [can] have high levels on both foci, just one focus, or neither." Moreover, we advance the literature on regulatory focus (Higgins, 2005; Worthy et al., 2007) by studying how the effect of chronic regulatory focus depends on competitive intensity as an important environmental determinant.

3.4. Theoretical Foundations and Development of Hypotheses

3.4.1. CEOs' Regulatory Focus

Researchers in numerous disciplines study how various CEO characteristics, such as attitudes, demographics, and personality, affect firm behavior through decision-making and action (Baron et al., 2012; Brockner et al., 2004; Wiklund and Delmar, 2003), thereby building on upper echelons theory (Hambrick and Mason, 1984). In the field of entrepreneurship, Simsek et al. (2010), for instance, show how CEOs' personalities influence their respective firms' entrepreneurial orientations. Much of the empirical evidence showing that CEO characteristics matter for firm behavior is derived from large, listed firms. However, these effects can be expected to be even more salient in SMEs (Lubatkin et al., 2006; Raisch and Birkinshaw, 2008; Wallace et al., 2010) given the enhanced degree of managerial discretion possessed by CEOs of smaller companies (Finkelstein and Hambrick, 1990) as well as their direct and frequent contact with workers and managers on all levels (Bierly and Daly, 2007; Man et al., 2002).

In management research in general and entrepreneurship research in particular, one aspect of individuals' characteristics – regulatory focus – has attracted a notable amount of attention in recent years (e.g., Brockner et al., 2004; Bryant, 2009; Hmieleski and Baron, 2008; Tumasjan and Braun, 2012; Wu et al., 2008). In building on and extending classic achievement theory (McClelland et al., 1953), regulatory focus theory (Higgins, 1997; Higgins et al., 2001) aims to explain how individuals differ in their approaches to goal attainment and in their underlying motivations. "Chronic regulatory focus" refers to a relatively stable (Higgins, 1989; Hmieleski and Baron, 2008) personality trait of individuals that is shaped through various, mostly childhood and adolescence, experiences (Higgins and Silberman, 1998), in particular socialization in early childhood (Higgins, 1989). More specifically, an individual's subjective history of success with a specific regulatory strategy, especially in the early stages of life, affects his/her preferences for using that strategy to achieve goals (Higgins et al., 2001). Chronic regulatory focus can be assessed in terms of two independent elements (Stam et al., 2010): promotion focus and prevention focus.

Individuals with high degrees of promotion focus are motivated by the need for growth and advancement (Crowe and Higgins, 1997). They therefore concentrate on potential gains and strive to maximize their achievements or "hits," where a "hit" is a positive outcome provoked by the individual's decisions and actions (cf. Brockner et al., 2004). In other words, individuals with high levels of promotion focus are motivated by the perceived potential for positive outcomes and aim to maximize rewards for their efforts, while the motivation of individuals with low levels of promotion focus remains largely unaffected by the possibility of maximizing hits

(Brockner et al., 2004). The absence of achievements leaves individuals with high levels of promotion focus with negative feelings of sadness and disappointment (Idson et al., 2000).

In contrast, individuals with high degrees of prevention focus are driven by the need for security, safety, and responsibility and thus strive to avoid any errors or potential negative outcomes (Brockner et al., 2004). They are driven by a fear of punishment for failures caused, for instance, by negligence instead of being motivated by rewards for their successful activities. The absence of failures creates positive feelings of calmness among individuals with high levels of prevention focus, whereas presence of failure leads to negative feelings of tension (Idson et al., 2000).

As individuals' preferences for promotion focus and prevention focus are not two ends of a continuum but orthogonal (Higgins et al., 2001), individuals can have different combinations of high or low levels of promotion and prevention focus (Idson et al., 2000). For instance, some individuals might exhibit high levels of promotion and prevention foci because they have had positive experiences with both motivational sets in the past (Higgins and Silberman, 1998; Lanaj et al., 2012; Markovits, 2013). In fact, studies carried out by Higgins et al. (2001) reveal only a low correlation between the two chronic regulatory foci indicating independence of the two dimensions.

3.4.2. CEOs' Regulatory Focus and its Effect on Exploration and Exploitation

The need for CEOs to engage in exploratory and exploitative activities has been frequently emphasized (e.g., Gedajlovic et al., 2012; Raisch et al., 2009). Exploration is typically associated with "search, experimentation, and variation," whereas exploitation refers to enhancements of "productivity and efficiency through choice, execution, and variance reduction" (Lavie et al., 2010: 110). Exploratory firm activities include, for instance, investigating new technologies, targeting new customer groups, or venturing into new market segments, while cost-cutting or quality-improving activities as well as attempts to increase the level of automation are frequently cited as examples of exploitative activities (Lubatkin et al., 2006). In our paper, we follow extant research (Knott, 2002; Lavie et al., 2010) in assuming that exploration and exploitation, while being distinct sets of activities that rely on specific capabilities and knowledge (March, 1991; Raisch et al., 2009), are complementary firm activities.[7] As such, firms that engage in both explorative and exploitative activities can harvest synergies (Bierly and Daly, 2007; Cegarra-Navarro et al., 2011). Researchers have theorized and empirically shown that engaging in both exploratory and exploitative activities exerts a positive influence on firm performance (e.g., He and Wong, 2004). Exploitative activities are important to harvest short-term efficiency gains, yet exclusively pursuing those activities would result in the firm missing important opportunities and, ultimately, becoming a victim of the creative-destruction processes (March, 1991). On the other hand, exploratory activities are more future-oriented and open up new business opportunities that enable adaptation to changing environments and growth (Raisch and Birkinshaw, 2008). However, pure engagement in those activities may result in inferior performance, as such firms might never fully realize their business potential but instead instantly jump into investing in new opportunities (Wiklund and Shepherd, 2011).

However, attempts to engage in both, exploration and exploitation at the same time, create substantial challenges for firms. In this regard, March's (1991) work emphasizes the inherent tensions that organizations face when aiming to engage in exploitative and exploratory activities, as both sets of activities are naturally distinct, and require different knowledge and skills. The challenges associated with engaging in both, exploration and exploitation, are particularly salient for SMEs (Lubatkin et al., 2006) because SMEs often lack the resources needed to engage in "structural ambidexterity," i.e., to build separate organizational units for the pursuit of exploration and exploitation – an element that has been proposed by various researchers (e.g., O'Reilly and Tushman, 2004) as fostering entrepreneurship in established companies. Moreover, sequential instead of simultaneous engagement in exploration and exploitation (a strategy labeled "temporal ambidexterity") has been argued to be difficult to implement due to the difficulty of detecting optimum shift times and the high ramp-up costs associated with shifting from one phase to another (Lavie et al.,

[7] Scholarly debates on the nature and relationships of exploration and exploitation remain vivid (Gupta et al., 2006; Lavie et al., 2010). For instance, several authors claim that exploitation and exploration constitute two ends of a continuum, and that they need to be balanced (Raisch et al., 2009). Others view them as two separate and independent dimensions of firm activities, also labeled as orthogonal activities (e.g., Gibson and Birkinshaw, 2004). The complementary perspective that we apply claims that exploration and exploitation are separate dimensions yet positively correlated. The underlying rationale of this assumption is that firms benefit from previous investments in one domain (e.g., exploration) when making subsequent investments in the other domain (e.g., exploitation). For instance, resources released through successful exploitation activities can be used to finance future exploratory activities (Brouwer, 2000). This complementary view is supported by an abundant body of empirical work (see Bierly and Daly (2007) for an overview).

2010; Turner et al., 2013). Thus, given their resource constraints, SMEs might engage in leadership-based contextual ambidexterity (Lubatkin et al., 2006; Patel et al., 2013) in order to be able to explore and exploit at the same time. Leadership-based contextual ambidexterity is an approach that refers to key decision makers' "behavioral capacity to simultaneously demonstrate alignment and adaptability" (Gibson and Birkinshaw, 2004: 209) and that is likely to be particularly affected by CEO personality. Organizations that possess high levels of leadership-based contextual ambidexterity are associated with high levels of both, firm-level exploration and exploitation (Gibson and Birkinshaw, 2004).

The factors that determine a firm's ability to engage in exploration and exploitation are not yet fully understood. In addition to environmental and organizational factors (Lavie et al., 2010), the characteristics and behaviors of key decision makers can create heterogeneity in firms' levels of exploration and exploitation (Gedajlovic et al., 2012; Mom et al., 2009). We propose that variations in CEOs' chronic regulatory focus help explain heterogeneity in the levels of exploration and exploitation in the respective SMEs.

3.4.2.1. CEOs' Promotion Focus and its Effect on Exploration and Exploitation

CEOs with high (as compared to low) levels of promotion focus generally feel intrinsically motivated to maximize their achievements in terms of size and number, and to continuously earn rewards for the activities with which they are associated (Brockner et al., 2004). As promotion focus is associated with reaching for "maximal goals" (Brendl and Higgins, 1996; Idson et al., 2000), these CEOs are expected to pursue goals such as improving their firm's competitive position to the best possible level. Hence, typical achievements that CEOs with high levels of promotion focus perceive as "hits," which help them to achieve their overall professional goals, include but are not limited to: attracting new customers, launching new products, enhancing the firm's reputation, and improving financial indicators relative to previous years and/or competitors.

Such "hits" can be achieved by engaging in exploratory and exploitative activities. Engagement in exploratory activities – the active search for new business opportunities (Raisch and Birkinshaw, 2008) – might lead to perceived rewards in the form of new product launches or an expansion of the customer base (Shepherd et al., 2009). As a consequence, CEOs with high levels of promotion focus are likely to be more motivated to engage in exploratory firm activities than CEOs with a low promotion focus. This is in line with extant research showing that high levels of promotion focus are associated with the individual's willingness to deviate from established paths (Liberman et al., 1999).

Moreover, high levels of promotion focus render individuals more creative (Friedman and Förster, 2001) and enable them to generate more novel ideas (Crowe and Higgins, 1997). Exploratory activities, which are characterized by the detection and pursuit of new opportunities outside the firm's current business model (Raisch and Birkinshaw, 2008), require utilizing skills and knowledge in new, non-paradigmatic ways (Raisch et al., 2009). Hence, CEOs with high levels of promotion focus appear particularly well-suited to pursue such activities.

We also hypothesize that the engagement of CEOs with high levels of promotion focus is not constrained to exploratory activities, but also spans exploitative tasks. Research has long emphasized the uncertain nature of exploratory activities given the lack of knowledge about their effective future payoffs (Kline and Rosenberg, 1986). In fact, many exploratory projects fail over time (Cooper, 2008). As a consequence, a pure focus on exploratory activities would lead to extended periods in which "hits" are absent between two exploratory breakthroughs. As CEOs with high levels of promotion focus are sensitive to the absence/presence of hits, they would experience negative feelings of sadness in those times (Idson et al., 2000). Given those CEOs' desire to avoid the negative emotions associated with such a situation, we argue that high levels of promotion focus also induce CEOs to continuously focus on exploitative activities. For instance, refinement activities that improve product or service quality, and those that enhance process reliability enable CEOs to achieve rather predictable short-term "hits" in the form of increased customer satisfaction or decreased production costs and, subsequently, higher profit margins (e.g. Gibson and Birkinshaw, 2004; He and Wong, 2004). As such, engagement in exploitative activities helps generate a rather predictable "continuous stream of rather incremental hits"[8] and also contributes to the CEO's aspiration to reach for "maximal goals."

[8] The assumption that exploitative effort leads to predictable hits holds true as long as the CEO manages to ultimately implement the improvements. Indeed, there is anecdotal evidence that in some cases reluctant employees impede the proposed changes. Furthermore, it should be noted that while exploitation is associated with more predictable hits (as compared to exploration), this does not imply that less effort is needed.

Based on our assumption that exploitation and exploration are complementary, we hypothesize that CEOs with a high level of promotion focus intensively engage in exploratory and in exploitative firm activities. Therefore:

H1a and H1b: A CEO's level of promotion focus is positively associated with: (a) the firm's level of exploration and (b) the firm's level of exploitation.

3.4.2.2. CEOs' Prevention Focus and its Effect on Exploration and Exploitation

In the following, we will hypothesize that CEOs with high levels of prevention focus engage in less exploration yet more exploitation than CEOs with low levels of prevention focus. High levels of prevention focus are typically associated with striving for "minimal goals" (Idson et al., 2000), which are defined as the "lowest goal whose end state will produce satisfaction" (Brendl and Higgins, 1996: 104). In a professional context, striving for minimal goals is associated with aiming to meet the obligations imposed by shareholders as well as customers or board members. Hence, while high levels of promotion focus motivate CEOs to optimize their firm's market position to the *best possible degree*, high levels of prevention focus encourage CEOs to improve their firm's market position to a *minimum threshold level* that satisfies the demands of stakeholders as well as CEOs' own needs for security and responsibility.

We first posit that a high level of prevention focus decreases the CEO's willingness to engage in exploration activities. As argued above, the exploration of non-paradigmatic business opportunities bears a high probability of failure (Anderson and Tushman, 1990) due to the unknown outcomes and frequent failure of such search processes (Cooper, 2008; Kline and Rosenberg, 1986). CEOs with high levels of prevention focus are generally sensitive to the possibility of failure and aim to avoid it. Engagement in uncertain exploratory activities would suffuse CEOs characterized by high levels of prevention focus with strong negative emotions, especially tension (Idson et al., 2000). The avoidance of uncertain exploratory activities, however, puts these CEOs into a mood of calmness that is associated with positive emotions and is therefore assessed as "preferred" by such CEOs (Idson et al., 2000). Hence, regulatory focus theory implies that these CEOs' basic need for safety likely motivates them to avoid any potential failure associated with engaging in uncertain exploration, even if that implies missing potentially promising opportunities (Hmieleski and Baron, 2008).

While we theorize that a high level of prevention focus decreases exploratory activities, we also argue that it induces CEOs to engage in more exploitation. CEOs with high levels of prevention focus strive to fulfill their minimal goals and thereby meet stakeholders' demands. Those minimal goals typically relate to improving product or service quality according to customer requests or increasing the firm's profit as requested by the board. We argue that exploitative activities, such as the optimization of production processes through increased automation, support CEOs in achieving those minimal goals while at the same time fulfilling their need for safety. For instance, exploitative firm activities that target improved product/service quality or lower production costs help to improve the firm's market position at a relatively low level of business risk because the technology, production processes, and customer requirements are generally well understood (Christensen and Bower, 1996).

Moreover, due to their basic need for responsibility, individuals with high levels of prevention focus have been shown to be intrinsically motivated to continuously reduce error rates (Pennington and Roese, 2003). As such, CEOs with high (as compared to low) levels of prevention focus are more likely to steadily engage in exploitative quality-improvement measures in order to meet not only customer demands but also their own quality standards. This argumentation is in line with previous research that theorizes that CEOs with high levels of prevention focus often have experience in throughput functions, such as production and engineering, which are closely tied to exploitative improvements (Chiaburu, 2010). In addition, previous research argues that CEOs with high levels of prevention focus are associated with high levels of formalization in the organization (Chiaburu, 2010). Formalization, in turn, has been shown to increase the firm's level of exploitation, as it reduces variation (e.g., of product quality), and helps in the codification and implementation of best practices (Jansen et al., 2006). In summary, we hypothesize that:

H2a and H2b: A CEO's level of prevention focus is: (a) negatively associated with the firm's level of exploration and (b) positively associated with the firm's level of exploitation.

3.4.3. Moderating Effects of Competitive Intensity

We also hypothesize that the effect of a CEO's chronic regulatory focus on the firm's level of exploration and exploitation is contingent on environmental factors because individuals, depending on their personality, are attentive to specific cues from the environment and adapt their behavior accordingly (Barrick, 2005). In support of this notion, previous research shows that the effect of individuals' regulatory focus on their respective behavior depends on the context (Hmieleski and Baron, 2008), especially in terms of whether a "fit" or "misfit" exists between the preferred regulatory focus strategy and the environment (Cesario et al., 2004; Higgins, 2005). Depending on whether an individual assumes that the environmental conditions allow him/her to achieve his/her goals, either positive or negative emotions are triggered (Baas et al., 2011; Idson et al., 2000) leading to variation in behavior.

One environmental factor that might be particularly important in the context of regulatory focus is "competitive intensity," which is defined as a situation of fierce rivalry among players in an industry in which the behavior of one organization strongly depends on the actions of competing firms, leading to high levels of unpredictability and uncertainty as well as a lack of growth opportunities (Auh and Menguc, 2005). Previous empirical studies showed that competitive intensity affects CEOs' sensemaking and decision-making (e.g., Dean and Sharfman, 1993; Miller and Friesen, 1983) as well as firm behavior, for instance inter-firm collaboration (Ang, 2008) and innovation (Boone, 2001). Competitive intensity is likely to interact with CEOs' chronic regulatory focus because it changes the reward structure of the industry as perceived by the CEO, and it alters the presence and absence of perceived achievements and failures due to the increased uncertainty and the increased volatility of competitive advantage (cf. McMullen et al., 2009). As such, competitive intensity acts as a situational stimulus that interacts with the CEO's regulatory focus.

The literature on exploration and exploitation also refers to the important role of environmental factors in general (e.g., Miller and Friesen, 1984; Zahra and Bogner, 2000) and competitive intensity in particular (Tang and Hull, 2012; Yang and Li, 2011), as different environments require different strategies to ensure success (e.g. Levinthal and March, 1993). Specifically, intense competition affects the risk and uncertainty associated with specific firm activities (Auh and Menguc, 2005). In a study of the automotive and computer industries, for example, Fine (1998: 31) shows that increased competition requires firms to intensify their engagement in both, exploitative and exploratory activities.

3.4.3.1. Competitive Intensity, Promotion Focus, and Exploration/Exploitation

CEOs with high levels of promotion focus are sensitive to the presence or absence of hits (Higgins, 1997). In order to achieve hits and remain successful in a competitively intense environment, firms must pursue both exploitative activities and exploratory activities (Auh and Menguc, 2005; Zahra, 1993). Consequently, we argue that as competitive intensity increases, CEOs with high levels of promotion focus intensify their efforts in both domains in order to maintain a continuous stream of "hits" and hence experience continuous feelings of joy instead of sadness (Idson et al., 2000).

More specifically, in a competitively intense industry, potential hits are harder to achieve and last for shorter time periods as compared to less competitive industries due to the high level of rivalry among firms in such contexts (Auh and Menguc, 2005). As CEOs with high levels of promotion focus are motivated to achieve maximal goals (Idson et al., 2000), the dismal prospects of competitively intense environments are likely to motivate them to also "explore new markets [and] find novel ways to compete" (Zahra, 1993: 325), and to identify other markets with reward structures that better fit their achievement-based regulatory focus.

Moreover, in highly competitive industries, CEOs with high levels of promotion focus become acutely aware of other businesses' success with exploration, as exploratory behavior is often the root cause of intensified competition (Fine, 1998). Given these CEOs' focus on maximal goals, the successes of competitor firms should stimulate them to put even more effort into exploration.[9] For these reasons, we expect CEOs with high levels of promotion focus to even more actively engage in exploration when competitive intensity is high than when it is low.

In Section 3.4.2.1, we argued that CEOs with high levels of promotion focus engage in exploitation more than CEOs with low levels of promotion focus because advances from exploitation might provide a continuous stream of rather predictable "hits," such as increases in profit margins owing to reductions in production costs. Engagement in exploitation thus creates feelings of joy for CEOs with high levels of promotion focus due to the presence of hits and enables them to avoid feelings of sadness arising from the absence of hits (Idson et al., 2000). We argue that these CEOs increase their exploitative efforts when competitive intensity is high in order to "respond to and

[9] We thank one anonymous reviewer for pointing out this argument.

counter competitive behavior" (Auh and Menguc, 2005: 1654). In competitively intense industries, competitors are constantly working on imitating and refining products, thereby increasing quality and lowering prices (cf. Dickson, 1992). As a consequence, competitive advantages quickly erode in such environments. In order to sustain a continuous stream of "hits" and to work toward the maximal goal of achieving the best possible market position in a competitively intense environment, CEOs need to intensify their exploitation activities in such a market. For instance, the implementation of specific measures to enhance product reliability might enable a company to be market leader for several years in an environment of low competition. However, this competitive advantage rapidly vanishes in competitively intense markets, making new investments in exploitation necessary to sustain the company's market position and avoid the absence of "hits." As CEOs with high levels of promotion focus strive to avoid an absence of hits in order to retain positive feelings such as "joy," they are likely to put more effort into exploitative activities such as cost cutting projects in order to achieve temporary competitive advantages when competitive intensity is high instead of low (Lavie et al., 2010). Therefore:

H3a and H3b: Competitive intensity: (a) enhances the positive effect of a CEO's level of promotion focus on the firm's exploration and (b) enhances the positive effect of a CEO's level of promotion focus on the firm's exploitation.

3.4.3.2. Competitive Intensity, Prevention Focus, and Exploration/Exploitation

High levels of competitive intensity are associated with high levels of uncertainty and risk (March, 1991). With increasing competitive intensity, the required organizational moves and the related success become more and more stochastic and dependent on competitors' actions (Auh and Menguc, 2005). In such situations, the basic needs for safety and responsibility among CEOs with high levels of prevention focus remain increasingly unfulfilled and these CEOs find it more and more difficult to fulfill their obligations (cf. Higgins, 1997). As a consequence, the CEOs with high levels of prevention focus experience strong negative feelings of fear and worry (Baas et al., 2011; Idson et al., 2000) in such a situation, which has been labeled a "lack of regulatory closure" in prior literature (Baas et al., 2011). Unfulfilled basic needs have been shown to trigger creativity (Clapham, 2001; De Dreu et al., 2008) and the willingness to explore divergent thinking (Baas et al., 2011) among individuals with high levels of prevention focus. The underlying reason is that the perceived challenges to fulfill one’s needs and meet one’s obligations in a competitively intense environment serve as “activizers” or “energizers” for CEOs with high levels of prevention focus (cf. Förster et al., 2005). The strong feelings of tension and worry about unsatisfied general needs of safety and security in situations of competitive intensity outrank the lower-level goals of avoiding failure in individual exploratory projects (Brendl and Higgins, 1996). Hence, we argue that CEOs with high levels of prevention focus become increasingly open to actively engaging in exploration when competition intensifies. Consequently, we hypothesize that the negative association between high levels of prevention focus and exploration is attenuated in competitive environments.[10]

With regard to exploitation, we argue that CEOs with high levels of prevention focus engage even more in exploitative activities when competitive intensity is high rather than low. The underlying rationale for this mechanism is two-fold. First, competitive intensity is characterized by imitation among competitors (Dickson, 1992) and, in turn, rapid diffusion of products and technologies (Levinthal and March, 1993) as well as a lack of customer preferences for specific providers of products and services (Kohli and Jaworski, 1990). Such characteristics require steady exploitation efforts in order to meet the various demands of stakeholders, especially customers who continuously desire improved quality and lower prices. CEOs with high levels of prevention focus, who are characterized by a need for responsibility (Higgins, 1997), feel compelled to meet those demands. They are therefore likely to increase their exploitation efforts when competitive intensity is high. Second, a competitively intense market is an environment that punishes non-activity (Kark and Van Dijk, 2007). As CEOs with high levels of prevention focus are attentive to the likelihood of failure and punishment, they invest in activities that are promising to avoid the presence of such negative outcomes. Exploitative activities, such as formal cost-control initiatives, efficiency measures, or customer-retention programs, that result, for instance, in lower production costs or a more stable customer base are well suited for maintaining competitive advantages, at least in the short term (Auh and Menguc, 2005; Miller and Friesen, 1984). Therefore:

[10] An alternative, prospect theory-based explanation for such behavior is that the need to avoid firm failure outranks the need to avoid failure on an exploratory project level.

H4a and H4b: Competitive intensity: (a) attenuates the negative effect of a CEO's level of prevention focus on the firm's exploration and (b) enhances the positive effect of a CEO's level of prevention focus on the firm's exploitation.

3.5. Methodology

3.5.1. Sample and Data Collection

To test our hypotheses, we collected survey data from SMEs, which we defined as firms with up to 500 employees (Dickson et al., 2006). The data covered CEO characteristics, firm characteristics, and the firms' exploration and exploitation activities, as well as other factors. In July 2012, we sent an electronic survey to 2,508 individuals (of which 1,229 were CEOs of SMEs)[11] that had at least once within the last 10 years expressed an interest in one of the largest, annual Swiss business events for SMEs ("Swiss SME Day")[12] and were therefore included in a university mailing list. A follow-up reminder was sent after four weeks. After five weeks of data collection, a total of 362 individuals (including 182 CEOs of SMEs) had completed the survey, resulting in a response rate of 14.4% for all respondents and 14.8% for the CEO subsample. These figures are comparable to those found in other studies targeting entrepreneurs and top managers (e.g., Patel et al., 2013; Zellweger et al., 2012). For our analyses, we solely rely on the CEO subsample. We removed 27 of the 182 responses owing to missing data regarding our focal constructs.[13] On average, the CEOs in the sample were 51 years old and had almost 16 years of tenure within the firm. 45% of them were majority owners (at least 50% of shares) of their firms, 25% held a minority share, and 30% held no ownership stake.

3.5.1.1. Representativeness

To assess the representativeness of our sample, we compared key characteristics of the CEOs and firms in our sample with data on the entire population of Swiss SMEs provided for instance by the Swiss Federal Statistical Office (SFSO) (see Table 6). In terms of size, micro businesses (less than 10 employees; 32% of our sample) were

[11] Non-CEO receivers of the questionnaire included department or sales managers, project leaders, and consultants.
[12] See www.kmu-tag.ch.
[13] To test whether these missing answers affected our results, we used multiple imputation and ran additional sets of OLS regressions based on the imputed dataset. The magnitude, directions, and significances of the results remained stable.

under-represented in our sample relative to the entire population of Swiss firms (microbusinesses account for 92% of companies). With regard to firm age, our sampled firms (mean age: 47 years) were older than those in a study by Frey et al. (2004), who analyzed survey responses of 1121 randomly chosen Swiss SMEs (mean age: 43 years). The fact that our sampled SMEs were older and larger than the average Swiss SME is in line with our focus on entrepreneurial behavior in *established* SMEs, which tend to be larger than newly founded ventures.

Table 6. Sample Characteristics (Paper 1).

Characteristics	Sample in this Study	Swiss Federal Statistical Office (2013;[a] Entire Firm/Human Population)
Number of firms	153	549,571
CEO age (years)	50.6	50.2[b]
Firm size		
0–9 employees	32.0%	92.1%
10–49 employees	35.9%	6.4%
50–249 employees	27.5%	1.3%
> 250 employees	4.6%	0.2%
Mean of employees	51/73[c]	8/67[c]
Firm age (years)	47	n/a[d]
Industry		
Construction/Manufacturing	39.2%/50.0%[c]	28.4%/45.5%[c]
Services	59.5%/48.1%[c]	71.6%/54.5%[c]
Others	1.3%/1.9%[c]	n/a[e]
Legal form of organization		
Limited (liabilities) companies	80%/84%[c]	34%/82%[c]
Others	20%/16%[c]	76%/18%[c]

[a]Firm population is based on STATENT and human population on SLFS, two databases that are provided by the Swiss Federal Statistical Office (SFSO).
[b]Average age of self-employed individuals in Switzerland.
[c]Only firms with more than 10 employees considered, since data of Swiss Federal Statistical Office also includes self-employed individuals with no (or only few) employees, which are not in the focus of this study.
[d]No data on firm age is available from the Swiss Federal Statistical Office. Data as reported by Frey et al. (2004), who study a representative sample of Swiss firms report an average firm age of 43 years..
[e]Primary sector excluded as non-relevant for this study; primary sector firms are predominantly microfirms.

In order to further scrutinize the representativeness of our sample (cf. Kotha and Swamidass, 2000; Patel et al., 2013), we compared specific characteristics of the sample firms with the corresponding population of Swiss SMEs.[14] The Welch T-test

[14] We thereby excluded microfirms (less than 10 employees) since the dataset provided by the Swiss Federal Statistical Office includes an abundant number of self-employees with no or few employees and thus firms, which are not in the focus of this study. For the age distribution in the population, we assumed a standard deviation of 12 years.

showed no statistical differences between the sample and the population with respect to the age of CEOs (T = .32, p = .57). Moreover, chi-square tests comparing four groups of legal forms ($\chi2(3) = 3.79$, p = .29) as well as the firm's affiliation with the industry or service sector ($\chi2(1) = 1.37$, p = .24) revealed no statistical differences between the sample and the population.

3.5.1.2. Key Informant Approach and Retrospective Bias

Our analysis is based on survey answers provided by CEOs as key informants. This approach, which is in line with other studies of SMEs (e.g. Dehlen et al., 2014; Patel et al., 2013), is based on the assumption that CEOs have the best insight into those firm characteristics and activities that are under investigation (Auh and Menguc, 2005).[15] Retrospective bias, which often constitutes a hazard for data gathered via surveys (Brundin et al., 2008), is unlikely to affect our data because of several specificities of the research design. First, our independent variables – the CEO's promotion and prevention focus – are designed to capture the respondent's view of past successes with certain motivational strategies. As the subjective (as opposed to objective) evaluation of the past is at the core of regulatory focus theory (Higgins et al., 2001), any potential retrospective bias of the respondent constitutes an integral part of the model rather than a distortion of it. Second, questions relating to our dependent variables (exploration and exploitation) as well as our moderator (competitive intensity) are tied to the *present* status of the firm rather than to historical data and, hence, cannot be subject to retrospective bias.

3.5.1.3. Non-Response Bias

We checked for two possible sources of non-response bias in our sample. First, we probed whether the CEOs who answered our survey differed from the CEOs who did not respond to our survey. As a first test, we conducted a one-way ANOVA comparing key characteristics of early and late respondents, assuming that late responses are more similar to non-responses (Kanuk and Berenson, 1975). We found no significant differences between early and late responses with regard to our explanatory variables. Moreover, we manually collected data on the industry affiliation of all firms in our database as well as the age of a subsample of 555 CEOs who had not responded to our

[15] We compared the CEOs' responses regarding exploration, exploitation, and competitive intensity with a few available responses from employees of the respective companies and found satisfactory agreement.

survey by searching public databases, newspapers, and other publicly available archives. We conducted chi-squared tests and found no statistically significant differences at the .05 level between respondents and non-respondents with respect to industry. Furthermore, when comparing the age of non-responding CEOs with the respondents' age, we found no statistically significant difference using the Welch T-test for unequal variances and sample sizes ($T = .19$, $p = .67$).

Second, to test for any distortion caused by missing answers on our dependent variables, we followed Heckman's (1976) two-step approach and compared partially completed responses with those that were complete. We first calculated a logit model that included CEO gender, CEO tenure, and firm size – all of which might affect response probability but are unrelated to the dependent variables in our sample – as independent variables and the response as the binary dependent variable (coded "1" for missing data on exploration or exploitation). We then used the outcome of this logit model to calculate the inverse Mill's ratio, which we included in our models. Regression models[16] show that the inclusion of the inverse Mill's ratio did not distort the results presented in this study. In sum, we concluded that the results were most likely not affected by non-response bias.

3.5.1.4. Common Method Bias

While designing the survey, we took several ex-ante steps to mitigate the risk of common method bias. First, we decreased the respondents' motivation to answer the survey in a socially desirable way by assuring strict confidentiality (Podsakoff et al., 2003). Second, the questions related to our variables were embedded in a more comprehensive survey and ordered in a way that made it almost impossible for respondents to draw any conclusions about the researchers' likely propositions and to edit their answers accordingly (Podsakoff et al., 2003). As an ex-post assessment of common method variance, we first conducted an explanatory factor analysis in order to reveal relationships among the measured variables (Hair et al., 2006). If common method bias exists, "either (a) a single factor will emerge from the analysis, or (b) one general factor will account for the majority of the covariance" among variables (Podsakoff and Organ, 1986: 536). The analysis of our data revealed eight factors with

[16] Available from the authors upon request.

eigenvalues greater than one[17], which together accounted for 65% of the total variance. The largest factor explained only 16.6% of the variance. We thus concluded that there was no dominant factor explaining variance in our sample. To scrutinize this finding, we also conducted a confirmatory factor analysis to analyze how well the data structure proposed by the researchers[18] is able to explain covariance among the measured items (Chang et al., 2010). This test showed that the model fit of our hypothesized data structure (see Sections 3.5.2 and 3.11, Tables 12–14) ($\chi2(74) = 107.904$, RMSEA = .06, CFI = .95) was significantly better ($p < .001$) than a model with only one dominant factor ($\chi2(77) = 375.725$, RMSEA = .16, CFI = .56), where the latter indicates the presence of common method bias. Given these findings, we assess the risk of common method bias in our study as low.

3.5.2. Measures

We applied an iterative, two-way translation (e.g. Dickson et al., 2006) to transform the original questionnaire from English into German. This approach aimed to maintain accuracy while maximizing understandability.

3.5.2.1. Dependent Variables

Various measures have been applied to assess exploration and exploitation in the extant literature (Gupta et al., 2006). We followed the approach used by Lubatkin et al. (2006), as they also focus on SMEs, and as they also adopt a broad view on exploration and exploitation that extends the narrow, technology-centric, and product-based focus of other studies (He and Wong, 2004), which might not be applicable for every industry. The exploration and exploitation variables were each assessed using six questionnaire items (see Section 3.11, Table 13), with possible responses ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). A firm’s level of exploration (exploitation) was calculated as the mean of the values for each of the six items associated with exploration (exploitation), so that it ranged from 1 to 5. The

[17] When conducting an exploratory factor analysis, researchers need to select the factors that will be considered. The eigenvalue of a factor indicates how much variance the factor explains (the larger the eigenvalue, the more variance that is explained). A general rule of thumb is to concentrate on factors with eigenvalues larger than 1 (Hair et al., 2006).

[18] The hypothesized data structure refers to the measurement model used for data analysis, i.e., all used constructs and items (e.g., assumption that the four items provided in Section 3.11, Table 14, load on a single factor (“competitive intensity”)).

Cronbach's alphas are .75 for exploration and .70 for exploitation, which suggests an adequate reliability (Hair et al., 2006).[19]

3.5.2.2. Independent Variables

We measured both independent variables – promotion and prevention focus – using the Regulatory Focus Questionnaire (RFQ) (Higgins et al., 2001; see Section 3.11, Table 12), which has previously been applied in entrepreneurial contexts (e.g., Bryant 2009). RFQ has been shown to be the most adequate measure to capture an individual's chronic regulatory focus (Haws et al., 2010). CEOs were asked to self-report their subjective histories of prevention and promotion success based on six established items for the promotion focus and five for the prevention focus. They provided their responses using a five-point Likert scale ranging from 1 to 5. A principle component analysis with varimax rotation showed an inconsistent loading of one promotion item ("Compared to most people, are you typically unable to get what you want out of life?"), which was therefore excluded from further analysis. The internal reliability of the promotion ($\alpha = .60$)[20] and prevention ($\alpha = .77$) scales can be assessed as acceptable (Bryant, 2009). After adjusting for reversely coded items, we averaged each respondent's answers for the individual items (Zhao and Pechmann, 2007) to create one measure of promotion focus and one measure of prevention focus.

3.5.2.3. Moderator Variable

Competitive intensity was assessed using the scale developed by Jansen et al., 2006. The questionnaire consists of four items (see Section 3.11, Table 14), which are rated using a seven-point Likert scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). We averaged answers to the four items to derive the level of competitive intensity in each case.

3.5.2.4. Control Variables

We included several control variables associated with engagement in exploration and exploitation: CEO age, CEO tenure, CEO ownership, firm age, firm size, family ownership, industry, and firm performance (e.g., Gedajlovic et al., 2012; Jansen et al.,

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[19] Factor loadings, average variance extracted (AVE), and composite reliability (CR; all available from the authors upon request) were similar to those found in previous studies, e.g., Gedajlovic et al. (2012).

[20] We suspect that the comparatively low level of internal reliability for promotion focus is caused by the specific cultural context of our study (see Sassenberg et al., 2012).

2006; Lubatkin et al., 2006; Mom et al., 2009). We included CEO age and CEO tenure to account for any effects of CEO characteristics that were the result of experience (e.g. Mom et al., 2009). For example, one could argue that CEOs with more experience are more likely to have the skills needed to simultaneously pursue exploration and exploitation. However, one could also suggest that older CEOs may be more focused on exploiting existing opportunities than on searching for new ones. We also controlled for the possibility that CEO ownership affects engagement in exploration and exploitation, as CEO ownership entails a specific pattern of goal setting and motivation (Gedajlovic et al., 2012). CEOs who own the majority (> 50%) of their firms represent the baseline in our analyses, while other cases are depicted using two dummy variables: "no CEO ownership" (coded "1" if the CEO did not hold any portion of the company) and "CEO minority ownership" (coded "1" if CEO owned shares but less than 50% of the company). Firm age was measured as the number of years since the firm's foundation (e.g. Lubatkin et al., 2006). Older firms are expected to maintain routines, which implies a focus on exploitation rather than exploration (Bracker and Pearson, 1986). We included firm size, measured as the number of full-time employees (Lubatkin et al., 2006) because larger firms have several advantages (e.g., availability of resources) as well as several disadvantages (e.g., bureaucracy impeding flexibility) with regard to exploration relative to smaller firms (Bierly and Daly, 2007). Moreover, SMEs' exploration and exploitation activities may be influenced by family ownership (dummy coded as "1" if firm was not perceived as a family firm by the CEO), as shown by Lubatkin et al. (2006). Finally, the industry dummies take potential environmental influences into account. Following Lubatkin et al. (2006), we dummy coded firms as "construction," "manufacturing," and "other businesses." Service firms served as the reference point in our model.

We also asked the respondents to indicate their assessment of firm performance (Deshpandé et al., 1993) over the last three years on a seven-point Likert-type scale using four items ("How would you assess your firm's development over the last 36 months relative to that of your competitors in terms of: (a) overall performance, (b) market share, (c) turnover growth, and (d) profitability"). We included performance as (inferior) performance has been shown to affect innovation behavior (Chrisman and

Patel, 2012). In particular, the firm's performance might alter the respective CEO's framing and his or her perceived end state.[21]

3.6. Analyses

3.6.1. Descriptives

Descriptive statistics and correlations for all variables are provided in Table 7. Overall, we find only moderate levels of correlation between the variables. In particular, the correlation between promotion focus and prevention focus is low ($r = -.080$, $p > .1$), which is in line with previous findings (Higgins et al., 2001). The correlation between exploration and exploitation is positive and significant ($r = .394$; $p < .001$), which is in line with prior studies (Bierly and Daly, 2007; Gedajlovic et al., 2012) and supports our assumption that exploration and exploitation are complementary variables rather than two ends of a continuum.

[21] To further investigate the possibility that performance differences might have substantially altered our findings, we repeated all calculations based on a subsample that excluded the lowest 5% of performers. The effect of all independent and moderator variables remained stable in terms of size, magnitude, and significance. A descriptive analysis of this subsample of low performers did not provide any support for prospect-theory-based assumptions that low performers engage in more exploration than high performers due to loss aversion (Kahneman and Tversky, 1979).

Table 7. Descriptives and Variable Correlations (Paper 1).

Variables	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. CEO age	50.58	8.43															
2. CEO tenure	15.64	10.70	.424***														
3. No CEO share	.29	.46	-.034	-.276***													
4. CEO minority share	.25	.44	-.290***	.031	-.378***												
5. Firm age	47.43	43.59	.044	.181*	.305***	-.039											
6. Firm size (employees)	50.87	85.86	-.094	-.010	.212**	.089	.383***										
7. Non-family firm	.41	.49	-.053	-.207*	.363***	.090	.009	.088									
8. Construction	.20	.40	-.187*	-.005	.006	.051	.031	-.088	-.112								
9. Manufacturing	.20	.40	.088	.140†	.043	-.062	.087	.098	-.213**	-.244**							
10. Other business	.01	.11	.109	.150†	.052	.065	.092	.041	.021	-.057	-.057						
11. Firm performance	4.66	1.05	-.130	.023	.091	.132	-.020	.130	.056	.095	-.066	.037					
12. Promotion focus	4.01	.54	-.011	-.113	.064	-.145†	-.126	-.060	-.129	.039	.038	-.067	.207*				
13. Prevention focus	3.42	.72	-.144†	-.087	.072	.003	.063	.150†	.065	-.041	-.059	-.100	.006	-.080			
14. Competitive intensity	5.45	1.33	-.017	.083	-.018	.054	.066	.109	-.177*	.162*	-.058	.091	-.028	.046	.024		
15. Exploration	3.60	.66	.112	.042	-.066	-.026	-.089	-.040	-.184*	-.073	.170*	.027	.204*	.366***	-.173*	.061	
16. Exploitation	3.85	.57	.159†	.051	.115	-.123	.102	-.012	.002	-.169*	.148†	.064	.204*	.350***	-.045	.101	.394***

N = 153; † $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

3.6.2. Regression Models

To test our hypotheses, we calculated multivariate regression models built on ordinary least squares (OLS). In line with suggestions in the extant literature (Aiken and West, 1991) and in order to rule out any distortion caused by multicollinearity we standardized all variables before conducting the regressions. We conducted several tests to probe the quality of the data and scrutinize whether the assumptions of OLS regression were met (e.g., Hair et al., 2006). We first identified two cases with absolute values for the R-student measure greater than 3 (see, e.g., Kotha et al., 2001). These outliers were removed from the sample, resulting in a final sample size of 153 cases for the OLS regressions. Furthermore, Ramsey RESET tests (e.g., Parker, 2006) showed that our regression models, which assume linearity, were correctly specified (Model 3: $F(3, 133) = .16$, $p = .924$; Model 6: $F(3, 133) = .44$, $p = .724$). Moreover, Kolmogorov-Smirnov tests (Massey Jr., 1951) revealed that the standardized residuals were sufficiently normally distributed (Model 3: $Z = .052$, $p > .100$; Model 6: $Z = .060$, $p > .100$). As confirmed by the White test (White, 1980), our data does not suffer from heteroskedasticity (Model 3: $\chi2(127) = 107.61$, $p = .893$; Model 6: $\chi2(127) = 126.73$, $p = .490$). All individual variance inflation factors (VIFs; based on standardized variables) were below 2.2 and thus below the critical value of 10. Hence we assume that multicollinearity did not distort or dilute our results (Neter et al., 1985).

3.6.3. Regression Results

In Models 1–3, the dependent variable is exploration, whereas in Models 4–6, the dependent variable is exploitation. Models 1 and 4 contain only the control variables. In Models 2 and 5, the independent variables – promotion and prevention focus – and the moderator variable competitive intensity are added. Models 3 and 6 additionally include the interaction terms.

Model 1 shows that non-family ownership has a negative and marginally significant ($\beta = -.16$, $p < .10$) effect on exploration. Moreover, firm performance is positively and significantly related to both exploration ($\beta = .25$, $p < .01$; Model 1) and exploitation

($\beta = .26$, $p < .01$; Model 4).[22] In Models 2 and 5, promotion focus exerts a positive and significant influence on exploration ($\beta = .30$, $p < .001$) and on exploitation ($\beta = .32$, $p < .001$). These findings are consistent with Hypotheses 1a and 1b. The effect of prevention focus on exploration is negative and marginally significant ($\beta = -.14$, $p < .1$), which is in line with Hypotheses 2a. However, as the effect of prevention focus on exploitation is insignificant ($\beta = .00$, $p > .1$), Hypothesis 2b is rejected for this sample. Competitive intensity is insignificant in Model 2 ($\beta = .06$, $p > .1$), whereas it is significant in Model 5 ($\beta = .16$, $p < .05$). In Models 3 and 6, which include the interaction terms, the interaction between promotion focus and competitive intensity exerts positive and significant effects on exploration ($\beta = .18$, $p < .05$) and exploitation ($\beta = .15$, $p < .05$). This is consistent with Hypotheses 3a and 3b. However, the interaction between prevention focus and competitive intensity does not have a significant effect on exploration ($\beta = -.01$, $p > .1$) or exploitation ($\beta = .10$, $p > .1$). Hypotheses 4a and 4b are thus rejected at the .1 significance level. The F-values are 2.966 ($p < .001$) for Model 3 and 3.501 ($p < .001$) for Model 6. The adjusted R^2 values of .171 for Model 3 and .208 for Model 6 indicate that these models offer a better fit than the other models. The results of the regressions are shown in Table 8. Moreover, Figure 2 provides graphic illustrations of the moderator effects.

[22] The result that family firms engage more in exploration is in line with research that has identified several important advantages for family firms when targeting radically new market opportunities (e.g., König et al. 2013). The positive correlation between firm performance and exploration and exploitation provides further empirical evidence that slack resources foster ambidexterity (e.g., Lavie et al. 2010).

Table 8. Regression Models of Exploration and Exploitation (Paper 1).

Variables	Models 1–3: Exploration			Models 4–6: Exploitation		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CEO age	.121	.087	.108	.146	.130	.148†
CEO tenure	-.056	-.017	-.042	-.051	-.017	-.030
No CEO share	-.019	-.039	-.088	.036	.001	-.010
CEO minority share	-.008	.013	.016	-.070	-.049	-.043
Firm age	-.070	-.034	-.003	.119	.157†	.175*
Firm size	-.037	-.013	-.014	-.087	-.092	-.104
Non-family firm	-.164†	-.098	-.091	-.002	.088	.091
Construction	-.061	-.089	-.074	-.137	-.164*	-.151†
Manufacturing	.137	.117	.138†	.128	.128	.143†
Other business	.026	.014	.021	.043	.039	.049
Firm performance	.254**	.185*	.176*	.261**	.196*	.187*
Promotion focus		.296***	.296***		.322***	.314***
Prevention focus		-.136†	-.140†		.001	-.001
Competitive intensity (C.I.)		.064	.096		.159*	.202*
Promotion focus x C.I.			.175*			.153*
Prevention focus x C.I.			-.005			.097
F	1.886	2.972***	2.966***	2.170*	3.539***	3.501***
R^2	.128	.232	.259	.145	.264	.292
R^2 Adjusted	.060	.154	.171	.078	.190	.208
R^2 Change	.128	.104	.027	.145	.119	.028

N = 153; † p < .10; * p < .05; ** p < .01; *** p < .001.

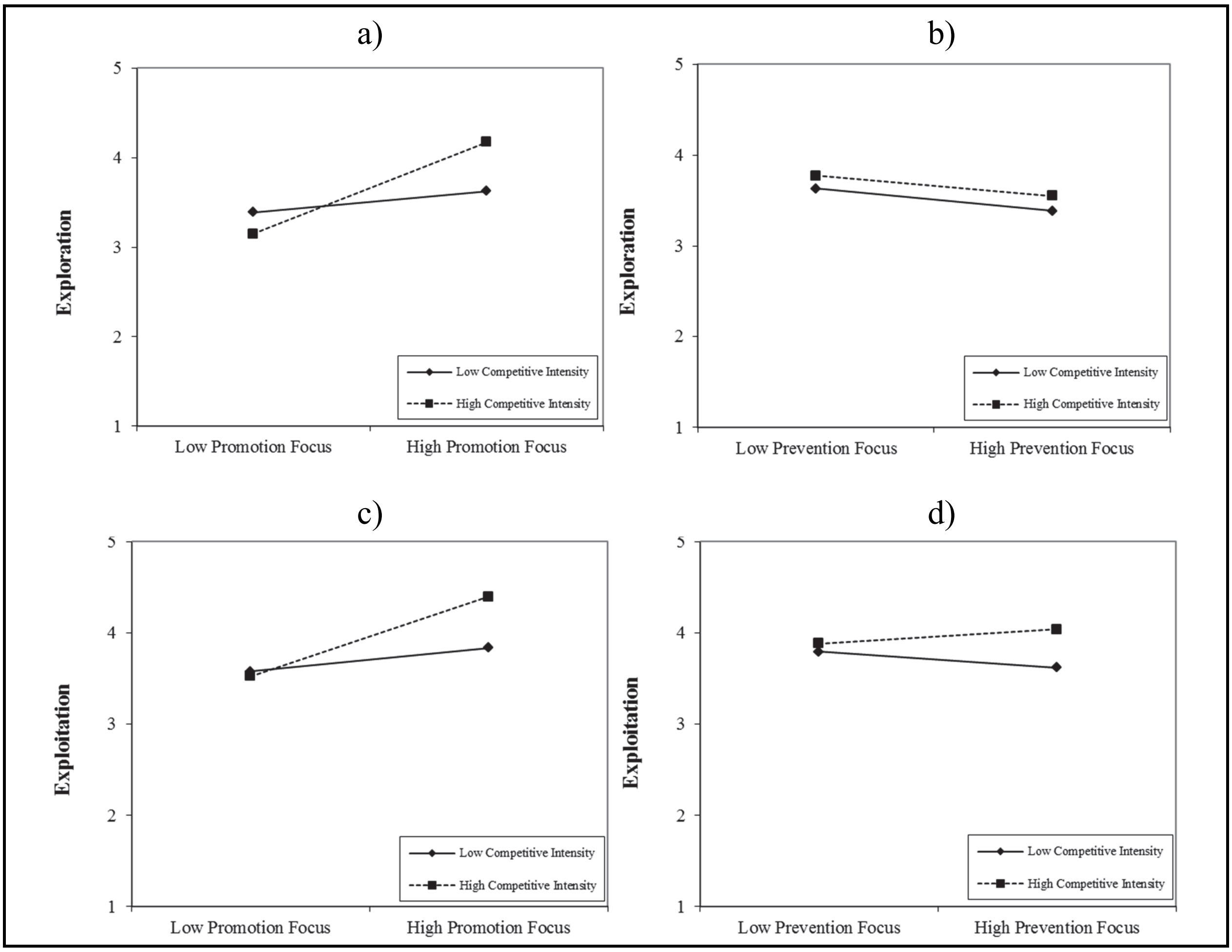

Figure 2. Interaction Effects (Paper 1).

3.6.4. Robustness Checks

We conducted a series of robustness tests to scrutinize our findings and to identify potential root causes for the non-findings (Hypotheses 2b, 4a, and 4b). First, we repeated our regressions using alternative calculations for our core variables in order to account for any distortions infused by the specific calculations of our variables. As the reliability of the promotion scale was low, we ran additional calculations with (a) all six items and (b) only four, positively coded items of the promotion focus scale (the negatively coded item “When it comes to achieving things that are important to me, I find that I don’t perform as well as I ideally would like to do” was also removed). All effects that were significant in the regressions described in Section 3.6.3 remained stable in terms of magnitude, direction, and significance.

When calculating “competitive intensity” based on three rather than four items (the item “Price competition is a hallmark of our local market” was removed, thereby increasing the internal reliability from .88 to .91), the effects of the independent and moderator variables as reported in Section 3.6.3 remained stable in terms of magnitude, direction, and significance. In addition, the interaction effect of prevention focus and competitive intensity on exploitation was positive and marginally significant ($\beta = .13$, $p < .10$) in this model. This is in line with the argumentation leading to H4b, which we had rejected based on the results given in Section 3.6.3. This interaction effect (as well as the effects reported in 4.3) remained stable in their magnitude, size, and direction when performing the below listed robustness tests with three rather than four competitive-intensity items.

We also ran calculations with alternative dependent variables, namely "organizational ambidexterity" (O'Reilly and Tushman, 2013). Organizational ambidexterity was calculated as the sum of, the product of, or the difference between exploration and exploitation (Jansen et al., 2005; Patel et al., 2013). The regressions reveal a positive effect of promotion focus on organizational ambidexterity, which is enhanced under competitive intensity, for the multiplicative ($\beta = .39$, $p < .001$ for direct and $\beta = .21$, $p < .01$ for interaction effect) and additive ($\beta = .37$, $p < .001$ for direct and $\beta = .19$, $p < .01$ for interaction effect) calculations of organizational ambidexterity (see Table 9)[23]. Prevention focus does not exert a positive effect on organizational ambidexterity (in line with our results rejecting H2b). The independent variables did not show any significant effect when the difference between exploration and exploitation was used as dependent variable. These findings suggest that chronic regulatory focus affects the absolute values of exploration and exploitation but does not have any effect on how CEOs balance those two sets of activities.

[23] Organizational ambidexterity is also positively correlated with CEO age, indicating that CEOs might become more skilled in pursuing ambidextrous firm activities over time. The positive effect of manufacturing on ambidexterity might be traced back to the cyclicality and the focus on technological innovation in this industry, which requires constant search for and harvesting of new opportunities.

Table 9. Regression Models of Ambidexterity (Paper 1).

Variables	Models 1–3: Multiplicative Ambidexterity			Models 4–6: Additive Ambidexterity			Models 7–9: Subtractive Ambidexterity		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
CEO age	.158†	.130	.154†	.159†	.129	.152†	-.017	-.035	-.030
CEO tenure	-.083	-.036	-.060	-.064	-.020	-.043	-.007	-.001	-.012
No CEO share	-.010	-.043	-.080	.009	-.023	-.060	-.050	-.038	-.074
CEO minority share	-.044	-.015	-.009	-.046	-.020	-.015	.055	.056	.054
Firm age	.036	.082	.113	.027	.071	.100	-.172†	-.172†	-.159
Firm size	-.068	-.056	-.065	-.073	-.062	-.069	.043	.071	.079
Non-family firm	-.120	-.025	-.019	-.101	-.009	-.003	-.152	-.170†	-.166†
Construction	-.098	-.129†	-.112	-.117	-.150†	-.134†	.065	.064	.066
Manufacturing	.176*	.163*	.187*	.158†	.146†	.168*	.015	-.005	.001
Other Business	.042	.035	.046	.041	.031	.041	-.014	-.021	-.024
Firm performance	.310***	.225**	.212**	.307***	.228**	.216**	.005	-.002	-.002
Promotion focus		.389***	.384***		.368***	.364***		-.010	-.004
Prevention focus		-.070	-.073		-.083	-.086		-.128	-.130
Competitive intensity (C.I.)		.125†	.174*		.132†	.176*		-.082	-.091
Promotion focus x C.I.			.212**			.196**			.028
Prevention focus x C.I.			.064			.053			-.091
F	2.559**	4.751***	4.928***	2.491**	4.460***	4.513***	1.017	1.041	.985
R^2	.166	.325	.367	.163	.312	.347	.073	.096	.104
R^2 Adjusted	.101	.257	.293	.097	.242	.270	.001	.004	-.002
R^2 Change	.166	.159	.042	.163	.149	.035	.073	.023	.008

N = 153; † p < .10; * p < .05; ** p < .01; *** p < .001.

Moreover, our results remained stable in terms of magnitude, direction, and significance regardless of whether control variables were included or excluded (see Spector and Brannick (2011) for a discussion of potential distortion through the inclusion of control variables).

As in many studies focusing on survey responses provided by CEOs (e.g., Patel et al., 2013; Zellweger et al., 2012), our sample size is limited. To rule out the possibility that the results described in Section 3.6.3 were caused by few extreme data points, we followed previous research and applied a bootstrapping approach (Bacharach et al., 2005; D'Aveni and Ilinitch, 1992). More specifically, we constructed 1,000 resamples and repeated the calculations five times. All of the results presented in Section 3.6.3 remained stable in terms of magnitude, direction, and significance.

To rule out the possibility that our results are sensitive to the model's specification, we conducted alternative regressions. Robust regressions calculated in STATA as well as generalized linear models based on maximum likelihood instead of the OLS parameter estimation were applied. These robustness checks also resulted in stable results compared to those reported in Section 3.6.3 (i.e., the magnitude, direction, and size of the results were stable).

3.6.5. Post-Hoc Test: Interactive Effects of Promotion and Prevention Focus

In a subsequent step of our analysis, we aimed to shed light on exploitation and exploration for CEOs with varying combinations of promotion and prevention focus (Lanaj et al., 2012). We first used the median to split the sample into four clusters (Idson et al., 2000; Markovits, 2013), which we labeled according to the taxonomy provided by Markovits (2013): high promotion focus and low prevention focus ("achievers"), high promotion focus and high prevention focus ("rationalists"), low promotion focus and low prevention focus ("indifferents"), and low promotion focus and high prevention focus ("conservatives"). We then calculated the mean values of exploration and exploitation for each of the four groups (Figure 3), and tested the significance of their differences using contrast analysis.

The results of the contrast analysis (see Tables 10 and 11) show that achievers engaged in the highest level of exploration (mean = 3.89), followed by rationalists (mean = 3.66) and indifferents (mean = 3.54). The level of exploration is lowest for conservatives (mean = 3.20). The four groups differed significantly in terms of their level of exploration, with the exception of rationalists and indifferents (p = .448). These results are in line with Hypotheses H1a and H2a.

With regard to exploitation, the activity level of achievers and rationalists was highest (mean = 4.00), followed by indifferents (mean = 3.71), and conservatives (mean = 3.55). While the difference between rationalists/achievers and indifferents turned out significant, the difference between achievers and rationalists as well as the difference between indifferents and conservatives were insignificant (in line with the regression results that led us to reject H2b). These results are further discussed in Section 3.7.

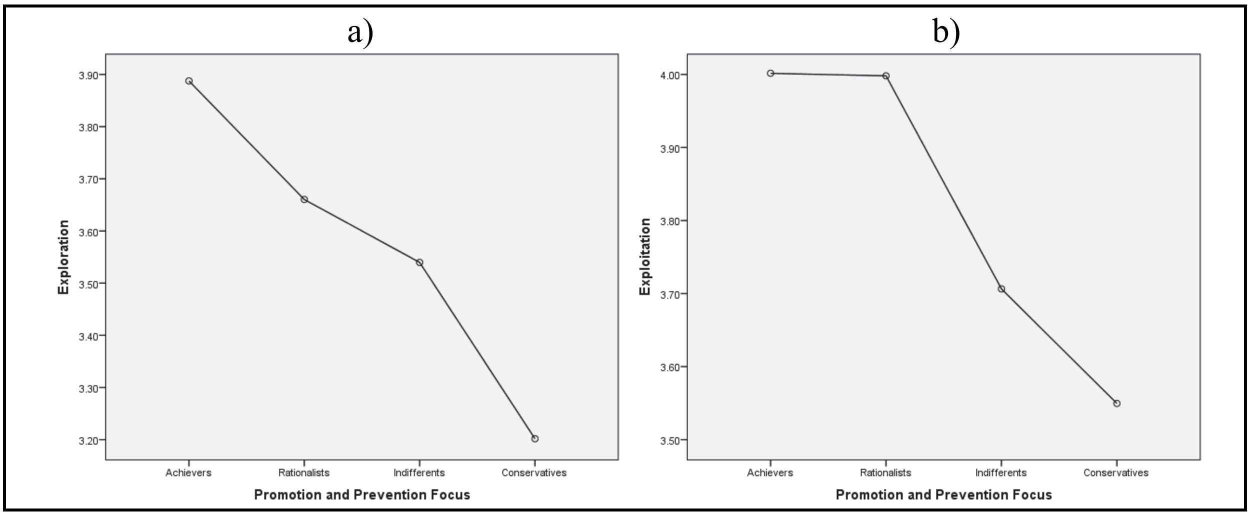

Figure 3. Post-Hoc Analyses (Paper 1).

Table 10. Contrast Tests: Exploration (Paper 1).

Groups (Mean Value)	Contrast Value	SD	T	df	Significance (two-tailed)
Achiever (3.89) – Rationalist (3.66)	.227	.13	1.800	149	.074
Achiever (3.89) – Indifferent (3.54)	.348	.16	2.133	149	.035
Achiever (3.89) – Conservative (3.20)	.686	.14	4.991	149	.000
Rationalist (3.66) – Indifferent (3.54)	.121	.16	.761	149	.448
Rationalist (3.66) – Conservative (3.20)	.459	.13	3.479	149	.001
Indifferent (3.54) – Conservative (3.20)	.338	.17	2.018	149	.045

Table 11. Contrast Tests: Exploitation (Paper 1).

Groups (Mean Value)	Contrast Value	SD	T	df	Significance (two-tailed)
Achiever (4.00) – Rationalist (4.00)	.004	.11	.031	149	.975
Achiever (4.00) – Indifferent (3.71)	.295	.14	2.051	149	.042
Achiever (4.00) – Conservative (3.55)	.452	.12	3.729	149	.000
Rationalist (4.00) – Indifferent (3.71)	.292	.14	2.087	149	.039
Rationalist (4.00) – Conservative (3.55)	.449	.12	3.858	149	.000
Indifferent (3.71) – Conservative (3.55)	.157	.15	1.062	149	.290

3.7. Discussion

This study aimed to enhance our understanding of how the CEO's promotion and prevention focus affect the respective firm's exploration and exploitation. In so doing, we aimed to advance theory on entrepreneurship in later stages of the organizational life cycle. The empirical results revealed a strong positive effect of the CEO's promotion focus and a negative effect of the CEO's prevention focus on the firm's level of exploration. These findings extend previous entrepreneurship studies that found evidence of a positive correlation between promotion focus and, for instance, the search for new ideas and the recognition of opportunities in new ventures (e.g., Hmieleski and Baron, 2008; Tumasjan and Braun, 2012). Our findings go beyond prior research by shifting the focus to later phases of the organizational life cycle, as we show how entrepreneurship can be fostered in *established* firms. In particular, our results reveal that high levels of CEOs' promotion focus are positively and high levels of prevention focus are negatively associated with entrepreneurship in the respective firms. This extension is important, as established SMEs, while they often benefit from specific advantages, such as established customer bases (e.g. Masurel and Van Montfort, 2006), are typically challenged by a tendency toward inertia caused by engraved routines (e.g. Withers et al., 2011). Several prior studies have highlighted that while new ventures typically emphasize exploration (Hill and Birkinshaw, 2008), firms tend to become more focused on exploitation over time (O'Reilly and Tushman, 2008). Our findings thus contribute to research seeking to identify how firms, especially SMEs, can remain entrepreneurial over time (Gedajlovic et al., 2012; Man et al., 2002; Zahra and Covin, 1995) by identifying the CEO's promotion and prevention focus as determinants of continued exploration.

Our investigation (see Section 3.6.4) also reveals that the CEO's level of promotion focus not only positively affects the firm's exploration but also its exploitation and, hence, its organizational ambidexterity (Raisch and Birkinshaw, 2008). As such, our study advances the thriving research stream that seeks to understand heterogeneity in firms' levels of organizational ambidexterity (Lavie et al., 2010), especially among SMEs (Gedajlovic et al., 2012; Lubatkin et al., 2006; Patel et al., 2013). We highlight the CEO's personality, especially his or her promotion focus, as an important determinant of organizational ambidexterity—a type of antecedent that has attracted little scholarly attention to date (cf. Lavie et al., 2010; Raisch and Birkinshaw, 2008). This finding might also inform research on upper echelons theory (Quigley and Hambrick, 2015), which has so far largely neglected the role of the CEO's chronic regulatory focus despite its focus on CEO characteristics.

Contrary to our expectations, the CEO's prevention focus did not significantly affect the firm's level of exploitation. This non-finding might have the following explanation: Based on arguments found in regulatory focus theory and research on organizational ambidexterity, we argued in Section 3.4.2.2 that high levels of prevention focus are associated with high levels of formalization, which in turn should foster exploitative firm activities. However, as extant studies of the relationship between formalization and exploitation (e.g., Jansen et al., 2005) focus on larger companies, their findings might not be fully transferrable to SMEs. In fact, one might suspect that high levels of prevention focus could induce the CEO of an SME to establish excessively formalized structures in order to avoid errors within the organization. Such overly formalized routines might be associated with high levels of bureaucracy, which can hamper advancements and improvements (e.g., Adler and Borys, 1996). Therefore, in-depth research is required to study and assess the specific error-avoidance measures that CEOs with high levels of prevention focus install in their firms as well as the implications of those measures.

We also studied the context dependency of the results, and provide evidence that the positive effect of a CEO's promotion focus on the firm's exploration and exploitation is enhanced when competitive intensity is high. As such, this study contributes to the emerging stream of research that investigates how the effects of regulatory focus depend on industry characteristics (Hmieleski and Baron, 2008). Moreover, we hypothesized that CEOs with high levels of prevention focus invest more in exploration and exploitation in contexts characterized by high rather than low competitive intensity. We did not find a significant effect on exploration, which might be explained as follows. Competitively intense situations might threaten CEOs with high levels of prevention focus. Theory on threat rigidity has long proposed that "when placed in a threat situation, an individual's most well-learned or dominant response might be emitted" (Staw et al., 1981: 502) because of, for instance, psychological stress. Yet the dominant response of CEOs with high levels of prevention focus is avoidance of firm activities with uncertain outcomes and, therefore, a reluctance to engage in exploration. This argument, which is based on threat rigidity, might counteract the regulatory focus-based argumentation found in Section 3.4.3.2 and ultimately explain the insignificant results.

The hypothesized positive interaction effect of competitive intensity and prevention focus on exploitation was rejected in our main regression models. However, additional tests based on adapted calculations of "competitive intensity" (not referring to item on "price wars" any more) resulted in stable, positive, and significant effects (see Section 3.6.4). This preliminary finding suggests that CEOs with high levels of prevention focus might be highly sensitive to specific market characteristics. For example, their exploitative activities might be different in markets with easily replaceable (commodity) goods, in which competitors engage in price wars, than in other markets where competitive intensity is high but companies mainly compete on the basis of, for instance, product and service quality.

Our study further advances theory on entrepreneurship (Brockner et al., 2004) and regulatory focus (Lanaj et al., 2012), as we study different *combinations* of promotion and prevention focus (see the post-hoc analysis). In line with prior work (Markovits, 2013), we distinguish among rationalists (high promotion and high prevention focus), achievers (high promotion and low prevention focus), conservatives (low promotion and high prevention focus), and indifferents (low promotion and low prevention focus). In line with our regression results, we find that among CEOs with high levels of promotion focus, firms led by achievers engage in significantly more exploration (and similar levels of exploitation) than firms led by rationalists. Two mechanisms might explain this pattern. First, when considering exploratory activities, rationalists might find themselves in a dilemma. Regulatory focus theory suggests that their high levels of promotion focus make them desire hits and that non-activity leads to negative emotions, such as disappointment and sadness (cf. Idson et al., 2000). At the same time, given their high levels of prevention focus, engagement in exploratory activities imbues these CEOs with high levels of tension arising from the perceived threat of failure. This dilemma might detract from the firm's overall level of exploration. Second, rationalists might be less likely than achievers to be overconfident – the tendency to overestimate the correctness of one's own assessment (Busenitz and Barney, 1997) – when, for instance, estimating the potential of identified opportunities. While high levels of promotion focus are generally associated with increased overconfidence bias (Trevelyan, 2008), high levels of prevention focus are related to the desire to avoid mistakes (Higgins, 1997) and, as such, might reduce the CEO's overconfidence bias. One might argue that rationalists can switch between the two regulatory foci and thus use a more careful and conservative prevention-focused approach when assessing exploratory opportunities. Future studies might therefore explore the decision-making patterns and underlying criteria of rationalist CEOs in more detail. In this regard, it would be of particular interest to study the performance implications. Organizational ambidexterity research (He and Wong, 2004) claims a positive association among exploration, exploitation, and firm performance, which suggests that achievers outperform rationalists. Conversely, based on recent research on entrepreneurship and regulatory focus (Baron, 2004; Brockner et al., 2004), which claims that entrepreneurs profit from scoring high on promotion and prevention, one would expect rationalists to generally be more entrepreneurially successful than their achiever counterparts (see also our discussion of the overconfidence argument). Given those inconsistent predictions, further research is required that studies under which contextual boundaries either achiever-CEOs or rationalist-CEOs are more successful regarding the respective firm's performance.

The findings from our contrast analysis also reveal that individuals with low levels of both prevention and promotion focus (indifferents) engage in significantly more exploration than conservatives (high levels of prevention and low levels of promotion focus), with the difference between rationalists and indifferents being non-significant. While this is in line with our theorizing (H1a and H2a), it challenges the way in which indifferents are pictured in the extant literature. While most research remains surprisingly silent about individuals with low levels of both foci (Lanaj et al., 2012), Markovits (2013: 85) describes indifferent employees as people without ideals that "find little interest in work or career and derive little satisfaction from it," who neither pursue innovations nor are reluctant to implement them and who are generally low performers. Our findings challenge this overly negative view of indifferents. In future studies, investigations of the characteristics of those individuals would be welcome, as would examinations of the conditions under which they become CEOs of SMEs (e.g., as family-internal successors in family firms). Such research may also focus on the motivations of indifferents, how they perform their tasks, and the precise performance implications of appointing such individuals as leaders.

3.8. Limitations and Future Research

As with any empirical work, our study comes along with several limitations that reveal potential avenues for additional research. A first limitation is our reliance on a single informant per firm as well as the subjective nature of data on exploration, exploitation, and competitive intensity, as individual respondents might have biased perspectives. However, this tradeoff must be weighed against the fruitfulness of insights gained from studying the behavior of SMEs, where often only the CEO has deep insights into the relevant decision-making and firm operations, and for which objective data is scarce.

Second, our investigation focuses on a specific type of firms – established Swiss SMEs – and is based on a sample that might not be fully representative of all SMEs. We therefore encourage scholars to replicate our study for other types of firms and in other geographical settings in order to scrutinize the generalizability of our findings. In addition, although the internal reliability of the promotion scale in our sample was acceptable (Hair et al., 2006; Reed et al., 2006), it was rather low. This is similar to other studies applying the Higgins scale in continental European contexts (e.g., Carmona et al., 2008; Sassenberg et al., 2012). We encourage researchers to focus on further investigating this phenomenon and proposing changes to the original RFQ scale that will result in higher levels of reliability for studies conducted in specific geographical contexts.

Third, our data set is cross-sectional, which implies we cannot a priori rule out reverse causality. For instance one might argue that previous firm performance alters the respective CEO's promotion and prevention focus. However, extant research indicates that such feedback of prior activities rather affects the height of goals than the type of goals or ways to achieve those goals (Donovan and Hafsteinsson, 2006;

Ilies and Judge, 2005). Moreover, previous studies have argued for and provided some empirical evidence for the quite stable nature of chronic regulatory focus (Higgins et al., 2001; Keller and Bless, 2006; Strauman, 1996) and thus indicate that reverse causality is relatively unlikely. Nevertheless, future research should account for potential changes in CEOs' regulatory focus over time by collecting longitudinal data on CEOs' promotion and prevention focus. Furthermore, lagged performance data would allow deriving further insights on the success of CEOs with high/low promotion/prevention focus in terms of their exploration and exploitation activities.

In addition, we suggest that scholars extend the investigation of determinants of exploration in SMEs to include other CEO characteristics, such as ambiguity tolerance (e.g., Begley and Boyd, 1988) or internal locus of control (Judge and Bono, 2001), as well as other environmental factors, such as munificence (e.g. Baum et al., 2001). Other promising avenues for additional research lie in studying what specific exploratory and exploitative activities CEOs with various combinations of promotion and prevention focus pursue.

3.9. Managerial Implications

This study also has important practical implications. Our results show that high levels of promotion focus among CEOs might be particularly valuable for SMEs in highly competitive markets, as such CEOs intensely pursue entrepreneurial opportunities while they also harvest short-term efficiency gains. This insight is particularly relevant for three types of real-life situations. First, owners of SMEs are advised to pay particular attention to hiring external CEOs who score high on promotion focus. Adapted questions from the Higgins et al. (2001) scale on chronic regulatory focus (see Section 3.11, Table 12) might help owners investigate the level of a candidate's promotion focus in a pre-offer assessment. Second, exiting owners who care about the future wellbeing of their firms (e.g., DeTienne, 2010) and who intend to hand over their firms in competitive markets should evaluate whether potential successors are characterized by high levels of promotion focus, as this might affect the firm's future prosperity. Third, SME CEOs who sense intensifying competition should investigate whether they are equipped with high levels of promotion focus, an attribute that will allow them to successfully lead their firms in competitively intense environments according to findings of this study. If this is not the case, they might consider one of two options. First, although research regarding whether and how otherwise stable personality traits can be intentionally altered is still inconclusive (Roberts et al., 2006), awareness of the shortfalls that accompany a lack of promotion focus might help CEOs critically assess their decision-making and resource allocations. Second, in line with findings in research on minority dissent (De Dreu and West, 2001), CEOs might include individuals with high levels of promotion focus in their management or advisor teams.

3.10. Conclusion

CEOs' characteristics substantially affect their organizations' entrepreneurial activities, particularly in SMEs. The chronic regulatory focus of key decision makers, especially their level of promotion focus, affects the firm's engagement in exploratory and exploitative activities, and might ultimately have an impact on firm performance. In order to advance entrepreneurship theory, we encourage scholars to further investigate how CEOs' personal characteristics in interaction with important environmental factors affect firm behavior.

3.11. Appendix

Focal Questionnaire Items

Table 12. Regulatory Focus Questionnaire Scale (Paper 1).

1. Compared to most people, are you typically unable to get what you want out of life?* (-)
2. Growing up, would you ever "cross the line" by doing things that your parents would not tolerate?*
3. How often have you accomplished things that got you "psyched" to work even harder?
4. Did you get on your parents' nerves often when you were growing up?*
5. How often did you obey rules and regulations that were established by your parents?
6. Growing up, did you ever act in ways that your parents thought were objectionable?*
7. Do you often do well at different things that you try?
8. Not being careful enough has gotten me into troubles at times.*
9. When it comes to achieving things that are important to me, I find that I don't perform as well as I ideally would like to do.*
10. I feel like I have made progress toward being successful in my life.
11. I have found hobbies or activities in my life that capture my interest or motivate me to put effort into them.

This scale is based on Higgins et al. (2001). Respondents were asked to answer each question on a five-point Likert scale. The questions refer to specific situations in the life of respondents. Questions 1, 3, 7, 9, 10, and 11 are promotion-focused items; 2, 4, 5, 6, and 8 are prevention-focused items. Answer options ranged from "never or seldom" (= 1) to "very often" (= 5). Items marked with an asterisk are reversed scored. Items marked with "(-)" were removed.

Table 13. Scale for Exploration and Exploitation (Paper 1).

1. The firm looks for novel technological ideas by thinking "outside the box."
2. The firm bases its success on its ability to explore new technologies.
3. The firm creates products or services that are innovative to the firm.
4. The firm looks for creative ways to satisfy its customers' needs.
5. The firm aggressively ventures into new market segments.
6. The firm actively targets new customer groups.
7. The firm commits to improve quality and lower cost.
8. The firm continuously improves the reliability of its products and services.
9. The firm increases the levels of automation in its operations.
10. The firm constantly surveys existing customers' satisfaction.
11. The firm fine-tunes what it offers to keep its current customers satisfied.
12. The firm penetrates more deeply into its existing customer base.

Respondents were asked to describe the firm's orientation during the past three years using a five-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree"), which has been used, for instance, by Lubatkin et al. (2006). Questions 1–6 are exploration items; 7–12 are exploitation items.

Table 14. Competitive Intensity Scale (Paper 1).

1. Competition in our local market is intense.
2. Our organizational unit has relatively strong competitors.
3. Competition in our local market is extremely high.
4. Price competition is a hallmark of our local market.

The scale is based on scales developed by Jaworski and Kohli (1993) and Birkinshaw et al. (1998), and was also used, for instance, by Jansen et al. (2006). Competitive intensity is measured on a seven-point Likert scale ranging from 1 = “strongly disagree” to 7 = “strongly agree.”

4. CEO-Customer Interactions in SMEs: A Research Agenda on Antecedents, Outcomes, and Moderators of CEO Empathy (Paper 2)

4.1. Abstract

The ability of chief executive officers (CEOs) to interact and thus empathize with their customers can strongly influence the performance of their small or medium-sized enterprises (SMEs). However, studies on CEOs' empathy in the context of SMEs are scant, whereas employees' empathy, particularly salespersons' empathy, has attracted considerable scholarly attention. In order to stimulate and direct empathy research in the SME context, we provide a comprehensive research agenda on antecedents, outcomes, and moderators of CEOs' empathy derived from a systematic review of the empirical literature on salespersons' empathy. Based on our research agenda, we encourage scholars, amongst others, to investigate the impact of CEOs' characteristics (e.g., chronic regulatory focus, temperament) on their empathy and to examine the effect of CEOs' empathy on customer satisfaction and decision quality, and whether these effects are enhanced by appropriate managerial training.

4.2. Introduction

Chief executive officers (CEOs) of small and medium-sized enterprises (SMEs) allocate a large amount of their working time to the marketing and sales function (Müller et al., 2012), which has been shown to be an important driver of SME performance (cf. Keh et al., 2007; Peterson and Lill, 1981). In this function, CEOs visit, consult, negotiate with, or even sell to customers (cf. Baron and Markman, 2000; Kazanjian, 1988; Müller et al., 2012). The customer need knowledge (cf. Homburg et al., 2009) as a result of such customer interactions supports CEOs in their decisions, for example, when deciding on which products or services to launch on the market. As such, the ability of CEOs to interact, in particular to empathize with their customers can strongly contribute to the performance of their SMEs (cf. Baron and Markman, 2000, 2003; Soriano and Castrogiovanni, 2012).

The relevance of empathizing with others has been recognized in various research fields (cf. Homburg et al., 2009). Thereby, empathy has increasingly been understood as comprising cognitive and emotional aspects (Decety and Jackson, 2004; Kerem et al., 2001; Wieseke et al., 2012), such as perspective taking and empathic concern (Woltin et al., 2011). Empathy thus refers to an individual's ability to understand another's thoughts and feelings (Bernstein and Davis, 1982; Davis, 1983; Devoldre et al., 2010) and to show concern for the perceived emotional situation of the other (Batson et al., 1981; Coke et al., 1978; Davis, 1983). As such, empathy has been intensively investigated in the fields of marketing, sales, and service (e.g., Agnihotri and Krush, 2015; McBane, 1995; Wilder et al., 2014). Employees' empathy, particularly salespersons' empathy, has been linked to ethical behavior (Agnihotri and Krush, 2015), customer satisfaction and loyalty (Aggarwal et al., 2005; Wieseke et al., 2012), or sales performance (e.g., Greenberg and Mayer, 1964; Plank and Reid, 2010; Spaulding and Plank, 2007). In recent years, scholars have begun studying executives' and entrepreneurs' empathy in the context of SMEs. Camuffo et al. (2012) identified entrepreneurs' empathy as a distinctive social competency that leads to superior firm performance. Furthermore, Goel et al. (2013) showed that CEOs' empathy enhances the socio-emotional wealth of their family-owned firms. Against this background, however, more empirical research is needed in that context, as it is not yet known how CEOs' empathy influences customer emotions, decision quality, or SME performance, and when these effects are of greatest magnitude. Moreover, it is not yet understood which factors determine CEOs' empathy, such as their personal characteristics and professional experience.

In order to stimulate and direct empathy research in the context of SMEs, we develop a comprehensive research agenda on antecedents, outcomes, and moderators of CEOs' empathy based on a systematic review of empirical journal articles on salespersons' empathy. We contribute to SME literature by highlighting fruitful avenues for future research on CEOs' empathy with customers. Moreover, we enhance the understanding of the important role of CEOs' empathy in customer-interactions. We further add to marketing, sales, and service literature by conducting a systematic literature review (SLR) of salespersons' empathy. Previous narrative reviews are hardly comprehensive (see, e.g., Wieseke et al., 2012) and focus on the outcomes of salespersons' empathy, thereby neglecting its antecedents and moderators (see, e.g., Ricks and Veneziano, 1998).

Our paper is structured as follows: First, we conceptualize CEO empathy. Second, we describe the methodology used. Third, we present the results of our SLR of salespersons' empathy. Fourth, we derive a research agenda on antecedents, outcomes, and moderators of CEOs' empathy, and discuss the limitations as well as managerial implications of our study. We then offer our conclusion.

4.3. Conceptualization of CEO Empathy

The extant literature in the fields of social and clinical psychology as well as management shows considerable ambiguity in the conceptualization of empathy (e.g., Gladstein, 1983; Parker and Axtell, 2001; Wieseke et al., 2012). Empathy has been described as a personal trait or stable ability, situation-specific state, experiential process, or interpersonal behavior, which is either cognitive or emotional and either unidimensional or multidimensional (Buchheimer, 1963; Duan and Hill, 1996; Wieseke et al., 2012). Studies on interindividual differences in human interactions conceptualize cognitive/emotional empathy either as a personality trait that is biologically endowed (Sullivan, 1953) or as a stable ability that increases with age and develops through social interactions (Gladstein, 1983; McBane, 1995; Mead, 1934). In interactions with others, of note, women (as compared to men) seem to have higher levels of both cognitive and emotional empathy (Davis, 1980; Hogan, 1969; Mehrabian and Epstein, 1972).

Cognitive empathy refers to an individual's intellectual understanding of another's internal state (Hogan, 1969; Wieseke et al., 2012). The underlying efforts to understand another's thoughts or feelings are commonly described as "perspective taking" (Barrett-Lennard, 1981; Bernstein and Davis, 1982; Woltin et al., 2011). High levels of perspective taking enable individuals to see others' points of view, to anticipate the reactions of others, and to address others' needs or opinions (Devoldre et al., 2010; Wieseke et al., 2012).

In contrast, emotional empathy refers to an individual's emotional response to another's emotional state (Hoffman, 1984; Mehrabian and Epstein, 1972; Wieseke et al., 2012). Emotional responses to another's welfare are described as "sympathetic concern" (Eisenberg et al., 1991) or, more commonly, "empathic concern" (Woltin et al., 2011). High levels of empathic concern enable individuals to show apprehensiveness for the perceived emotional situation of others resulting in helping behaviors (Batson et al., 1981; Coke et al., 1978; Wieseke et al., 2012). Of note, empathic concern is different from emotional contagion in that the latter refers to an individual's experience of another's emotions (Gladstein, 1983; Wieseke et al., 2012), which may result in automatic synchronization of facial expressions, vocalizations, or movements with those of the other (Hatfield et al., 1994). Hence, emotional contagion constitutes a simple expression of emotion sharing (Decety and Jackson, 2004) that takes the form of identification rather than that of empathy (De Waal, 1996).

Although conceptually independent, perspective taking and empathic concern are interrelated (Dietz and Kleinlogel, 2014; Duan and Hill, 1996). Piaget (1932) argued that the ability to take another's perspective is an essential prerequisite for non-egocentric behavior (cf. Dietz and Kleinlogel, 2014) and that the underlying cognitive processes lead to emotional responses, such as empathic concern. In fact, studies conducted by Davis (1980, 1983) show a positive correlation between perspective taking and empathic concern. As such, taking another's perspective may increase the ability to show empathic concern for the other (Coke et al., 1978).

Scholars increasingly understand empathy as a multidimensional phenomenon (Decety and Jackson, 2004; Kerem et al., 2001; Wieseke et al., 2012) including cognitive and emotional aspects, such as perspective taking and empathic concern (Woltin et al., 2011). In this regard, empathy is described as an individual's ability to sense another's thoughts and feelings (Rogers, 1957) and to react to the perceived welfare of the other (Davis, 1983). Hence, for the purpose of this study, we define an SME CEO's (salesperson's) empathy as his/her ability to understand and respond to a customer's thoughts and feelings in face-to-face interactions (e.g., negotiations and sales encounters) (Davis, 1983; Wieseke et al., 2012).

4.4. Methodology

4.4.1. Approach

In order to develop a research agenda on antecedents, outcomes, and moderators of SME CEOs' empathy, we relied on a SLR of salespersons' empathy. SLRs (David and Han, 2004; Henry et al., 2016; Newbert, 2007) have become recognized as appropriate methodological approaches within the field of SMEs (cf. Henry et al., 2016; Pittaway and Cope, 2007). They are different from traditional narrative reviews by being more explicit in the selection and evaluation of studies (David and Han, 2004). As such, SLRs appear especially suitable where a large evidence base exists (Henry et al., 2016), as it is the case in salesperson empathy literature.

The eight stages and choices involved in our SLR of salespersons' empathy are shown in Table 15. In conducting the SLR, we chose the databases ABI/INFORM Complete (ABI) and Business Source Premier (EBSCO) covering journals of multiple disciplines (cf. David and Han, 2004; Tranfield et al., 2003) likely to publish research on salesperson empathy (e.g., marketing, sales, and service). For the purpose of our study, we searched these databases for empirical papers published in academic journals by the means of a Boolean keyword search (see, e.g., Henry et al., 2016; Pittaway and Cope, 2007), thereby excluding books, grey literature, and conceptual papers. We further excluded papers where empathy constituted a peripheral element of the study (see, e.g., Henry et al., 2016) or where other interactions than those between sellers and buyers were addressed. Discussions between the authors throughout the process assured that exclusions were agreed (see, e.g., Henry et al., 2016). The Appendix outlines the articles not included in the SLR and the reasons for their exclusion (see Section 4.11, Table 20). Papers listed in the references of the retrieved articles with further relevance to our SLR were manually selected (see, e.g., Zou and Stan, 1998), some of which were not found by our search filters even though the keywords appeared in the title or abstract fields. This resulted in a sample of 36 articles of 23 well-regarded journals of various disciplines. Table 16 contains a summary and the results of our search filters used in the databases ABI and EBSCO. Table 17 presents the journal titles and respective number of articles included in the SLR. Of note, our sample size is comparable, for example, to that of Zou and Stan (1998) who applied a similar approach to their SLR of export performance.

Table 15. Stages and Choices in the SLR Process (Paper 2).

Stage	Description
1	ABI/INFORM Complete (ABI) and Business Source Premier (EBSCO) databases covering journals of multiple disciplines (cf. David and Han, 2004; Tranfield et al., 2003) likely to publish empirical research on salespersons' empathy with buyers (e.g., management, marketing, sales, service, psychology) were chosen for the purpose of the SLR.
2	After an initial search of ABI and EBSCO (see, e.g., Pittaway et al., 2004) with the basic term (empath* AND sales*), substantive keywords central to the concept of empathy, i.e., perspective taking and empathic concern, and to sales interactions were identified as filters for within-databases searches.
3	Methodological keywords were set following David and Han (2004) and Newbert (2007).
4	Academic journal articles written in English language were searched within ABI and EBSCO by means of a systematic Boolean keyword search using the terms (empath* OR "perspective taking") AND (sales* OR sell* OR buy*) AND (data OR effect* OR empirical* OR evidence OR finding* OR result* OR test*) in the respective title and abstract fields (see, e.g., David and Han, 2004; Henry et al., 2016).
5	Articles published in journals listed in the Social Science Citation Index (SSCI) were selected for further analyses (see, e.g., Pittaway and Cope, 2007). Although not listed in the SSCI, articles published in the following journals were retained due to their relevance for the SLR: *International Journal of Bank Marketing* (IJBM); *Journal of Consumer Marketing* (JCM); *Journal of Managerial Issues* (JMI); *Journal of Marketing Management* (JMM); Journal of Personal Selling and Sales Management (JPSSM); *Journal of Retailing and Consumer Studies* (JRCS). All these journals are listed, for instance, in the SCImago Journal Rank (SJR) and VHB-JOURQUAL.
6	Abstracts and, in case of substantive and methodological relevance, full texts of the papers were read (see, e.g., David and Han, 2004). Main exclusion criteria applied as follows (see, e.g., Henry et al., 2016): conceptual papers, articles where empathy is an insignificant component or by-product of the study, papers that address other interactions than those between sellers and buyers, and articles that study, for instance, consumers' empathy instead of salespersons' empathy (see Section 4.11, Table 20, for the articles not included in the review (N = 34) and the reasons for exclusion). Discussions between the authors throughout the SLR process ensured that exclusions were agreed (see, e.g., Henry et al., 2016).
7	Papers listed in the references of the remaining articles with further relevance to the SLR were additionally selected (see, e.g., Zou and Stan, 1998), some of which were published before ABI and EBSCO began coverage, or which were not found by the search terms although the keywords were contained in the title or abstract fields. This yielded a final total of 36 articles of 23 journals (cf. Zou and Stan, 1998) (see Table 16 for a summary and the results of the substantive and methodological filters used in the databases, and Table 17 for the journal titles and respective number of articles included in the SLR).
8	Articles were reviewed using a thematic reading guide (cf. Henry et al., 2016) developed by the authors (see Table 18 for the reading guide and Table 19 for the characteristics as well as key findings of the articles reviewed).

Sources: Adapted from Henry et al. (2016: 7) and Pittaway and Cope (2007: 482).

Table 16. Summary and Results of the Search Filters used in the Databases ABI and EBSCO (Paper 2).

Filter Type	Description	ABI	EBSCO	Total
Substantive	Find all academic journal articles written in English language with at least one of two keywords in the title or abstract: empath*, "perspective taking."	1585	2151	3736
Substantive	Retain papers with at least one of three additional keywords in the title or abstract: sales*, sell*, buy*.	80	102	182
Methodological	Retain articles with at least one of seven additional keywords indicating empirical data or analysis in the title or abstract: data, effect*, empirical*, evidence, finding*, result*, test*.	55	78	133
Substantive	Retain articles published in journals listed in the SSCI or SJR and VHB-JOURQUAL.	39	57	96
Substantive and methodological	Read abstracts for both substantive relevance and statistical analysis.	27	39	66
Substantive and methodological	Read full papers for both substantive relevance and statistical analysis.	21	29	50
Duplicates	Delete duplicate articles found in both databases.			29
Substantive	Go through the references of the remaining articles and select papers of further relevance for to SLR.			36

Sources: Adapted from David and Han (2004: 45) and Newbert (2007: 126).

Table 17. Journals included in the SLR (Paper 2).

Journal Titles (N = 23)	Number of Articles
European Journal of Marketing (EJM)[a]	2
Industrial Marketing Management (IMM)	2
International Journal of Bank Marketing (IJBM)	2
International Journal of Consumer Studies (IJCS)	1
Journal of Applied Psychology (JAP)	1
Journal of Business to Business Marketing (JBBM)	1
Journal of Business & Industrial Marketing (JBIM)	1
Journal of Consumer Marketing (JCM)	1
Journal of Managerial Issues (JMI)	1
Journal of Marketing (JM)	2
Journal of Marketing Management (JMM)	5
Journal of Marketing Research (JMR)	2
Journal of Marketing Theory and Practice (JMTP)	1
Journal of Personal Selling & Sales Management (JPSSM)	2
Journal of Psychology: Interdisciplinary and Applied (JPIA)	1
Journal of Retailing and Consumer Services (JRCS)	1
Journal of Service Research (JSR)	1
Journal of Services Marketing (JSM)	1
Journal of the Academy of Marketing Science (JAMS)	1
Marketing Letters (ML)	1
Psychology & Marketing (P&M)	4
Schmalenbach Business Review (SBR)	1
Service Industries Journal (SIJ)[b]	1
Total	36

Sources: Adapted from Darley et al. (2010: 98) and Henry et al. (2016: 8).
[a]Previously, '*British Journal of Marketing*' (1967–1971), then '*European Journal of Marketing'* (EJM) from 1971.
[b]Previously, '*Service Industries Review*' (1981–1982), then '*Service Industries Journal'* (SIJ) from 1983.

4.4.2. Analyses

Following Henry et al. (2016), we constructed a thematic reading guide with an appropriate coding system (see Table 18) in order to review the searched articles on salespersons' empathy. We coded the definition of empathy used and methodological approach employed for each of the articles, as salesperson empathy research shows considerable discrepancy in the definition and measurement of empathy (McBane, 1995). Of note, as the underlying conceptualization of empathy often was not clear-cut and required additional reflection, we decided early on in the process to apply a manual coding system to our SLR (cf. Henry et al., 2016). Besides measurement, the selected articles were coded for further methodological (e.g., data collection method and sample size) and analytical characteristics (i.e., analytical approaches adopted, such as regression models and correlation analysis), as the employed research methodology strongly influences the extent to which empirical findings are generalizable (Hair et al., 2006; Senftlechner and Hiebl, 2015). Moreover, in order to develop a research agenda on SME CEOs' empathy, we coded the key findings for each paper. The results of our analyses are presented in the next section.

Table 18. Thematic Reading Guide used for Articles included in the SLR (Paper 2).

Category
1. Year of publication
2. Journal title
3. Article title
4. Author(s)
5. Definition of empathy
6. Methodological approach
6a. Data collection method
6b. Sample: Informants and sample size
6c. Industry context
6d. Firm type
6e. Variables
6f. Measurement of empathy
7. Analytical approach
8. Key finding(s)

Source: Adapted from Henry et al. (2016: 9).

4.5. Results of the Systematic Literature Review

Figure 4 illustrates the time trend of salesperson empathy research in number of empirical articles published in academic journals (see, e.g., Henry et al., 2016). The first article was published in 1952. The few papers published between 1966 and 1975 were not included in the SLR as empathy constitutes an insignificant component of the study (see Section 4.11, Table 20). Almost half of the empirical articles were published between 2006 and 2015, indicating that the evidence base of salesperson empathy research is relatively recent.

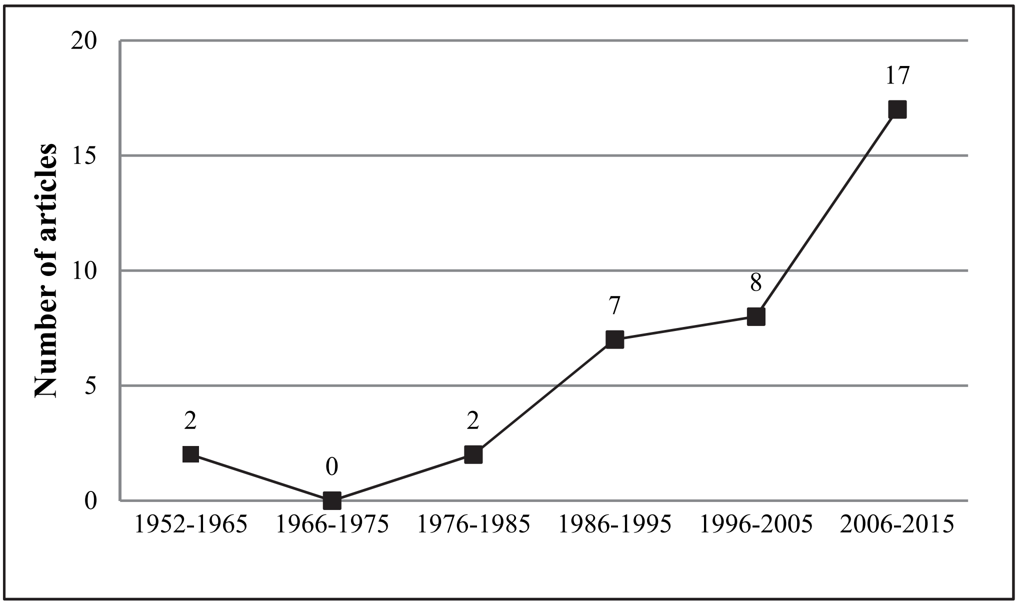

Figure 4. Salesperson Empathy Research: Time Trend in Number of Articles (Paper 2).

Table 19 presents the characteristics and key findings of the reviewed articles on sellers' empathy in a chronological order. The articles' characteristics in terms of the definition and measurement of empathy, data collection method, underlying sample, industry context, type of firms targeted, and analytical approach employed are described in Section 4.5.1. The key findings of the reviewed studies regarding the antecedents, outcomes, and moderators of salespersons' empathy are shown in Section 4.5.2.

Table 19. Articles included in the SLR: Characteristics and Key Findings (Paper 2).

Year	1952	1964	1977	1980
Author(s)	Tobolski and Kerr[a]	Greenberg and Mayer[a]	Lamont and Lundstrom[a]	McDermott and Schweitzer
Empathy definition	Cognitive ability	Cognitive and emotional trait	Cognitive trait	Cognitive ability
Empathy measurement	Empathy Test (Kerr and Speroff, 1951)	Multiple Personal Inventory (Greenberg and Mayer, 1964)	Scale by Hogan (1969)	-
Data collection method	Survey	Survey	Survey	Exercise, survey
Sample	32 Salespersons	1030 Salespersons	71 Salespersons	50 Salespersons, 8 sales managers, 1 marketing/product manager and staff
Industry context	Retail	Retail, service	Manufacturing	Manufacturing
Firm type	n.s.	small, large	large	large
Analytical approach	Correlation analysis	Descriptive statistics, correlation analysis, t test	Regression	Descriptive statistics
Key finding(s)	New car salespersons' empathic ability is positively related to their performance, whereas used car salespersons' empathic ability is not associated with their performance.	Salespersons' empathy is positively related to their performance.	Salespersons' empathy negatively influences their performance.	After the exercise, the salespersons perceived an increased ability to be aware of customers' perspectives, to foresee customer objections, and to adapt their appeals to particular customer segments.

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Table 19. (Continued)

Year	1990	1992	1994	1994
Author(s)	Spiro and Weitz[a]	Dawson et al.	Palmer and Bejou	Pilling and Eroglu
Empathy definition	Cognitive and emotional trait	Cognitive trait	Cognitive ability	Cognitive trait
Empathy measurement	IRI (Davis, 1980)	BLRI (Barrett-Lennard, 1978)	SOCO Scale (Saxe and Weitz, 1982)	-
Data collection method	Survey	Interview	Survey	Experiment
Sample	268 Salespersons	150 Customers	568 Buyers	484 Buyers
Industry context	Manufacturing	Retail	Service	Retail
Firm type	large	n.s.	n.s.	n.s.
Analytical approach	Correlation analysis	ANOVA	ANOVA	ANOVA
Key finding(s)	Salespersons' perspective taking and empathic concern are positively related to their practice of adaptive selling, but are not related to their performance.	Salespersons' empathy does not affect their performance.	The seller-buyer relationship duration has a positive effect on salespersons' empathic orientation.	Salespersons' empathy has a positive effect on the likelihood of placing an order and the likelihood of listening to future sales presentations. These effects are enhanced in cases where salespersons' professionalism is high, but are not moderated by merchandise salability. The effect of salespersons' empathy on the likelihood of listening to future sales presentations is further increased when buyers work for independent retailers and when their experience is high.

(Continued)

Table 19. (Continued)

Year	1995	1995	1995	1998
Author(s)	McBane	Palmer and Bejou	Pettijohn et al.	Ricks and Veneziano
Empathy definition	Cognitive and emotional process	Cognitive ability	Cognitive process	Emotional state
Empathy measurement	BLRI (Barrett-Lennard, 1978), IRI (Davis, 1980), items by Dillard and Hunter (1986)	SOCO Scale (Saxe and Weitz, 1982)	BLRI (Barrett-Lennard, 1962)	IRI (Davis, 1980)
Data collection method	Survey	Survey	Survey	Survey
Sample	154 Salespersons	568 Buyers	113 Salespersons	225 Salespersons
Industry context	Manufacturing	Service	Retail	Manufacturing, service
Firm type	n.s.	n.s.	n.s.	n.s.
Analytical approach	Regression	ANOVA	ANOVA, chi square test	MANCOVA
Key finding(s)	Salespersons' perspective taking and empathic concern are not related to their performance. However, the relationship between salespersons' perspective taking and performance is enhanced when they control the sales interactions. These controlling behaviors, though, do not influence the relationship between salespersons' empathic concern and performance.	Gender dyad (female buyer-female salesperson; female-male; male-female; male-male) had a positive effect on salespersons' empathic orientation perceived by buyers. The empathic orientation of female and male salespersons was perceived as high when assessed by female buyers. When rated by male buyers, female salespersons were perceived as showing the lowest level of empathic orientation, followed by male salespersons.	Salespersons' empathy does not affect their performance.	Salespersons' empathy does not affect their performance. Moreover, salespersons' gender (1: female; 0: male) interacts with empathy on unit sales (but not on managerial rating), suggesting that empathy is advantageous for females, but disadvantageous for males.

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Table 19. (Continued)

Year	2000	2001	2002	2003
Author(s)	Ricks et al.	Klemz and Boshoff	Widmier	Wong and Sohal
Empathy definition	Emotional state	Cognitive ability	Cognitive and emotional trait	Cognitive ability
Empathy measurement	IRI (Davis, 1980)	SERVQUAL Scale (Parasuraman et al., 1988, 1991, 1994)	Scales by Giacobbe (1991)	SERVQUAL Scale (Parasuraman et al., 1988), RSQS (Dabholkar et al., 1996)
Data collection method	Survey	Survey	Survey	Survey
Sample	225 Salespersons	350 Customers	744 Salespersons	1261 Buyers
Industry context	Manufacturing, service	Retail	Manufacturing, service	Retail
Firm type	n.s.	small, large	large	large
Analytical approach	MANCOVA, MANOVA, ANOVA	PLS	Regression, Chow test	Path analysis
Key finding(s)	Salespersons' self-monitoring does not interact with empathy on managerial rating and unit sales.	Small retailers' (salespersons') reliability and responsiveness are positively related to their empathy perceived by customers. Large retailers' responsiveness is also positively associated with their empathy perceived by customers. Small retailers mainly apply empathy to increase customers' willingness to buy, whereas large retailers primarily use assurance.	Salespersons' perspective taking and empathic concern have a positive effect on their customer orientation. The negative effect of sales volume incentives on customer orientation is enhanced when perspective taking and empathic concern are high. The positive link between customer satisfaction incentives and customer orientation is weakened by perspective taking, but strengthened by empathic concern.	Salespersons' empathy is positively associated with buyers' loyalty to the salesperson and loyalty to the company.

(Continued)

Table 19. (Continued)

Year	2005	2005	2005	2006
Author(s)	Aggarwal et al.	Homburg and Stock	Stock and Hoyer	Drollinger et al.
Empathy definition	Cognitive and emotional ability	Cognitive ability	Cognitive ability	Cognitive and emotional ability
Empathy measurement	Scale by Plank et al. (1996)	IRI (Davis, 1980, 1983), SERVQUAL Scale (Parasuraman et al., 1991), items by Hogan et al. (1984)	IRI (Davis, 1980, 1983), items by Hogan et al. (1984)	IRI (Davis, 1980, 1983)
Data collection method	Survey	Survey	Survey	Survey
Sample	162 Buyers	164 Salespersons, 164 Customers	173 Salespersons, 173 Customers	151 Salespersons
Industry context	Manufacturing	Manufacturing, service	Manufacturing, service	Manufacturing, service
Firm type	n.s.	small, medium, large	small, medium, large	n.s.
Analytical approach	SEM	SEM, chi square test	SEM, chi square test	Correlation analysis
Key finding(s)	Salespersons' empathy has a positive effect on their listening skills and customers' trust in the salesperson and satisfaction with the salesperson.	The positive relationship between salespersons' work satisfaction and customer satisfaction is stronger in the case of salespersons with high empathy levels.	The positive relationship between salespersons' customer-oriented attitude and customer-oriented behavior is stronger in cases where salespersons' empathy is high.	Salespersons' empathic concern is positively related to their sensing and processing, but is not related to their responding. Perspective taking is positively associated with all of these three dimensions of active empathetic listening.

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Table 19. (Continued)

Year	2006	2007	2007	2008
Author(s)	Klemz et al.	Spaulding and Plank	Teng et al.	Värlander and Yakhlef
Empathy definition	Cognitive ability	Cognitive and emotional ability	Cognitive behavior	Cognitive and emotional ability
Empathy measurement	SERVQUAL Scale (Parasuraman et al., 1988, 1991)	Scale by Plank et al. (1996)	SERVQUAL Scale (Parasuraman et al., 1994)	-
Data collection method	Survey	Survey	Survey	Case study
Sample	505 Customers	321 Buyers	91 Salespersons, 91 Buyers	10 Salespersons, 39 Customers
Industry context	Retail	Retail	Manufacturing, service	Service
Firm type	small, large	n.s.	n.s.	large
Analytical approach	PLS, ANOVA	Regression	Regression	Content analysis
Key finding(s)	Small retailers (salespersons) particularly apply empathy to influence customers' willingness to buy, while large retailers mainly use assurance.	Salespersons' empathy positively influences their performance and customers' trust in the salesperson.	Buyers' gender (1: female; 0: male) has a positive effect on their perceived salespersons' empathy. Extraversion similarity of buyers and salespersons negatively affects salespersons' empathy perceived by buyers.	Pertinent to face-to-face interactions, spontaneity, improvisation, empathy, anticipation of needs, and feelings of trust and friendship all positively influence salespersons' cross-selling outcomes.

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Table 19. (Continued)

Year	2009	2009	2009	2010
Author(s)	Homburg et al.[a]	Nahmens and Ikuma	Peterson and Limbu	Plank and Reid[a]
Empathy definition	Cognitive ability	Cognitive ability	Cognitive and emotional ability	Cognitive and emotional ability
Empathy measurement	BLRI (Barrett-Lennard, 1978, 1981)	SERVQUAL Scale (Berry et al., 1985)	-	Scale by Plank et al. (1996)
Data collection method	Survey	Survey	Experiment	Survey
Sample	452 Sales employees, 859 Customers, 197 managers	150 Buyers	636 Students/Salespersons 636 Retailers/Prospects	481 Buyers
Industry context	Service	Service	Service	Manufacturing
Firm type	large	n.s.	small	n.s.
Analytical approach	Multilevel analysis, cross lagged analysis	Kruskal Wallis test, correlation analysis	ANOVA	Path analysis, regression
Key finding(s)	Sales employees' empathy has a positive effect on their customer need knowledge. Perspective taking training does not influence this effect.	House size is negatively related to salespersons' empathy expected by new home buyers. The latters' age is positively associated with their perceived salespersons' empathy, which, in turn, relates to new home buyers' service satisfaction. Further, house size and new home buyers' household income are negatively related to their assessed importance of salespersons' empathy.	Empathy training, also combined with training in mirroring, had a positive effect on salespersons' performance and their perceived effectiveness of empathy and mirroring training.	Salespersons' empathy decreases salesperson-buyer conflict and increases buyers' trust in the salesperson and salespersons' performance.

(Continued)

Table 19. (Continued)

Year	2011	2012	2012	2012
Author(s)	Lee et al.	Agnihotri et al.	Kraus et al.	Wieseke et al.[a]
Empathy definition	Cognitive and emotional ability	Cognitive and emotional trait	Cognitive ability	Cognitive and emotional ability
Empathy measurement	Scale by Plank et al. (1996)	Scale by Ahearne et al. (2007)	BLRI (Barrett-Lennard, 1978, 1981)	Scale by McBane (1995)
Data collection method	Survey	Survey	Survey, archival study	Survey
Sample	322 Customers	125 Salespersons, 15 Sales managers	202 Salespersons, 428 Customers	214 Sales employees, 752 Customers
Industry context	Retail	Service	Service	Service
Firm type	n.s.	large	large	large
Analytical approach	SEM	SEM	Multilevel analysis	Multilevel analysis
Key finding(s)	Salespersons' empathy is positively related to positive customer emotions, but is not associated with negative customer emotions, which implies that customers do not possess negative feelings when interacting with a salesperson who is not especially empathic.	Salespersons' empathy proneness has a positive effect on their helping behaviors targeted at other salespersons. However, salespersons' empathy does not affect their customer relationship performance.	Salespersons' empathy positively affects their customer orientation and customers' store loyalty. Furthermore, the negative impact of salespersons' intention to promote in-house brands on customer orientation and customers' store loyalty is mitigated when salespersons' empathy is high.	Sales employees' empathy and perspective taking have a positive effect on customer satisfaction, whereas sales employees' empathic concern does not affect customer satisfaction. These effects are all enhanced when the respective customers' empathy, perspective taking, or empathic concern is high.

(Continued)

Table 19. (Continued)

Year	2014	2015	2015	2015
Author(s)	Cowart and Darke	Agnihotri and Krush	Hall et al.	Itani and Inyang
Empathy definition	Cognitive ability	Cognitive and emotional trait	Cognitive ability	Cognitive and emotional trait
Empathy measurement	-	Scale by Ahearne et al. (2007)	BLRI (Barrett-Lennard, 1978, 1981)	Scale by Ahearne et al. (2007)
Data collection method	Experiments	Survey	Field study, survey	Survey
Sample	290 Students/Salespersons	95 Salespersons and their managers	48 Salespersons, 330 Customers	25 Salespersons, 150 Customers
Industry context	Retail	Service	Retail	Service
Firm type	large	large	medium	large
Analytical approach	ANOVA, mixed ANOVA	SEM	SEM	Multilevel analysis, SEM
Key finding(s)	Encouraging salespersons to take the perspective of target customers is effective in reducing the targeting of these stigmatized customers with unethical sales tactics favoring inferior products.	Salespersons' empathy positively affects their ethical behaviors. This effect is stronger in cases where salespersons trust their managers. Further, salespersons' empathy positively influences their performance.	Salespersons' empathy has a positive effect on their accuracy of intuitive judgments about customer needs in face-to-face interactions, but does not affect their accuracy of deliberative judgments.	Salespersons' empathy does not influence the customer-company relationship quality, but has a positive effect on salespersons' listening abilities. This effect is weaker in cases where salespersons feel high levels of work-related stress.

ANOVA: analysis of variance; BLRI: Barrett-Lennard Relationship Inventory; IRI: Interpersonal Reactivity Index; MANCOVA: multivariate analysis of covariance; MANOVA: multivariate analysis of variance; PLS: partial least squares; RSQS: Retail Service Quality Scale; SEM: structural equation modeling; SERVQUAL: Service Quality; SLR: systematic literature review; SOCO: Selling Orientation-Customer Orientation.
[a]Articles manually selected for the purpose of the SLR. These articles are all cited in some of the other papers listed in the table.

4.5.1. Characteristics of the Articles Reviewed

4.5.1.1. Definition and Measurement of Empathy

The 36 reviewed articles define salesperson empathy as an ability (22 studies), trait (nine studies), state (two studies), process (two studies), or behavior (only one study), which is either cognitive (19 studies) or emotional (two studies) and either unidimensional or multidimensional (15 studies) (cf. Wieseke et al., 2012). The majority of the articles conceptualize salesperson empathy as a cognitive ability. However, salesperson empathy is increasingly described as a multidimensional construct (McBane, 1995; Wieseke et al., 2012) comprising cognitive and emotional constituents.

Out of the 31 quantitative articles, 18 studies solely measured salespersons' cognitive or emotional empathy, thereby using the Barrett-Lennard Relationship Inventory (BLRI) (Barrett-Lennard, 1962) or Service Quality (SERVQUAL) scale (Parasuraman et al., 1988, 1991, 1994). Another 13 studies measured both the cognitive and emotional dimensions of salespersons' empathy, thereby applying singlefactor (see Ahearne et al., 2007; Plank et al., 1996), multifactor (see McBane, 1995; Wieseke et al., 2012), or separate measurement models (see the Interpersonal Reactivity Index (IRI); Davis, 1980, 1983).

4.5.1.2. Data Collection Method

In our sample, 28 out of 36 reviewed articles used mail survey for data collection. Three articles are based on experimental data, and one article each used personal interviews and a case study approach. Another three articles enriched their survey-data by conducting an exercise, archival study, or field study. Observations of how sellers empathize with buyers have not yet been conducted. As such, mail survey constitutes the dominant method for data gathering in salesperson empathy research. This high degree of conformity in terms of data collection method is in contrast to the lacking agreement on a consistent definition and measurement of salesperson empathy (see, e.g., Zou and Stan, 1998). Of note, our sample consists of cross-sectional studies. Only one article is based on longitudinal data.

4.5.1.3. Sample: Informants and Sample Size

The reviewed articles on salesperson empathy are based on data collected from salespersons (eleven studies) and buyers/customers (twelve studies). Nine articles used dyadic data from salespersons and customers. Further two articles were based on data collected from salespersons and sales managers. Only two articles used triadic data from salespersons, managers, and customers or staff. Salesperson empathy was either self-rated or assessed by the customer. We thus analyzed whether the findings were influenced by empathy ratings. We thereby did not find any evidence that the results were affected by whether salesperson empathy was self- or customer-rated. The size of the samples used in the articles range from 10 to 1030 salespersons, 39 to 1261 buyers/customers, and 1 to 197 managers, resulting in an average sample size of 233 salespersons, 407 customers, and 79 managers.

4.5.1.4. Industry Context

Out of the 36 articles reviewed, eleven articles each focus on services and retailing, and six articles focus on manufacturing. Seven studies involve samples drawn from both the service and manufacturing sector, and only one study uses samples drawn from both the service and retail sector. We checked whether industry focus is associated with different findings for salesperson empathy. We thereby did not find any evidence that the results were affected by industry focus.

4.5.1.5. Firm Type

Out of the 20 studies providing information on firm type, the majority investigate salespersons’ empathy in the context of large firms. This focus might reflect the possibility of building large samples of salespersons and buyers (see, e.g., Zou and Stan, 1998). While six studies obtained their data from small firms, only two studies compared small firms with large companies in terms of applying empathy in customer interactions. Klemz and Boshoff (2001) and Klemz et al. (2006) showed that small retailers mainly apply empathy to increase customers’ willingness to buy, while large retailers mainly use assurance (i.e., conveying trust and confidence; Parasuraman et al., 1988). These findings are discussed in Section 4.6.

4.5.1.6. Analytical Approach

In the reviewed articles, the analytical approaches most frequently applied were analysis of variance (ANOVA), structural equation modeling (SEM), regression models, and correlation analysis. The popularity of these approaches might be the consequence of researchers' assumption that salespersons' empathy leads to positive outcomes, such as an effective sales performance (cf. Spaulding and Plank, 2007). Further analytical tools adopted were multilevel analysis, partial least square (PLS), or content analysis.

4.5.2. Key Findings of the Articles Reviewed

The key findings of the reviewed articles with regard to the antecedents, outcomes, and moderators of salespersons' empathy are illustrated in Figure 5 and presented in the next sections. Some studies have examined salesperson empathy as a moderator of specific relationships (e.g., Homburg and Stock, 2005), whose results are also shown below.

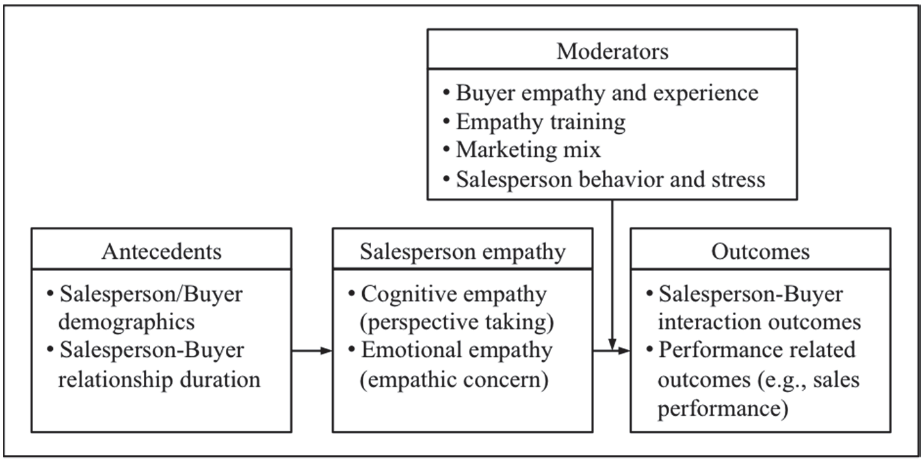

Figure 5. A Framework of Extant Research on Salespersons' Empathy (Paper 2).

4.5.2.1. Antecedents of Salespersons' Empathy

The reviewed articles described salesperson empathy as a cognitive ability or behavior when studying its antecedents. Referring to salesperson empathy as an ability implies that empathy can be enhanced by appropriate training (Decety and Jackson, 2004; Wieseke et al., 2012). Regarding this, McDermott and Schweitzer (1980) conducted a group exercise with salespersons of a large industrial firm in order to improve their understanding of customers' perspectives of new product innovations. After the exercise, the salespersons perceived an increased ability to be aware of customers' perspectives, to anticipate customer objections, and to adapt their appeals to specific customer segments. As McDermott and Schweitzer (1980) did not apply statistical analysis to the data, their results have to be interpreted with caution. Furthermore, extant research reveals that the salesperson-buyer relationship duration has a positive effect on salespersons' empathy perceived by buyers (Palmer and Bejou, 1994). This is in line with the above mentioned notion that empathy develops through social interactions (e.g., McBane, 1995; Mead, 1934). Moreover, regarding the concept of service quality (SERVQUAL) (Parasuraman et al., 1988), previous research indicates that retailers/salespersons manage their empathy through high responsiveness (i.e., their willingness to help customers and provide prompt service) (Klemz and Boshoff, 2001).

With regard to salesperson and buyer demographics, Nahmens and Ikuma (2009) provided empirical evidence that buyers' age is positively related to their perceived salespersons' empathy. In contrast, Teng et al. (2007) showed that buyers' age as well as education do not relate to their perceived salespersons' empathy. In their study, they further found that buyers' gender has a positive effect on their perceived salespersons' empathy. More specifically, Palmer and Bejou (1995) provided support that gender dyad affects salespersons' empathy perceived by buyers. They thereby showed that the empathy of female and male salespersons was perceived as high when rated by female buyers. When assessed by male buyers, female salespersons were perceived as showing the lowest degree of empathy, followed by male salespersons. Apart from salesperson and buyer demographics, personality characteristics that might influence salespersons' empathy have rarely been investigated. In this regard, Teng et al. (2007) found empirical evidence that extraversion similarity of salespersons and buyers negatively affects salespersons' empathy perceived by buyers.

4.5.2.2. Outcomes of Salespersons' Empathy

The reviewed studies suggest that salespersons' empathy has both positive salesperson-buyer interaction and performance related outcomes. With regard to the former outcomes, extant research reveals that salespersons' empathy is positively associated with positive customer emotions (Lee et al., 2011), customer satisfaction and loyalty (Aggarwal et al., 2005; Wieseke et al., 2012), as well as customer trust in the salesperson (Aggarwal et al., 2005; Spaulding and Plank, 2007). Furthermore, salespersons' empathy has been found to decrease salesperson-buyer conflicts (Plank and Reid, 2010). More specifically, previous research shows that salespersons' cognitive empathy is positively related to, for example, customer need knowledge (Homburg et al., 2009), customer service satisfaction (Nahmens and Ikuma, 2009), customers' willingness to buy (Klemz and Boshoff, 2001; Klemz et al., 2006), and the likelihood of placing an order (Pilling and Eroglu, 1994), but that salespersons' emotional empathy is not related to customer satisfaction and loyalty (Wieseke et al., 2012).

Regarding performance related outcomes, prior research indicates that salespersons' empathy positively influences their listening abilities (Aggarwal et al., 2005; Itani and Inyang, 2015), ethical behavior (Agnihotri and Krush, 2015), practice of cross-selling (Värlander and Yakhlef, 2008), and sales performance (e.g., Greenberg and Mayer, 1964; Plank and Reid, 2010; Spaulding and Plank, 2007). The study of Agnihotri et al. (2012), though, suggests that sellers' empathy does not affect their customer relationship performance. More specifically, previous research shows that salespersons' cognitive empathy improves their accuracy of intuitive judgments about customer needs, but that it does not influence their accuracy of deliberative judgments (Hall et al., 2015). Furthermore, salespersons' cognitive and emotional empathy have been linked to active empathetic listening (Drollinger et al., 2006), customer orientation (Widmier, 2002), and adaptive selling (Spiro and Weitz, 1990). With regard to the effect of salespersons' cognitive/emotional empathy on sales performance, the reviewed studies report mixed results. Using the Empathy Test by Kerr and Speroff (1951), Tobolski and Kerr (1952) showed that salespersons' cognitive empathy has a positive effect on their sales performance, while Lamont and Lundstrom (1977) reported a negative effect when applying the well-established empathy scale by Hogan (1969). The further reviewed studies suggest that salespersons' cognitive/emotional empathy does not influence their sales performance (e.g., Dawson et al., 1992; McBane, 1995; Spiro and Weitz, 1990). The contradicting results for the empathy-sales performance link are discussed in Section 4.6.

4.5.2.3. Moderators of Salespersons' Empathy

The majority of the reviewed studies examine moderators in the relationship between salespersons' empathy and seller-buyer interaction outcomes. Previous research indicates that the positive link between salespersons' empathy and their ethical behaviors is stronger when salespersons trust their managers (Agnihotri and Krush, 2015). Furthermore, Itani and Inyang (2015) found that the positive relationship between salespersons' empathy and their listening abilities is weaker when salespersons feel high levels of work related stress. Applying a multifactor measurement model of empathy, Wieseke et al. (2012) empirically determined that the effect of salespersons' empathy on customer satisfaction is strengthened by customers' empathy. As such, they provided support for a "symbiosis" effect of salesperson and customer empathy. They repeated their analysis using empathy dimensions, such as perspective taking and empathic concern, and thereby showed stable results in terms of magnitude, direction, and significance. Moreover, based on triadic data collected from salespersons, their managers, and customers, Homburg et al. (2009) found that perspective taking training does not strengthen the effect of salespersons' empathy on customer need knowledge, whereas Peterson and Limbu (2009) showed that empathy training enhances sales performance. In addition, extant research reveals that the positive effect of salespersons' cognitive empathy on the likelihood of listening to future sales presentations is enhanced by salesperson professionalism and buyer experience (Pilling and Eroglu, 1994). With regard to the marketing mix framework (McCarthy, 1960), the just mentioned effect is not influenced by merchandise salability, but is increased when buyers work for independent retailers (Pilling and Eroglu, 1994). Previous research further indicates that the link between salespersons' perspective taking and sales performance is stronger when salespersons control their sales interactions (McBane, 1995). However, these controlling behaviors do not affect the relationship between salespersons' empathic concern and sales performance.

4.5.2.4. Salespersons' Empathy as Moderator

Extant research suggests that the positive link between salespersons' work satisfaction and customer satisfaction is stronger when salespersons have high empathy levels (Homburg and Stock, 2005), which are associated with high interaction levels between salespersons and customers (cf. Comer and Drollinger, 1999). Stock and Hoyer (2005) also found that the positive link between salespersons' customer-oriented attitude and customer-oriented behavior is stronger when salespersons have high levels of empathy. Furthermore, previous research indicates that the negative impact of salespersons' intention to promote in-house brands on both customer orientation and customer store loyalty is mitigated in cases where salespersons possess high levels of empathy (Kraus et al., 2012). Regarding incentive compensation, Widmier (2002) showed that salespersons' perspective taking and empathic concern decrease the ability of sales volume incentives to motivate salespersons to be more sales-oriented. He further showed that the ability of customer satisfaction incentives to motivate salespersons to be more customer-oriented is increased by empathic concern, but, surprisingly, decreased by perspective taking. Moreover, previous research reveals that salespersons' gender interacts with their emotional empathy on unit sales (but not on managerial rating) and suggests that emotional empathy is advantageous for female salespersons, but disadvantageous for male salespersons (Ricks and Veneziano, 1998). Finally, Ricks et al. (2000) provided support for the centrality of self-monitoring for effective sales performance and empirically showed that salespersons' self-monitoring does not interact with their emotional empathy on both unit sales and managerial rating.

4.6. Discussion

Our starting point was based on the argumentation that CEOs' ability to interact and thus empathize with their customers can strongly contribute to the performance of their SMEs (cf. Baron and Markman, 2000, 2003; Soriano and Castrogiovanni, 2012). In order to stimulate and direct empathy research in the SME context, this study aims to provide a comprehensive research agenda on antecedents, outcomes, and moderators of CEOs' empathy derived from a SLR of salespersons' empathy.

Our systematic review (see, e.g., David and Han, 2004; Henry et al., 2016) of empirical articles reveals that salesperson empathy has mainly been conceptualized as a cognitive ability. However, salesperson empathy is increasingly regarded as comprising cognitive and emotional components, such as perspective taking and empathic concern (McBane, 1995; Wieseke et al., 2012). The industry focus of salesperson empathy research pertains to services, retailing, and manufacturing. Furthermore, mail survey constitutes the dominant method for data gathering in salesperson empathy research, thereby overshadowing other approaches, such as case studies, experiments, and interviews. Moreover, most studies investigate salespersons' empathy in the context of large firms. Only two studies explicitly address the role of salespersons' empathy in small and large firms. In this regard, small retailers have been shown to mainly use empathy to influence customers' willingness to buy, whereas large retailers mainly apply assurance (Klemz and Boshoff, 2001; Klemz et al., 2006). This finding suggests that empathy is of particular relevance in the SME context, as salespersons usually interact with customers on a regular basis, tend to have close customer relationships, and know their customers intimately (cf. Klemz and Boshoff, 2001).

Our SLR of salespersons' empathy further shows that seller-buyer relationship duration as well as seller and buyer demographics (e.g., age) are positively associated with salespersons' empathy perceived by buyers (Nahmens and Ikuma, 2009; Palmer and Bejou, 1994, 1995). Moreover, salespersons' empathy has been linked to seller-buyer interaction outcomes, such as buyer satisfaction (Aggarwal et al., 2005), and to performance related outcomes, such as cross-selling (Värlander and Yakhlef, 2008) and sales performance (e.g., Agnihotri and Krush, 2015; Greenberg and Mayer, 1964; Plank and Reid, 2010). These links might be strengthened, for example, by purchasing experience (Pilling and Eroglu, 1994), but weakened by job related stress experienced by salespersons (Itani and Inyang, 2015).

With regard to the relationship between salespersons' empathy and sales performance, studies have come up with mixed results (e.g., Ricks and Veneziano, 1998; Spaulding and Plank, 2007; Spiro and Weitz, 1990). We believe that this is due to the discrepancy in the definition and measurement of empathy (McBane, 1995). Indeed, our SLR shows that salespersons' empathy comprising cognitive and emotional aspects tends to have a positive effect on sales performance, whereas salespersons' cognitive or emotional empathy alone does not affect sales performance. Hence, salespersons who are able to understand customer needs and to show concern for their customers (cf. Batson et al., 1981; Davis, 1983; Devoldre et al., 2010; Wieseke et al., 2012) can strongly influence sales performance. This insight constitutes one of the main findings of our SLR. In order to advance salesperson empathy research more consistently and convincingly, we thus call on scholars to agree on a multidimensional conceptualization and measurement of salesperson empathy and to apply it to their empirical studies.

According to our SLR, the basic premise of salesperson empathy research is that salespersons' empathy leads to positive outcomes, such as an effective sales performance (cf. Spaulding and Plank, 2007). However, it can be argued that salespersons' empathy has an optimum level regarding sales performance (Homburg et al., 2011), as empathizing with customers requires resources in terms of salesperson time (cf. Saxe and Weitz, 1982) and complexity costs arising from meeting customer needs (cf. Niraj et al., 2001). Regarding this issue, Homburg et al. (2011) provided empirical evidence for a curvilinear, inverted U-shaped effect of salesperson customer orientation on sales performance. We thus encourage researchers to account for a possible optimum level of salesperson empathy (comprising cognitive and emotional components) with regard to sales performance. A curvilinear, inverted U-shaped effect of salesperson empathy on sales performance might further explain why some studies have come up with mixed results for the link between salesperson empathy and sales performance. Future researchers should also investigate in which steps of the personal selling process (cf. Belz, 1998; Jolson and Comer, 1992) salesperson empathy is of particular importance for effective sales performance (cf. Plank and Reid, 2010). For example, it might be argued that salespersons' empathy has more impact in the first steps of the selling process, such as when identifying the needs of the customer and stimulating customer desire (Jolson and Comer, 1992).

4.7. Research Agenda on CEOs' Empathy in the Context of SMEs

Based on the results of our SLR of salespersons' empathy, we developed a research agenda on antecedents, outcomes, and moderators of SME CEOs' empathy. The research agenda is illustrated in Figure 6 and discussed in detail below.

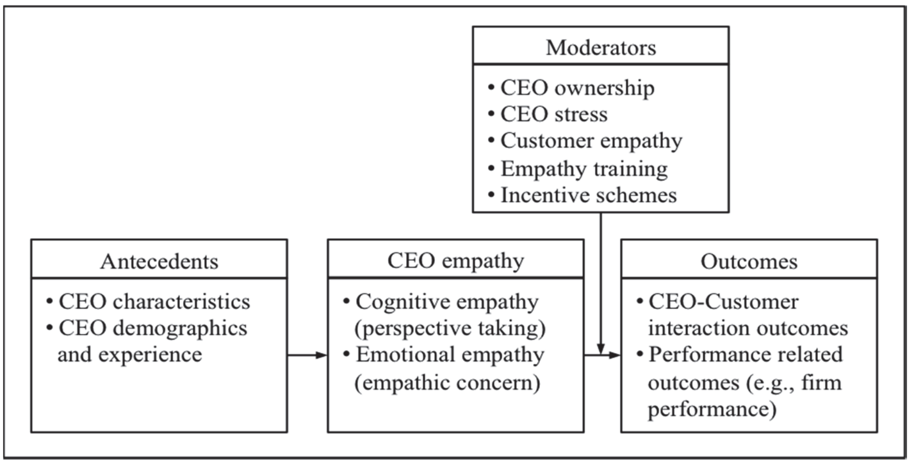

Figure 6. A Framework for Future Research on SME CEO's Empathy with Customers (Paper 2).

First, as shown above, previous research indicates that seller and buyer demographics are associated with salespersons' empathy perceived by buyers (e.g., Nahmens and Ikuma, 2009; Palmer and Bejou, 1995). However, personality characteristics that might affect salespersons' empathy have rarely been addressed. One personality characteristic that might influence empathy – chronic regulatory focus – has received considerable attention in management and entrepreneurship research (e.g., Brockner et al., 2004; Hmieleski and Baron, 2008; Kammerlander et al., 2015). Regulatory focus refers to an individual's motivational sets that determine his/her goal-directed behavior (Higgins, 1997; Higgins et al., 2001). More specifically, an individual's regulatory focus comprises a promotion focus and prevention focus (Higgins et al., 2001). Individuals with a high promotion focus aim to maximize their achievements, whereas individuals with a high prevention focus strive to avoid failures and meet their obligations (Brockner et al., 2004; Johnson et al., 2015; Kammerlander et al., 2015). Based on upper echelons theory (Hambrick and Mason, 1984), previous research has examined the link between CEOs' regulatory focus and the performance of their SMEs (Wallace et al., 2010). However, it is not yet understood how CEOs' regulatory focus influences their interactions with and behavior toward customers as one on the firm's major stakeholders. Initial findings in the fields of social psychology show that individuals' regulatory focus tends to have a positive effect on their cognitive/emotional empathy (e.g., Sassenrath, 2011; Woltin et al., 2011). Against this background, we encourage future scholars to analyze how CEOs' regulatory focus influences their interactions, particularly empathy, with customers. CEOs' temperament (Decety and Jackson, 2004) and customer-oriented attitude (Stock and Hoyer, 2005) constitute further potential antecedents of their empathy. Moreover, we recommend researchers to test or control for the effect of CEOs' demographics and experience, as age, gender, or tenure in terms of the number of years employed in the firm might affect empathy (e.g., Davis, 1980; Mehrabian and Epstein, 1972; Parker and Axtell, 2001).

Second, extant research suggests that salespersons' empathy has both positive seller-buyer interaction and performance related outcomes, such as customer loyalty (Wieseke et al., 2012) and effective sales performance (e.g., Greenberg and Mayer, 1964; Plank and Reid, 2010). In line with these findings, the research stream investigating empathy in the SME context shows that entrepreneurs' empathy increases firm performance (Camuffo et al., 2012). However, it is not yet known how

CEOs' empathy influences customer satisfaction or loyalty, and whether it ultimately contributes to firm performance. Moreover, it is not yet understood how CEOs' empathy affects their decision-making. It can be argued that customer need knowledge (cf. Homburg et al., 2009) as a result of empathizing with customers supports CEOs in their decisions, for example, when deciding on which products or services to create and launch on the market. Hattula et al. (2015), though, empirically showed that taking the consumer's perspective activates marketing managers' personal consumption preferences, leading to self-referential decisions in the product development or pricing context. We thus suggest that future scholars investigate the effect of CEOs' empathy on both CEO-customer interaction and performance related outcomes. Validating CEO empathy as a determinant of customer satisfaction or decision quality would suggest that CEOs' ability to empathize with customers contributes to the performance of their firms. Nonetheless, as empathizing with customers and addressing customer needs require resources (cf. Homburg et al., 2011; Niraj et al., 2001; Saxe and Weitz, 1982), scholars should test for a possible optimum level of CEOs' empathy regarding performance related outcomes. An inverted U-shaped effect of CEO empathy on firm performance might also explain why some empathic CEOs attain greater success than others.

Third, further fruitful avenues for future research lie in examining potential moderators for the link between CEOs' empathy and both CEO-customer interaction and performance related outcomes. As mentioned above, prior research indicates that salespersons' empathy positively affects customer satisfaction, and that this effect is stronger when customers have high levels of empathy (Wieseke et al., 2012). Future studies on CEO empathy might analyze whether the link between CEOs' empathy and customer trust in the CEO/firm is strengthened by customer empathy. An interaction effect (symbiosis) of CEO and customer empathy on customer trust would imply that symbiotic CEO-customer interactions lead to trusting relationships, thereby stressing the relevance of CEOs' ability to foster symbiotic interactions with their customers (cf. Wieseke et al., 2012). Furthermore, as shown above, Peterson and Limbu (2009) provided empirical support that empathy training enhances sales performance, whereas the findings of Homburg et al. (2009) suggest that perspective taking training does not strengthen the effect of salespersons' empathy on customer need knowledge. Therefore, future research on CEO empathy might examine whether the link between CEOs' empathy and customer relationship performance is stronger when they receive appropriate empathy training (e.g., mystery shopping). Moreover, extant research shows that the impact of customer satisfaction incentives on customer orientation is stronger in cases where salespersons have high levels of empathic concern (Widmier, 2002). Against this background, we encourage future studies on CEO empathy to examine CEO ownership and incentive schemes as potential moderators of the link between CEOs' empathy and firm performance. In addition, Itani and Inyang (2015) found that salespersons' empathy positively affects their listening abilities, but that this effect is weaker when salespersons feel high levels of job related stress. Future studies on CEO empathy might investigate whether the effect of CEOs' empathy on positive negotiation outcomes is weaker or even absent when CEOs experience high levels of job related stress, for example, when competitive intensity is high (cf. Kammerlander et al., 2015; Staw et al., 1981) or when both shareholders and board members demand an increase in market share and profitability.

As mentioned above, initial findings suggest that individuals' regulatory focus is related to their cognitive/emotional empathy (e.g., Sassenrath, 2011; Woltin et al., 2011), and that entrepreneurs' empathy is associated with firm performance (Camuffo et al., 2012). These fragmented insights have not yet been combined into a coherent theoretical framework. Thus, beyond the scope of our study, we also recommend researchers to analyze whether CEOs' empathy mediates the relationship between their regulatory focus and the performance of their firms. Validating empathy as a mediator between regulatory focus and firm performance would add to empathy literature in general and might also inform upper echelons theory (Hambrick and Mason, 1984), which examines how top executives' regulatory focus affects the performance of their firms.

Future studies may rely on surveys to test the above discussed antecedents, outcomes, and moderators of CEOs' empathy. Great care should be taken in defining and measuring CEO empathy. Regarding this, scholars widely agree that empathy comprises cognitive and emotional aspects (Decety and Jackson, 2004; Kerem et al., 2001; Wieseke et al., 2012). As such, we recommend future scholars to adapt either the multifactor measurement model developed by McBane (1995), or the well-established Interpersonal Reactivity Index (IRI) (Davis, 1980, 1983) capturing global and specific dimensions of empathy (Goel et al., 2013).

4.8. Limitations

As with any academic work (cf. Kammerlander et al., 2015), this study reveals several limitations. First, we developed a research agenda on CEOs' empathy with customers. As CEOs' empathy with employees, suppliers, or board members is also of importance for SMEs (cf. Baron and Markman, 2000, 2003), we encourage researchers to replicate this study for other types of stakeholders. Second, the research agenda on CEOs' empathy is mainly based on salesperson empathy literature. However, while studies on CEOs' empathy are scant (e.g., Goel et al., 2013), employees' empathy, particularly salespersons' empathy, has received considerable attention. Third, with regard to our SLR of salespersons' empathy, we only included empirical articles published in academic journals, thereby excluding books or grey literature (see, e.g., Henry et al., 2016; Pittaway and Cope, 2007). However, this is generally considered acceptable as the journals' peer reviews act as a screen for a minimum quality threshold (David and Han, 2004; Pittaway and Cope, 2007). Furthermore, as the databases ABI and EBSCO may not contain all relevant articles (David and Han, 2004; Newbert, 2007; Pittaway and Cope, 2007), we cannot rule out the possibility that studies with further relevance to our review have inadvertently been omitted (Henry et al., 2016; Senftlechner and Hiebl, 2015). Nonetheless, used together and supplemented by a manual search of the references of all retrieved articles, we believe that these databases have allowed us to build a representative sample of the full population of empirical articles on salesperson empathy (see, e.g., David and Han, 2004; Newbert, 2007; Zou and Stan, 1998). Moreover, similar to traditional narrative reviews, our keyword searches for and selection of empirical articles required several choices (see also David and Han, 2004). However, we have made our choices explicit (see Tables 15 and 16), which are thus open to critique and replication. In addition, we have eschewed applying more complex and rigorous meta-analytic procedures (cf. David and Han, 2004), mainly due to the broad scope of our study and the nature of our data.

4.9. Managerial Implications

This study has noteworthy managerial implications. We argue that CEOs' ability to empathize with their customers can strongly contribute to the performance of their SMEs (cf. Baron and Markman, 2000, 2003). As high degrees of CEO empathy can be beneficial for SMEs (e.g., Goel et al., 2013), SME owners should account for factors that might weaken the relationship between CEO empathy and firm performance, such as work related stress experienced by CEOs (cf. Itani and Inyang, 2015). They should further take into account a possible optimum level of CEO empathy, as empathizing with customers and satisfying customer needs require resources (cf. Homburg et al., 2011; Niraj et al., 2001; Saxe and Weitz, 1982). Moreover, with regard to customer interactions, SME CEOs should investigate whether they possess high degrees of empathy. If this is not the case, they might monitor their interactions with customers (cf. McBane, 1995). In addition, as CEOs occupy the key decision-making position and influence their firm's strategies and subsequent performance (cf. Cannella et al., 2008; Hambrick and Mason, 1984; Wallace et al., 2010), they should apply their customer need knowledge resulting from empathizing with customers to their decisions, for example, when deciding on which products to launch on the market.

4.10. Conclusion

One individual ability of CEOs – their empathy with customers – is of essential relevance for SMEs. We thus developed a research agenda on antecedents, outcomes, and moderators of CEOs' empathy. In order to contribute to SME research and empathy literature, we encourage future researchers, amongst others, to investigate the influence of CEOs' characteristics on their empathy and to test the effect of CEOs' empathy on customer trust and decision quality, and when these effects are of greatest magnitude. It is our hope that this study will stimulate the young research stream investigating empathy in the context of SMEs.

4.11. Appendix

Table 20. Articles not included in the SLR: Reasons for Exclusion (Paper 2).

Year	Author(s)	Reason(s) for Exclusion
1972	Cotham et al.	Empathy constitutes an insignificant component of the study.
1974	Schwartz	Empathy constitutes a by-product of the study. Furthermore, no empirical research was conducted.
1976	Ivy and Boone	No empirical research was conducted.
1977	Barnes and Ayars	Empathy constitutes a by-product of the study. Moreover, no empirical research was conducted.
1977	Christopher	Author deals with marketing and sales planning.
1986	Sager and Ferris	Empathy constitutes an insignificant component of the study.
1992	Large and Barclay	Authors deal with "business empathy."
1992	Mick et al.	Empathy constitutes a by-product of the study.
1993	Olsen et al.	Authors address consumers' empathy with threatened domestic workers.
1999	Comer and Drollinger	Authors address active empathetic listening. Furthermore, no empirical research was conducted.
2000	Kolesar and Galbraith	Authors deal with e-retailing.
2000	Van Boven et al.	Authors investigate egocentric empathy gaps between commodity owners and buyers regarding the endowment effect.
2001	Clarke	Empathy constitutes a by-product of the study.
2001	Galinsky and Mussweiler	Authors investigate the role of perspective taking in determining the distributive outcome in negotiations.
2003	Smulders et al.	Empathy constitutes a by-product of the study.
2005	Galinsky et al.	Authors offer a model for how perspective taking facilitates social coordination and fosters social bonds.
2006	Bagozzi	No empirical research was conducted.
2008	Keiningham et al.	Authors investigate the relationship between customer behavior and company growth.
2008	Su et al.	Authors deal with husband-wife purchase decision-making.
2008	Zhuang and Tsang	Authors address empathy for gray marketing practices.
2009	Cullen and Taylor	Research was done in an e-commerce setting.
2009	Dash et al.	Authors investigate the relationship between consumers' national cultural orientations and their expectations of a bank's service quality (empathy).
2009	Urban et al.	Authors suggest morphing the Web to build empathy, trust, and sales.

(Continued)

Table 20. (Continued)

Year	Author(s)	Reason(s) for Exclusion
2010	Brandon-Jones et al.	Authors investigate buyers’ empathy with suppliers.
2010	Doran	Authors address empathy with fair trade producers.
2010	Henagan	Authors investigate the relationship between the empathic concern of award-winning salespersons and their comparison target discomfort.
2011	Krishna	Authors deal with empathetic altruism.
2012	Goodrich and Ramsey	Service employees’ empathy was measured by using only one self-developed item.
2013	Baron	Author investigates “empathy wages.”
2013	Drollinger and Comer	Authors address active empathetic listening.
2013	Lee et al.	Authors deal with cultural perspective taking in cross-cultural negotiations.
2013	Pryor et al.	Authors address salespersons’ listening expressing cognitive and emotional empathy.
2014	Chowdhury and Fernando	Authors deal with consumer empathy.
2015	Vezzali et al.	Authors investigate the role of extended contact via story telling in approving attitudes toward stigmatized groups.

5. CEO Regulatory Focus and SME Performance: The Mediating Role of Empathy (Paper 3)

5.1. Abstract

Based on regulatory focus and empathy theory, I hypothesize that the empathy of chief executive officers (CEOs) positively mediates the relationship between their chronic regulatory focus (promotion focus and prevention focus) and the performance of their small or medium-sized enterprises (SMEs). The analysis of survey responses from CEOs in Switzerland revealed that CEOs' empathy positively mediates the positive relationship between their promotion focus and the performance of their firms. CEOs' prevention focus is negatively related to empathy, and CEOs' empathy does not mediate the negative relationship between their prevention focus and the performance of their firms.

5.2. Introduction

In recent years, one aspect of individuals' characteristics – chronic regulatory focus – has attracted considerable attention in entrepreneurship research (e.g., Brockner et al., 2004; Bryant, 2009; Kammerlander et al., 2015). Chronic regulatory focus refers to an individual's motivational sets that determine his/her goal-directed behavior (Higgins, 1997; Higgins et al., 2001). More specifically, an individual's regulatory focus comprises a promotion focus and prevention focus (Higgins et al., 2001). Individuals with high degrees of promotion focus aim to maximize their achievements, whereas individuals with high degrees of prevention focus strive to avoid failures and meet their obligations (e.g., Brockner et al., 2004; Kammerlander et al., 2015).

Based on regulatory focus and upper echelons theory, extant research shows that the regulatory foci of chief executive officers (CEOs) are associated with the performance of their small or medium-sized enterprises (SMEs) (Wallace et al., 2010). However, previous research has not examined any mediating mechanisms in the relationship between CEOs' regulatory focus and the performance of their firms, such as CEOs' interactions with and behavior toward customers as one of the firm's major stakeholders. As such, it is not yet understood through which mechanisms CEOs' regulatory focus influences the performance of their SMEs.

I address this issue by empirically investigating the mechanism of how CEOs' regulatory focus contributes to firm performance. I thereby introduce empathy as a factor that connects CEOs' regulatory focus and the performance of their firms. Empathy is increasingly viewed as comprising cognitive and emotional aspects (Decety and Jackson, 2004; Kerem et al., 2001; Wieseke et al., 2012). As such, empathy refers to an individual's ability to take another's perspective (Bernstein and Davis, 1982; Davis, 1983; Dymond, 1949) and to show concern for the welfare of the other (Batson et al., 1981; Coke et al., 1978; Davis, 1983). The empathy of CEOs is of essential relevance for SMEs, as the quality of CEOs' customer interactions can strongly influence the performance of their firms (cf. Baron and Markman, 2000, 2003). Moreover, SME CEOs allocate a large amount of their working time to the marketing and sales function (Müller et al., 2012), which in turn is an important driver of SME performance (e.g., Peterson and Lill, 1981). In this function, for example, CEOs visit, consult, negotiate with, and even sell to customers (cf. Baron and Markman, 2000; Kazanjian, 1988; Müller et al., 2012). The empathy of CEOs also fits well into the context of regulatory focus and firm performance. On the one hand, although there is little research on the role of regulatory focus in social interactions (Brebels et al., 2008; Galinsky et al., 2005), initial findings reveal that individuals' regulatory focus is positively related to their cognitive or emotional empathy (Keller and Pfattheicher, 2013; Sassenrath, 2011; Woltin et al., 2011). On the other hand, previous research identifies entrepreneurs' empathy as a distinctive social competency that leads to superior firm performance (Camuffo et al., 2012). However, these fragmented insights have not yet been combined into a coherent theoretical framework.

Hence, building on regulatory focus and empathy theory, I hypothesize that CEOs' empathy positively mediates the relationship between their promotion and prevention focus and the performance of their firms. Figure 7 illustrates the expected relationships. I test my hypotheses using survey responses provided by CEOs of Swiss SMEs (cf. Kammerlander et al., 2015). My findings, based on multivariate regression and indirect effects models (cf. Preacher and Hayes, 2004, 2008), contribute to entrepreneurship and SME research, regulatory focus and empathy literature, and managerial practice.

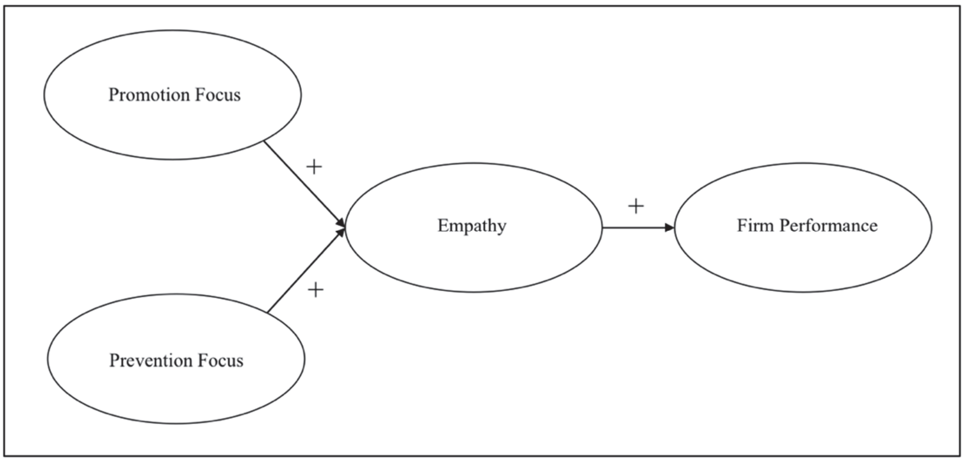

Figure 7. Expected Theoretical Relationships (Paper 3).

My paper is organized as follows: First, I provide the theoretical framework of the study and develop my hypotheses. Second, I describe the methodology used. Third, I explain the statistical procedures applied and present the empirical results. Fourth, I discuss the findings and limitations of the study, and draw implications for future research as well as managerial practice. I then offer my conclusion.

5.3. Theoretical Framework and Research Hypotheses

5.3.1. CEOs' Regulatory Focus

In management research in general and entrepreneurship research in particular, one facet of individuals' personalities – regulatory focus – has received considerable attention in recent years (e.g., Brockner et al., 2004; Bryant, 2009; Hmieleski and Baron, 2008; Kammerlander et al., 2015; Tumasjan and Braun, 2012). Building on traditional achievement theory (McClelland et al., 1953), regulatory focus theory (Higgins, 1997; Higgins et al., 2001) intends to explain how individuals differ in their goal-directed behavior and in their underlying motivations (cf. Kammerlander et al., 2015). "Chronic regulatory focus" refers to a relatively stable personality trait (Higgins, 1989; Hmieleski and Baron, 2008) that is formed through individual, mostly childhood and adolescent, experiences (Higgins and Silberman, 1998). More specifically, an individual's subjective history of success with a certain regulatory behavioral strategy orients him/her toward using that strategy to approach future goals (Higgins et al., 2001; Johnson et al., 2015; Kammerlander et al., 2015). Goal-directed behavior is regulated by two distinct motivational systems (Higgins et al., 2001), namely, a promotion focus and prevention focus.

Individuals with high levels of promotion focus are motivated by the need for growth and advancement (Crowe and Higgins, 1997; Kammerlander et al., 2015). They therefore focus on potential gains and aim to maximize positive outcomes or achievements (Brockner et al., 2004; Johnson et al., 2015). The presence of achievements produces positive feelings of joy among individuals with high degrees of promotion focus, whereas absence of achievements causes negative feelings of sadness (Idson et al., 2000; Kammerlander et al., 2015). Furthermore, individuals with high degrees of promotion focus tend to have an independent self-construal (Higgins and Spiegel, 2004; Keller and Pfattheicher, 2013), i.e., they define themselves in terms of their internal attributes such as traits, abilities, needs, goals, and hopes, that make them unique and separate from others (Cross et al., 2000; Lee et al., 2000; Uskul et al., 2009). In contrast, individuals with high levels of prevention focus are motivated by the need for security and responsibility (Crowe and Higgins, 1997; Kammerlander et al., 2015) and thus aim to prevent potential negative outcomes or failures (Brockner et al., 2004; Johnson et al., 2015). The absence of failures produces positive feelings of calmness among individuals with high degrees of prevention focus, whereas presence of failure causes negative feelings of tension (Idson et al., 2000; Kammerlander et al., 2015). Moreover, individuals with high degrees of prevention focus tend to have an interdependent self-construal (Higgins and Spiegel, 2004; Keller and Pfattheicher, 2013), i.e., they view their selves as being connected to others and define themselves, at least in part, in terms of their interpersonal relationships, group memberships, and social responsibilities and obligations (Cross et al., 2000; Lee et al., 2000; Uskul et al., 2009).

Individuals' promotion focus and prevention focus constitute two orthogonal motivational systems (Higgins et al., 2001). As such, individuals can exhibit different combinations of high or low degrees of promotion and prevention focus (Higgins and Silberman, 1998; Idson et al., 2000; Kammerlander et al., 2015; Markovits, 2013). Indeed, studies conducted by Higgins et al. (2001) show only a low correlation between promotion and prevention focus, suggesting that the two motivational dimensions of chronic regulatory focus are mutually independent.

Regulatory focus theory has been used to study numerous entrepreneurial phenomena (Brockner et al., 2004; Burmeister-Lamp et al., 2012; Wu et al., 2008), such as acquisitions (Gamache et al., 2015), venture creation and performance

(Hmieleski and Baron, 2008; McMullen and Shepherd, 2002), opportunity recognition and decision-making (Crowe and Higgins, 1997; Tumasjan and Braun, 2012), as well as exploration and exploitation in SMEs (Kammerlander et al., 2015). Furthermore, based on regulatory focus and upper echelons theory, Wallace et al. (2010) investigated the relationship between CEOs' regulatory foci and the performance of their SMEs, and whether these relationships are moderated by environmental dynamism. However, Wallace et al. (2010) did not analyze any mediating mechanisms in the relationship between CEOs' regulatory focus and the performance of their SMEs, such as CEOs' interactions with customers as one of the firm's major stakeholders. In this regard, there is surprisingly little research on the role of regulatory focus in interactions with others (Brebels et al., 2008; Galinsky et al., 2005). A few studies, for example, have investigated the link between individuals' regulatory focus and cognitive or emotional empathy (Keller and Pfattheicher, 2011, 2013; Sassenrath, 2011; Woltin et al., 2011), which is shown in more detail in Section 5.3.3.

5.3.2. CEOs' Empathy

The extant literature in the fields of social and clinical psychology as well as management shows considerable ambiguity in the conceptualization of empathy (Gladstein, 1983; Parker and Axtell, 2001; Preston and De Waal, 2002; Wieseke et al., 2012). Empathy has been described as a personality trait or stable ability, situation-specific state, experiential process, or interpersonal behavior, which is either cognitive or emotional and either unidimensional or multidimensional (Buchheimer, 1963; Duan and Hill, 1996; Wieseke et al., 2012). Studies on interindividual differences in social interactions widely describe cognitive/emotional empathy as a personality trait or stable ability (Duan and Hill, 1996).

Cognitive empathy refers to an individual's intellectual understanding of another's internal state (Hogan, 1969; Wieseke et al., 2012). The underlying cognitive efforts to understand another's thoughts or feelings are generally described as "perspective taking" (Bernstein and Davis, 1982; Dymond, 1949; Woltin et al., 2011). Individuals with high levels of perspective taking are able to see others' points of view, to anticipate the reactions of others, and to address others' opinions, motivations, or needs (Devoldre et al., 2010; Wieseke et al., 2012). In contrast, emotional empathy refers to an individual's affective response to another's emotional state (Eisenberg and

Strayer, 1987; Hoffman, 1984; Wieseke et al., 2012). Affective responses to another's welfare are described as "sympathetic concern" (Eisenberg et al., 1991) or, more commonly, "empathic concern" (Woltin et al., 2011). Individuals with high levels of empathic concern are able to show apprehensiveness for the perceived welfare of others, resulting in helping behaviors (Batson et al., 1981; Coke et al., 1978; Wieseke et al., 2012). Of note, empathic concern differs from emotional contagion in that the latter refers to an individual experiencing another's emotions (Gladstein, 1983), which may result in automatic synchronization of facial expressions, vocalizations, postures, and movements with those of the other (Hatfield et al., 1994). Emotional contagion thus constitutes a simple expression of emotion sharing (Decety and Jackson, 2004) that takes the form of identification rather than that of empathy with others (De Waal, 1996).

Although conceptually distinct, perspective taking and empathic concern are interrelated (Dietz and Kleinlogel, 2014; Duan and Hill, 1996). Studies conducted by Davis (1980, 1983) reveal a positive correlation between perspective taking and empathic concern, indicating that cognitive and emotional empathy are interdependent. As such, taking another's perspective may enhance the ability to show empathic concern for the other (Coke et al., 1978).

Scholars increasingly understand empathy as a multidimensional phenomenon including cognitive and emotional aspects (Decety and Jackson, 2004; Kerem et al., 2001; Wieseke et al., 2012). In this regard, empathy is described as an individual's ability to sense another's thoughts and feelings (Rogers, 1957) and to react to the perceived welfare of the other (Davis, 1983). For the purpose of this study, I define CEO empathy as a CEO's ability to understand and respond to a customer's thoughts and feelings in face-to-face interactions (Davis, 1983; Wieseke et al., 2012). I thereby view CEO empathy as containing a cognitive component, namely, perspective taking, and an emotional component, namely, empathic concern (cf. Wieseke et al., 2012).

Defining CEO empathy as an individual ability implies that empathy increases with age (Decety and Jackson, 2004; Gladstein, 1983; Mead, 1934). In interactions with others, women seem to be more empathic than men (Davis, 1980; Hogan, 1969; Mehrabian and Epstein, 1972). With regard to non-overt characteristics, for example, both the independent self-construal, resulting from a promotion focus, and the interdependent self-construal, resulting from a prevention focus, enable perspective taking and empathic concern (Trautwein et al., 2014), which I explain in more detail in Section 5.3.3.

Empathy has been investigated in the fields of management (e.g., Parker and Axtell, 2001; Skinner and Spurgeon, 2005), entrepreneurship (e.g., Goel et al., 2013; Hockerts, in press), leadership (e.g., Kellett et al., 2002, 2006), marketing (e.g., McBane, 1995; Spiro and Weitz, 1990), sales (e.g., Agnihotri and Krush, 2015; Pilling and Eroglu, 1994), and service (e.g., Wieseke et al., 2012; Wilder et al., 2014). In the latter three fields, employees' empathy, particularly salespersons' empathy, has attracted considerable attention. Previous research has linked salespersons' empathy, for example, to customer orientation (Widmier, 2002), listening abilities (Aggarwal et al., 2005; Drollinger et al., 2006), customer satisfaction and loyalty (Aggarwal et al., 2005; Wieseke et al., 2012), and sales performance (e.g., Agnihotri and Krush, 2015; Plank and Reid, 2010; Spaulding and Plank, 2007). Only recently, scholars have begun studying top managers' and entrepreneurs' empathy in the SME context. Camuffo et al. (2012) examined the relationship between entrepreneurs' empathy and the performance of their family-owned SMEs. Furthermore, Goel et al. (2013) investigated the link between CEOs' empathy and the socio-emotional wealth of their family-owned SMEs.

CEO empathy is of special relevance for SMEs, as the nature of CEOs' customer interactions can strongly contribute to firm performance (cf. Baron and Markman, 2000, 2003; Soriano and Castrogiovanni, 2012). Moreover, SME CEOs spend almost 20% of their working time on the marketing and sales function (Müller et al., 2012), in which they, for example, consult, negotiate with, or sell to customers (cf. Baron and Markman, 2000; Kazanjian, 1988; Müller et al., 2012). Marketing and sales have also been shown to be an important driver of SME performance (cf. Keh et al., 2007; Peterson and Lill, 1981). Thus, I believe that investigating CEOs' empathy for customers is appropriate in the SME context.

5.3.3. CEOs' Regulatory Focus and its Effect on their Empathy

5.3.3.1. CEOs' Promotion Focus and its Effect on their Empathy

As mentioned above, individuals with high levels of promotion focus are driven by the need for growth and advancement (Crowe and Higgins, 1997; Kammerlander et al., 2015) and thus strive to maximize their achievements in terms of size and quantity

(Brockner et al., 2004; Johnson et al., 2015). Typical achievements that create positive feelings of joy among CEOs with a high promotion focus (Idson et al., 2000) include, but are not limited to, enhancing customer satisfaction and loyalty and improving financial measures relative to competitors and/or previous years (Kammerlander et al., 2015).

Showing empathy for customers can attain such achievements. Empathizing with customers – the ability to sense and react to customers' perspectives and emotional states (Davis, 1983; Rogers, 1957; Wieseke et al., 2012) – is related to customer satisfaction and loyalty (Aggarwal et al., 2005; Wieseke et al., 2012) and sales performance (e.g., Greenberg and Mayer, 1964; Plank and Reid, 2010; Spaulding and Plank, 2007). Hence, CEOs with high (as compared to low) degrees of promotion focus are more likely to show empathy for customers in order to maximize their achievements and fulfill their needs for growth and advancement (cf. Kammerlander et al., 2015). This argument is in line with previous research showing that a promotion focus is associated with individuals' perspective taking (Sassenrath, 2011).

Furthermore, individuals with high degrees of promotion focus tend to have an independent self-view (Higgins and Spiegel, 2004; Keller and Pfattheicher, 2013), i.e., they define themselves by their personal needs or goals and thus view their selves as being distinct and separate from others (Cross et al., 2000; Lee et al., 2000; Uskul et al., 2009). Previous research theorizes that self-other distinction facilitates perspective taking and empathic concern (Trautwein et al., 2014), as the other's perspective and welfare can differ from one's own point of view and emotional state (Decety and Jackson, 2004; Woltin et al., 2011). Indeed, extant research shows that self-other distinction is related to the individual's ability to take another's perspective (Todd et al., 2011). As a consequence, CEOs with high (as compared to low) degrees of promotion focus are likely to be more empathic in customer interactions, as their personal needs or goals (e.g., profitability) might differ from those of their customers (e.g., service excellence). Therefore, I hypothesize that:

H1: CEOs' promotion focus is positively related to their empathy.

5.3.3.2. CEOs' Prevention Focus and its Effect on their Empathy

As explained above, individuals with high levels of prevention focus are driven by the need for security and responsibility (Crowe and Higgins, 1997; Kammerlander et al.,

2015) and thus strive to prevent failures (Brockner et al., 2004; Johnson et al., 2015). Striving to avoid failures, which leads to positive feelings of calmness among individuals with a high prevention focus (Idson et al., 2000; Kammerlander et al., 2015), is typically associated with aiming to appease the major stakeholders in the environment and to claim conformance to their norms and expectations (Lalwani et al., 2009). In a professional context, CEOs with high levels of prevention focus aim to meet the obligations imposed by shareholders, board members, or customers (Kammerlander et al., 2015). Typical obligations relate to enhancing firm performance, as requested by shareholders and/or board members, and improving product or service quality according to customer requests.

Stakeholder demands in general and customer requests in particular can be satisfied by applying empathy (cf. Aggarwal et al., 2005). Empathizing with customers helps CEOs fully understand and appropriately respond to customers' demands and emotional situations (Davis, 1983). Hence, CEOs with high (as compared to low) degrees of prevention focus are more likely to show empathy for customers in order to meet the demands of their costumers and fulfill their own needs for security and responsibility (cf. Kammerlander et al., 2015). This is in line with previous research showing that a prevention focus is associated with individuals' attention to others (Sassenrath, 2011) and empathic concern for others (Woltin et al., 2011).

Moreover, individuals with high levels of prevention focus tend to have an interdependent self-view (Higgins and Spiegel, 2004; Keller and Pfattheicher, 2013), i.e., they define themselves by their social relationships or obligations and thus view their selves as being connected to others (Cross et al., 2000; Lee et al., 2000; Uskul et al., 2009). Previous research argues that self-other connectedness facilitates perspective taking and empathic concern (Trautwein et al., 2014), as individuals are, at least to some extent, aware of others' perspectives and emotional states (Cross et al., 2000; Markus and Kitayama, 1994). In fact, extant research shows that interdependence is associated with individuals' ability to take others' perspectives and to show concern for others (Cross et al., 2000). As a consequence, CEOs with high (as compared to low) degrees of prevention focus are likely to be more empathic in customer interactions, as they generally tend to have close relationships with customers. Thus, I hypothesize that:

H2: CEOs' prevention focus is positively related to their empathy.

5.3.4. CEOs' Empathy and its Effect on Firm Performance

High levels of empathy enable CEOs to understand customers' points of view, to address customer needs, and to show concern for their customers (Batson et al., 1981; Davis, 1983; Devoldre et al., 2010). As the quality of CEOs' customer interactions can influence the performance of their firms (cf. Baron and Markman, 2000, 2003; Soriano and Castrogiovanni, 2012), I argue that high (as compared to low) degrees of CEOs' empathy are more likely to enhance the respective firm's performance. This argument is in line with extant research showing that entrepreneurs' empathy is associated with the performance of their firms (Camuffo et al., 2012). In addition, previous research shows that salespersons' empathy is associated with customer satisfaction (Aggarwal et al., 2005; Wieseke et al., 2012) as well as sales performance (e.g., Greenberg and Mayer, 1964; Plank and Reid, 2010; Spaulding and Plank, 2007).

Moreover, empathizing with customers is related to listening abilities (Aggarwal et al., 2005; Drollinger et al., 2006) and customer need knowledge (Homburg et al., 2009). This knowledge can support CEOs in their decisions, for example, when deciding on which products or services to create and launch on the market. As CEOs occupy the key decision-making position, their knowledge, as a result of empathizing with customers, might influence their firm's strategies and subsequent performance (cf. Cannella et al., 2008; Hambrick and Mason, 1984; Wallace et al., 2010). As such, high (as compared to low) degrees of CEOs' empathy are more likely to increase the respective firm's performance. Therefore, I hypothesize that:

H3: CEOs' empathy is positively related to the performance of their firms.

5.3.5. CEOs' Empathy and its Mediating Effects

Extant research shows that CEOs' regulatory foci are associated with the performance of their firms (Wallace et al., 2010). However, previous research has not examined potential mediators of the relationship between CEOs' regulatory focus and the performance of their firms, such as CEOs' empathy for customers. As such, it is not yet known through which mediating mechanisms CEOs' regulatory focus affects firm performance. Based on regulatory focus and empathy theory and prior empirical evidence, I anticipated that CEOs' promotion focus and prevention focus are positively related to their empathy, which in turn is positively associated with the respective firm's performance. These expected relationships convey a theoretical model (see

Figure 7) in which CEOs' empathy positively mediates the relationship between their promotion and prevention focus and the respective firm's performance. Such a notion is consistent with research on upper echelons theory (Hambrick and Mason, 1984) examining how CEO characteristics relate to firm performance through decision-making and subsequent actions and behaviors. I therefore hypothesize that:

H4: CEOs' empathy positively mediates the relationship between their promotion focus and the performance of their firms.

H5: CEOs' empathy positively mediates the relationship between their prevention focus and the performance of their firms.

5.4. Methodology

5.4.1. Sample and Data Collection

I collected survey data from SMEs with up to 500 employees (cf. Dickson et al., 2006; Kammerlander et al., 2015). The data covered, amongst others, CEO characteristics and abilities, as well as firm characteristics and performance. In June 2014, I sent an online survey to 1,251 CEOs of SMEs that had at least once articulated their interest to participate in one of the largest, annual Swiss business events for SMEs ("Swiss SME Day") and were therefore included in a university mailing list (cf. Kammerlander et al., 2015). A total of 154 CEOs completed the survey. This resulted in a response rate of 12.3%, which is in line with prior studies using similar samples of CEOs and entrepreneurs (e.g., Hmieleski et al., 2010, 2012; Zellweger et al., 2012). Due to incomplete data regarding the focal constructs, I removed 21 of the 154 responses, resulting in a final sample size of 133 CEOs. 7.0% of the CEOs were female. On average, the CEOs were 51 years old and had almost 17 years of tenure within their firms. Average firm age was 46.01, and average firm size was 48.12 employees. Table 21 shows the distribution of the number of employees.

Table 21. Distribution of the Number of Employees (Paper 3).

Number of Employees	Frequency	Percentage	Cumulative Percentage
0–9	46	34.6	34.6
10–49	47	35.3	69.9
50–249	35	26.3	96.2
250–500	5	3.8	100.0
Total	133	100.0	

Sources: Adapted from Adams et al. (2012) and Kammerlander et al. (2015).

5.4.1.1. Non-Response Bias

In order to explore the possibility of non-response bias in the sample, I compared early and late respondents (cf. Kammerlander et al., 2015), assuming that late responses are more similar to non-responses than early responses (Kanuk and Berenson, 1975). Using t tests (cf. Hmieleski and Baron, 2008) on CEO sex, age, and tenure, as well as firm age and number of employees, I found no significant differences between early and late responses. Therefore, I assessed the possibility of non-response bias in the sample as low.

5.4.1.2. Common Method Bias

In an assessment of common method variance (cf. Kammerlander et al., 2015), I first applied an explanatory factor analysis (Hair et al., 2006). If common method bias exists in the study, "either (a) a single factor will emerge from the analysis, or (b) one general factor will account for the majority of the covariance" among the variables (Podsakoff and Organ, 1986: 536). The analysis revealed six factors, which accounted for 68% of total variance. The first factor explained only 21% of the variance, providing initial evidence that common method bias was not a potential issue in the study, as no single factor accounted for the majority of the variance. In order to confirm these findings, I applied a confirmatory factory analysis to test how well the factor structure explains covariance among the measured items (cf. Chang et al., 2010; Kammerlander et al., 2015). The analysis showed that my four-factor measurement model (promotion focus, prevention focus, empathy, and firm performance) ($\chi 2(142) = 205.549$, RMSEA = .06, CFI = .91) fit the observed data better ($p < .001$) than a model with only one single factor ($\chi 2(152) = 663.962$, RMSEA = .16, CFI = .30), where the latter indicates common method variance (cf. Kammerlander et al., 2015). In sum, I assessed the potential of common method bias in the study as low.

5.4.2. Measures

I performed a translation-back-translation (e.g., Dickson et al., 2006; Kammerlander et al., 2015) to transform the original questionnaire from English to German (see Section 5.10, Tables 25–27). This procedure aimed to maintain accuracy while assuring understandability (cf. Kammerlander et al., 2015).

5.4.2.1. Dependent Variable

Firm performance was assessed using a scale developed by Deshpandé et al. (1993). The scale is grounded in survey measures of the Profit Impact of Market Strategy (PIMS) project (Buzzell and Bradley, 1987; Kotabe et al., 1991) and has been applied in a recent study analyzing SME CEOs' regulatory focus (Kammerlander et al., 2015). I asked CEOs to assess their firm's development over the last three years relative to that of their direct competitors in terms of four items (overall performance, market share, turnover growth, and profitability) (cf. Kammerlander et al., 2015), which were scored on a seven-point Likert scale, ranging from 1 ("strongly below average") to 7 ("strongly above average"). I averaged each respondent's answers to the four items to derive the level of firm performance (cf. Kammerlander et al., 2015). The internal reliability of the firm performance scale ($\alpha = .82$) can be assessed as adequate (Hair et al., 2006). Subjective firm performance measures, such as the scale utilized in this study, have widely been used in prior studies (e.g., Nadkarni and Herrmann, 2010; Wallace et al., 2010), as objective data on SME performance is scarce. Subjective measures have also been shown to be highly correlated with objective measures of firm performance (Venkatraman and Ramanujam, 1987; Wallace et al., 2010). Furthermore, asking CEOs to compare the performance of their firms to that of similar firms in the same industry helps to minimize industry effects (Dess et al., 1990; Wallace et al., 2010).

5.4.2.2. Independent Variables

Promotion focus and prevention focus were captured by the Regulatory Focus Questionnaire (RFQ) (Higgins et al., 2001), which has been applied in prior studies targeting CEOs and entrepreneurs (e.g., Bryant, 2009; Kammerlander et al., 2015).

RFQ has been shown to be the most appropriate construct to measure an individual's chronic regulatory focus (Haws et al., 2010). I asked CEOs to report their subjective history of promotion and prevention success based on six items for the promotion focus and five for the prevention focus (cf. Kammerlander et al., 2015), which were rated on a five-point Likert scale, ranging from 1 ("never or seldom") to 5 ("very often"). After adjusting reversely coded prevention items, I conducted a principle component analysis with varimax rotation (cf. Kammerlander et al., 2015). This analysis revealed an inconsistent loading of one promotion item ("How often have you accomplished things that got you 'psyched' to work even harder?") and two prevention items ("How often did you obey rules and regulations that were established by your parents?"; "Not being careful enough has gotten me into troubles at times.") (reverse scored), which were thus excluded from further analysis. A CEO's level of promotion (prevention) focus was calculated as the mean of the values of the remaining five (three) promotion (prevention) items (cf. Kammerlander et al., 2015). The Cronbach's alphas were .74 for promotion focus and .83 for prevention focus, which suggests an acceptable reliability (Hair et al., 2006).

5.4.2.3. Mediator Variable

Empathy items were drawn from the scale developed by McBane (1995) and adapted by Wieseke et al. (2012). This measure is mainly based on the well-established Interpersonal Reactivity Index (IRI) (Davis, 1980, 1983) and has recently been used in service research (e.g., Wilder et al., 2014). It captures global and specific dimensions of empathy (Goel et al., 2013), namely, one cognitive (perspective taking) and two emotional dimensions (empathic concern and emotional contagion). In alignment with the definition of CEO empathy provided above, the questionnaire only included the indicators for perspective taking (three items) and empathic concern (four items), which were scored on a seven-point Likert scale, ranging from 1 ("strongly disagree") to 7 ("strongly agree"). Where appropriate, I slightly changed the wording of the items to refer to empathy for customers rather than to empathy for individuals in general (Homburg et al., 2009). Sample items were "When I am upset at a customer, I usually try to 'put myself in his/her shoes' for a while" (perspective taking) and "My customers' misfortunes usually disturb me a great deal" (empathic concern). I averaged the three items for perspective taking and four items for empathic concern to create a single measure of a CEO's empathy (cf. Plank and Reid, 2010; Wilder et al., 2014). The empathy ratings were found to be internally consistent (α = .71) (Hair et al., 2006).

5.4.2.4. Individual Control Variables

I included CEO sex, CEO age, and CEO tenure to control for the possibility that CEOs' characteristics affect their empathy (Davis, 1980; Hogan, 1969; Mehrabian and Epstein, 1972; Parker and Axtell, 2001) and the performance of their firms (Nadkarni and Herrmann, 2010; Wallace et al., 2010). CEO sex was a dichotomous variable coded 1 if the CEO was female and coded 0 if male. CEO tenure was measured as the number of years that the CEO has been employed in the sampled firm.

5.4.2.5. Firm Control Variables

As the age and size of a firm may provide resources that enable the firm to more favorably compete (Freeman et al., 1983; Hannan and Freeman, 1984; Wallace et al., 2010), I controlled for these variables (Wallace et al., 2010). Firm age was measured as the number of years since the firm's foundation (Kammerlander et al., 2015), and firm size was measured as the number of full-time employees.

5.5. Analyses

5.5.1. Statistical Procedures

To test my first three hypotheses, I calculated multivariate regression models based on ordinary least squares (OLS) (cf. Kammerlander et al., 2015). Variance inflation factors (VIFs) were all below 1.5 and thus well below the threshold value of 10. I therefore assumed that multicollinearity did not distort or dilute the regression results (Neter et al., 1985). In order to test hypotheses 4 and 5, I employed a simple indirect effects approach (cf. Hmieleski et al., 2010, 2012), wherein empathy was a mediating variable in the relationship between regulatory focus (promotion focus and prevention focus) and firm performance. To compute the indirect effects models, I applied statistical methods developed by Preacher and Hayes (2004, 2008). I thereby estimated confidence intervals for the population value of the unstandardized indirect effects using bias-corrected and accelerated bootstrapping techniques (cf. Hmieleski et al., 2010, 2012). Through bootstrapped confidence intervals, I avoided power problems introduced by non-normal sampling distributions that arise in the product of coefficient tests (e.g., Sobel's test) for indirect effects (Hmieleski et al., 2010, 2012; MacKinnon et al., 2002, 2004).

5.5.2. Results

The reliabilities, descriptive statistics, and correlations for the variables are presented in Table 22. I find only moderate levels of correlation between the variables. In particular, the correlation of promotion focus with prevention focus is low ($r = -.11$, $p > .10$), which is in alignment with prior studies (cf. Higgins et al., 2001; Kammerlander et al., 2015).

Table 22. Reliabilities, Descriptives, and Variable Correlations (Paper 3).

Variables	α	M	SD	1.	2.	3.	4.	5.	6.	7.	8.
1. CEO sex		.07	.25								
2. CEO age		50.73	7.90	-.082							
3. CEO tenure		16.57	10.56	.020	.457***						
4. Firm age		46.01	47.71	.033	-.042	.213*					
5. Firm size (employees)		48.12	71.87	-.152†	-.036	-.002	.357***				
6. Promotion focus	.74	4.07	.48	.122	-.135	-.314***	-.105	-.020			
7. Prevention focus	.83	3.06	.92	-.093	.069	.072	.079	-.030	-.108		
8. Empathy	.71	5.31	.73	.014	.162†	.157†	-.005	.032	.139	-.136	
9. Firm performance	.82	4.67	.89	.025	-.119	-.088	.058	.090	.259**	-.160†	.179*

N = 133; † $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

The regression results relating to hypotheses 1–3 are shown in Table 23. The bootstrap results pertaining to hypotheses 4 and 5 are displayed in Table 24. Hypothesis 1 proposes that CEOs' promotion focus is positively related to empathy. Model 1 of Table 23 shows that the relationship between promotion focus and empathy is positive and significant ($\beta = .32$, $p < .05$), which provides support for Hypothesis 1. Hypothesis 2 suggests that CEOs' prevention focus is positively related to empathy. As indicated in Model 2 of Table 23, the relationship between prevention focus and empathy is negative and marginally significant ($\beta = -.12$, $p < .10$). Hypothesis 2 is thus rejected for this sample. Hypothesis 3 states that CEOs' empathy is positively related to the performance of their firms. As Model 5 of Table 23 reveals, empathy has a positive and significant relationship with firm performance ($\beta = .25$, $p < .05$), which is in line with Hypothesis 3.

Hypothesis 4 proposes that CEOs' empathy positively mediates the relationship between their promotion focus and the performance of their firms. Model 3 of Table 23 shows that the relationship between promotion focus and firm performance is positive and significant ($\beta = .49$, $p < .01$), and Model 6 of Table 23 reveals that this relationship becomes weaker ($\beta = .43$, $p < .05$) when empathy is added to the regression. In combination with the findings for hypotheses 1 and 3, this pattern of results suggests that the positive effect of promotion focus on firm performance is positively mediated by empathy (Baron and Kenny, 1986; Hmieleski et al., 2010, 2012). As presented in Table 24, the indirect effect of promotion focus on firm performance via empathy is positive and significant (Bootstrapped Indirect Effect = .06), with a 95% confidence interval of .001 to .186. Thus, these findings lend support for Hypothesis 4. Hypothesis 5 states that CEOs' empathy positively mediates the relationship between their prevention focus and the performance of their firms. Model 4 of Table 23 reveals that the relationship between prevention focus and firm performance is negative and marginally significant ($\beta = -.15$, $p < .10$), and Model 7 of Table 23 shows that this relationship becomes insignificant ($\beta = -.12$, $p > .10$) when empathy is added to the model. Combined with the findings for hypotheses 2 and 3, though, these results suggest that the negative effect of prevention focus on firm performance is negatively mediated by empathy (Baron and Kenny, 1986; Hmieleski et al., 2010, 2012). As displayed in Table 24, the indirect effect of prevention focus on firm performance through empathy is negative and insignificant (Bootstrapped Indirect

Effect = -.03), with a 95% confidence interval of -.081 to .004. Hypothesis 5 is therefore rejected for this sample.

The R^2 change values of all models in Table 23 indicate a significant increase in the explained variance over and above the respective control model. Figure 8 provides a graphic illustration of the relationships found in the models.

Table 23. Regression Models of Empathy and Firm Performance (Paper 3).

Variables	Empathy		Firm Performance				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Individual control variables							
CEO sex	.009	.044	-.019	.049	.083	-.020	.039
	(.255)	(.256)	(.311)	(.316)	(.311)	(.308)	(.312)
CEO age	.010	.011	-.010	-.009	-.012	-.012	-.011
	(.009)	(.009)	(.011)	(.011)	(.011)	(.011)	(.011)
CEO tenure	.012†	.008	.002	-.004	-.007	.000	-.006
	(.007)	(.007)	(.009)	(.009)	(.009)	(.009)	(.009)
Firm control variables							
Firm age	-.001	.000	.001	.001	.001	.001	.001
	(.001)	(.001)	(.002)	(.002)	(.002)	(.002)	(.002)
Firm size (employees)	.001	.000	.001	.001	.001	.001	.001
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Independent variables							
Promotion focus	.317*		.492**			.429*	
	(.139)		(.170)			(.172)	
Prevention focus		-.118†		-.148†			-.121
		(.069)		(.086)			(.086)
Mediator variable							
Empathy					.254*	.201†	.231*
					(.108)	(.108)	(.108)
F	1.734	1.337	1.975†	1.054	1.497	2.225*	1.580
R^2	.076	.060	.086	.048	.067	.111	.081
R^2 adjusted	.032	.015	.042	.002	.022	.061	.030
R^2 change	.038*	.021†	.061**	.023†	.041*	.086**	.056*

Unstandardized regression coefficients are reported, followed by the standard errors in parenthesis.
The R^2 *change* values refer to the respective control models, which are not shown due to space reasons.
N = 133; † $p < .10$; * $p < .05$; ** $p < .01$.

Table 24. Bootstrapped Indirect Effects of Promotion and Prevention Focus on Firm Performance (via Empathy) (Paper 3).

Variables	Firm Performance			
	Boot Indirect Effect	Boot SE	LL 95% CI	UL 95% CI
Independent variables				
Promotion focus	.064	.044	.001	.186
Prevention focus	-.027	.021	-.081	.004

Sources: Adapted from Hmieleski et al. (2010, 2012).
SE: standard error; LL: lower limit; CI: confidence interval; UL: upper limit.
Control variables: CEO sex, CEO age, CEO tenure, Firm age, Firm size.
Bias-corrected and accelerated confidence intervals are reported.
N = 133. Bootstrap sample size = 1,000.

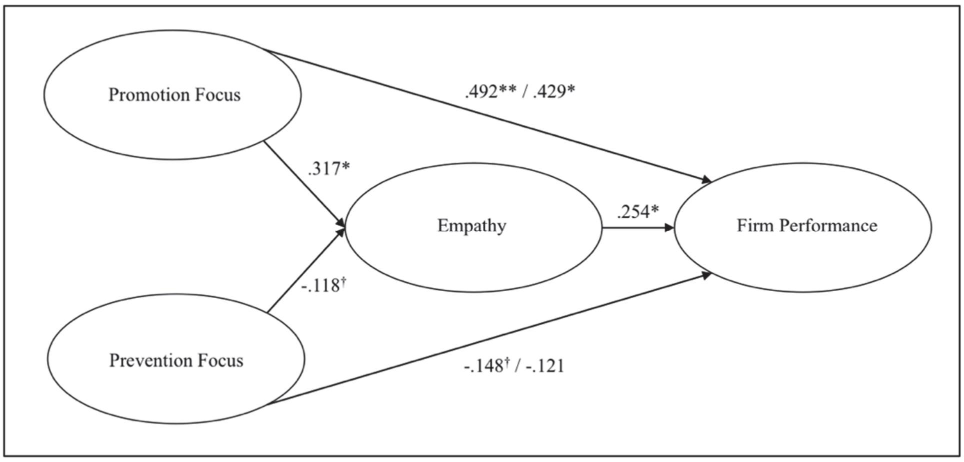

Figure 8. Relationships Found (Paper 3).
Unstandardized regression coefficients are shown.
N = 133; † $p < .10$; * $p < .05$; ** $p < .01$.

5.5.3. Robustness Checks

I conducted several robustness checks to scrutinize the findings from the regressions (cf. Kammerlander et al., 2015). To rule out the potential that the regression results were affected by few data points, I first adopted a bootstrapping approach (cf. D'Aveni and Ilinitch, 1992). I thereby repeated the regressions using 1,000 resamples (cf. Kammerlander et al., 2015) and found that all of the results reported above remained stable in terms of magnitude, direction, and size. In addition, I applied alternative regressions in order to rule out the potential that the regression results are sensitive to the model's specification. I conducted generalized linear models built on maximum likelihood instead of ordinary least squares (cf. Kammerlander et al., 2015). These robustness tests also confirmed the results presented above in terms of magnitude, direction, and significance.

5.6. Discussion

This study aimed to investigate how CEOs' regulatory focus is related to firm performance through empathy. In so doing, I aimed to advance the literature in several ways. First, I add to entrepreneurship literature and research on SMEs. By providing a fine-grained picture of how CEOs' regulatory focus relates to firm performance via empathy for customers, I enhance the understanding of how CEOs' regulatory focus influences the performance of their firms. To the best of my knowledge, this study is the first to theoretically and empirically link CEO regulatory focus and empathy as well as CEO empathy and firm performance in the context of SMEs. Furthermore, I argued that CEO empathy is of special relevance for SMEs, as the quality of CEOs' customer interactions can strongly influence the performance of their firms (cf. Baron and Markman, 2000, 2003). As shown, my empirical findings confirm the potential of CEO empathy to increase the performance of SMEs. Moreover, I validated empathy as a mediator between promotion focus and firm performance. This finding implies that CEOs with high degrees of promotion focus empathize with customers in order to maximize their achievements, such as customer loyalty (cf. Brockner et al., 2004; Johnson et al., 2015; Kammerlander et al., 2015), which ultimately contributes to the performance of their SMEs. As such, I offer a first explanation through which mechanism CEOs' promotion focus affects the performance of their firms and also inform research on upper echelons theory (Hambrick and Mason, 1984), which examines how top executives' regulatory foci relate to firm performance. Contrary to my expectations, though, CEOs' empathy did not mediate the relationship between their prevention focus and the performance of their firms. With regard to this non-finding, interestingly, CEOs' prevention focus negatively relates to empathy, which might have the following explanation: As argued above, CEOs with high degrees of prevention focus strive to avoid failures and thus empathize with customers in order to understand and meet customer demands (Davis, 1983; Kammerlander et al., 2015; Lalwani et al., 2009). However, CEOs with high levels of prevention focus are driven by a fear of punishment for failures caused (Brockner et al., 2004; Kammerlander et al., 2015). In customer interactions, this fear might induce CEOs to mainly detect signals of potential failures instead of elaborating the meaning of the incoming information per se (cf. Oyserman et al., 2007; Sassenrath, 2011), which might impair efficient information processing and empathy for customers. My results also provide empirical evidence that CEOs' promotion focus positively affects firm performance, whereas CEOs' prevention focus exerts a negative effect on firm performance. These results confirm prior empirical work (Wallace et al., 2010) and suggest that a prevention focus, which is associated with the desire to avoid failures and meet stakeholder demands, has performance costs as compared to a promotion focus, which is associated with a focus on potential gains and the desire to maximize achievements, such as improved financial measures (e.g., Galinsky et al., 2005; Johnson et al., 2015; Kammerlander et al., 2015; Oyserman et al., 2007).

Second, I contribute to regulatory focus research by investigating the relationship between regulatory focus and empathy. In this regard, prior studies focus on the cognitive or emotional dimension of empathy (Keller and Pfattheicher, 2011, 2013; Sassenrath, 2011; Woltin et al., 2011). However, empathy is increasingly understood as a multidimensional phenomenon including cognitive and emotional aspects (Decety and Jackson, 2004; Kerem et al., 2001; Wieseke et al., 2012). In line with this, I conceptualized and measured empathy as a cognitive and emotional ability (cf. Davis, 1983). Furthermore, I offer theoretical reasoning and empirical evidence for the relationship between promotion focus and empathy. Moreover, my empirical results show that promotion focus indirectly relates to firm performance through empathy. In addition, my finding that prevention focus negatively relates to empathy, which is in line with prior work revealing a negative but insignificant effect of prevention focus on empathic concern (Keller and Pfattheicher, 2011), might challenge regulatory focus theory assuming a positive relationship between prevention focus and empathy.

Third, I add to empathy literature. In general, my investigation joins the young research stream that studies empathy in the context of SMEs (Camuffo et al., 2012; Goel et al., 2013). Furthermore, this study is the first to validate empathy as a mediator between promotion focus and firm performance, which adds to knowledge on empathy in general.

5.7. Limitations and Future Research

As with any empirical work, this study reveals several limitations that also suggest opportunities for additional research. First, my analysis is based on a sample of Swiss

SMEs that might not be fully representative of all SMEs (cf. Kammerlander et al., 2015). Therefore, I encourage researchers to replicate the study in other cultural contexts and for other types of firms in order to assess the generalizability of my results. Second, I relied on a single informant per firm and subjective data on firm performance (cf. Kammerlander et al., 2015). However, objective data on SME performance is scarce, where often only the CEO has deep insights into the relevant firm operations. Third, I only examined one promising mediator, namely, CEO empathy, in the relationship between CEOs' regulatory focus and the performance of their firms, uncovering empathy as a mediator between promotion focus and firm performance. I thus encourage researchers to investigate further potential mediators in the regulatory focus-firm performance link, such as market orientation in general (Narver and Slater, 1990) and customer orientation in particular (Deshpandé et al., 1993). Further fruitful avenues for future research lie in analyzing when the mediating effect of empathy is of greatest magnitude in the regulatory focus-firm performance relationship, such as when CEOs receive empathy training (Malle and Pearce, 2001). In addition, as my empirical results show that prevention focus negatively relates to empathy, in-depth research, such as archival studies and focus group interviews, is required in order to investigate the relationship between CEOs' prevention focus and their empathy for customers.

5.8. Managerial Implications

This study has important managerial implications. My findings suggest that high degrees of promotion focus among CEOs might be beneficial for SMEs (cf. Kammerlander et al., 2015), as such CEOs empathize with customers and, ultimately, contribute to firm performance. Hence, SME owners are advised to pay attention to recruiting CEOs with high levels of promotion focus and empathy (cf. Kammerlander et al., 2015). Interview questions adapted from the Higgins et al. (2001) scale on chronic regulatory focus and the McBane (1995) scale on empathy (see Section 5.10, Tables 26–27) might help owners assess the degree of a candidate's promotion focus and empathy. Furthermore, with regard to customer interactions, SME CEOs should check whether they have high empathy levels. If this is not the case, they might control their interactions with and behavior toward customers (cf. McBane, 1995). In addition, referring to CEO empathy as an individual ability suggests that pre-existing levels of empathy can be enhanced by appropriate training (Decety and Jackson, 2004; Wieseke et al., 2012), especially by mystery shopping (cf. Finn and Kayandé, 1999) and role playing, i.e., by instructing individuals to take their target's perspective (Kraus et al., 2012; Malle and Pearce, 2001). CEOs can train their empathy by "walking in the shoes of the customer," enabling them to better understand customer needs and motivations (cf. Wieseke et al., 2012).

5.9. Conclusion

Addressing one important facet of CEOs' personalities – their chronic regulatory focus comprising a promotion and prevention focus – and the mechanism of how it contributes to SME performance, I successfully validate CEOs' empathy as a mediator between their promotion focus and the performance of their firms. In order to advance entrepreneurship and SME research, I encourage researchers to investigate further mediating mechanisms through which promotion focus and prevention focus influence SME performance.

5.10. Appendix

Focal Survey Items

Table 25. Firm Performance Scale (Paper 3).

1. Overall performance.
2. Market share.
3. Turnover growth.
4. Profitability.

The scale is based on Deshpandé et al. (1993), which has been applied, for instance, by Kammerlander et al. (2015). Respondents were asked to indicate their firm's development over the last three years compared to that of their direct competitors in terms of four items. Firm performance was measured on a seven-point Likert scale ranging from 1 = "strongly below average" to 7 = "strongly above average."

Table 26. Regulatory Focus Questionnaire Scale (Paper 3).

1. Compared to most people, are you typically able to get what you want out of life?
2. Growing up, would you ever "cross the line" by doing things that your parents would not tolerate?*
3. How often have you accomplished things that got you "psyched" to work even harder? (-)
4. Did you get on your parents' nerves when you were growing up?*
5. How often did you obey rules and regulations that were established by your parents? (-)
6. Growing up, did you ever act in ways that your parents thought were objectionable?*
7. Do you often do well at different things that you try?
8. Not being careful enough has gotten me into troubles at times.* (-)
9. When it comes to achieving things that are important to me, I find that I perform as well as I ideally would like to do.
10. I feel like I have made progress toward being successful in my life.
11. I have found hobbies or activities in my life that capture my interest or motivate me to put effort into them.

This scale is based on Higgins et al. (2001), which has been used, for instance, by Bryant (2009) and Kammerlander et al. (2015). Respondents were asked to answer each question on a five-point Likert scale ranging from 1 = "never or seldom" to 5 = "very often." The questions refer to specific situations in the life of respondents. Questions 1, 3, 7, 9, 10, and 11 are promotion-focused items; 2, 4, 5, 6, and 8 are prevention-focused items. Reversed scored items are marked with an asterisk. Items marked with "(-)" were removed.

Table 27. Empathy Scale (Paper 3).

1. I try to look at everybody's side of a disagreement before I make a decision.
2. When I am upset at a customer, I usually try to "put myself in his/her shoes" for a while.
3. I believe that there are two sides to every question and try to look at them both.
4. I would describe myself as a pretty softhearted person.
5. If a customer is unhappy, I quickly realize this, even if I do not know him/her well.
6. My customers' misfortunes usually disturb me a great deal.
7. I often have tender, concerned feelings for customers less fortunate than me.

The scale is based on McBane (1995) and Wieseke et al. (2012), which has been used, for instance, by Wilder et al. (2014). Empathy was measured on a seven-point Likert scale ranging from 1 = "totally disagree" to 7 = "totally agree." Items 1–3 refer to cognitive empathy (perspective-taking); 4–7 refer to emotional empathy (empathic concern).

6. Concluding Chapter

6.1. Revisiting the Research Questions of the Cumulative Dissertation

The first section of the concluding chapter revisits and answers the research questions of the cumulative dissertation (see also Table 28). The subsequent sections summarize the dissertation's theoretical and practical contributions, its limitations and suggested avenues for future research, and offer the final conclusion.

This dissertation strived to answer specific research questions. With regard to the research questions 1 and 2 (see Table 28), the results of the first paper suggest that a CEO's promotion focus positively influences the firm's exploration and exploitation. In contrast, a CEO's prevention focus negatively impacts on the firm's exploration, and does not affect exploitation. Moreover, the positive effect of a CEO's promotion focus on the firm's exploration and exploitation is enhanced when competition is intense. Competitive intensity, though, does not moderate the link between a CEO's prevention focus and the firm's exploration and exploitation.

With respect to the research questions 3 and 4, the SLR of salesperson empathy revealed that seller-buyer relationship duration and seller and buyer demographics (e.g., age) are positively associated with salespersons' empathy perceived by buyers (Nahmens and Ikuma, 2009; Palmer and Bejou, 1994, 1995). Moreover, salesperson empathy has been linked to positive seller-buyer interaction outcomes, such as buyer satisfaction (e.g., Aggarwal et al., 2005), and performance related outcomes, such as sales performance (e.g., Agnihotri and Krush, 2015; Plank and Reid, 2010). These links might be enhanced, for example, by customer empathy (Wieseke et al., 2012), but weakened by job related stress felt by salespersons (Itani and Inyang, 2015). From these findings, the second paper derived a research agenda on SME CEOs' empathy with customers. Amongst others, the paper encourages researchers to investigate the impact of CEOs' characteristics (e.g., regulatory focus, temperament) on their empathy and to test the effect of CEO empathy on customer trust and firm performance, and whether these effects are enhanced by CEO ownership or empathy training. The paper also suggests scholars to analyze whether CEOs' empathy mediates the link between their regulatory focus and the firm's performance.

The third paper addresses the just mentioned mediating mechanism and the related research questions 5–7. The results of the paper show that the CEO's promotion focus is positively related to his/her empathy. Interestingly, and contrary to the expectations, the CEO's prevention focus negatively affects his/her empathy. Furthermore, the CEO's empathy exerts a positive influence on the firm's performance. Moreover, CEO empathy mediates the positive link between promotion focus and firm performance, but does not mediate the negative relationship between prevention focus and firm performance.

Against this empirical background and regarding the overall research question, this dissertation suggests that the CEO's regulatory focus and empathy play an important role in the exploration, exploitation, and performance of SMEs. The CEO's regulatory focus, particularly their level of promotion focus, influences the firm's exploration and exploitation. In addition, the CEO's promotion focus affects the subsequent firm's performance. This effect is mediated by their empathy with customers. The next two sections discuss the papers' theoretical and practical contributions.

Table 28. Revisiting and Answering the Research Questions of the Cumulative Dissertation.

Research Question	Answer to Research Question
Overall Research Question (RQ): *What roles do the CEO's regulatory focus and empathy play in the exploration, exploitation, and performance of SMEs?*	The CEO's regulatory focus and empathy play an important role in the exploration, exploitation, and performance of SMEs. The CEO's regulatory focus, particularly his/her promotion focus, affects the firm's exploration and exploitation. In addition, the CEO's promotion focus affects the firm's performance. This effect is mediated by their empathy for customers.
Paper 1: Exploration and Exploitation in Established SMEs: The Effect of CEOs' Regulatory Focus (Chapter 3)	
RQ 1. How *does the CEO's regulatory focus affect the respective firm's exploration and exploitation?*	1. The CEO's promotion focus positively affects the respective firm's exploration and exploitation. The CEO's prevention focus has a negative effect on exploration, but does not influence exploitation.
RQ 2. How *does competitive intensity moderate these relationships?*	2. The positive relationship between a CEO's promotion focus and the respective firm's exploration and exploitation is stronger when competition is intense. Competitive intensity, though, does not moderate the relationship between a CEO's prevention focus and exploration/exploitation.
Paper 2: CEO-Customer Interactions in SMEs: A Research Agenda on Antecedents, Outcomes, and Moderators of CEO Empathy (Chapter 4)	
RQ 3. *What are the antecedents, outcomes, and moderators of the salesperson's empathy?*	3. A salesperson's demographics constitute one of the antecedents to his/her empathy. Salesperson empathy has been linked to positive salesperson-buyer interaction (e.g., customer satisfaction) and performance related outcomes (e.g., practice of cross-selling). These relationships might be enhanced, for example, by customer empathy.
RQ 4. *What future directions can be derived for the research on the SME CEO's empathy with customers?*	4. Future research directions, amongst others, lie in examining CEO empathy as a promising mediator between his/her personal characteristics (e.g., regulatory focus) and the respective firm's performance, and whether this mediating mechanism depends on, for example, empathy training.
Paper 3: CEO Regulatory Focus and SME Performance: The Mediating Role of Empathy (Chapter 5)	
RQ 5. How *is the CEO's regulatory focus related to his/her empathy?*	5. The CEO's promotion focus is positively related to his/her empathy. Surprisingly, a CEO's prevention focus negatively relates to his/her empathy.
RQ 6. How *does the CEO's empathy influence the respective firm's performance?*	6. The CEO's empathy positively influences the respective firm's performance.
RQ 7. *Does the CEO's empathy mediate the relationship between his/her regulatory focus and the respective firm's performance?*	7. The CEO's empathy mediates the positive relationship between his/her promotion focus and the respective firm's performance, but does not mediate the negative relationship between his/her prevention focus and firm performance.

6.2. Theoretical Contributions

This cumulative dissertation aimed to advance theory in several ways. The theoretical contributions of each paper are discussed in detail above (see Sections 3.7, 4.2, 4.6, and 5.6). The most central contributions are outlined in the following.

The first paper investigated how CEOs' promotion and prevention focus affect their firm's exploration and exploitation. The paper's findings show a positive effect of CEOs' promotion focus and a negative effect of CEOs' prevention focus on the firm's exploration. These results extend prior entrepreneurship studies that found evidence of a positive relationship between promotion focus and, for example, opportunity recognition (Hmieleski and Baron, 2008). The findings further show that CEOs' promotion focus not only positively influences the firm's exploration but also its exploitation and, hence, its organizational ambidexterity (Raisch and Birkinshaw, 2008). As such, the paper contributes to the research stream that seeks to understand heterogeneity in organizational ambidexterity (Lavie et al., 2010), particularly among SMEs (e.g., Lubatkin et al., 2006). Contrary to the expectations, however, the paper's results suggest that CEOs' prevention focus does not affect the firm's exploitation. Furthermore, the paper reveals that the positive link between CEOs' promotion focus and the firm's exploration and exploitation is stronger when CEOs face intense competition. As such, the study advances the emerging research stream that analyzes how the effects of regulatory focus depend on industry factors (Hmieleski and Baron, 2008). In this regard, though, the paper's findings suggest that CEOs' with a high prevention focus do not invest more in exploration or exploitation when competition is intense. In addition, the paper advances theory on entrepreneurship (Brockner et al., 2004) and regulatory focus (Lanaj et al., 2012) by studying different combinations of promotion and prevention focus.

The second paper provides a research agenda on antecedents, outcomes, and moderators of CEO empathy derived from a SLR of salesperson empathy. The paper adds to SME literature by suggesting promising ways for future research on CEOs' empathy for customers (see Sections 4.7 and 6.1). By conducting a SLR of salesperson empathy, the paper also contributes to marketing, sales, and service literature. Previous narrative reviews contain a fraction of the existing literature and focus on the effects of salesperson empathy (see, e.g., Ricks and Veneziano, 1998; Wieseke et al., 2012). Most importantly for salesperson empathy research, the findings of the SLR suggest that salespersons' empathy comprising cognitive and emotional aspects tends to exert a positive effect on sales performance, whereas cognitive or emotional empathy alone does not affect sales performance. This might explain why studies come up with mixed results for the salesperson empathy-sales performance link (e.g., Ricks and Veneziano, 1998; Spaulding and Plank, 2007).

The third paper analyzed how CEOs' regulatory focus relates to firm performance through empathy. This paper contributes to entrepreneurship and SME research. By validating empathy as a mediator between promotion focus and firm performance, the paper offers a first explanation through which mechanism CEOs' promotion focus affects the firm's performance. This also informs research on upper echelons theory (Hambrick and Mason, 1984) and contributes to knowledge on empathy in general. Moreover, the paper contributes to regulatory focus research by examining the link between regulatory focus and empathy. In this regard, previous studies focus on cognitive/emotional empathy (e.g., Keller and Pfattheicher, 2011; Sassenrath, 2011). However, as empathy is increasingly viewed as a multidimensional construct (e.g., Kerem et al., 2001; Wieseke et al., 2012), empathy was measured as a cognitive and emotional ability (cf. Davis, 1983). In addition, the paper's finding that prevention focus negatively affects empathy might challenge the assumptions of regulatory focus theory (e.g., Keller and Pfattheicher, 2011).

6.3. Practical Contributions

The three dissertation papers have noteworthy practical contributions, some of which are outlined in the following. The first paper shows that CEOs with a high promotion focus are particularly valuable for SMEs in competitive industries, as such CEOs intensely engage in both exploration and exploitation activities. Hence, SME owners should pay particular attention to hiring CEOs with high levels of promotion focus. Furthermore, SME owners who intend to hand over their firms in highly competitive markets should check whether potential successors have high levels of promotion focus, as this might influence the firm's future wellbeing. Moreover, CEOs who face intense competition should evaluate whether they possess high degrees of promotion focus. If this is not the case, they might include individuals with a high promotion focus in their advisor team (cf. De Dreu and West, 2001).

The second paper argues that CEOs' ability to empathize with their customers can strongly contribute to the performance of their SMEs (cf. Baron and Markman, 2000, 2003). The empirical findings of the third paper confirm this argument. As such, SME owners who aim to enhance performance related outcomes should take into account any factors that might weaken the CEO empathy-firm performance link, such as when CEOs feel high levels of work related stress (cf. Itani and Inyang, 2015). SME owners should further account for the possibility that CEO empathy has an optimum level (cf. Homburg et al., 2011), as empathizing with customers requires resources. Moreover, if CEOs possess low levels of empathy, they might either control their interactions with customers (cf. McBane, 1995) or train their empathy, for example, by "walking in the shoes of the customer," enabling them to better understand customer needs (Wieseke et al., 2012).

6.4. Limitations and Future Research

This cumulative dissertation reveals several limitations that suggest potential avenues for future research. The limitations of each dissertation paper are presented in the respective sections, some of which are emphasized in the following. The first paper relies on a single source per firm and subjective data on exploration and exploitation. However, objective data on firm behavior is scarce, where often only the CEO has deep insights into the relevant operations. Furthermore, the paper is based on a sample of Swiss SMEs that might not be fully representative of all SMEs. This limitation might encourage researchers to replicate the study in other cultural contexts in order to assess the generalizability of the results. The limitation might also encourage scholars to propose changes to the original RFQ scale (Higgins et al., 2001), as the comparatively low level of internal reliability for promotion focus in the sample might be caused by the specific cultural context of the study (see Sassenberg et al., 2012). Of note, the third paper of this dissertation used a slightly changed version of the RFQ scale that resulted in higher levels of reliability. With regard to determinants of exploration in SMEs, the paper might inspire scholars to examine other CEO characteristics, such as ambiguity tolerance (e.g., Begley and Boyd, 1988) and internal locus of control (Judge and Bono, 2001), as well as other environmental factors, such as munificence (e.g. Baum et al., 2001). Further fruitful avenues for future research lie in studying in what exploratory and exploitative activities CEOs with various combinations of promotion and prevention focus engage.

The second paper developed a research agenda on CEOs' empathy with customers mainly based on salesperson empathy literature. However, while studies on CEOs' empathy are scarce (e.g., Goel et al., 2013), salespersons' empathy has attracted considerable scholarly attention. With respect to the SLR of salespersons' empathy, only empirical journal articles were included (see, e.g., Henry et al., 2016; Pittaway and Cope, 2007). However, as the journals' peer review processes act as a proxy for quality (David and Han, 2004; Pittaway and Cope, 2007), this is generally considered acceptable. In addition, the databases ABI and EBSCO may not contain all possible articles (cf. David and Han, 2004; Newbert, 2007). Nonetheless, used together and manually searching the references of the retrieved articles, the sample is argued to be representative of all empirical articles on salesperson empathy (see, e.g., David and Han, 2004; Newbert, 2007). The paper highlights fruitful avenues for future research on CEOs' empathy for customers and suggests multifactor scales for measuring CEO empathy (cf. Davis, 1983; McBane, 1995). For the research agenda on antecedents, outcomes, and moderators of CEO empathy, it is referred to Sections 4.7 and 6.1.

The third paper is based on a sample of CEOs working for SMEs located in Switzerland and thus shares the limitations with the first paper (e.g., single informant approach and subjective data). Specifically, the third paper solely investigated CEO empathy as a mediator in the relationship between CEOs' regulatory focus and their firm's performance. This might encourage scholars to examine further potential mediators in the regulatory focus-firm performance relationship, such as market orientation in general (Narver and Slater, 1990) and customer orientation in particular (Deshpandé et al., 1993). The paper might also encourage researchers to analyze when the mediating effect of empathy is of greatest magnitude in the regulatory focus-firm performance link, such as when CEOs train their empathy (Malle and Pearce, 2001).[24] Homburg et al. (2009), for example, applied a simple measure for perspective taking training to their study. In addition, as the empirical findings of the third paper reveal a negative effect of prevention focus on empathy, in-depth research, such as focus interviews of CEOs and customers, is required to investigate the relationship between CEOs' prevention focus and their empathy for customers. Figure 9 illustrates future research directions suggested by the three dissertation papers.

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[24] In a first step, future researchers could verify whether empathy training enhances the level of CEO empathy for customers (cf. Malle and Pearce, 2001; McDermott and Schweitzer, 1980).

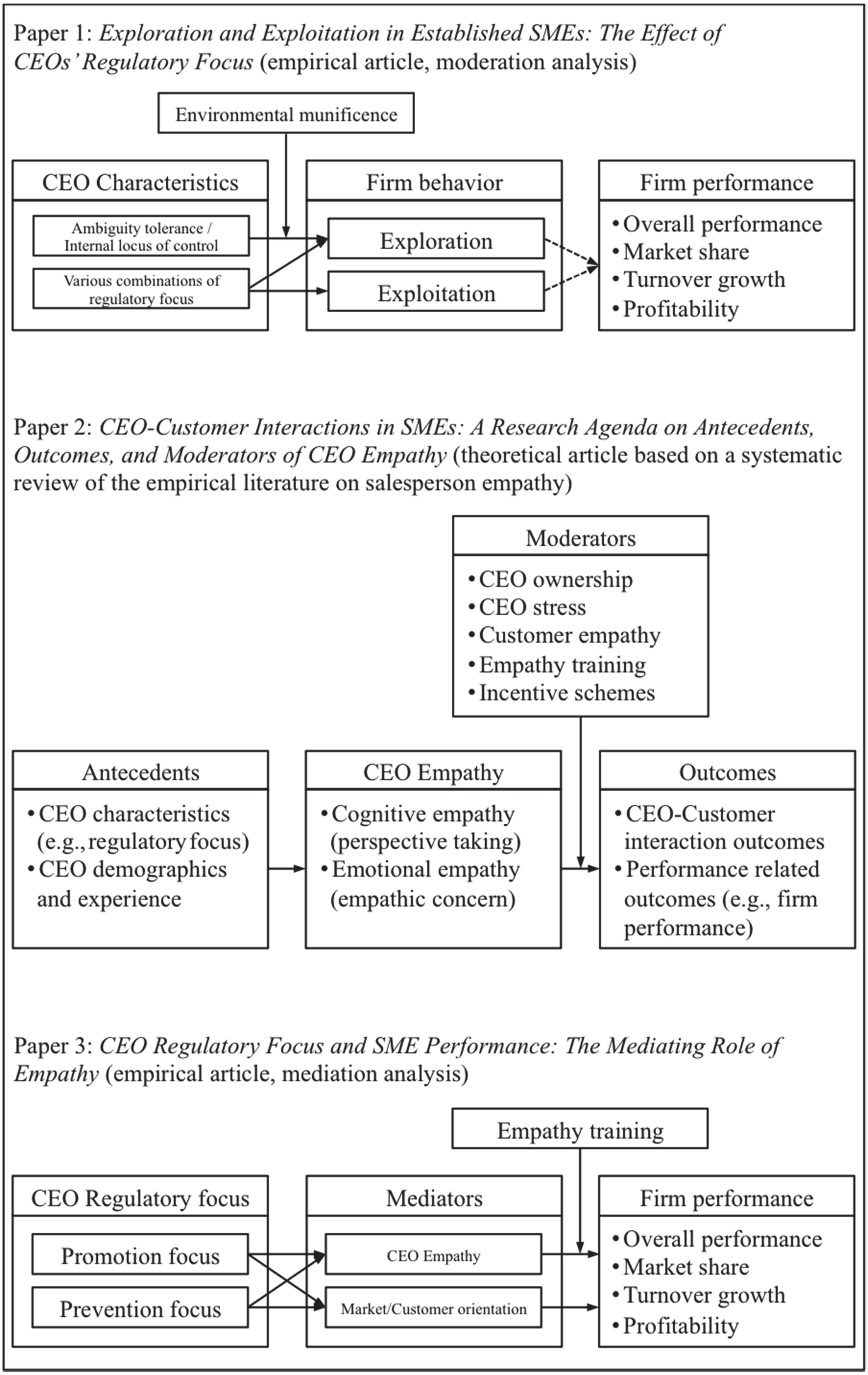

Figure 9. Future Research Directions suggested by the three Dissertation Papers.

6.5. Conclusion

CEOs' personal characteristics and abilities play an important role in the exploration, exploitation, and performance of SMEs. This dissertation shows that CEOs' regulatory focus, particularly their level of promotion focus, influences the firm's exploration and exploitation. In addition, this dissertation reveals that CEOs' promotion focus affects the firm's performance, and that this effect is mediated by their empathy for customers. In order to advance entrepreneurship and SME research, this dissertation suggests researchers to further analyze how CEOs' characteristics affect firm behavior, and whether these effects are moderated by environmental factors. Furthermore, this dissertation encourages scholars to examine further mediating mechanisms in the link between regulatory focus and SME performance.

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Curriculum Vitae

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Personal Information

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Education

since 09/2014	University of St. Gallen, St. Gallen, Switzerland, Certificate Advanced Studies in University Didactics
since 09/2011	University of St. Gallen, St. Gallen, Switzerland, Doctoral Studies Title: CEOs matter – Their Influence on SME Behavior and Performance
09/2008 – 02/2011	University of St. Gallen, St. Gallen, Switzerland, Accounting and Finance, final grade 5.35 (Scale 1–6)
10/2005 – 06/2008	University of St. Gallen, St. Gallen, Switzerland, Business Administration, final grade 5.13 (Scale 1–6)
09/1998 – 06/2003	Bundeshandelsakademie Bregenz, Bregenz, Austria (high school equivalent), final grade 1.00 (Scale 1–5)

Awards

05/2003	Scholarship of the “Bank für Tirol und Vorarlberg” (BTV) for excellent performance in school

Professional Experience

since 09/2010	University of St. Gallen, Swiss Research Institute of Small Business and Entrepreneurship, St. Gallen, Switzerland, Research and Teaching Assistant, Project Leader
07/2008 – 09/2008	Ernst & Young, Zurich, Switzerland, Auditing, Intern
09/2005 – 09/2010	UNIQA Burger & Partner, Hard, Austria, Marketing Assistant
08/2005 – 09/2005	Dornbirner Sparkasse, Dornbirn, Austria, Human Resources Management, Intern
11/2004 – 03/2005	Dornbirner Sparkasse, Dornbirn, Austria, Information Technology, Human Resources Management, Intern
09/2003 – 10/2004	Austrian Armed Forces, Military Music, Vorarlberg, Austria

Journal Papers

Kammerlander N, Burger D, Fust A and Fueglistaller U (2015) Exploration and Exploitation in Established Small and Medium-Sized Enterprises: The Effect of CEOs' Regulatory Focus. *Journal of Business Venturing* 30(4): 582–602.

Working Papers

Gasda JM, Covin JG, Kraus S, Burger D and Fueglistaller U. Pay Less – Get More: An Experimental Study with Swiss Entrepreneurs. To be submitted to Organization Studies in 2016 (VHB ranking: A).

Conference Papers

Burger D, Fueglistaller U and Fust A (2016) CEO-Customer Interactions in SMEs: A Research Agenda on Antecedents, Outcomes, and Moderators of CEO Empathy. In: *Rencontres de St-Gall*, St. Gallen, Switzerland, 29–31 August 2016, pp. 1–53. St. Gallen: Swiss Research Institute of Small Business and Entrepreneurship.

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Burger D, Fueglistaller U and Fust A (2013) Salespersons' Empathy: A Systematic Literature Review and Research Agenda. In: *INFORMS Annual Meeting*, Minneapolis, MN, 6–9 October 2013, p. 58. Catonsville, MD: Institute for Operations Research and the Management Sciences.

Kammerlander N, Fust A, Burger D and Fueglistaller U (2013) Regulatory Focus of CEOs and Organizational Ambidexterity in SMEs. In: *73rd Annual Academy of Management Meeting*, Orlando, FL, 9–13 August 2013, pp. 1–40. New York: Academy of Management.

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Further Publications

Please refer to www.alexandria.unisg.ch and www.researchgate.net

Teaching

Spring 2016	„Applied Research Project II," University of St. Gallen, master level
Autumn 2015	„Applied Research Project I," University of St. Gallen, master level
Autumn 2012 – 2015	Teaching assistant for „Managing Small and Medium-Sized Enterprises (SMEs)" (*Prof. Urs Fueglistaller)*, University of St. Gallen, master level; Guest talks about „SME Development and Change" and „SME Differentiation Through Service Excellence and Empathy"
Autumn 2012	„Applied Research Project III," University of St. Gallen, master level
Spring 2012 – 2015	Teaching assistant for „Entrepreneurial Management of Small and Medium-Sized Firms – A Life-Cycle Orientated Perspective" (*Prof. Urs Fueglistaller)*, University of St. Gallen, master level; Guest talks about „SME Development and Change" and „SME Differentiation Through Service Excellence and Empathy"
Spring 2012	„Applied Research Project II," University of St. Gallen, master level
Autumn 2011	„Applied Research Project I," University of St. Gallen, master level
Spring 2011	Teaching assistant for „Integrative Seminar" (*Prof. Urs Fueglistaller),* University of St. Gallen, bachelor level
Autumn 2010	Teaching assistant for „Small and Medium-Sized Firms – A Life-Cycle Orientated Perspective," „Applied Research Project III," and „Research Project and Methodology" (*Prof. Urs Fueglistaller)*, University of St. Gallen, master level
since 09/2010	Supervision of bachelor and master theses, University of St. Gallen, Swiss Research Institute of Small Business and Entrepreneurship

Advanced Training in Quantitative Research Methods

06/2015	University of St. Gallen, St. Gallen, Switzerland, Summer School in Empirical Research Methods: Workshop Lectures on Statistics with "R" (*Dr. Christian Hildebrand*)
06/2014	University of St. Gallen, St. Gallen, Switzerland, Summer School in Empirical Research Methods: Bayesian Data Analysis (*Prof. John K. Kruschke*)
06/2013	University of St. Gallen, St. Gallen, Switzerland, Summer School in Empirical Research Methods: Experimental Design for Behavioral Science (*Prof. Gerald Häubl*); Structural Equation Models (*Prof. Douglas Baer*)

Further Skills

Languages	German (native language), English (advanced), French (advanced)
Computer	Very good skills in Microsoft Office, Lotus Notes, and SPSS; good skills in STATA, Amos, and SmartPLS; basic skills in “R”
Road cycling	08/2015: Alpenbrevet, Silver Tour, Meiringen, Switzerland, 132 km, 3,875 meters in altitude difference, 05:29:23,00 hours
	08/2015: Tour “Rund um Vorarlberg,” Hohenems, Austria, 160 km, 2,400 meters in altitude difference, 04:52:53,40 hours
	08/2015: Arlberggiro, St.Anton, Austria, 148 km, 2,400 meters in altitude difference, 04:50:20,90 hours

Hard (Vorarlberg), 2nd August 2016