Individuals, Teams and Organizations:
A multilevel analysis of individual, team and organizational level factors on performance

Inauguraldissertation
zur
Erlangung des Doktorgrades
der
Wirtschafts- und Sozialwissenschaftlichen Fakultät
der
Universität zu Köln

2016

vorgelegt
von

M.Sc. Tessa Karcisky
aus
Osnabrück

Referent:	Jun.-Prof. Dr. Thorsten Semrau
Korreferent:	Univ.-Prof. Dr. Mark Ebers
Tag der Promotion:	24.01.2017

Acknowledgments

I would like to thank Prof. Dr. Thorsten Semrau, my dissertation supervisor, for his profound knowledge as well as his guidance and support. Also, I am greatly indebted to Prof. Dr. Mark Ebers for serving as the second reviewer of my thesis. In addition, I want to thank my co-authors Torsten Biemann and Armita Atabaki as well as my colleagues for providing guidance and valuable feedback.

Furthermore, I would like to thank my parents Karin and Ulrich Karcisky as well as my sister Nina Karcisky for their support and encouragement.

Finally, my deepest thanks go to my future husband Daniel Willmann. His indefinite support and commitment to me throughout the process encouraged me to finish the dissertation. Without him this thesis would not exist.
You are the most important person in my life.

Table of Contents

List of Tables

List of figures

1 Introduction

This thesis deals with the relationships between individual, team, and organizational level factors and performance using multilevel analyses. The thesis consists of four chapters. The purpose of this first chapter is to provide a brief overview of the three determinants of organizational behavior (inputs, processes and outcomes) at three key levels of analysis (micro, meso and macro level) and to highlight multilevel organizational behavior analysis. Moreover, a summary for each study is provided. The following three chapters present my studies.

The manuscript underlying Chapter 2 is an article authored by me and my coauthors Thorsten Semrau and Torsten Biemann. Both coauthors contributed to the data collection. The manuscript is prepared by Thorsten Semrau and me. Torsten Biemann commented on various versions of the manuscript. It was presented at the Annual Meeting Academy of Management 2014 in Philadelphia, USA and nominated as best paper. A previous version was published in the *Academy of Management Proceedings* (Vol. 2014, No. 1, p. 13573). The manuscript is prepared for submission to the *Journal of Work and Organizational Psychology*.

The manuscript underlying Chapter 3 is currently under review at the *Journal of Applied Psychology* and coauthored by Armita Atabaki, Thorsten Semrau and Torsten Biemann. The data collection was solely done by me. Armita Atabaki and I prepared the manuscript. Moreover, Thorsten Semrau contributed to the theoretical idea and conception and Torsten Biemann provided guidance on the methodological approach. An earlier version was presented at the Academy of Management 2015 in Vancouver, Canada.

The manuscript underlying Chapter 4 is a single-author paper and prepared for submission to the *Journal of Applied Psychology*. Guidance and comments were provided by Thorsten Semrau.

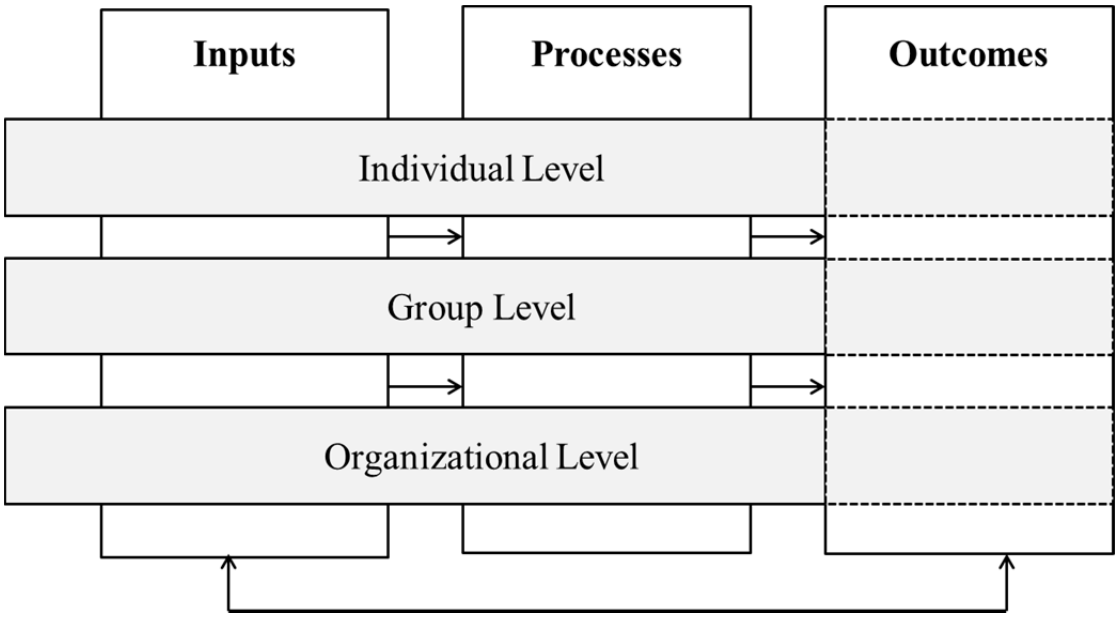
1.1 Organizational Behavior Research

Organizational behavior is "a field of study that investigates the impact that individuals, groups, and structure have on behavior within organizations for the purpose of applying such knowledge toward improving an organization's effectiveness" (Robbins, 2001, p. 6). Practitioners as well as researchers are mostly interested in understanding which and how factors from individuals, groups and organizations drive processes that in turn affect performance (Colquitt, LePine, & Wesson, 2015; Huczynski & Buchanan, 2013; Robbins, Judge, & Campbell, 2013).

Organizational behavior can be classified by the Input-Process-Outcomes model (Mathieu, Maynard, Rapp, & Gilson, 2008; Robbins et al., 2013), which describes the linkages in organizational behavior through inputs, processes and outcomes (Mathieu et al., 2008). These three variables exist at three levels: the micro level relating to individuals, the meso level relating to groups/teams and the macro level relating to organizations (Robbins et al., 2013). Individual, team and organizational inputs drive and influence specific processes, which in turn influence outcomes, such as individual, team and organizational performance (Colquitt et al., 2015; Huczynski & Buchanan, 2013; Mathieu et al., 2008). First, inputs are antecedent factors, for example personality at the micro/individual level and structure at the macro/organizational level, that drive specific processes (Colquitt et al., 2015). Second, processes are the linkages between inputs and outcomes. Example at the micro/individual level are motivation and decision making, and at the meso/group level communication and conflict. Third, outcomes, the

variables organizational behavior research aims to explain and predict, result from processes initiated by inputs. Examples are individual performance at the micro/individual level and team performance at the meso/group level (Robbins et al., 2013). With respect to the Input-Process-Outcomes model, it is important to consider that, first, outcomes may also influence inputs. Second, individual, team and organizational inputs as well as processes do not only influence outcomes at the respective individual, team and organizational levels but may also have an impact on lower or higher level outcomes (visualized by the dotted line in Figure 1.1). In the following the three key levels of analysis in organizational behavior are explained in more detail.

Figure 1.1: Input-Process-Outcome Model in Organizational Behavior Research
Own representation based on Mathieu et al. (2008, p. 413); Robbins et al. (2013, p. 25).



Organizational Behavior at the Micro Level

The organizational behavior at the micro level relates to inputs and processes at the individual level that affect performance (Robbins et al., 2013). Individual inputs refer to characteristics defined as "structures and propensities inside people that explain their characteristic patterns of thought, emotion, and behavior" (Colquitt et al., 2015, p.

278). These characteristics, such as personality and values, result in specific thinking processes, for example motivation or perception, that in turn influence performance (Anderson, Spataro, & Flynn, 2008; Barrick & Mount, 1991; Cable & DeRue, 2002; Wright & Nishii, in press).

Values and interests are the basis for understanding people's attitudes and motivation because they influence perception and "convey what is important to people in their lives" (Bardi, Lee, Hofmann-Towfigh, & Soutar, 2009, p. 913). For example, Van Iddekinge, Putka, and Campbell (2011) found support for a positive relationship between interests and job performance. Another important individual characteristic having a major impact on performance is the employee's personality. "Personality encompasses a person's relatively stable feelings, thoughts, and behavioral patterns" (Carpenter, Bauer, & Erdogan, 2010, p. 70). Personality traits have been investigated by scholars for many years as predictors of work performance (Barrick & Mount, 1991; Carter et al., 2014; Hough, 1998). Researchers explained differences in employees' performance based on differences in personality traits. Findings suggest that personality traits are related to various work-related outcomes such as job performance (Barrick & Mount, 1991; Bono & Judge, 2004). The Big Five Model is the most widely used model to evaluate personality traits (Barrick & Mount, 1991). It assumes that the five basic dimensions: neuroticism, conscientiousness, agreeableness, openness to experience and extraversion, underline most human personalities (Costa & McCrae, 1992). In this regard, Judge and Ilies (2002) found neuroticism, that is being emotionally unstable and tending to be anxious, to be a valid predictor of performance motivation; whereas openness, being open-minded with respect to new ideas and thoughts, and extraversion, being talkative and likely to socialize, were significant predictors of goal-setting and self-efficacy. Many studies have identified conscientiousness, that is being determined

and dependable as well as resourceful, to be a valid predictor of job performance for several occupational groups and criterion types (Barrick & Mount, 1993; Hough, 1998; Judge & Ilies, 2002; McHenry, Hough, Toquam, Hanson, & Ashowrth, 1990). In addition, Collins, Hanges, and Locke (2004) confirmed a significant positive relation between success entrepreneurs' need for achievement, that is, being motivated to achieve goals, utilize skills and knowledge, excel personal standards, and rival and surpass others (Fineman, 1977; McClelland, Atkinson, Clark, & Lowell, 1953; Murray, 1938).

Organizational Behavior at the Meso Level

The meso level relates to group/team-level inputs and processes that influence performance (Bell, 2007; Colquitt et al., 2015). A team has "some level of interdependence and operates in an organizational context that influences their functioning" (Mathieu et al., 2008, p. 411) and can be described by a number of characteristics, including team personality, diversity and group structure (Robbins et al., 2013). In the last decades, team work has increased due to advances in technology and an increasing requirement for contributions from multiple people across the organization (Cannon-Bowers & Salas, 2001; Robbins & Judge, 2012). This makes an examination of team characteristics on performance highly relevant to today's work environment (Jackson, Joshi, & Erhardt, 2003).

For example, team structure, described as relationships that drive the allocation of tasks, responsibilities and authority, was identified to be related to team performance (Stewart & Barrick, 2000). Further, Saavedra, Earley, and Van Dyne (1993) found support for the impact of complex group interdependences on group performance. Complex interdependencies directly affected intragroup conflict, although varying by task condition. In addition, this relationship between group interdependencies and

performance was partially mediated by intragroup conflicts. That is, the process of intragroup conflict negatively affected group performance. Besides team structure, leadership, the act of influencing others to work towards a certain goal, has an important impact on outcomes (Cohen, 1990, p. 9). Teams are able to perform successfully when their tasks are being managed, either by a leader or by self-managed teams (Robbins & Judge, 2012). For example, Srivastava, Bartol, and Locke (2006) found that empowering leadership has a positive impact on performance. In addition, transformational leaders are assumed to be capable of aligning team goals by establishing team identification processes and collective optimism, which in turn increases team performance (Kearney & Gebert, 2009).

Besides the increasing importance of team work in organizations (Lawler, Mohrman, & Ledford, 1995; Mohammed & Angell, 2004), teams have become more and more diverse (Choi, 2007; Sung, Choi, & Kim-Jo, 2014). This makes the examination of relationships between diversity in teams and performance more important than ever (Barrick, Neubert, Mount, & Stewart, 1998; Barry & Stewart, 1997; Van Knippenberg & Schippers, 2007). In terms of surface-level diversity, researchers found support for a positive relationship between demographic diversity and team performance (Bantel & Jackson, 1989). Others identified the relationship between both gender diversity (Gonzalez & Denisi, 2009) and nationality diversity (Earley & Mosakowski, 2000) and performance to be an inverted U. In terms of deep-level diversity, informational diversity is known to be positively related to group performance (Jehn, Northcraft, & Neale, 1999). In contrast, the relationship between value diversity and group performance was identified to be negative (Harrison, Price, Gavin, & Florey, 2002). With respect to team personality, some researchers found supporting evidence

for a linear positive effect on team performance (Barrick et al., 1998; Bell, 2007; Neuman, Wagner, & Christiansen, 1999).

Organizational Behavior at the Macro Level

The macro level deals with organizational-level inputs such as organizational structure as well as culture (Robbins & Judge, 2012). These organizational inputs drive processes such as the implementation of human resource management and change practices. The examination of organizational characteristics is of particular importance as they have a substantial impact on the employees' and teams' behavior, and in turn on performance (De Meuse, Bergmann, Vanderheiden, & Roraff, 2004; Mumdziev & Windsperger, 2011).

Organizational structure can be characterized by centralization, the extent to which decisions are made in one central point in an organization, or formalization, the extent to which jobs and tasks are standardized (Robbins et al., 2013). Organizational structure affects the link between individual and team characteristics and performance (Hirst, Van Knippenberg, Chen, & Sacramento, 2011; Robbins & Judge, 2012). A centralized organization may be more beneficial than a decentralized organization for performance (Mumdziev & Windsperger, 2011). Furthermore, organizational downsizing, the planned approach to make an organization leaner by staff reduction or business selling, is an important organizational characteristic having an impact on performance. De Meuse et al. (2004) found that when organizations implement downsizing, it has a positive impact on organizational financial performance three years after the announcement in comparison to non-downsizing companies. In contrast, Guthrie and Datta (2008) suggested downsizing to be negatively related to firm profitability, and that the effects are even stronger for industries with high research and development intensity. In addition, the organizational type, for example a start-up

company versus a franchise organization, also may have a significant impact on the relationship between individual- and team-level characteristics and performance. Moreover, organizational culture, characterized by the four traits, involvement, consistency, adaptability and mission, is identified to be positively related to performance (Dension & Mishra, 1995).

1.2 Multilevel Organizational Behavior Research

Researchers and practitioners agree that individual, team and organizational characteristics play an important role for performance (Colquitt et al., 2015; Robbins & Judge, 2012). As a consequence, they are interested in understanding which and how factors and characteristics at these three levels affect performance (Colquitt et al., 2015). As outlined in Chapter 1.1, a great number of studies made attempts to answer these questions. However, research gaps still exist regarding the aforementioned relationships and many research questions relevant for theory and practice remain unanswered (Hersey, Blanchard, & Johnson, 2007). This makes the assessment of characteristics at the individual, team and organizational level in the workplace an essential part of today's research. Based on theoretical as well as methodological reasons, researchers claim the need to apply multilevel analysis at the three levels of organizational behavior to account for the embeddedness of each level in a higher-level context (Klein & Kozlowski, 2000; Kozlowski, Chao, Grand, Braun, & Kuljanin, 2013).

With respect to the theoretical reasons, two aspects are important. First, in organizations, top-down as well as bottom-up processes take place that span the multiple levels of an organization (Klein & Kozlowski, 2000). Top-down processes relate to the contextual effects of higher levels (e.g. organizational level) that shape lower level processes (e.g. individual- or team-level) such as strategic decisions, which

are implemented by teams and individuals. Bottom-up relates to lower level phenomena (e.g. individual or team level) that manifest at higher levels (e.g. organizational level) (Kozlowski et al., 2013). This multilevel emergence in organizational behavior needs to be addressed in order to provide valuable insights, including the impact of specific individual or team inputs on performance. In sum, it is important to account for organizational behavior at all levels and the embeddedness of each level in a higher-level context in order to identify the relevant mechanisms and processes that influence performance outcomes (Sawyer, 2001).

Second, researchers as well as practitioners are interested in identifying the actual impact of individual, group or organizational characteristics on performance. However, this is challenging when individuals are nested within teams or in an organization. This embeddedness may result in additional effects from the other levels that influence the processes and outcomes (Kozlowski et al., 2013). The embeddedness makes it necessary not to examine solely individual, team or organizational characteristics but also to account for the resulting effects of being nested in a team or organization. For example, analyzing characteristics at the macro level does not take into account individual and team characteristics, whereas looking solely at the micro level does not take into account contextual effects of organizational characteristics that can constrain the effects of individual differences (Klein & Kozlowski, 2000). Multilevel research is able to conceptualize the embeddedness of individuals in an organization and the influence of lower and higher levels. Multilevel research allows researchers to specify how phenomena at different levels are linked, thereby bridging the different perspectives (Mathieu & Chen, 2011).

From a methodological point of view, multilevel analysis is able to solve the major challenge to identify both the direct effects of specific inputs and to conduct an

empirical analysis of contextual and emergent effects (Kozlowski et al., 2013). The development of multilevel analysis has made the investigation of system phenomena possible. Multilevel analysis enables researchers to solve the statistical problems resulting from hierarchical data structures, allowing a more integrated understanding of processes across levels in organizations (Klein & Kozlowski, 2000). For example, multilevel analysis is able to remove the between-group variation from lower level predictors by centering the variables. As a consequence, it allows the interpretation of the direct effects of the explanatory variables (Aguinis, Gottfredson, & Culpepper, 2013; Enders & Tofighi, 2007a). Although multilevel analyses has clear advantages, due to theoretical and methodological reasons as highlighted before, many research questions still remain unanswered (Kozlowski et al., 2013).

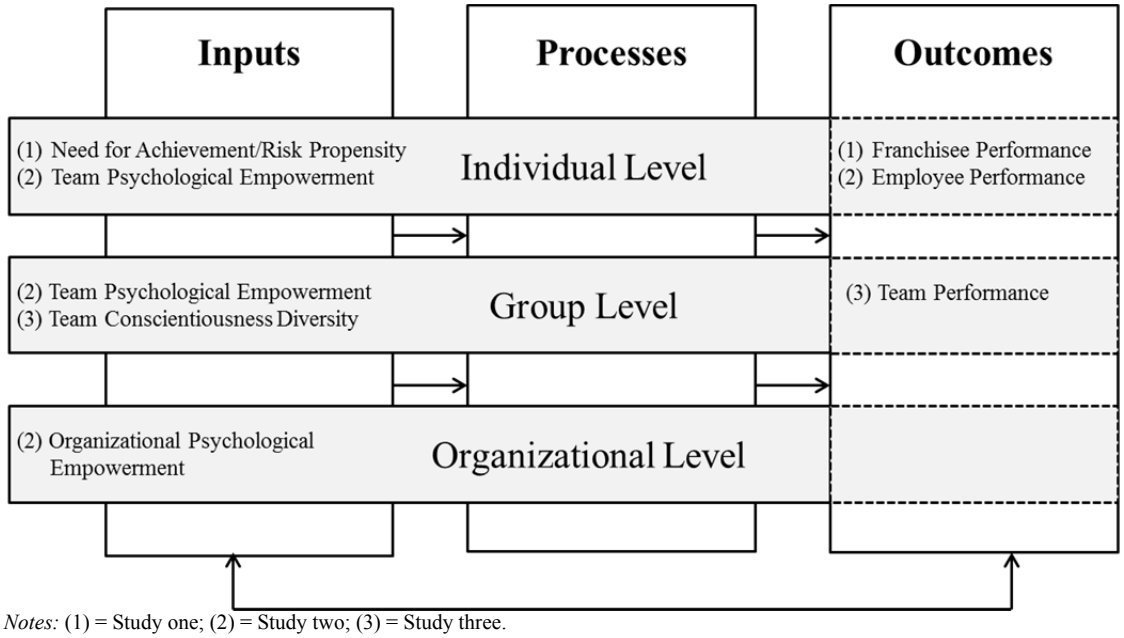
1.3 Thesis Outline

The main contribution of this thesis is the investigation of relationships between performance and characteristics at the individual, team, and organizational level applying multilevel analyses. The three studies analyze the impact of various individual, team and organizational inputs on individual and team performance through underlying processes. Each study contributes to closing specific research gaps and answering research questions that are of particular interest to practitioners as well as researchers and have not been examined so far.

Figure 1.2 provides an overview of the variables analyzed in my three studies based on the Input-Process-Outcomes Model. In study one (1), the impact of two individual characteristics such as need for achievement and risk propensity on employee performance is analyzed. Study two (2) examines the relationship between employee performance and individual (psychological empowerment), team (team empowerment),

as well as organizational characteristics (organizational empowerment). In study three (3) the focus lies on a team characteristic such as team personality diversity. In the next section, the current states of research, the research gaps and the research questions for each study are briefly described.

Figure 1.2: Input-Process-Outcome Model – Thesis Overview
Own representation based on Mathieu et al. (2008, p. 413); Robbins et al. (2013, p. 25).



Notes: (1) = Study one; (2) = Study two; (3) = Study three.

Study one (Chapter 2) investigates the effects of two individual-level personality traits, need for achievement and risk propensity (the micro level), on franchisees' performance in franchise organizations, based on multilevel analyses with 276 franchisees nested in 47 franchise organizations. A considerable body of research focuses on franchising, which accounts for a large proportion of economic activity all over the world (Combs, Ketchen, Shook, & Short, 2011; Ketchen, Short, & Combs, 2011). However, most studies have focused on franchisors and the impact of their strategic decisions on performance (Combs et al., 2011) and little is known about the influence of franchisees. Specifically, researchers call the investigation of individual characteristics because these inputs may have a potential impact on performance and help to understand why some franchisees are more successful than others (Combs et al.,

2011; Combs, Michael, & Castrogiovanni, 2004). The study one contributes to closing the research gap and answering the research question of how franchisees' individual characteristics, such as need for achievement and risk propensity, relate to performance as selecting the right franchisees is crucial for the franchise organization's success (Combs et al., 2011; Ketchen et al., 2011).

In study two (Chapter 3), the relationships between employee performance and psychological empowerment at the individual (the micro level), team (the meso level) and organizational level (the macro level) are examined, using a sample of 430 employees nested in 180 teams from 29 organizations. In this study, the characteristics at the micro, meso and macro organizational behavior level are analyzed simultaneously. The concept of psychological empowerment has received considerable academic attention as a main driver of employee performance (Conger & Kanungo, 1988; Kanter, 1977; Seibert, Wang, & Courtright, 2011). More recent studies have begun to examine the generalizability of empowerment theory across multiple levels (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Seibert, Silver, & Randolph, 2004). Although the individual and team level implications of psychological empowerment on performance have been examined in prior research, no study so far has addressed the organizational effects of psychological empowerment on employee performance (Maynard, Gilson, & Mathieu, 2012). Therefore, the research question is how and whether psychological empowerment at the individual, team and especially the organizational level affects employee performance.

Study three (Chapter 4) analyzes the effect of team conscientiousness diversity on team performance by applying multilevel analysis, using a sample of 116 teams (with 327 employees) nested in 20 companies. Moreover, the moderating impact of empowering leadership (the meso level) is examined while controlling for the

embeddedness of teams in organizations. Due to increased teamwork and increasingly diverse teams, an understanding of diversity in teams is important for organizations and societies (Choi, 2007; Lawler et al., 1995; Mohammed & Angell, 2004). However, due to inconsistent research findings, the questions of how differences between team members affect performance, and whether diversity in teams may have positive or negative effects on team performance, remain to be solved (Jackson et al., 2003; Milliken & Martins, 1996; Van Knippenberg & Schippers, 2007; K. D. Williams & O'Reilly, 1998). In this study, the research questions are: What are the effects of deep-level diversity, such as team conscientiousness diversity, on team performance? Is the relationship inverted U-shaped, and does a contextual condition such as empowering leadership moderate the relationship?

In sum, this dissertation contributes to closing the research gaps that call for an understanding of the relationship between specific characteristics at the individual, team and organizational level and performance, while applying multilevel analyses.

2 Too Much of a Good Thing? Risk Propensity, Need For Achievement and Performance among Franchisees

2.1 Introduction

Franchising accounts for a large proportion of economic activity all over the world and has attracted a considerable body of research (Combs et al., 2011; Ketchen et al., 2011). So far, however, most of this research has focused on franchisors, their decision to use franchise as a strategy and the consequences of this decision (Combs et al., 2011). In contrast, we know much less on why, within the very same franchise organization, some franchisees are more successful than others and there is a particular dearth of research shedding light on how individual characteristics may contribute to answering this question (Combs et al., 2011; Combs et al., 2004).

The present study contributes to closing this gap by examining how franchisees' risk propensity and their need for achievement contribute to explaining franchisee performance. Addressing this question seems fruitful for several reasons: First, a considerable body of research among independent entrepreneurs shows that these two individual characteristics may have a significant impact on success in exploiting a business opportunity and running a new business (Collins et al., 2004; Fahed-Sreih & Morin-Delerm, 2012; Johnson, 1990). When considering that franchisees also run a venture to locally exploit a business opportunity, it seems plausible to assume that risk propensity and need for achievement may potentially also help to explain why some franchisees are more successful than others. Second, however, researchers have rightly pointed to significant differences regarding other aspects of the occupational contexts in which independent entrepreneurs and franchisees are embedded. The former are largely autonomous in managing and running their business and reap the monetary rewards of

their efforts and achievements (Lévesque, Shepherd, & Douglas, 2002). The latter are embedded in a franchise organization, expected to follow rules and standards set by the franchisor, which limits their autonomy (Combs et al., 2004; Ketchen et al., 2011). With the franchisor typically receiving a considerable percentage of franchisees' revenues, franchisees also never reap the full benefits from their efforts (Combs et al., 2004; Ketchen et al., 2011). Taking into account that person-environment fit theory suggests occupational context differences to have an effect on the relationship between individual characteristics and performance (Kristof-Brown, Zimmerman, & Johnson, 2005) it thus seems likely that individual factors affecting the performance of independent entrepreneurs may not necessarily have similar performance implications among franchisees.

Against this backdrop, the present study develops theoretical arguments on how risk propensity and need for achievement will relate to performance among franchisees. In particular, we propose that among franchisees there will be a) an inverted U-shape relationship between risk propensity and performance as well as an inverted U-shaped relationship between need for achievement and performance. We test our hypotheses using multilevel analyses based on a dataset comprising 276 franchisees nested in 47 franchise organizations and find evidence supporting our theoretical reasoning.

The study at hand makes several contributions. First, our study narrows a substantial gap in the franchise literature (Combs et al., 2011; Combs et al., 2004) by highlighting how risk propensity and need for achievement can help to answer the question why some franchisees are more successful than others. Additionally, our study contributes to the discussion on the differences between entrepreneurs and franchisees (Kaufmann & Dant, 1999; Ketchen et al., 2011), as it points to the fact that while the similar individual-level characteristics may be relevant for the performance of

franchisees and independent entrepreneurs, these characteristics may differ in how they relate to performance across the two groups. Finally, we believe that our study also has clear practical implications.

2.2 Theory and Hypotheses

Franchising involves a long-term contractual agreement between a franchisor and a group of franchisees (Combs et al., 2004; Ketchen et al., 2011). The franchisor collects fees and receives a percentage of franchisees' revenues in exchange for allowing franchisees to market goods or services under their brand name and use their business practices and processes (Combs et al., 2004; Ketchen et al., 2011). For the franchisor, this arrangement bears the opportunity to quickly grow a businesses and profit from franchisees' resources and their understanding of local markets. For franchisees, it provides the opportunity to run their own firm within the boundaries defined by the franchisor.

Based on these characteristics of franchising, there is an ongoing debate on the extent to which franchisees are entrepreneurs (Kaufmann & Dant, 1999; Ketchen et al., 2011). On the one hand, franchisees are considered to be similar to independent entrepreneurs as both set up and run their own businesses to realize financial achievements (Clarkin & Swavely, 2006; Kaufmann & Dant, 1999; Ketchen et al., 2011). In doing so, both also take considerable levels of risk (Kaufmann & Dant, 1999; Ketchen et al., 2011), including investing their own money, dedicating time and energy, and most likely devoting themselves, at a personal level, to the new venture without knowing in advance whether the business will be profitable or if they have the capabilities and skills needed to succeed. Thus, failure is quite common among independent entrepreneurs (Holmes, Hunt, & Stone, 2010; Ucbasaran, Shepherd,

Lockett, & Lyon, 2013), as well as franchisees (Combs et al., 2004; Michael & Combs, 2008).

In contrast to independent entrepreneurs, franchisees typically do not need to identify the business opportunity they exploit, can rely on a tried-and-true business model as well as an existing brand name and established business practices and processes (Combs et al., 2011; Ketchen et al., 2011; Pizanti & Lerner, 2003; Shane, 1996). The franchising arrangement thus limits the risks involved in setting up a new business and lowers the degree to which franchisees are personally responsible for their work outcomes (Ketchen et al., 2011). At the same time, the franchise arrangement does not allow franchisees to reap the full benefits from their own abilities, efforts, and achievements, as the franchisor collect an initial entry fee and typically receives a certain percentage of franchisees' revenues as royalty payments (Combs & Ketchen, 2003; Combs et al., 2004; Michael & Combs, 2008). Additionally, and even though franchisees typically have substantial latitude, they have less autonomy and flexibility than independent entrepreneurs (Kaufmann & Dant, 1999; Ketchen et al., 2011). Acting as agents of a principal, franchisees are also obliged to follow their franchisor's rules and requirements (Combs et al., 2011; Pizanti & Lerner, 2003; Shane, 1996). In particular, franchisees are expected to act on behalf of their franchisors, comply with the rules and standards set, nurture the franchisor's brand name, and facilitate cross-buying within the franchise system (Combs et al., 2004; Davies, Lassar, Manolis, Prince, & Winsor, 2011; Kidwell, Nygaard, & Silkoset, 2007).

When considering these similarities and dissimilarities between franchisees and independent entrepreneurs, it seems plausible to assume that personality characteristics shown to contribute to explaining differences in the performance of independent entrepreneurs may also help explain why some franchisees are more successful than are

others. Considering differences in the occupational contexts in which franchisees and independent entrepreneurs are embedded, however, it seems likely that the performance implications of such individual characteristics may not necessarily be equivalent.

Based on this notion, we subsequently develop and test hypotheses on how risk propensity and need for achievement—two personality traits that are closely related to entrepreneurial activity and founding a business from a conceptual perspective (Brockhaus, 1982; Johnson, 1990; McClelland et al., 1953)—contribute to explaining differences in franchisees' performance.

2.2.1 Risk Propensity and Franchisees' Performance

Risk propensity is a personality trait indicating individuals' readiness to take risks and their willingness to take actions that involve uncertainty in order to potentially get higher returns (Zuckerman, 1994). With these characteristics in mind, risk taking is considered to be a key predictor of becoming an entrepreneur and has repeatedly also been addressed as a factor relevant for explaining differences in entrepreneurs' success (Caliendo, Fossen, & Kritikos, 2009; Lumpkin & Dess, 1996). In fact, previous research has shown that entrepreneurs are typically more willing to take higher risks than non-entrepreneurs (Kihlstrom & Laffont, 1979; Zheng & Prislin, 2012), and that individuals' risk propensity predicts individuals' decision to eventually become an entrepreneur (Caliendo et al., 2009). Previous research has also found a relationship between risk propensity and entrepreneurs' success which seems to be best described by an inverted U (Caliendo, Fossen, & Kritikos, 2010; Chell, Harworth, & Brearly, 1991).

Among franchisees, for which this link has—to the best of our knowledge—not been addressed so far, we also suggest an inverted U-shaped relationship between risk propensity and performance. Specifically, we posit that franchisees with both low and high risk propensity realize lower performance than will those with medium risk

propensity. Initially, increases in risk propensity should be beneficial for franchisees' performance, as individuals with higher levels of risk propensity tend to be more comfortable in dealing with situations involving risk and uncertainty and, thus, are better able to deal with the tasks involved in setting up and running a business (Nieß & Biemann, 2014). Additionally, individuals with higher risk propensity have shown to be more self-confident, tend to exhibit a greater self-efficacy, and are more resistant to stress than their counterparts with lower risk propensity (Zhao, Seibert, & Hills, 2005). These characteristics are helpful for franchisees to overcome the challenges involved in setting up and running a new business in new and untried markets (Baum & Locke, 2004; Kaufmann & Dant, 1999).

However, there are also reasons to believe that—after a certain threshold is reached—further increases in risk propensity result in a decrease in franchisees' performance. Similar to independent entrepreneurs, franchisees have to manage their resources carefully to succeed (Ketchen et al., 2011). A high risk propensity may lead franchisees to gamble with their resources. Specifically, franchisees with a high risk propensity may more likely follow their own entrepreneurial ideas on how to run their business instead of sticking to the tried-and-true procedures and processes established by the franchisor. With compliance to standards set by the franchisors being crucial to secure franchisees' performance (Davies et al., 2011; Fenwick & Strombom, 1998; Kidwell et al., 2007), we thus propose:

> *Hypothesis 1:* The relationship between franchisees' risk propensity and performance is inverted U-shaped.

2.2.2 Franchisees' Need for Achievement and Performance

Need for achievement is another personality trait considered to be highly relevant for individuals' inclination to become an entrepreneur as well as performance

(Barrick & Mount, 2005; Fahed-Sreih & Morin-Delerm, 2012; Hogan, 2007). Need for achievement describes individuals' drive to achieve goals, as well as their motivation to use their skills and knowledge, excel personal standards, and rival and surpass others (Fineman, 1977; McClelland et al., 1953; Murray, 1938). Individuals who are highly achievement motivated strive to succeed in relatively demanding tasks where outcomes are based on their skills and efforts and results are easily measurable (Davidsson, 1989; Johnson, 1990). They likely engage in activities that entail clear responsibilities for task outcomes and that allow a high level of independence and competence assessment (Amit, Glosten, & Muller, 1993; Collins et al., 2004)

Need for achievement has a long tradition of being associated with entrepreneurial activity (Collins et al., 2004; Johnson, 1990) and several studies suggest a positive relationship between need for achievement and success among independent businesses. Miner, Smith, and Bracker (1994), as well as Lee and Tsang (2001), for example, showed that businesses founded by individuals with a high need for achievement grow significantly faster than do those of their counterparts with a lower need for achievement. A meta-analysis conducted by Collins et al. (2004) confirmed a significant positive relation between founders' need for achievement and their success.

Based on the notion that need for achievement is a relevant predictor of the performance of entrepreneurs, we believe that it may also be relevant for explaining differences in franchisees' performance. In contrast to what research on need for achievement among entrepreneurs suggests, however, we posit that the relationship between need for achievement and performance among franchisees follows an inverted U. Similarly to our hypothesis on the relationship between franchisees' risk propensity and performance, we propose that franchisees with a low, as well as franchisees with a high

need for achievement will realize a lower performance than franchisees with a medium level of need for achievement.

As outlined above, individuals scoring high on need for achievement desire to accomplish challenging tasks whose outcomes are easily measurable, strive for a high level of autonomy, and are motivated by task outcomes based on their skills and efforts (Lee & Tsang, 2001). Being responsible for setting up and developing a franchise outlet implies a considerable level of responsibility. Moreover, immediate feedback on success is provided in terms of financial outcomes (Davidsson, 1989). To at least some extent, becoming a franchisee should thus fit with relatively higher levels of need for achievement and, according to person-environment fit theory, thus result in a willingness to invest time and energy that facilitates performance (Kristof-Brown et al., 2005). Additionally, a higher need for achievement should increase franchisees' abilities to overcome the challenges involved in setting up and running their franchise outlet. As previous research suggests, individuals with higher need for achievement are more likely able to engage in the instrumental activities necessary for success in setting up and running a business, as scoring high on achievement motivation implies the use of productive and active strategies to overcome problems (Frese, Fay, Hilburger, Leng, & Tag, 1997).

However, we also expect that, after a certain threshold, further increases in need for achievement will likely result in decreases in franchisees' performance. In contrast to independent entrepreneurs, who are autonomous and may act on their own behalf in managing and running their business, franchisees are agents of their franchisors and constrained by their obligations to follow the rules, business practices and processes defined (Davies et al., 2011; Kidwell et al., 2007). Additionally, franchisees' business outcomes are not solely based on their skills and efforts, but also on their franchisors'

and other franchisees' actions (Ketchen et al., 2011). Moreover, franchisees have to share the benefits from their efforts and achievements with their franchisor (Kaufmann & Dant, 1999; Ketchen et al., 2011). Based on these arguments, we suggest that a high rather than moderate level of need for achievement aligns less coherently with being a franchisee. According to person-environment fit theory (Kristof-Brown et al., 2005), further increases in need for achievement beyond a certain threshold will thus likely result in a decrease in motivation and effort among franchisees that is detrimental for their performance. Additionally, tendencies to strive to excel in existing standards, and rival and surpass others that are associated with high levels of need for achievement (Fineman, 1977; McClelland et al., 1953; Murray, 1938) may motivate franchisees to behave competitively toward other franchisees within the system, deviate from the standards set by the franchisor, which can ultimately decrease their performance (Davies et al., 2011; Fenwick & Strombom, 1998; Kidwell et al., 2007). Therefore, we propose:

> *Hypothesis 2:* The relationship between franchisees' need for achievement and performance is inverted U-shaped.

2.3 Sample and Method

2.3.1 Sample

Data were gathered in a survey study comprising three parts. First, we designed an online questionnaire that assessed franchise systems' characteristics and was to be answered by the franchisor. Franchisors invited to participate in the study were identified and contacted with the help of a cooperating internet portal that specialized in franchising. As part of the survey, franchisors also listed contact information on at least five of their franchisees. Second, we sent out survey invitations to the franchisees that

were identified by franchisors. From a total of 581 franchisees, we received 276 questionnaires (response rate of 47.5%) from 47 franchise organizations located in Germany. Third, franchisors evaluated participating franchisees' performance on a questionnaire. We then matched franchisor and franchisee data. On average, franchisors in our data set had been in business for 16.58 years, and their systems comprised 88.22 franchisees. Their distribution in industry categories is fairly similar to the one the German Franchising Association (DFV) reports for the German franchising industry (DFV, 2013). Specifically, 51.1% of our franchisors were active in the service sector (48% for the German franchising industry), 23.4% in the trading sector (27% for the German franchising industry), and 23.4% in hotel and food services (17% for the German franchising industry). The mean age of franchisees in our sample was 44.19 years, and 21% were female. On average, franchisees had 13.20 years of formal education and 7.21 years of industry experience before entering their respective franchise organizations.

2.3.2 Measures

Our study is based on survey data obtained from either franchisors or franchisees. The surveys were conducted in German. All scales adapted from English versions were translated and back-translated to ensure equivalency (Brislin, 1980).

Franchisee Performance. We relied on two different measures to capture franchisees' performance. First, we followed earlier research among entrepreneurs (Chandler & Hanks, 1993, 1998; Honig, Lerner, & Raban, 2006; Lee & Tsang, 2001; Semrau & Sigmund, 2012) and asked franchisees to indicate recent revenue and profit growth rates of their franchise outlets using broad categories. Response categories ranged from 1 (up to 0%) to 9 (more than 200%). We chose this scale format as it helps to overcome problems caused by unwillingness to disclose detailed financial

information (Zahra, Neubaum, & El-Hagrassey, 2002). Revenue and profit growth rates were highly interrelated (r = .730, p < .01)[1], and were combined into a single index to represent franchisees' financial performance.[2]

Second, we adapted a scale developed by Janssen and Van Yperen (2004) to assess franchisees performance from the perspective of the franchisor. This scale comprised of five items with a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) that were answered by the franchisor (Cronbach's alpha = .95). Sample items are "This franchisee meets all the performance requirements" and "This franchisee fulfills all his/her responsibilities." In contrast to the measure described above, relying on this scale also allowed us to capture aspects of franchisees' behaviors, such as free-riding or deviating from the rules set by the franchisor, which may not have immediate negative consequences for franchisees' financial performance, but may be detrimental for the franchise organization (Lado, Dant, & Tekleab, 2008; Loughry & Tosi, 2008).

Risk Propensity. To measure franchisees' risk propensity, we relied on seven items that previous research has validated to capture individuals' general tendencies to take risks (Meertens & Lion, 2008; Zhao et al., 2005). Specifically, we made use of five items developed by Meertens and Lion (2008) and added two items established by Zhao et al. (2005) to ensure that our scale was sufficiently reliable. Sample items are "I prefer to avoid risks (reverse coded)" and "I enjoy the excitement of uncertainty and risk." Franchisees rated their agreement with each statement using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Cronbach's alpha for this scale was .79.

Need for Achievement. To gauge franchisees' need for achievement, we used the nine items scale developed and validated by Eisenberger, Jones, Stinglhamber, Shanock, and Randall (2005). Sample items are "I like to set challenging goals for

[1] Reported is the average correlation. Across the five imputed datasets used for this study, correlations ranged from r = .708, p < .01 to r = .767, p < .01.
[2] Items were logarithmized before being combined to correct for skewness.

myself on the job" and "I enjoy situations at work where I am personally responsible for finding solutions to problems." Franchisees rated their agreement with each statement using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Cronbach's alpha for this scale was .85.

Controls. At the franchisee level, we controlled for gender, which was previously found to be related to succeeding in developing a business (Langowitz & Minniti, 2007; Renzulli, Aldrich, & Moody, 2000). We also accounted for franchisee age because older individuals have had more opportunities to accumulate experiences and expertise (Colombo & Grilli, 2005; Lee & Tsang, 2001). In addition, we controlled for franchisees' highest level of formal education (Frese et al., 2007; Wiklund & Shepherd, 2003) and industry experience in terms of the number of years they were active in the respective industry prior to becoming a franchisee for their current franchisor (Delmar & Shane, 2006; Lee & Tsang, 2001), as both may effect franchisee performance. We further controlled for franchisees' working hours per week for their franchise outlets to control for part-time franchisees.

At the franchisor level, we controlled for several variables that earlier research has shown to be related to franchisors' and franchisees' performance. We followed earlier research to control for the age of the franchise organization and its size in terms of the total number of franchisees (Kalnins & Mayer, 2004; Pizanti & Lerner, 2003; Windsperger, 2004). To control for potential effects of the industry sectors in which franchise organizations operate, we included dummy variables that indicated whether the franchise organizations were active in trading or accommodation and food services. Recognizing that initial fees may prevent franchisees' opportunistic behaviors (Windsperger, 2001), we also included a dummy variable that indicated whether a franchisor collected initial fees from franchisees. In addition, we controlled for the

extent to which decision rights were centralized in a franchise system using the scale developed by Windsperger (2004) and for the level of formalization in a franchise system by relying on a scale developed by Boulay (2010). Finally, we considered differences in franchise systems' strategic postures. To capture this variable, we made use of an adapted version of the strategic posture scale based on Covin and Slevin (1989), which was previously used by Stam and Elfring (2008).

2.3.3 Analytical Approach

Our data had a hierarchical structure with two levels of analysis (276 franchisees nested in 47 franchise systems). We first checked whether our data required multilevel analyses and estimated a null model and the corresponding intraclass correlation (ICC1) (Aguinis et al., 2013). Confirming the need for multilevel analyses, the null model (see Models 1 and 4, Table 2) revealed that 90% of the variance in franchisees' growth in financial performance (ICC1 = 0.90) and 45% of the variance in franchisees' agent performance (ICC1 = 0.45) resided between franchise systems. Thus, we applied a multilevel model reflecting that the franchisees in our sample were nested in franchise systems and entered variables at those two levels of analysis (Bliese, 2000; Hofmann, 1997). We centered our controls at the grand mean and our explanatory variables (risk propensity and need for achievement) at the group means. Group-mean centering removes all between-group variation from lower level predictors and yields pure estimations of their effects, which allows us to directly interpret the performance effects of our franchisee-level explanatory variables (Aguinis et al., 2013; Enders & Tofighi, 2007a).

There were missing data in our variables that varied between zero (e.g., gender) and 5.4% (risk propensity). To avoid the loss of information and statistical power inherent in the procedure of listwise deletion (Graham, 2009; Roth, 1994; Schafer &

Graham, 2002), we applied multiple imputation (Rubin, 1987; Sinharay, Stern, & Russell, 2001). Specifically, we applied an imputation algorithm described by Schafer (2001) and Schafer and Yucel (2002) designed specifically for clustered data. Imputations were conducted with the PAN extension package using the R language for statistical computing (Team, 2008). Following Sinharay et al. (2001), we created $m = 5$ imputations. Datasets were stored and analyses were performed on each of the five datasets before the results were combined following the rules suggested by Rubin (1987). We reran all analyses based on the dataset with listwise deleted cases and obtained similar results.

2.4 Results

The means, standard deviations, and correlations of our variables are depicted in Table 2.1.

Table 2.1: Means, Standard Deviations, and Correlations

N (L1) = 276 *N (L2) = 47*	*M*	*SD*	*1.*	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*	*9.*	*10.*	*11.*	*12.*	*13.*	*14.*	*15.*	*16.*	*17.*
1. Financial performance	2.12	2.16		-.017	.003	-.136	-.126	.088	-.048	-.011	-.038	-.073	.058	-.032	.045	-.036	-.072	-.122	-.017
2. Agent performance	5.80	1.23	-.074		.043	-.073	.163	-.005	-.151	.172	.053	.147	-.235	.028	-.051	-.136	.215	-.183	-.152
3. Risk Propensity	3.78	1.08	-.003	.333		.203	.122	.008	-.073	-.084	.054	-.002	-.084	.134	-.032	-.022	.069	.052	-.083
4. Need for Achievement	5.76	0.78	.362	.144	.388		.044	-.009	-.049	-.019	-.005	-.059	.011	.129	-.062	.016	.001	.052	-.066
5. Education	13.26	3.08	.132	-.025	-037	-.099		-.149	-.069	.108	-.083	-.127	-.185	.011	-.196	-.256	.025	.188	.081
6. Industry Experience	7.18	8.94	-.308	.128	.340	-.007	-.315		.258	-.152	-.129	.020	.190	.094	.098	.274	-.104	.031	-.046
7. Age franchisee	44.16	9.48	-.167	-.031	-.114	.289	-.123	.055		-.117	-.036	-.035	.245	.094	.228	.189	-.193	.133	.053
8. Gender (Female = 1)	0.214	0.41	-.058	-.069	.313	-.292	-.146	-.263	-.031		-.003	-.006	-.178	-.175	-.144	-.225	.054	-.156	-.038
9. Working hours	48.34	20.02	-.039	.044	-.145	-.255	.314	-.187	.008	-.059		.020	-.069	.059	.184	.127	.146	.087	-.039
10. Strategic Posture	3.75	0.97	-.051	.262	.144	-.026	.176	.016	-.194	-.037	-.149		.307	-.303	.060	-.100	.069	.317	-.075
11. Centralization	4.79	1.29	.312	.067	-.027	.137	.098	.236	.148	-.132	-.244	.202		-.122	.311	.259	-.142	.271	.144
12. Formalization	5.92	1.07	.078	.187	-.246	.197	.223	.266	.139	-.407	.093	-.284	-.011		.166	.090	-.046	.267	-.232
13. Age franchisor	10.47	10.83	.113	.066	-.199	.312	.135	.083	.292	-.149	.214	.019	.177	.231		.442	-.085	.195	-.139
14. Size Franchisor[b]	2.95	1.59	.125	-.106	-.159	.191	.081	.157	.182	-.141	.269	-.245	.018	.186	.510		-.048	-.017	.045
15. Accom./Food Service	0.23	0.43	-.153	.286	-.117	.023	.069	-.092	-.275	-.066	.100	.007	-.006	.099	-.146	.105		-.262	.140
16. Retail	0.23	0.43	-.166	-.088	-.201	.072	-.012	.091	.008	-.144	.109	.206	.113	.157	.079	.054	-.306		-.160
17. Entry Fee	0.87	0.34	-.035	-.085	.270	-.087	-.181	-.281	.058	.094	-.011	-.049	.052	-.187	-.049	-.036	.211	-.240	

Notes: Numbers above/below the diagonal represent franchisee-/franchisor-level correlations; [b] logarithm because of skewed distribution; all correlations at franchisee-level above |.119| and at franchisor-level above |.288| are significant at $p < .05$.

With respect to our hypotheses, franchisee-level correlations revealed that our explanatory variables were significantly and positively related ($r = .203$, $p < .01$). Franchisee-level correlations also reveal that our measures for franchisees' performance were not significantly interrelated, which indicates that both measures indeed capture distinct dimensions of franchisees' performance.

Table 2.2 displays the results of our multilevel analyses.

Table 2.2: Results from Multilevel Analyses

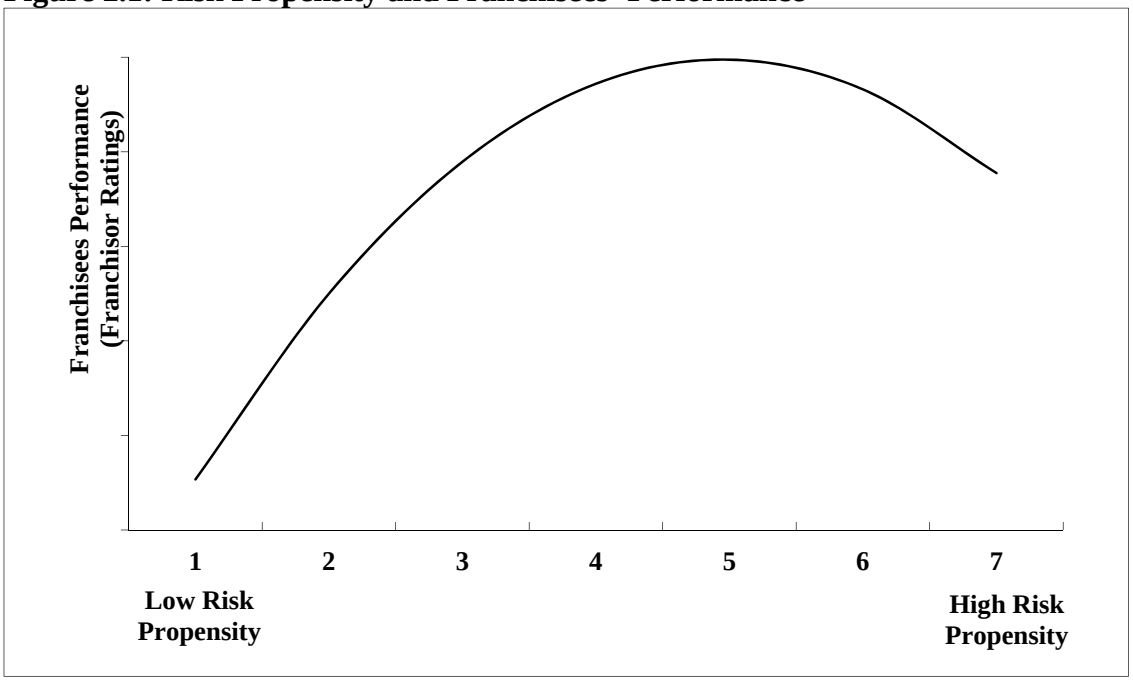
N (L1) = 276 ***N (L2) = 47***	***Financial performance*** [b]			***Agent performance***		
	Model 1	***Model 2***	***Model 3***	***Model 4***	***Model 5***	***Model 6***
Level 1 Controls						
Gender (Female = 1)		-0.204 (0.324)	-0.228 (0.329)		0.208^{+} (0.115)	0.254* (0.128)
Age franchisee		-.0121 (0.015)	-0.010 (0.015)		-0.001 (0.006)	-0.001 (0.005)
Working hours		-0.003 (0.008)	-0.002 (0.008)		0.002 (0.005)	0.002 (0.004)
Education		-0.032 (0.048)	-0.032 (0.045)		-0.032 (0.026)	-0.038 (0.026)
Industry Experience		-0.036* (0.145)	-0.036* (0.015)		-0.017 (0.005)	-0.017 (0.013)
Level 2 Controls						
Intercept	2.133** (0.186)	2.108** (0.179)	2.111** (0.178)	6.102** (0.135)	6.124** (0.117)	6.124** (0.117)
Age franchisor		0.181 (0.015)	0.172 (0.015)		0.007 (0.008)	0.007 (0.008)
Size Franchisor[b]		-0.084 (0.106)	-0.082 (0.108)		-0.036 (0.055)	-0.036 (0.055)
Retail		-0.980* (0.392)	-0.996* (0.390)		-0.392 (0.315)	-0.395 (0.314)
Accommodation/Food Service		-0.743 (0.502)	-0.751 (0.497)		0.448* (0.221)	0.447* (0.219)
Entry Fee		-0.303 (0.486)	-0.310 (0.482)		-0.253 (0.288)	-0.246 0.285
Strategic Posture		-0.162 (0.202)	-0.159 (0.201)		0.373* (0.141)	0.376* (0.093)
Centralization		0.250^{+} (0.147)	0.253^{+} (0.148)		0.007 (0.094)	0.009 (0.093)
Formalization		0.028 (0.173)	0.025 (0.175)		0.269* (0.119)	0.273* (0.119)
Explanatory Variables						
Risk Propensity			0.185 (0.849)			0.565* (0.242)
Risk Propensity^2			-0.025 (0.111)			-0.060* (0.030)
Need for Achievement			3.041* (1.291)			0.515^{+} (0.306)
Need for Achievement^2			-0.264* (0.120)			-0.057* (0.028)
L1-Variance	0.458	0.109	0.128	0.778	0.734	0.703
L2-Variance	4.283**	4.185*	4.065*	0.637**	0.493**	0.501**
ICC	0.900			0.450		

Notes: Full information maximum likelihood estimation; Reported are average gamma coefficients with robust standard errors; standard errors in parentheses; [b] logarithm because of skewed distribution.
$^{+}$ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$.

Our first hypothesis stated that the relationship between franchisees' risk propensity and their performance would follow an inverted U. Model 3 showed no significant relation between franchisees risk propensity and their financial performance,

thus, provided no support for Hypothesis 1. In contrast, Model 6 revealed a significant and positive relation between the linear term representing risk propensity ($\gamma = 0.565$, $p < .05$) and a significant and negative association between its squared term ($\gamma = -0.060$, $p < .05$) and franchisees performance rated by their franchisor, which supported Hypothesis 1. The corresponding slope illustrating this relationship is depicted in Figure 2.1.

Figure 2.1: Risk Propensity and Franchisees' Performance



Hypothesis 2 suggested that the relationship between franchisees' need for achievement and performance would follow an inverted U. Model 3 showed a significant and positive relationship between franchisees' financial performance and the linear term representing need for achievement ($\gamma = 3.041$, $p < .05$), as well as a significant and negative relation between the squared term representing need for achievement ($\gamma = -0.264$, $p < .05$). Similarly, Model 6 revealed a marginally significant positive link between the linear term representing need for achievement ($\gamma = 0.515$, $p < .10$) and a significant negative link between the squared term representing need for achievement ($\gamma = -0.057$, $p < .05$) and franchisees' performance rated by their franchisor. Figure 2.2 and 2.3 illustrate these results.

Figure 2.2: Need for Achievement and Franchisees' Financial Performance

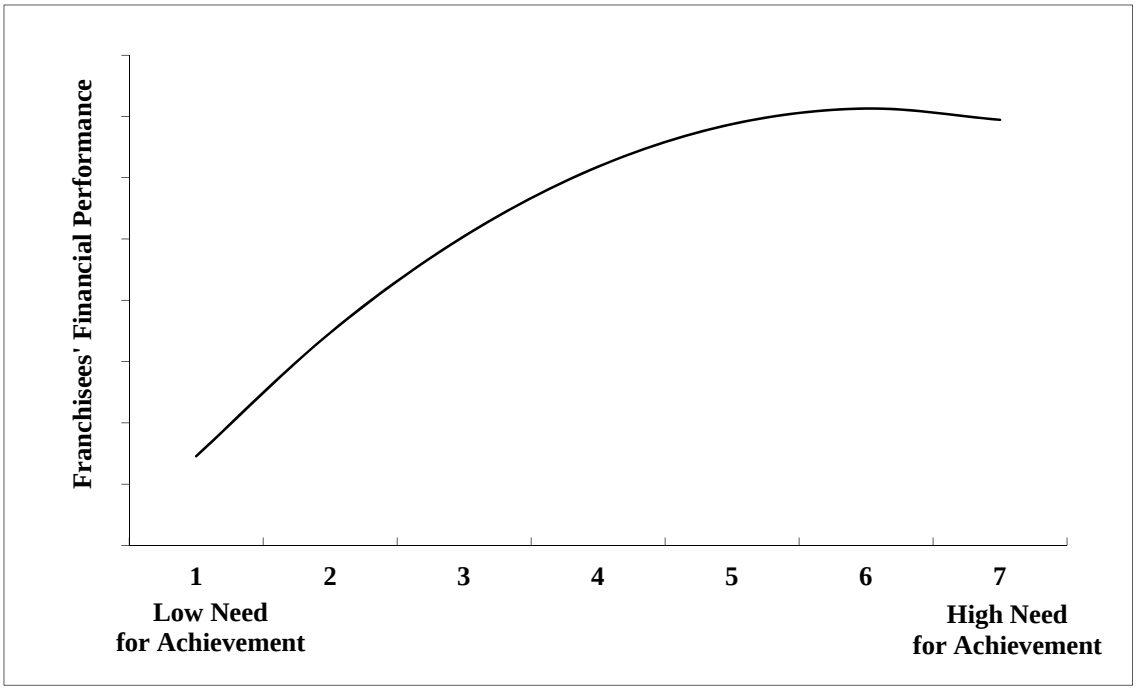
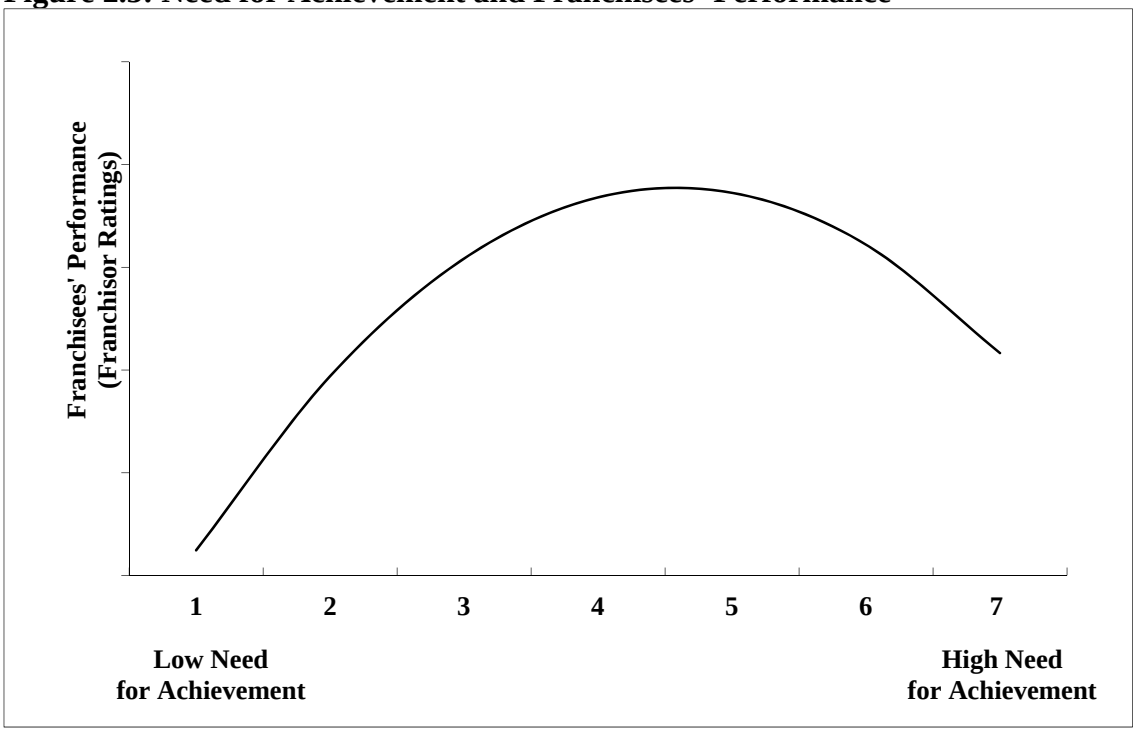


Figure 2.3: Need for Achievement and Franchisees' Performance



2.5 Discussion

This study aimed to shed light on how risk propensity and need for achievement, two personality traits that are considered highly relevant for the performance of

independent entrepreneurs (Caliendo et al., 2010; Fahed-Sreih & Morin-Delerm, 2012; Johnson, 1990) contribute to explaining differences in franchisees' performance. Specifically, we proposed and found that the relationships between risk propensity and franchisees' performance, as well as need for achievement and franchisees' performance would be inverted U-shaped.

With respect to franchisor ratings of franchisees' performance, our study supports the idea that, similar to what previous research found among entrepreneurs (Caliendo et al., 2010; Nieß & Biemann, 2014), franchisees' performance profits from increases in risk propensity up to a certain point. Also in line with prior research among entrepreneurs (Caliendo et al., 2010; Nieß & Biemann, 2014), we found that further increases in risk propensity beyond that point decreases franchisees performance from the perspective of the franchisor. Interestingly, however, we did not observe a significant relation between franchisees' risk propensity and their financial performance. This finding may be explained by the fact that compared to franchisees' financial performance their capacity to run a business according to the expectations of their franchisor profits more from the initial increases in confidence and sense of control that are associated with a moderate level of risk propensity (Zhao et al., 2005). Analogously, tendencies to not stick to the tried-and-true business model and complying with the processes and procedures established (Davies et al., 2011; Fenwick & Strombom, 1998; Kidwell et al., 2007), which we suggested to result from high levels of risk propensity, seem to be more detrimental for the franchisor's brand name and cross-buying within the franchise system than for franchisees' local financial outcomes (Combs et al., 2004; Davies et al., 2011; Kidwell et al., 2007).

Our results clearly support the theoretical reasoning leading to our second hypothesis. First, we found that franchisees' performance initially profits from increases

in need for achievement. This finding supports the notion that moderate rather than low levels of need for achievement align well with setting up and developing a franchise outlet and increase franchisees' abilities to deal with the challenges and responsibilities involved (Davidsson, 1989). In contrast to what prior research observed among entrepreneurs (Collins et al., 2004; Miner et al., 1994), however, we also found that the performance of franchisees decreases when franchisees' need for achievement increases beyond a certain threshold. In line with person-environment fit theory (Kristof-Brown et al., 2005), this result supports the idea that, as the franchise arrangement does not allow franchisees to reap the full benefits from their own abilities, efforts, and achievements, high levels of need for achievement align more coherently with founding and running an independent business than with being a franchisee.

With these findings, our study provides confirming evidence for the idea that, due to task similarities, risk propensity and need for achievement—two personality characteristics that have previously shown their relevance in predicting the performance of entrepreneurs (Caliendo et al., 2010; Collins et al., 2004)—also contribute to explaining differences in franchisees' performance. Because of differences regarding other aspects of the occupational context in which franchisees and independent entrepreneurs are embedded, however, these personality characteristics do not have the exact same performance implications.

Underscoring the idea that occupational contexts acts as contingencies for the relation between individual characteristics and performance (Kristof-Brown et al., 2005), the results of our study have practical implications for franchisees and franchisors. For franchisors, it implies that individuals with an entrepreneurial personality may not necessarily be best suited to also strive as franchisees. Conversely, individuals who think about setting up a business should carefully consider the fit

between their personality characteristics and what is needed to be successful as a franchisee. Particularly, when being highly achievement motivated, they should consider to becoming an independent entrepreneur rather than a franchisee.

2.6 Limitations and Avenues for Future Research

Our study has some limitations that provide avenues for future research. First, we acknowledge that our study rests on franchisees whose contact details were provided by their franchisors. Therefore, we cannot completely rule out that the franchisees in our sample are not fully representative for their respective population. Furthermore, we addressed the effect of only two personality traits that previous research has shown to be relevant for entrepreneurial behaviors. Considering that previous research also suggests personality characteristics, such as extraversion, openness to experience, or emotional stability, to be relevant for the performance among entrepreneurs (Zhao, Seibert, & Lumpkin, 2010), we encourage future research to address whether and how these personality characteristics also affect franchisees' performance.

2.7 Conclusion

We believe that the present study makes relevant contributions. First, our study narrows a substantial gap in the franchise literature (Combs et al., 2011; Combs et al., 2004) by highlighting how two individual characteristics help explain performance differences among franchisees. Suggesting that the performance implications of individual characteristics may differ among franchisees and independent entrepreneurs, this study also contributes to the ongoing discussion on the differences and similarities between franchisees and entrepreneurs (Kaufmann & Dant, 1999; Ketchen et al., 2011). Finally, we believe that our study has practical implications.

3 Taking Empowerment to a Higher Level: A Three-Level Model of Psychological Empowerment and Employee Performance

3.1 Introduction

Originating from Bandura's work on self-efficacy (1977), the concept of psychological empowerment describes employees' perceptions of meaning, competence, self-determination, and impact at work (Spreitzer, 1995; Thomas & Velthouse, 1990). The concept has received considerable research attention over the last three decades (Conger & Kanungo, 1988; Kanter, 1977; Seibert et al., 2011). In fact, numerous studies have shown that individuals (Koberg, Boss, Senjem, & Goodman, 1999; Liden, Wayne, & Sparrowe, 2000) as well as teams (Kirkman & Rosen, 1999; Kirkman, Rosen, Tesluk, & Gibson, 2004) that are psychologically empowered can achieve superior levels of performance. More recently, studies have begun to further examine the generalizability of empowerment theory across multiple levels by simultaneously addressing the performance implications of psychological empowerment at the individual and team levels (Chen et al., 2007; Seibert et al., 2004). Highlighting that the performance of employees cannot just profit from their individual psychological empowerment, but also from being embedded in a team context with psychologically empowered coworkers (Chen et al., 2007), this research provided evidence for the proposition that psychological empowerment is homologous, i.e., retains its function across levels of analysis (Seibert et al., 2011; Wallace, Mathe, Paul, & Johnson, 2011).

While the performance implications of psychological empowerment at the individual and team levels have been systematically addressed in prior research, still little is known about the performance implications of organizational-level psychological empowerment (Maynard et al., 2012). For several reasons, we suggest that this gap

needs to be addressed. The antecedents of psychological empowerment reside at the individual, team, and organizational levels (Maynard et al., 2012). Additionally, individual employees typically need to interact and collaborate with organization members outside their immediate team context to succeed in fulfilling their job duties (House, Rousseau, & Thomas-Hunt, 1995; Klein, Dansereau, & Hall, 1994; Klein & Kozlowski, 2000). Thus, there is reason to believe that employees' performance is affected not just by fellow team members' psychological empowerment, but also by the psychological empowerment prevalent among fellow organization members outside their team.

Building on these notions and extending previous work, the present study suggests and tests how psychological empowerment at the individual, team, and organizational level relates to employee performance. Complementing previous research (Chen et al., 2007; Wallace et al., 2011), it thus contributes to our knowledge on the generalizability of empowerment theory across levels of analysis.

3.2 Theory and Hypotheses

Employees feel empowered when they find meaning in their work, have a significant influence on work outcomes, perceive their job as important, believe in their ability to succeed in their activities, and have a choice to take actions in their work processes (Spreitzer, 1995). Such perceptions of meaning, competence, self-determination, and impact at work, i.e., psychological empowerment (Spreitzer, 1995), likely vary between individuals, teams, and organizations (Maynard et al., 2012).

At an individual level, employees' feelings of empowerment are likely to differ, as they are also shaped by individual characteristics, such as positive self-evaluation traits (Seibert et al., 2011) and need for achievement (Hon & Rensvold, 2006).

Additionally, some employees within a team or organization may feel more empowered than their co-workers, as they were subject to specific measures, such as trainings fostering their capacity to deal with challenging customers and make competent decisions (Conger & Kanungo, 1988; Ndulue, 2012).

As a result of individual-level differences in psychological empowerment, employees within organizations are likely embedded in team contexts that also differ with respect to the level of psychological empowerment. Team-level empowerment differences can be further fueled by sources, such as leadership, which reside at the team-level (Chen et al., 2007; Kirkman & Rosen, 1997, 2000). While some team leaders will increase their employees' feelings of competence and impact by asking for their opinion when making decisions other team leaders in the very same organizations may make more decisions by themselves, which results in lower levels of psychological empowerment (Wallace et al., 2011).

Due to individual- and team-level differences in psychological empowerment, there is also reason to believe that employees will be embedded in organizational contexts that differ with respect to psychological empowerment. Antecedents of empowerment residing at the organizational level may further attenuate such differences (Seibert et al., 2004). For instance, organizations vary considerably with respect to the extent to which planning and decision rights are (de-)centralized (Hage & Aiken, 1967; Van de Ven & Ferry, 1980). Providing employees with power and control over important decisions, decentralization fosters feelings of autonomy and competence and is thus considered a key to employees' empowerment perceptions (Aryee, Walumbwa, Seidu, & Otaye, 2012; Hempel, Zhang, & Han, 2012).

In sum, employees are likely to differ with respect to their individual feelings of empowerment. Further, there is reason to believe that employees are embedded in social

contexts at the team and organizational level that can differ with respect to psychological empowerment. Based on this three-level model of psychological empowerment, which formally qualifies as an additive model according to Chan's (1998) typology of composition models, we will subsequently derive our hypotheses on how individual-, team-, and organizational-level psychological empowerment relates to individual employees' performance.

3.2.1 Individual-Level Psychological Empowerment and Employee Performance

It has been widely recognized that employees' perceptions of meaning, competence, self-determination, and impact at work stimulate intrinsic motivation and thus result in superior performance (Spreitzer, 1995, 2008). Specifically, empowered employees are presumed to show higher levels of initiative and take on a more active role in their work, which allows them to perform their tasks more effectively and efficiently (Thomas & Velthouse, 1990). Additionally, employees' feelings of competence and impact are suggested to increase their efforts and persistence (Sadri & Robertson, 1993; Stajkovic & Luthans, 1998).

Based on these arguments and in line with prior research (Seibert et al., 2004), we thus expect a positive relationship between individual-level psychological empowerment and employee performance. We thus propose:

> *Hypothesis 1*. There is a positive relationship between individual-level psychological empowerment and employee performance.

3.2.2 Team-Level Psychological Empowerment and Employee Performance

According to our multi-level framework, employees within organizations are embedded in social contexts of team members that can differ considerably with respect to their perceptions of meaning, competence, and self-determination. In line with prior

research (Chen et al., 2007), we expect such differences in team-level psychological empowerment to also have positive implications for employee performance.

When team-level psychological empowerment is high, individual employees are surrounded by colleagues who are intrinsically motivated and will show high levels of persistence, initiative, and related behavioral tendencies (Chen et al., 2007; Kirkman et al., 2004). For several reasons, the performance of individual employees should profit from such team members. Social learning theory (Bandura, 1989) suggests that individuals model their behavior according to salient stimuli in their social environment. When employees work in a team, team members and their behavior serve as such stimuli. Based on social learning principles (Bandura, 1989), the performance of individual employees should thus benefit from working alongside team members, showing a work behavior driven by high levels of psychological empowerment. Psychologically empowered teams are also more likely to develop higher performance norms (Chen et al., 2007). Such performance norms drive employee performance, as individuals not performing according to team norms are likely to depart from the team (Schneider, Smith, & Sipe, 2000). Finally, employee performance should directly profit from the work attitude and behavior of team members who are psychologically empowered. Due to task interdependencies, individual employees' work outcomes are affected by whether team members effectively and efficiently fulfil their job duties (Campion, Medsker, & Higgs, 1993a), which is more likely to happen in teams that are psychologically empowered (Chen et al., 2007).

In line with these arguments and prior research (Chen et al., 2007), we thus suggest that team-level psychological empowerment will be positively related to employee performance.

Hypothesis 2. There is a positive relationship between team-level psychological empowerment and employee performance.

3.2.3 Organizational-Level Psychological Empowerment and Employee Performance

Typically, the work of individual employees not just depends on their team members, but also requires them to interact and collaborate with other members of their organization (House et al., 1995; Klein et al., 1994; Klein & Kozlowski, 2000). For reasons analogous to the ones described above, we also expect organizational-level psychological empowerment, i.e., the perceptions of meaning, competence, and self-determination prevalent among the members of the organization in which individual employees are embedded, to be positively associated with individual employees' performance.

Similar to team members, other organization members can also serve as salient stimuli for employee observational learning (Bandura, 1989). The performance of individual employees should thus profit from being embedded in a context with organization members who are psychologically empowered and thus show work behaviors driven by high levels of intrinsic motivation, persistence, and initiative (Sadri & Robertson, 1993; Stajkovic & Luthans, 1998). Similarly, performance norms form not just at the team level, but also at the organizational level (Griffin, O'Leary-Kelly, & Collins, 1998; Rennesund & Saksvik, 2010). Stimulating organization-wide performance norms and driving individuals to leave the organization that do not adhere to these standards (Schneider et al., 2000), organization members' psychological empowerment can thus further contribute to employee performance. Due to interdependences between individuals and subunits across the organizational hierarchy (Zohar & Luria, 2005), employees' capacity to achieve high-performance work outcomes should also be affected by the work attitudes and behaviors of organization members that are not part of their team. Allowing employees to do their work more effectively (Ployhart, 2004), organization members' psychological empowerment should thus further profit employee performance.

Based on these lines of reasoning, we also expect a positive relationship between organizational-level psychological empowerment and employee performance. We thus propose:

Hypothesis 3. There is a positive relationship between organizational-level psychological empowerment and employee performance.

3.3 Method

3.3.1 Sample and Procedure

To test our hypotheses, we collected the data from employees working in branch teams in companies in the retail sector, which is one of the largest sectors in the world in terms of employment. Specifically, we collected data from small and medium-sized bakery retail companies in Germany. In every company, branch team employees were jointly responsible for several interconnected tasks, such as serving customers, operating the oven organizing the local work flow, planning and coordinating product delivery with the production department, coordinating seasonal design changes with other branch teams, and reporting customer feedback to the company's headquarters.

In sum, 32 companies interested in participating in our study were identified and contacted with the help of a consultancy firm. Company headquarters provided lists of branch teams that were to participate in the study. Then, paper-based questionnaires were sent to branch team employees and their team leaders. To ensure that common-source variance was not an issue in our study, branch team employees reported on their psychological empowerment, whereas branch-team leaders reported on employees' performance.

In total, 49% of the employees and 46% of the team leaders returned questionnaires. After matching employee and team leader responses and a listwise deletion of cases with missing values, the resulting sample for the study at hand

comprised 378 employees from 178 branch teams in 29 organizations. The average employee in our sample was 36.39 (*SD* = 13.05) years old, 95% were female. On average, employees had been working in their company for 5.71 (*SD* = 5.89) years.

3.3.2 Measures

For all scales translated from English to German, we applied a translation and back-translation procedure to ensure equivalency (Brislin, 1980). Additionally, we pretested our surveys for content validity and comprehensibility (Sudman, Bradburn, & Schwarz, 1996). The scales used to capture our dependent and independent variables are shown in Table 1 in Appendix A.

Employee performance. Branch team leaders assessed two aspects of their employees' performance: core task performance and extra role performance. To capture core task performance, we used a scale adapted from Podsakoff and MacKenzie (1989). The scale comprises five items and utilizes a 5-point Likert scale ranging from 1 (= strongly disagree) to 5 (= strongly agree). Cronbach's alpha for the scale was .89. Extra role performance was measured with items adapted from Williams and Anderson (1991), which capture organizational citizenship behavior that directly benefits the organization (OCBO) as well as organizational citizenship behavior that indirectly benefits the organization by means of contributing to other employees' performance (OCBI). OCBO and OCBI were assessed by four items each (Cronbach's alpha = .98 and Cronbach's alpha = .86, respectively), using a 5-point Likert scale ranging from 1 (= strongly disagree) to 5 (= strongly agree).

Psychological empowerment. Our measures of individual-, team-, and organizational-level psychological empowerment were constructed in multiple steps. First, we relied on the scale developed by Spreitzer (1995) to capture employees' empowerment perceptions. Employees rated their agreement with 12 statements on a 5-

point Likert-type scale (1 = strongly disagree to 5 = strongly agree). In line with prior research (Chen et al., 2007; Seibert et al., 2004), the 12 items were aggregated to obtain an overall empowerment score (Cronbach's alpha = .77).

As noted before, our conceptualization of team- and organizational-level psychological empowerment reflects an additive composition model (Chan, 1998). We thus constructed team- and organizational-level psychological empowerment scores by aggregating employees' empowerment perceptions to the team and the organizational level, respectively.

We were interested in examining a contextual-effect model (Blalock, 1984) that explains employee performance by a combination of psychological empowerment at three levels of analyses. Following established recommendations for testing contextual effects (Enders & Tofighi, 2007b), we centered the psychological empowerment scores around the grand mean when entering them into our analyses. This procedure ensures that our analyses of the effect of psychological empowerment at one particular level are not biased by the influences of psychological empowerment at the other two levels (Enders & Tofighi, 2007b).

Control variables. In our analyses, we controlled for several individual-level variables that previous research found to be related to employee performance. First, we controlled for gender (Gilboa, Shirom, & & Fried, 2005). We also accounted for employees' age. Due to organizations offering fewer training opportunities to older employees, as well as due to the deterioration in abilities (e.g., speed, strength), age may negatively relate to employee performance (Gininger, Dispenzieri, & Eisenberg, 1983; Sturman, 2003; Verhaeghen & Salthouse, 1997). Further, we controlled for employees' organizational tenure, which suggests an accumulation of work- and organization-

related knowledge that can have a positive effect on employee performance (Nonaka, 1994; Tesluk & Jacobs, 1998).

3.3.3 Analytical Approach

Our data had a hierarchical structure with three levels of analysis (individual, team, and organizational level). Following established procedures (Hofmann, 1997; Raudenbush & Bryk, 2001), we calculated intraclass correlation coefficients *ICC*(1) for our employee performance measures to indicate the variance in our dependent variable residing at the team and organizational level. At the team level, ICC(1)s were 0.159 for core task performance, 0.191 for OCBO, and 0.332 for OCBI. At the organizational level, the ICC(1)s were 0.029 for core task performance, 0.009 for OCBO, and 0.019 for OCBI.

We used hierarchical linear modeling (Bryk & Raudenbush, 1992; Hofmann, 1997) to test our hypotheses. Specifically, we used the current version of the statistical software M*plus* (Muthén & Muthén, 1998-2012) to analyze three-level models with fixed effects based on the maximum likelihood estimations with robust standard errors.

3.4 Results

Means, standard deviations, and zero order correlations are shown in Table 3.1.

Table 3.1: Means, Standard Deviations, and Correlations

N(L1) = 378 ***N(L2) = 178*** ***N(L3) = 29***	***M***	***SD***	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1. OCBI	4.17	.85									
2. OCBO	4.50	.60	.51**								
3. Core performance	4.24	.77	.57**	.60**							
4. Empowerment L1	3.60	.60	.07	.14**	.11*						
5. Empowerment L2	3.60	.42	.06	.13**	.04	.69**					
6. Empowerment L3	3.60	.17	-.08	-.04	-.10+	.29**	.41**				
7. Gender	.95	.21	.02	.03	.09+	.14**	.08	.04			
8. Age	36.39	13.05	.09+	.10*	.06	.10*	.09+	.00	.13*		
9. Org. tenure	5.71	5.89	.10*	.09+	.08	.15**	.13*	.08	.12*	.42**	

Notes: L1 = individual level, L2 = team level, L3 = organizational level, org. tenure = organizational tenure.
$^{+}p < 0.10$, $*p < 0.05$ and $**p < 0.01$.

The results of multilevel analyses are depicted in Table 3.2.

Table 4.2: Results from Multilevel Analyses

N(L1) = 378 ***N(L2) = 178*** ***N(L3) = 29***	**Core Performance**		**OCBI**		**OCBO**	
	Model 1 (Controls only)	**Model 2**	**Model 1** (Controls only)	**Model 2**	**Model 1** (Controls only)	**Model 2**
	Estimates *(S.E.)*	Estimates *(S.E.)*	Estimates *(S.E.)*	Estimates *(S.E.)*	Estimates *(S.E.)*	Estimates *(S.E.)*
Age	0.001 (0.003)	0.001 (0.003)	0.005 (0.004)	0.004 (0.004)	0.004 (0.003)	0.004 (0.003)
Gender	0.247 (0.142)+	0.193 (0.150)	-0.077 (0.078)	-0.120 (0.082)	0.025 (0.133)	-0.014 (0.127)
Org. tenure	0.007 (0.007)	0.006 (0.006)	0.007 (0.008)	0.006 (0.008)	0.003 (0.005)	0.002 (0.005)
Empowerment L1	-	0.196 (0.078)*	-	0.127 (0.072)+	-	0.101 (0.048)*
Empowerment L2	-	-0.039 (0.120)	-	0.059 (0.130)	-	0.115 (0.081)
Empowerment L3	-	-0.666 (0.272)*	-	-0.587 (0.213)**	-	-0.414 (0.173)*
Intercept L3	4.239***	6.770 (1.002)***	4.182***	6.078 (0.847)***	4.505***	5.994 (0.619)***
AIC	877.053	872.117	921.086	921.019	672.973	669.400

Notes: Reported are unstandardized coefficients; standard errors in parentheses; OCBI = organization citizenship behavior that benefits the individual, OCBO = organization citizenship behavior that benefits the organization, L1 = individual level, L2 = team level, L3 = organizational level, AIC = Akaike Information Criterion.
+ $p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Hypothesis 1 proposed a positive relationship between individual-level psychological empowerment and employee performance. For core task performance ($\gamma = 0.196$, $p = 0.012$), OCBI ($\gamma = 0.127$, $p = 0.072$), and OCBO ($\gamma = 0.101$, $p = 0.034$), our data provided evidence supporting Hypothesis 1.

Hypothesis 2 suggested a positive relationship between team-level psychological empowerment and employee performance. Our data did not support Hypothesis 2 ($\gamma = -0.039$, $p = 0.749$, for core performance; $\gamma = 0.059$, $p = 0.648$ for OCBI; $\gamma = 0.115$, $p = 0.157$ for OCBO).

Hypothesis 3 proposed a positive relationship between organizational-level psychological empowerment and employee performance. In contrast to Hypothesis 3, we observed significant negative relationships between organizational-level

psychological empowerment and core task performance (γ = - 0.666, p = 0.014), OCBI (γ = - 0.587, p = 0.006) as well as OCBO (γ = - 0.414, p = 0.016).

3.5 Discussion

Numerous studies have shown individuals or teams that are psychologically empowered to achieve superior levels of performance (e.g. Kirkman & Rosen, 1999; Liden et al., 2000). Highlighting that the performance of employees simultaneously profits from individual-level psychological empowerment and from being embedded in a team context with psychologically empowered coworkers (Chen et al., 2007), recent research has provided further evidence to support the generalizability of empowerment theory across different levels of analyses. The present study extends this prior research by suggesting a three-level model of employee empowerment and simultaneously examining the relationship between employee performance and psychological empowerment at the individual, team, and organizational levels.

In line with our theoretical reasoning, we find that individual-level psychological empowerment is positively related to employee performance. This finding confirms previous research results highlighting that employees who perceive their tasks as meaningful and themselves as competent and influential will likely achieve superior performance at work (Koberg et al., 1999; Liden et al., 2000). Contrary to our expectations and observations made in previous studies (e.g., Chen et al., 2007), we did not find a significant relationship between team-level empowerment and employee performance. Also, we observed a negative relationship between organizational-level psychological empowerment and employee performance. Contradicting our theoretical reasoning, these findings suggest that employee performance does not always profit

from being embedded in a social context characterized by high levels of psychological empowerment.

Recent research results on the liabilities associated with organizational-level empowerment practices (Lanaj, Hollenbeck, Ilgen, Barnes, & Harmon, 2013) can potentially help to explain the negative performance implications of organizational-level psychological empowerment. It is widely recognized in the literature that organization-wide empowerment practices, such as decentralizing decision rights, can stimulate initiative-taking and effort among employees (Kanter, 1977). However, recent research suggests that such practices can also increase the probability of coordination failure within organizations, which is detrimental for performance (Lanaj et al., 2013). This is because providing employees with more authority may preclude effective coordination, which is particularly unfavorable when employees and teams within the organization depend on each other to accomplish their tasks (Hoegl, Weinkauf, & Gemuenden, 2004).

3.5.1 Theoretical and Practical Implications

The present study extends previous work on the simultaneous effects of empowerment at different levels of analysis. Previous research suggests that psychological empowerment is homologous, as it retains its function across the individual and team levels of analyses (Seibert et al., 2011; Wallace et al., 2011). Our findings confirm a positive performance effect of individual-level empowerment but highlights that organizational-level psychological empowerment can have a negative impact on employee performance. As such, the present study points to the possibility that empowerment theory may—at least in some organizational and industry contexts—not necessarily be generalized to the organizational-level.

For managers, our study results suggest to proceed with caution when trying to facilitate employee performance by means of stimulating psychological empowerment. On the one hand, managers may be well advised to establish practices that increase individual employees' perceptions of meaning, competence, self-determination, and impact (Spreitzer, 1995; Thomas & Velthouse, 1990). On the other hand, managers need to carefully evaluate how to avoid the potential negative performance implications of organization-wide psychological empowerment.

3.5.2 Limitations and Research Directions

Our study has some limitations that should be addressed in future research. First, we acknowledge that the branch teams invited to participate in our study were identified by their respective company headquarters and thus not necessarily randomly selected. Additionally, our study rests on the data from one particular industry. While this sampling approach improves the internal validity of our study and many firms in the global economy employ similar types of teamwork as the retail bakery companies in our study, further research might want to examine the consequences of individual-, team-, and organizational-level psychological empowerment on employee performance in other organizational and industry contexts. Considering our tentative explanation for the observed negative effect of organizational-level psychological empowerment, it seems particularly fruitful to reexamine this link based on a sample of organizations that vary with respect to the need for coordinated action among employees that are not part of one team. To examine the potential interaction between psychological empowerment and national culture (Hui, Au, & Fock, 2004), future research might also want to address the performance implications of psychological empowerment in different national contexts.

3.6 Conclusion

Researchers have widely acknowledged that psychological empowerment retains its function across different levels of analysis (Seibert et al., 2011; Wallace et al., 2011). Resting on a three-level model of psychological empowerment, our study challenges this idea and points to the fact that—at least in certain contexts—organizational-level psychological empowerment may be detrimental for employee performance.

4 Team Conscientiousness Diversity and Team Performance – The Moderating Effect of Empowering Leadership

4.1 Introduction

Besides team work getting increasingly important in organizations (Lawler et al., 1995; Mohammed & Angell, 2004), teams also get more and more diverse (Choi, 2007; Sung et al., 2014). The understanding of diversity in teams is of great value and importance for organizations and societies that are becoming ever more diverse (Jackson et al., 2003). It is necessary to shed light on the question of how differences between team members affect performance and whether diversity in teams may have positive or negative effects on team performance (Milliken & Martins, 1996; Van Knippenberg & Schippers, 2007; K. D. Williams & O'Reilly, 1998).

Most research in terms of diversity has been conducted with respect to surface-level diversity (Mohammed & Angell, 2004). Many studies focused on characteristics such as gender, age and ethnicity, as these are easily observed (Milliken & Martins, 1996; Pelled, 1996; Van Knippenberg, De Dreu, & Homan, 2004; K. D. Williams & O'Reilly, 1998) and measured (Jackson, May, & Whitney, 1995). However, the empirical findings regarding the relationship between surface-level diversity and performance are still inconsistent. Whereas demographic diversity may be beneficial for team performance (Bantel & Jackson, 1989), diversity in tenure may not be (Ely, 2004). Yet, the majority of researchers claim that the examination of surface-level differences becomes less important and a "new time" (Harrison et al., 2002, p. 1029) in research on diversity has begun to consider the more important deep-level diversity characteristics such as personality, attitudes and values (Bowers, Pharmer, & Salas, 2000; Harrison, Price, & Bell, 1998; Harrison et al., 2002; Pelled, Eisenhardt, & Xin, 1999). These are

less readily apparent and thus more difficult to observe and assess (Riordan, 2000). Although an increasing number of studies have examined the link, for example, between diversity in team personality and team performance (e.g. Barrick et al., 1998; Barry & Stewart, 1997; Mohammed & Angell, 2003, 2004; Neuman et al., 1999), results are quite inconsistent (Dahlin, Weingart, & Hinds, 2005; Gibson & Vermeulen, 2003; Richard, Barnett, Dwyer, & Chadwick, 2004).

Therefore, researchers posit the following calls: First, they claim the importance of resolving the inconsistent findings regarding the relationship between deep-level diversity and team performance and answering whether diversity is beneficial for team performance (Barrick et al., 1998; Barry & Stewart, 1997; Van Knippenberg & Schippers, 2007). Second, researchers postulate the need to consider curvilinear relationships between deep-level diversity and performance (Barrick et al., 1998; Barry & Stewart, 1997; Van Knippenberg & Schippers, 2007). Third, they claim the importance of moderators and call for the examination of moderators that may influence the relationship between deep-level diversity and performance. The present study aims at answering these calls. First, I address the call to resolve the inconsistent findings and answer the question of whether diversity is beneficial by extending previous work and shedding light on the relationship between deep-level diversity and team performance, focusing on conscientiousness, the most important personality predictor of performance (Barrick & Mount, 1991). Second, I will examine the inverted U-shaped relationship between team conscientiousness diversity and team performance. Third, I address the call to examine moderators and suggest the team conscientiousness diversity-performance relationship to be positively moderated by team leader's empowering leadership, which offers the team autonomy in decision making (Srivastava et al., 2006). This autonomy allows the team to make effective use of their different work

approaches that result from initial increases in team conscientiousness diversity. Second, the empowering leader establishes a vision that results in strong group unity (Arnold, Arad, Rhoades, & Drasgow, 2000), which is useful to overcome conflicts resulting from further increases in team conscientiousness diversity.

I test the hypotheses based on multilevel analyses and a data set comprising 116 teams nested in 20 organizations. First, the results reveal that the relationship between team conscientiousness diversity and team performance is inverted U-shaped. Second, the results suggest that the inverted U-shaped relationship between team conscientiousness diversity and team performance becomes evident when empowering leadership is high, but not when empowering leadership is low.

The study at hand contributes to both the diversity (Van Knippenberg et al., 2004; K. D. Williams & O'Reilly, 1998) and the conscientiousness literature (Barrick et al., 1998; Neuman et al., 1999). First, the results contribute to the discussion on whether diversity is beneficial for performance (Milliken & Martins, 1996; Van Knippenberg & Schippers, 2007; K. D. Williams & O'Reilly, 1998). Specifically, it contributes to resolving the inconsistent findings on the effects of team diversity, especially deep-level diversity (Judge & Le Pine, 2007; Barrick et al., 1998; Barry & Stewart, 1997) and complements research results showing an inverted U-shaped relationship between diversity in surface-level characteristics and performance, such as gender (Gonzalez & Denisi, 2009) and nationality (Earley & Mosakowski, 2000). Third, the study further contributes to the diversity literature as it examines the impact of moderators on the relationship between diversity and team performance (Le et al., 2011; Van Knippenberg & Schippers, 2007). Specifically, results highlight that empowering leadership helps to tap the benefits of diversity as variety by fostering the utilization of the enlarged pool of

perspectives and work approaches, but can also catalyze counterproductive outcomes of diversity (Somech, 2006).

Moreover, the study contributes to the conscientiousness literature (Kramer, Bhave, & Johnson, 2014; Mohammed & Angell, 2003). It complements findings on the relationships between individual level conscientiousness and performance (Barrick & Mount, 1991) as well as the elevation of team conscientiousness (Mohammed & Angell, 2003; Neuman et al., 1999) and performance. Besides, the study complements research claiming a curvilinear relationship between conscientiousness diversity and performance (Barrick et al., 1998; Barry & Stewart, 1997; Mohammed & Angell, 2003; Neuman et al., 1999) due to the results, which highlight the benefits of initial increases in team conscientiousness diversity but show detrimental effects as team conscientiousness diversity further increases beyond a certain threshold. In addition, the moderation of empowering leadership complements previous findings regarding the impact of contextual conditions on the conscientiousness-performance relationship. First, the results are in line with previous research findings on moderators such as degree of autonomy (Barrick & Mount, 1993) or job complexity (Le et al., 2011) that influence the relationship between individual-level conscientiousness and performance. Second, the study results complement research findings regarding moderators such as study setting (Bell, 2007) and task type (English, Griffin, & Steelman, 2004; Peeters, Van Tuijl, Rutte, & Reymen, 2006) that influence the relationship between team conscientiousness mean and performance. In addition, the results provide new insights on the relationship between the team conscientiousness and performance as no prior study has found support for a moderating impact of leadership. In addition, the study findings have clear practical implications.

4.2 Theory and Hypotheses

Conscientiousness, one of the Big Five personality dimensions (Costa & McCrae, 1992), refers to whether an individual is dependable, i.e. careful, thorough, organized, and resourceful (Barrick & Mount, 1991). Conscientious employees are prone to self-control and the active process of planning, organizing and carrying out tasks in a structured way (Neuman et al., 1999). They are responsible (Halfhill, Sundstrom, Lahner, Calderone, & Nielsen, 2005), hard-working and achievement-oriented (Barrick & Mount, 1991; Hurtz & Donovan, 2000) as well as committed to work goals (Barrick & Mount, 1993). Moreover, employees scoring high on conscientiousness are purposeful, strong-willed and determined (Rothmann & Coetzer, 2003). Based on these notions, conscientiousness has been firmly established as an important predictor of employee performance in an organizational context (Barrick & Mount, 1991, 1993; Hurtz & Donovan, 2000; Robie & Ryan, 1999).

However, recent research points out that the relationship between conscientiousness and employee performance may not be strictly positive, but follows an inverted U (Carter et al., 2014; Le et al., 2011; Robie & Ryan, 1999). According to personality theory (Roberts, Jackson, Fayard, Edmonds, & Meints, 2009), initial increases in conscientiousness will benefit employee performance because employees that are achievement-oriented, dependable and deal with challenges in an organized and structured way are able to fulfil their job duties effectively and efficiently (Carter et al., 2014; Hurtz & Donovan, 2000). Beyond some threshold, however, further increases in conscientiousness will have negative effects on employee performance as employees with high levels of conscientiousness levels are also prone to self-deception and rigidity (Neuman et al., 1999). Being inflexible perfectionists, they pay too much attention to small details and overlook important goals, which in turn negatively affects

performance (Carter et al., 2014; LePine, Colquitt, & Erez, 2000; Martocchio & Judge, 1997; Rothmann & Coetzer, 2003).

Whereas findings on the relationship between conscientiousness and performance are mostly consistent (Barrick & Mount, 1991, 1993; Hurtz & Donovan, 2000; Robie & Ryan, 1999), an inconsistent picture is prevalent in terms of team conscientiousness (Bell, 2007; Mohammed & Angell, 2003; Neuman et al., 1999). With respect to the elevation of team conscientiousness, formally represented by the team mean, some researchers find supporting evidence for a linear positive effect on team performance (Barrick et al., 1998; Bell, 2007; Neuman et al., 1999). However, other studies do not find this evidence (Barry & Stewart, 1997; Mohammed & Angell, 2003). Additionally, researchers have suggested a curvilinear relationship between team conscientiousness and team performance, but results do not support the curvilinearity (Barrick et al., 1998; Barry & Stewart, 1997).

In view of the inconsistent findings, other researchers suggested that it may not be the elevation of team conscientiousness, but team conscientiousness diversity, i.e. the variance of or differences in conscientiousness among team members, that may help to explain differences in team performance (Kramer et al., 2014; Neuman et al., 1999). Moreover, researchers postulate a curvilinear relationship between team conscientiousness diversity characteristics and team performance (Barrick et al., 1998; Barry & Stewart, 1997; Van Knippenberg & Schippers, 2007) and claim the importance of moderators in this relationship (Le et al., 2011; Mohammed & Angell, 2004; K. D. Williams & O'Reilly, 1998). Building on this notion, and drawing on diversity theory (Van Knippenberg et al., 2004), I will subsequently delineate why I expect the relationship between team conscientiousness diversity and team performance to be inverted U-shaped. Drawing on theory of empowering leadership (Arnold et al., 2000;

Srivastava et al., 2006), I further suggest that empowering leadership moderates the aforementioned relationship between team conscientiousness diversity and team performance.

4.2.1 Diversity in Team Conscientiousness and Team Performance

According to diversity theory (Harrison et al., 2002; Van Knippenberg et al., 2004), it is widely presumed that diversity may initially be beneficial for team performance (Bantel & Jackson, 1989; Van Knippenberg & Schippers, 2007). Diversity results in a greater variety of thoughts, ideas and work approaches (Glanzer & Glaser, 1961; Milliken & Martins, 1996; Van Knippenberg & Schippers, 2007). In line and according to the complementary model of person-environment fit (Muchinsky & Monahan, 1987) the diversity in team members' personalities improves team performance as members add unique attributes to the team (Neuman et al., 1999).
Teams who are confronted with a variety of tasks (Campion, Medsker, & Higgs, 1993b) that require different perspectives and approaches will benefit from having members with different levels of conscientiousness to carry out the diverse tasks. This in turn may result in an increase in performance (Farace, Monge, & Russell, 1977; Mohammed & Angell, 2003).

However, diversity theory also suggests that the benefits of diversity for team performance are limited, and increases in diversity beyond a certain threshold might even be detrimental to team performance (Van Knippenberg et al., 2004). Generally, people tend to be more attracted to those who are similar to themselves (Edmondson, 1999). Increasing team diversity thus results in team members being less attracted to one another and increases the likelihood of conflicts. Besides, diversity may result in very different work approaches that lead to communication and coordination problems

and result in additional conflicts. All these conflicts are likely to lead to poor team performance (K. D. Williams & Nida, 2011).

Relating this to conscientiousness, an initially positive effect of team conscientiousness diversity on team performance seems plausible. As noted before, team conscientiousness diversity describes the variance of or differences in conscientiousness of employees working in the same team (Neuman et al., 1999). With higher levels of team conscientiousness diversity, team members' heterogeneity with respect to conscientiousness increases. Compared to teams with moderate diversity in conscientiousness, teams with very high diversity in conscientiousness are comprised of both hard-working structured achievement-oriented employees and more flexible and intuitive employees (Ozer & Benet-Martinez, 2006). According to the complementary model of person-environment fit (Muchinsky & Monahan, 1987) the diversity in member's personalities improves team performance as members add unique attributes to the team (Neuman et al., 1999). The team with diversity in conscientiousness can make use of a diverse pool of different work approaches and perspectives (Glanzer & Glaser, 1961; Van Knippenberg & Schippers, 2007), which results in a better mixture for the completion of tasks within the team's task spectrum and in turn, better team performance (Farace et al., 1977; Glanzer & Glaser, 1961; Mohammed & Angell, 2003). As mentioned before, teams are confronted with a variety of tasks of, for example, different degrees of urgency and difficulty (Campion et al., 1993b) that require very different levels of conscientiousness. That is, more strategic tasks, such as long-term work planning, require employees with rather high conscientiousness levels who are determined and structured (Rothmann & Coetzer, 2003), whereas ad-hoc cleaning tasks may be executed perfectly by employees with lower conscientiousness levels but who are flexible and intuitive (Ozer & Benet-Martinez, 2006). Team

conscientiousness diversity offers the team the possibility to assign and match the right employees to specific tasks that require their conscientiousness levels. This enables a good fit between employee and task required conscientiousness level (person-environment fit), which has a positive effect on team performance (Caldwell & O'Reilly, 1990).

However, it also seems plausible to assume that further increases in conscientiousness diversity beyond some threshold will have negative effects on team performance. Generally, people tend to be more attracted to others who are similar to themselves (Edmondson, 1999). However, in a highly diverse team the employees are very different with respect to their conscientiousness levels. Hard-working employees are working together with intuitive, less achievement and performance-oriented employees (Ozer & Benet-Martinez, 2006). In this diverse team, the employees with high levels of conscientiousness might be annoyed with their lazy counterparts. At the same time, the laid-back employees are irritated by the achievement-oriented behavior of the highly conscientious colleagues who might be rigid, inflexible and compulsive perfectionists that pay too much attention to small details and overlook important goals (Judge & LePine, 2007; Le et al., 2011; Mount, Oh, & Burns, 2008; Rothmann & Coetzer, 2003; Tett, 1998). The increasing diversity in team conscientiousness results in being less attracted to one another, which increases the likelihood of conflicts. Besides the emergence of conflicts due to the similarity-attraction-approach, increasing team conscientiousness diversity will more likely result in very different work approaches, which in turn lead to communication and coordination problems and as a result in additional conflicts and a decrease in team performance. The differences may make it difficult to align goals as well as behaviors, particularly work approaches. In turn, this may lead to a situation where the highly conscientious employees not only perform their

work tasks but also finish or complete the work of their laid-back less conscientious colleagues (Mohammed & Angell, 2003). This may cause the highly conscientious employees to experience feelings of inequality, which lead to conflicts and harm team satisfaction and result in a decrease in performance (Gevers & Peeters, 2009; Mohammed & Angell, 2003). Besides, an employee may have a high (respectively low) conscientiousness level but there are no tasks within the team's task spectrum that require such high (respectively low) conscientiousness levels. This may result in dissatisfaction and further conflicts.

Based on this conceptualization, and in line with prior research on the performance implications of diversity in surface-level characteristics, such as gender (Gonzalez & Denisi, 2009) and nationality (Earley & Mosakowski, 2000), I suggest that the link between team conscientiousness diversity and employee performance will follow an inverted U.

In accordance with the aforementioned arguments, I suggest that initial increases in conscientiousness diversity are beneficial for team performance. Beyond some threshold, however, further increases in team conscientiousness diversity will lead to a decrease in team performance. Consequently, I suggest an inverted U-shaped relationship between team conscientiousness diversity and team performance:

> *Hypothesis 1:* There is an inverted U-shaped relationship between team conscientiousness diversity and team performance.

4.2.2 Moderating Effect of Leader's Empowering Leadership

Empowering leadership refers to the degree to which leaders share their power with subordinates in terms of providing them with autonomy and responsibility to engage in decision making (Srivastava et al., 2006; Zhang & Bartol, 2010). Empowering leaders also communicate and establish a vision and common goals, which

lead to great group unity and feelings of belonging together (Arnold et al., 2000). Based on these characteristics, I suggest that team leader's empowering leadership helps to leverage the potential inherent in initial increases in team conscientiousness diversity and alleviate the negative effects of further increases in team conscientiousness diversity beyond some limit. Formally, I thus expect team empowering leadership to positively moderate the relationship between team conscientiousness diversity and team performance.

As noted before, an empowering leader offers the team autonomy in terms of how to define, divide up and carry out tasks (Arnold et al., 2000; Srivastava et al., 2006). Such autonomy enables the team to make more effective use of different ways of approaching and carrying out work tasks resulting from (initial) increases in team conscientiousness diversity. Having this autonomy, team members can divide up and assign the work tasks within the team's task spectrum, matching tasks requiring various levels of conscientiousness to employees with corresponding levels of conscientiousness, which benefits their team performance. That is, empowering leadership positively affects the initial increase in team performance resulting from team conscientiousness diversity.

Also, team leader's empowering leadership will alleviate the negative consequences of further increases in team conscientiousness diversity beyond a certain threshold. First, empowering leaders are able to establish a vision and an overall team goal that results in employees developing a strong group unity and a sense of belonging together (Arnold et al., 2000; Srivastava et al., 2006). These feelings of partnership and belonging together may motivate employees and enable them to solve and overcome conflicts between team members resulting from higher levels of team conscientiousness diversity (Arnold et al., 2000; Mohammed & Angell, 2003). Second, with an

empowering leader, a team with very high team conscientiousness diversity can develop better performance norms and work rules, even when their personality normally produces different work behaviors. For example, the low conscientious employees, who tend to be flexible rather than structured and determined, may feel empowered and motivated to perform better alongside with their organized, well-structured and conscientious colleagues.

Based on the above mentioned arguments, I expect team leaders' empowering leadership to positively moderate the relationship between team conscientiousness diversity and team performance. Empowering leadership has a dual effect of fostering the positive as well as preventing the negative effects of further increases in team conscientiousness diversity

> *Hypothesis 2:* Team leaders' empowering leadership positively moderates the inverted U-shaped relationship between the team conscientiousness diversity and team performance.

4.3 Method

4.3.1 Sample and Procedure

I tested the hypotheses based on data from branch teams in small and medium-sized bakery companies in Germany. Branch teams are responsible for a variety of tasks, such as serving customers, organizing and coordinating product delivery with the production site, planning the work flow, coordinating seasonal decorations with other branch teams, and reporting customer feedback to the company's headquarters.

In 2014, 32 bakery companies were identified and contacted with the support of a consultancy firm. Company headquarters identified branch teams that were to participate in the study and employees working in the branch teams received paper-

based questionnaires. In 2015, data on the performance of the branch teams, i.e. their overall gross sales, were collected from the company's financial statements. In total, 49% of the employees returned questionnaires. I received objective performance data for 89% of the branch teams. After matching employee responses and objective team performance data and a listwise deletion of cases with missing values, the resulting sample for the study at hand comprised data on 116 teams (with 327 employees) from 20 companies. The average team age was 37.59 (SD = 9.37) years and 96% were female.

4.3.2 Measures

For all scales adapted from English versions, I applied a translation and back-translation procedure to ensure that the German and English versions were equivalent (Brislin, 1980). Moreover, I pre-tested the surveys for content validity and comprehensibility (Sudman et al., 1996).

Team performance. Team performance was captured by the overall gross sales per branch team in 100T€.

Team conscientiousness diversity. I relied on nine items from the NEO Five-Factor Inventory (Costa & McCrae, 1992; Lang, Lüdtke, & Asendorpf, 2001) to capture team members' conscientiousness. Team members rated their agreement using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The items were combined to an index (Cronbach's alpha = .84).

In line with previous research (Kramer et al., 2014; Mohammed & Angell, 2003), I calculated two team conscientiousness measures. First, I calculated team conscientiousness means by aggregating the conscientiousness scores of individuals belonging to one team. Then, I calculated the standard deviation of team members' conscientiousness scores to reflect team conscientiousness diversity.

Empowering Leadership. To gauge empowering leadership, team members rated the empowering leadership of their branch team leader on a 13 item scale developed by Srivastava et al. (2006). Items were combined to a single index (Cronbach's alpha = .95). In the next step, I analyzed the agreement of team members' perceptions of empowering leadership (Bliese, 2000). I found good inter-rater agreement (median rwg(j) = .89) (James, Demaree, & Wolf, 1984; LeBreton & Senter, 2008), and a one-way ANOVA revealed significant between-team variance ($F = 2.44$, $p < .01$). These results were confirmed by intra-class correlation analysis (ICC[1] = .36, ICC[2] = .59) (Bliese, 2000; Woehr, Loignon, Schmidt, Loughry, & Ohland, 2015). I thus aggregated empowering leadership scores to the team level.

Controls. At the team level, I controlled for team members' gender (Gilboa et al., 2005) and team members' age (Gatewood & Feild, 2001; Sturman, 2003). In line with previous research (Mohammed & Angell, 2003), I also included the team conscientiousness mean in the analyses. Finally, I also controlled for company age and company size (Ensley & Hmieleski, 2005).

4.3.3 Analytical Approach

The data had a hierarchical data structure with two levels of analysis (116 teams nested in 20 companies). I first checked whether the data required multilevel analyses and estimated a null model and the corresponding intraclass correlation (ICC1) (Aguinis et al., 2013). Confirming the need for multilevel analyses, the null model (see Models 1, Table 2) revealed that 18% of the variance in team performance (ICC1 = 0.18) resided between companies. I thus applied a multilevel model reflecting that the teams in the sample are nested in different companies and entered variables at those two levels of analysis (Bliese, 2000; Hofmann, 1997).

I centered the explanatory variables at the group mean to ensure that they were uncorrelated with higher-level variables (Enders & Tofighi, 2007b). Team-level and company-level controls were entered grand-mean centered (Aguinis et al., 2013; Enders & Tofighi, 2007b).

Testing the hypotheses involved the linear and the squared terms representing team conscientiousness diversity as well as the interactions between empowering leadership and the linear and the squared terms representing team conscientiousness diversity. Estimations of lower-order terms may be biased when higher order effects are not accounted for (Aiken & West, 1991; Jaccard & Turrisi, 2003). Consequently, I tested the hypotheses based on an omnibus model that included all interaction terms (Aguinis, 2004).

4.4 Results

Means, standard deviations and zero order correlations for the variables of the study are shown in Table 4.1.

Table 4.1: Means, Standard Deviations, and Correlations

N (L1)= 116 ***N (L2) = 20***	***M***	***SD***	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1. Team Performance (in 100T€)	6.60	2.62								
2. Team Conscientiousness Diversity	0.38	0.37	.065							
3. Team Member Gender (Mean)	0.96	0.12	-.115	-.006						
4. Team Member Age (Mean)	37.59	9.37	-.016	-.150	.175					
5. Team Conscientiousness (Mean)	4.49	0.34	-.077	-.726**	.119	.394**				
6. Empowering Leadership	3.99	0.76	-.047	-.198**	.011	-.101	.220*			
7. Company Age	119.8	55.66	.085	.149	.086	-.179	-.182	.080		
8. Company Size	35.93	12.01	-.114	.163	-.072	-.224*	-.162	.053	.258**	

Notes: $^{+}$ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$.

Table 4.2 displays the results of the multilevel analyses.

Table 4.2: Results from Multilevel Analyses

N (L1)= 116 ***N (L2) = 20***	**Team Performance**		
	Model 1 Estimates *(S.E.)*	**Model 2** Estimates *(S.E.)*	**Model 3** Estimates *(S.E.)*
Level 1 Controls			
Team Member Gender (Mean)		-1.875 (1.886)	-2.413 (2.076)
Team Member Age (Mean)		0.004 (0.028)	-0.002 (0.031)
Team Conscientiousness (Mean)		-0.409 (0.755)	-0.178 (1.044)
Empowering Leadership		-0.056 (0.328)	-0.067 (0.269)
Level 2 Controls			
Intercept	6.702** (0.345)	6.769** (0.325)	6.833** (0.341)
Company Age		0.008 (0.005)	0.007 (0.005)
Company Size		-0.037 (0.325)	-0.044* (0.019)
Explanatory Variables			
Team Conscientiousness Diversity			2.882+ (1.455)
Team Conscientiousness Diversity^2			-1.247+ (0.677)
Team Conscientiousness Diversity * Empowering Leadership			2.659* (1.125)
Team Conscientiousness Diversity^2 * Empowering Leadership			-0.958 (0.692)
L1-Variance	5.663	5.578	5.415
L2-Variance	1.263**	0.975**	0.777**
ICC	0.182		

Notes: Full information maximum likelihood estimation; Reported are gamma coefficients with robust standard errors; standard errors in parentheses;[b] logarithm because of skewed distribution;
$^+ p < 0.10$; * $p < 0.05$; ** $p < 0.01$.

Hypothesis 1 suggested that the relationship between team conscientiousness diversity and team performance follows an inverted U. In line with Hypothesis 1, Model 3 reveals a positive relation between the linear term representing team conscientiousness diversity and team performance ($\gamma = 2.882$, $p = 0.051$) and a negative association between the squared term representing team conscientiousness diversity and team performance ($\gamma = -1.247$, $p = 0.069$).

Hypothesis 2 suggested a positive moderating effect of team leader's empowering leadership on the relationship between team conscientiousness diversity and team performance. I observed a positive interaction between empowering leadership and the linear term representing team conscientiousness diversity ($\gamma = 2.659$, $p = 0.020$). In contrast to Hypothesis 2, the interaction effect between empowering leadership and the squared term representing team conscientiousness diversity is negative, but misses the threshold for marginal significance ($\gamma = -0.958$, $p = 0.169$).

I further examined these results by calculating simple slopes (Aiken & West, 1991; Preacher, Curran, & Bauer, 2006) for the relationship between diversity in team conscientiousness and team performance at high and low levels of empowering leadership (i.e. , one standard deviation above and below the mean).

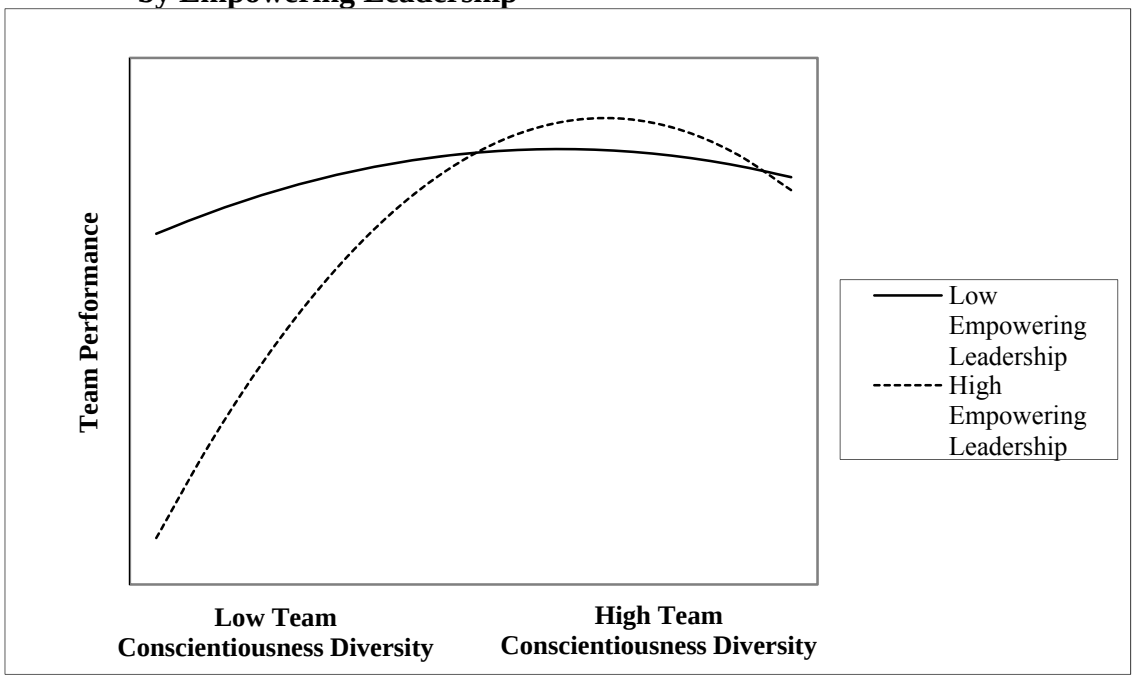
Table 4.3: Results from Simple Slope Analyses for Hypothesis 2

	Team Performance	
	Simple Slopes	
	Team Consientiousness Diversity	Team Consientiousness Diversity^2
Low Empowering Leadership	0.86	-0.52
High Empowering Leadership	4.89**	-1.97+

Notes: $^+ p < 0.10$; * $p < 0.05$; ** $p < 0.01$.

Table 4.3 reveals an inverted U-shaped relationship between team conscientiousness diversity and team performance when empowering leadership is high (bhigh = 4.895, p = 0.002, for the linear term; $b_{high} = -1.974$; $p = 0.072$, for the squared term). In contrast, no such relationship between team conscientiousness diversity and team performance becomes evident when empowering leadership is low ($b_{low} = 0.869$, $p = 0.638$, for the linear term; $b_{low} = -0.522$; $p = 0.336$, for the squared term). The corresponding slopes are depicted in Figure 4.1.

Figure 4.1: Team Conscientiousness Diversity and Team Performance moderated by Empowering Leadership



In line with the results presented above, simple slope analyses thus suggest that while empowering leadership amplifies the initial positive effect of team conscientiousness diversity, it also fuels the negative effect when team conscientiousness diversity further increases beyond some threshold.

4.5 Discussion

The present study examined the effects of team conscientiousness diversity on team performance and the potential moderating effect of empowering leadership. Specifically, I proposed that there will be an inverted U-shaped relationship between team conscientiousness diversity and team performance and that this relationship will be positively moderated by team leader's empowering leadership.

In line with the theoretical reasoning, I found that up to a certain point, team performance profits from increases in team conscientiousness diversity. Further increases in team conscientiousness diversity beyond some threshold, however, have a negative effect on team performance. In line with the complementary model of person-

environment fit (Muchinsky & Monahan, 1987), this supports the idea that initial increases in team conscientiousness in a team add unique attributes to the team that are beneficial for performance. Specifically, this result suggests that, due to differences in conscientiousness levels (Glanzer & Glaser, 1961; Van Knippenberg & Schippers, 2007), a diverse team can make use of a pool of different work approaches, which are beneficial for effectively and efficiently completing team tasks and thus result in better team performance (Farace et al., 1977; Glanzer & Glaser, 1961; Mohammed & Angell, 2003).

However, study results also underline the argument that high levels of conscientiousness diversity are detrimental to performance as different thinking and behavioral patterns may also result in conflicts among team members. Generally, individuals are less attracted to others who are different from themselves, as postulated by the similarity-attraction-approach (Edmondson, 1999). In addition, increasing conscientiousness diversity will more likely result in a situation where highly conscientious employees need to redo work of their lower conscientious colleagues, and therefore experience feelings of inequality, which result in conflicts (Mohammed & Angell, 2003).

I also find partial support for the hypothesis suggesting a positive moderating effect of empowering leadership for the link between team conscientiousness diversity and team performance. Specifically, in line with my theoretical reasoning, results show empowering leadership positively affects the initial increase in team performance resulting from team conscientiousness diversity. This supports the idea that with an empowering leader offering autonomy in decision making (Srivastava et al., 2006), teams can make more effective use of the different ways of approaching and conducting work tasks that result from (initial) increases in conscientiousness diversity. This is

because when having autonomy, team members can effectively divide and assign work tasks with different conscientiousness requirements to team members with corresponding levels of conscientiousness, which benefits team performance (Caldwell & O'Reilly, 1990; Farace et al., 1977).

In contrast to the theoretical reasoning leading to Hypothesis 2, however, the results presented also suggest that empowering leadership fuels the negative team performance implications of further increases in team conscientiousness diversity beyond some limit. In developing Hypothesis 2, I suggested that empowering leaders may neutralize the negative consequences of team conscientiousness diversity, as they communicate a vision that may alleviate the conflicts between team members resulting from very different work approaches (Arnold et al., 2000). This line of reasoning is not supported. Instead, study results suggest that empowering leadership fuels the negative performance implications when team conscientiousness diversity increases beyond some limit. This finding can be explained by considering that an empowering leader does not just grant autonomy to teams with low to moderate levels of team conscientiousness diversity. When granting autonomy to a team with a very high level of conscientiousness diversity, however, this autonomy may not be used effectively and may even amplify conflicts between team members. This is because along with increases in team conscientiousness diversity, the teams' thinking structures and behaviors also become increasingly diverse. The empowering leader motivates the diverse employees to voice their own opinions and to follow their own ideas and approaches (Srivastava et al., 2006). This makes it difficult to align the behaviors of the diverse conscientious team and may result in communication as well as coordination problems, which in turn further fuel conflicts. As a consequence of these conflicts the team performance decreases (K. D. Williams & Nida, 2011). In sum, high empowering

leadership is counterproductive for the team performance in teams with high diversity in team conscientiousness.

4.5.1 Theoretical and Practical Implications

The present study contributes to the diversity and the conscientiousness literature. First of all, the present study contributes to the discussion on whether diversity is beneficial for performance (Milliken & Martins, 1996; Van Knippenberg & Schippers, 2007; K. D. Williams & O'Reilly, 1998) by providing theoretical and empirical evidence for an inverted U-shaped relationship between team conscientiousness diversity and team performance. Specifically, it complements prior research results showing curvilinear relationships between team performance and diversity in surface-level characteristics, such as gender (Gonzalez & Denisi, 2009) and nationality (Earley & Mosakowski, 2000), and answers the call to shed more light on the relationship between deep-level diversity characteristics and performance (Judge & LePine, 2007; Van Knippenberg & Schippers, 2007). The present study further contributes to the diversity literature by investigating how moderators can influence the link between diversity and team performance (Le et al., 2011; Van Knippenberg & Schippers, 2007). Specifically, the present study highlights that while contextual conditions, such as empowering leadership, may help to tap the benefits of diversity by fostering the utilization of an enlarged pool of perspectives and work approaches, they can also be a catalyst for the counterproductive outcomes of diversity (Somech, 2006).

Second, the present study contributes to the conscientiousness literature (Kramer et al., 2014; Mohammed & Angell, 2003) by complementing previous findings on how individual-level conscientiousness (Barrick & Mount, 1991) and the elevation of team conscientiousness (Mohammed & Angell, 2003; Neuman et al., 1999) relate to performance in an organizational context. Highlighting that initial increases in team

conscientiousness diversity are beneficial for team performance, whereas further increasing team conscientiousness diversity beyond some threshold is detrimental, the present study also complements previous research suggesting curvilinear effects of conscientiousness diversity (Barrick et al., 1998; Barry & Stewart, 1997; Mohammed & Angell, 2003; Neuman et al., 1999). In addition, the moderation of empowering leadership complements previous findings and provides new insights regarding the impact of contextual conditions on the conscientiousness-performance relationship. First, the results are in line with previous research findings on moderators influencing the relationship between individual-level conscientiousness and performance. For example, Barrick and Mount (1993) found evidence that the relationship between individual conscientiousness and performance was moderated by the degree of autonomy. Moreover, Le et al. (2011) identified a moderating effect of job complexity on the relationship between individual conscientiousness and performance. Second, the study findings complement research findings regarding moderators influencing the relationship between team conscientiousness mean and performance. Researchers found that study setting (Bell, 2007) and task type (English et al., 2004; Peeters et al., 2006) moderate the relationship between team conscientiousness and performance. In addition, my study results provide new insights into the team conscientiousness-performance relationship as no study so far has clearly found a moderating impact of leadership.

The results of the study also have clear practical implications. When making decisions on hiring additional employees who are meant to work in teams, for example, managers should carefully take the conscientiousness level into consideration as selection criteria. They should consider the fit between candidates' conscientiousness levels to avoid levels of conscientiousness diversity that are either too low or too high

and to ensure that team tasks that require different conscientiousness levels can be performed effectively. Also, managers should try to match teams with moderate levels of conscientiousness diversity with team leaders high on empowering leadership to ensure that teams can reap the benefits associated with variety in the ways of approaching and conducting work tasks.

4.5.2 Limitations and Research Directions

The study has some limitations that should be addressed in future research. First, I acknowledge that the branch teams invited were selected by their respective company headquarters and therefore not necessarily randomly identified. Additionally, the study is based on data from one industry. While this approach improves the internal validity, it may negatively affect the generalizability of the results (Fraenkel, Wallen, & Hyun, 2011). Therefore, further research should examine the relationships between team conscientiousness diversity and team performance in other industry contexts. Moreover, other leader's characteristics should be examined for their moderating effect on the diversity-performance relationship (Klein, Knight, Ziegert, Lim, & Saltz, 2011) to get a clearer picture of which leadership behaviors moderate diversity.

4.6 Conclusion

The present study provides theoretical and empirical evidence suggesting that the relationship between team conscientiousness diversity and team performance follows an inverted U and that this relationship is fueled by empowering leadership. The results underline the idea that diversity in deep-level characteristics plays an important role for team performance (Bowers et al., 2000; Harrison et al., 1998; Harrison et al., 2002; Pelled et al., 1999). Also the study demonstrates that while a particular leadership behavior can be essential to reap the potential positive performance implications of

diversity, the very same behavior can also be a catalyst for the counterproductive outcomes when diversity is increased beyond an optimal level.

References

Aguinis, H. (2004). *Regression analysis for categorical moderators*. New York, NY: Guilford.

Aguinis, H., Gottfredson, R. K., & Culpepper, S. A. (2013). Best-practice recommendations for estimating cross-level interaction effects using multilevel modeling. *Journal of Management, 39*(6), 1-39.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.

Amit, R., Glosten, L., & Muller, E. (1993). Challenges to theory development in entrepreneurship research. *Journal of Management Studies, 30*(5), 815-834.

Anderson, C., Spataro, S. E., & Flynn, F. J. (2008). Personality and organizational culture as determinants of influence. *Journal of Applied Psychology, 93*(3), 702-710.

Arnold, J. A., Arad, S., Rhoades, J. A., & Drasgow, F. (2000). The empowering leadership questionnaire: The construction and validation of a new scale for measuring leader behaviors. *Journal of Organizational Behavior, 21*(3), 249-269.

Aryee, S., Walumbwa, F. O., Seidu, E. Y. M., & Otaye, L. E. (2012). Impact of high-performance work systems on individual- and branch-level performance: Test of a multilevel model of intermediate linkages. *Journal of Applied Psychology, 97*(2), 287-300.

Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist, 44*, 1175-1184.

Bantel, K., & Jackson, S. (1989). Top management and innovation in banking: Does the composition of the team make a difference? *Strategic Management Journal, 10*, 107-124.

Bardi, A., Lee, J. A., Hofmann-Towfigh, N., & Soutar, G. (2009). The structure of intraindividual value change. *Journal of Personality and Social Psychology, 97*(5), 913-929.

Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*(1), 1-25.

Barrick, M. R., & Mount, M. K. (1993). Autonomy as a moderator of the relationships between the Big Five personality dimensions and job performance. *Journal of Applied Psychology, 78*(1), 111-118.

Barrick, M. R., & Mount, M. K. (2005). Yes, personality matters: Moving on to more important matters. *Human Performance, 18*(4), 359-372.

Barrick, M. R., Neubert, M. J., Mount, M. K., & Stewart, G. L. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology, 83*(3), 377-391.

Barry, B., & Stewart, G. L. (1997). Composition, process, and performance in self-managed groups: The role of personality. *Journal of Applied Psychology, 82*(1), 62-78.

Baum, J. R., & Locke, E. A. (2004). The Relationship of Entrepreneurial Traits, Skill, and Motivation to Subsequent Venture Growth. *Journal of Applied Psychology, 89*(4), 587-598.

Bell, S. T. (2007). Deep-level composition variables as predictors of team performance: a meta-analysis. *Journal of Applied Psychology, 92*(3), 595-615.

Blalock, H. M. (1984). Contextual-Effects Models: Theoretical and Methodological Issues. *Annual Review of Sociology, 10*, 353-372.

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations*. San Francisco: Jossey-Bass.

Bono, J. E., & Judge, T. A. (2004). Personality and transformational and trasactional leadership: A meta-analysis. *Journal of Applied Psychology, 89*(5), 901-910.

Boulay, J. (2010). The role of contract, information systems and norms in the governance of franchise systems. *International Journal of Retail & Distribution Management, 38*(9), 662-676.

Bowers, C. A., Pharmer, J. A., & Salas, E. (2000). When member heterogeneity is needed in work teams - A meta-analysis. *Small Group Research, 31*(3), 305-327.

Brislin, R. W. (1980). Translation and content analysis of oral and written material. In J. W. B. H. C. Triandis (Ed.), *Handbook of Cross-Cultural Psychology* (Vol. 2, pp. 389-444). Boston, MA: Allyn & Bacon.

Brockhaus, R. H. (1982). The psychology of the entrepreneur *Encyclopedia of entrepreneurship* (pp. 39–57). Englewood Cliffs, NJ: Prentice-Hall.

Cable, D. M., & DeRue, D. S. (2002). The convergent and discriminant validity of subjective fit perceptions. *Journal of Applied Psychology, 87*(5), 875-884.

Caldwell, D. F., & O'Reilly, C. A. I. (1990). Measuring person-job fit with a profile-comparison process. *Journal of Applied Psychology, 75*(6), 648-657.

Caliendo, M., Fossen, F. M., & Kritikos, A. S. (2009). Risk attitudes of nascent entrepreneurs–new evidence from an experimentally validated survey. *Small Business Economics, 32*(2), 153-167.

Caliendo, M., Fossen, F. M., & Kritikos, A. S. (2010). The impact of risk attitudes on entrepreneurial survival. *Journal of Economic Behavior & Organization, 76*(1), 45-63.

Campion, M. A., Medsker, G., & Higgs, A. C. (1993a). Relations between work group characteristics and effectiveness: implications for designing effective work groups. *Personnel Psychology, 46*, 823-850.

Campion, M. A., Medsker, G., & Higgs, A. C. (1993b). Relations between work group characteristics and effectiveness: implications for designing effective work groups. *Personnel Psychology, 46*(4), 823-850.

Cannon-Bowers, J. A., & Salas, E. (2001). Reflections on shared cognition. *Journal of Organizational Behavior, 22*(2), 195-202.

Carpenter, M., Bauer, T., & Erdogan, B. (2010). *Principles of management*. Washington, DC: Flat World Knowledge.

Carter, N. T., Dalal, D. K., Boyce, A. S., O'Connell, M. S., Kung, M. C., & Delgado, K. M. (2014). Uncovering curvilinear relationships between conscientiousness and job performance: how theoretically appropriate measurement makes an empirical difference. *Journal of Applied Psychology, 99*(4), 564-586.

Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology, 83*(2), 234-246.

Chandler, G. N., & Hanks, S. H. (1993). Measuring the Performance of Emerging Businesses: A Validation Study. *Journal of Business Venturing, 8*(5), 391-408.

Chandler, G. N., & Hanks, S. H. (1998). An examination of the substitutability of founders human and financial capital in emerging business ventures. *Journal of Business Venturing, 13*(5), 353-369.

Chell, E., Harworth, J., & Brearly, S. (1991). *The search for entrepreneurial traits*. London: Thomson Learning.

Chen, G., Kirkman, B. L., Kanfer, R., Allen, D., & Rosen, B. (2007). A Multilevel study of leadership, empowerment, and performance in teams. *Journal of Applied Psychology, 92*(2), 331-346.

Choi, J. N. (2007). Group composition and employee creative behaviour in a Korean electronics company: Distinct effects of relational demography and group diversity. *Journal of Occupational & Organizational Psychology, 80*(2), 213-234.

Clarkin, J. E., & Swavely, S. M. (2006). The importance of personal characteristics in franchisee selection. *Journal of Retailing and Consumer Services, 13*(2), 133-142.

Cohen, W. A. (1990). *The art of the leader*. Englewood Cliffs, NJ: Pearson Prentice Hall.

Collins, C. J., Hanges, P. J., & Locke, E. A. (2004). The relationship of achievement motivation to entrepreneurial behavior: A meta-analysis. *Human Performance, 17*(1), 95-117.

Colombo, M. G., & Grilli, L. (2005). Founders' human capital and the growth of new technology-based firms: A competence-based view. *Research Policy, 34*(6), 795-816.

Colquitt, J., LePine, J. A., & Wesson, M. (2015). *Organizational behavior: Improving performance and commitment in the workplace*. New York, NY: McGraw-Hill Education.

Combs, J. G., & Ketchen, D. J. (2003). Why Do Firms Use Franchising as an Entrepreneurial Strategy?: A Meta-Analysis. *Journal of Management, 29*(3), 443-465.

Combs, J. G., Ketchen, D. J., Shook, C. L., & Short, J. C. (2011). Antecedents and consequences of franchising: Past accomplishments and future challenges. *Journal of Management, 37*(1), 99-126.

Combs, J. G., Michael, S. C., & Castrogiovanni, G. J. (2004). Franchising: A review and avenues to greater theoretical diversity. *Journal of Management, 30*(6), 907-931.

Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review, 13*(3), 471-482.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI)*. Odessa, FL: Psychological Assessment Resources.

Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal, 10*(1), 75-87.

Dahlin, K. B., Weingart, L. R., & Hinds, P. J. (2005). Team diversity and information use. *Academy of Management Journal, 48*(6), 1107-1123.

Davidsson, P. (1989). Entrepreneurship — And after? A study of growth willingness in small firms. *Journal of Business Venturing, 4*(3), 211-226.

Davies, M. A. P., Lassar, W., Manolis, C., Prince, M., & Winsor, R. D. (2011). A model of trust and compliance in franchise relationships. *Journal of Business Venturing, 26*(3), 321-340.

De Meuse, K. P., Bergmann, T. J., Vanderheiden, P. A., & Roraff, C. E. (2004). New evidence regarding organizational downsizing and a firm's financial performance: a long-term analysis. *Journal of Managerial Issues, 16*(2), 155-177.

Delmar, F., & Shane, S. (2006). Does experience matter? The effect of founding team experience on the survival and sales of newly founded ventures. *Strategic Organization, 4*(3), 215-247.

Dension, D. R., & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science, 6*(2), 204-223.

DFV (2013). Deutsche Franchisewirtschaft auf einen Blick. Retrieved 14.01.2014.

Earley, P. C., & Mosakowski, E. (2000). Creating hybrid team cultures: an empirical test of transnational team functioning. *Academy of Management Journal, 43*(1), 26-49.

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*(2), 350-383.

Eisenberger, R., Jones, J. R., Stinglhamber, F., Shanock, L., & Randall, A. T. (2005). Flow experiences at work: for high need achievers alone? *Journal of Organizational Behavior, 26*, 755–775.

Ely, R. J. (2004). A field study of group diversity, participation in diversity education programs, and performance. *Journal of Organizational Behavior, 25*(6), 755-780.

Enders, C. K., & Tofighi, D. (2007a). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods, 12*(2), 121-138.

Enders, C. K., & Tofighi, D. (2007b). Supplemental material for centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods, 12*(2), 121-138.

English, A., Griffin, R. W., & Steelman, L. A. (2004). Team performance: The effect of team conscientiousness and task type. *Small Group Research, 35*(6), 643-665.

Ensley, M. D., & Hmieleski, K. M. (2005). A comparative study of new venture top management team composition, dynamics and performance between university-based and independent start-ups. *Research Policy, 34*(7), 1091-1105.

Fahed-Sreih, J., & Morin-Delerm, S. (2012). A perspective on leadership in small businesses: Is the need for achievement a motive in predicting success? *International Journal of Entrepreneurship, 16*, 1-23.

Farace, R. V., Monge, P. R., & Russell, H. M. (1977). *Communicating and organizing*. Reading, MA: Addison-Wesley.

Fenwick, G. D., & Strombom, M. (1998). The Determinants of Franchisee Performance: An Empirical Investigation. *International Small Business Journal, 16*(4), 28.

Fineman, S. (1977). The achievement motive construct and its measurement: Where are we now? *British Journal of Psychology, 68*(1), 1-22.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. (2011). *How to design and evaluate research in education*. Hightstown, NJ: Mcgraw-Hill.

Frese, M., Fay, D., Hilburger, T., Leng, K., & Tag, A. (1997). The concept of personal initiative: Operationalization, reliability and validity in two German samples. *Journal of Occupational & Organizational Psychology, 70*(2), 139-161.

Frese, M., Krauss, S. I., Keith, N., Escher, S., Grabarkiewicz, R., Luneng, S. T., . . . Friedrich, C. (2007). Business owners' action planning and its relationship to business success in three african countries. *Journal of Applied Psychology, 92*(6), 1481-1498.

Gatewood, R. D., & Feild, H. S. (2001). *Human resource selection*. New York: Harcourt College Publishers.

Gevers, J. M. P., & Peeters, M. A. G. (2009). A pleasure working together? The effects of dissimilarity in team member conscientiousness on team temporal processes and individual satisfaction. *Journal of Organizational Behavior, 30*(3), 379-400.

Gibson, C., & Vermeulen, F. (2003). A healthy divide: Subgroups as a stimulus for team learning behavior. *Administrative Science Quarterly, 48*(2), 202-239.

Gilboa, S., Shirom, A., & & Fried, Y. (2005). A meta-analysis of stress and performance at work: Moderating effects of gender, age, and tenure. *Academy of Management Proceedings*, A1-A6.

Gininger, S., Dispenzieri, A., & Eisenberg, J. (1983). Age, experience, and performance on speed and skill jobs in an applied setting. *Journal of Applied Psychology, 68*, 469-475.

Glanzer, M., & Glaser, R. (1961). Techniques for the study of group structure and behavior: II. Empirical studies of the effects of structure in small groups. *Psychological Bulletin, 58*(1), 1-27.

Gonzalez, J. A., & Denisi, A. S. (2009). Cross-level effects of demography and diversity climate on organizational attachment and firm effectiveness. *Journal of Organizational Behavior, 30*(1), 21-40.

Graham, J. W. (2009). Missing Data Analysis: Making It Work in the Real World. *Annual Review of Psychology, 60*(1), 549-576.

Griffin, R. W., O'Leary-Kelly, A., & Collins, J. (1998). Dysfunctional work behaviors in organizations. . In C. L. Cooper & D. M. Rousseau (Eds.), *Trends in organizational behavior* (Vol. 5, pp. 65-82). New York, NY: John Wiley & Sons Ltd.

Guthrie, J. P., & Datta, D. K. (2008). Dumb and dumber: the impact of downsizing on firm performance as moderated by industry conditions. *Organization Science, 19*(1), 108-123.

Hage, J., & Aiken, M. (1967). Relationship of centralization to other structural properties. *Administrative Science Quarterly, 12*(1), 72-92.

Halfhill, T., Sundstrom, E., Lahner, J., Calderone, W., & Nielsen, T. M. (2005). Group personality composition and group effectiveness: An integrative review of empirical research. *Small Group Research, 36*(1), 83-105.

Harrison, D. A., Price, K. H., & Bell, M. P. (1998). Beyond relational demography: Time and the effects of surface- and deep-level diversity on work group cohesion. *Academy of Management Journal, 41*(1), 96-107.

Harrison, D. A., Price, K. H., Gavin, J. H., & Florey, A. T. (2002). Time, teams, and task performance: Changing effects of surface- and deep-level diversity on group functioning. *Academy of Management Journal, 45*(5), 1029-1045.

Hempel, P. S., Zhang, Z. X., & Han, Y. (2012). Team empowerment and the organizational context: Decentralization and the contrasting effects of formalization. *Journal of Management, 38*(2), 475-501.

Hersey, P. H., Blanchard, K. H., & Johnson, D. E. (2007). *Management of organizational behavior*. Englewood Cliffs, NJ: Prentice-Hall.

Hirst, G., Van Knippenberg, D., Chen, C.-H., & Sacramento, C. A. (2011). How does bureaucracy impact individual creativity? A cross-level investigation of team contextual influences on goal orientation-creativity relationships. *Academy of Management Journal, 54*(3), 624-641.

Hoegl, M., Weinkauf, K., & Gemuenden, H. G. (2004). Interteam coordination, project commitment, and teamwork in multiteam R&D projects: A longitudinal study. *Organization Science, 15*(1), 38-55.

Hofmann, D. A. (1997). An overview of the logic and rationale of hierarchical linear models. *Journal of Management, 23*(6), 723-744.

Hogan, R. (2007). Personaly measurement, faking, and employment selection. *Journal of Applied Psychology, 92*(5), 1270-1285.

Holmes, P., Hunt, A., & Stone, I. (2010). An analysis of new firm survival using a hazard function. *Applied Economics, 42*(2), 185-195.

Hon, A. H. Y., & Rensvold, R. B. (2006). An interactional perspective on perceived empowerment: the role of personal needs and task context. *International Journal of Human Resource Management, 17*(5), 959-982.

Honig, B., Lerner, M., & Raban, Y. (2006). Social Capital and the Linkages of High-Tech Companies to the Military Defense System: Is there a Signaling Mechanism? *Small Business Economics, 27*(4/5), 419-437.

Hough, L. M. (1998). Effects of intentional distortion in personality measurement and evaluation of suggested palliatives. *Human Performance, 11*, 209-244.

House, R., Rousseau, D. M., & Thomas-Hunt, M. (1995). The meso paradigm: a framework for the integration of micro and macro organisational behavior. *Research in Organizational Behavior, 17*, 71-114.

Huczynski, A. A., & Buchanan, D. A. (2013). *Organizational behavior*. Harlow: Pearson Education Limited.

Hui, M. K., Au, K., & Fock, H. (2004). Empowerment effects across cultures. *Journal of International Business Studies, 35*(1), 46-60.

Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology, 85*(6), 869-879.

Jaccard, J., & Turrisi, R. (2003). *Interaction effects in multiple regression*. Thousand Oaks: Sage.

Jackson, S. E., Joshi, A., & Erhardt, N. L. (2003). Recent research on team and organizational diversity: SWOT analysis and implications. *Journal of Management, 29*(6), 801-830.

Jackson, S. E., May, K. E., & Whitney, K. (1995). Understanding the dynamics of diversity in decision-making teams. In E. S. R. A. Guzzo, and Associates. (Ed.), *Team Effectiveness and Decision Making in Organizations* (pp. 204-261). San Fancisco: Jossey-Bass.

James, L. R., Demaree, R. G., & Wolf, G. (1984). Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology, 69*(1), 85.

Janssen, O., & Van Yperen, N. W. (2004). Employees' goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisafction. *Academy of Management Journal, 47*(3), 368-384.

Jehn, K. A., Northcraft, G. B., & Neale, M. A. (1999). Why differences make a aifference: A field study of diversity, conflict, and performance in workgroups. *Administrative Science Quarterly, 44*(4), 741-763.

Johnson, B. R. (1990). Toward a multidimensional model of entrepreneurship: The case of achievement motivation and the entrepreneur. *Entrepreneurship Theory and Practice, 14*(3), 39-54.

Judge, T. A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology, 87*(4), 797-807.

Judge, T. A., & LePine, J. A. (2007). The bright and dark sides of personality: implications for personnel selection in individual and team contexts. In J.Langan-Fox, C. L. Cooper & R. J. Klimoski (Eds.), *Research Companion to the Dysfunctional Workplace* (pp. 332-355). Cheltenham, UK: Edward Elgar.

Kalnins, A., & Mayer, K. J. (2004). Relationships and hybrid contracts: An analysis of contract choice in information technology. *Journal of Law, Economics & Organization, 20*(1), 207-229.

Kanter, R. M. (1977). *Men and women of the corporation*. New York: Basic Books.

Kaufmann, P. J., & Dant, R. P. (1999). Franchising and the domain of entrepreneurship research. *Journal of Business Venturing, 14*(1), 5-16.

Kearney, E., & Gebert, D. (2009). Managing diversity and enhancing team outcomes: the promise of transformational leadership. *Journal of Applied Psychology, 94*(1), 77-89.

Ketchen, D. J., Short, J. C., & Combs, J. G. (2011). Is franchising entrepreneurship? Yes, no, and maybe so. *Entrepreneurship: Theory & Practice, 35*(3), 583-593.

Kidwell, R. E., Nygaard, A., & Silkoset, R. (2007). Antecedents and effects of free riding in the franchisor–franchisee relationship. *Journal of Business Venturing, 22*(4), 522-544.

Kihlstrom, R., & Laffont, J. (1979). A general equilibrium theory of firm formation based on risk aversion. *Journal of Political Economy, 87*(4), 719-748.

Kirkman, B. L., & Rosen, B. (1997). A model of work team empowerment. In R. W. Woodman & W. A. Pasmore (Eds.), *Research in organizational change and development* (pp. 131-167). Greenwich, CT: JAI Press.

Kirkman, B. L., & Rosen, B. (1999). Beyond self-management: Antecedents and consequences of team empowerment. *Academy of Management Journal, 42*(1), 58-74.

Kirkman, B. L., & Rosen, B. (2000). Powering up teams. *Organizational Dynamics, 28*, 48-66.

Kirkman, B. L., Rosen, B., Tesluk, P. E., & Gibson, C. B. (2004). The impact of team empowerment on virtual team performance: the moderating role of face-to-face interaction. *Academy of Management Journal, 47*(2), 175-192.

Klein, K. J., Dansereau, F., & Hall, R. J. (1994). Levels issues in theory development, data collection, and analysis. *Academy of Management Review, 19*(2), 195-229.

Klein, K. J., Knight, A. P., Ziegert, J. C., Lim, B. C., & Saltz, J. L. (2011). When team members' values differ: The moderating role of team leadership. *Organizational Behavior and Human Decision Processes, 114*(1), 25-36.

Klein, K. J., & Kozlowski, S. W. J. (2000). From micro to meso: Critical steps in conceptualizing and conducting multilevel research. *Organizational Research Methods, 3*(3), 211-236.

Koberg, C. S., Boss, R. W., Senjem, J. C., & Goodman, E. A. (1999). Antecedents and outcomes of empowerment. *Group & Organization Management, 24*(1), 71-91.

Kozlowski, K. J., Chao, G. T., Grand, J. A., Braun, M. T., & Kuljanin, G. (2013). Advancing multilevel research design: Capturing the dynamics of emergence. *Organizational Research Methods, 16*(4), 581-615.

Kramer, A., Bhave, D. P., & Johnson, T. D. (2014). Personality and group performance: The importance of personality composition and work tasks. *Personality and Individual Differences, 58*, 132-137.

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: a meta-analysis of person-job, person-organization, person-group and person-supervisor fit. *Personnel Psychology, 58*(2), 281-342.

Lado, A. A., Dant, R. R., & Tekleab, A. G. (2008). Trust-opportunism paradox, relationalism, and performance in interfirm relationships: evidence from the retail industry. *Strategic Management Journal, 29*(4), 401-423.

Lanaj, K., Hollenbeck, J. R., Ilgen, D. R., Barnes, C. M., & Harmon, S. J. (2013). The double-edged sword of decentralized planning in multiteam systems. *Academy of Management Journal, 56*(3), 735-757.

Lang, F. R., Lüdtke, O., & Asendorpf, J. B. (2001). Testgüte und psychometrische Äquivalenz der deutschen Version des Big Five Inventory (BFI) bei jungen, mittelalten und alten Erwachsenen. *Diagnostica, 47*(3), 111-121.

Langowitz, N., & Minniti, M. (2007). The entrepreneurial propensity of women. *Entrepreneurship: Theory & Practice, 31*(3), 341-364.

Lawler, E. E., III, Mohrman, S. A., & Ledford, G. E. J. (1995). *Creating high performance organizations*. San Francisco: Jossey-Bass.

Le, H., Oh, I. S., Robbins, S. B., Ilies, R., Holland, E., & Westrick, P. (2011). Too much of a good thing: curvilinear relationships between personality traits and job performance. *Journal of Applied Psychology, 96*(1), 113-133.

LeBreton, J. M., & Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods, 11*(4), 815-852.

Lee, D. Y., & Tsang, E. W. K. (2001). The effects of entrepreneurial personality, background and network activities on venture growth. *Journal of Management Studies, 38*(4), 583-602.

LePine, J. A., Colquitt, J. A., & Erez, A. (2000). Adaptability to changing task contexts: Effect of general cognitive ability, conscientiousness, and openness to experience. *Personnel Psychology, 53*(3), 563-593.

Lévesque, M., Shepherd, D. A., & Douglas, E. J. (2002). Employment or self-employment: A dynamic utility-maximizing model. *Journal of Business Venturing, 17*(3), 189-210.

Liden, R. C., Wayne, S. J., & Sparrowe, R. T. (2000). An examination of the mediating role of psychological empowerment on the relations between the job,

interpersonal relationships, and work outcomes. *Journal of Applied Psychology, 85*(3), 407-416.

Loughry, M. L., & Tosi, H. L. (2008). Performance implications of peer monitoring. *Organization Science, 19*(6), 876-890.

Lumpkin, G., & Dess, G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review, 21*(1), 135–172.

Martocchio, J. J., & Judge, T. A. (1997). Relationship between conscientiousness and learning in employee training: Mediating influences of self-deception and self-efficacy. *Journal of Applied Psychology, 82*(5), 764–773.

Mathieu, J. E., & Chen, G. (2011). The etiology of the multilevel paradigm in management research. *Journal of Management, 37*(2), 610-641.

Mathieu, J. E., Maynard, M. T., Rapp, T., & Gilson, L. (2008). Team Effectiveness 1997-2007: A Review of Recent Advancements and a Glimpse Into the Future. *Journal of Management, 34*(3), 410-476.

Maynard, M. T., Gilson, L. L., & Mathieu, J. E. (2012). Empowerment--fad or fab? A multilevel review of the past two decades of research. *Journal of Management, 38*(4), 1231-1281.

McClelland, D. C., Atkinson, J. C., Clark, R. A., & Lowell, L. (1953). *The achievement motive*. New York: Appleton-Century-Crofts.

McHenry, J. J., Hough, L. M., Toquam, J. L., Hanson, M. A., & Ashowrth, S. (1990). Project a validity results: The relationship between predictor and criterion domains. *Personnel Psychology, 43*(2), 335-354.

Meertens, R. M., & Lion, R. (2008). Measuring an individual's tendency to take risks: The risk propensity scale. *Journal of Applied Social Psychology, 38*(6), 1506-1520.

Michael, S. C., & Combs, J. G. (2008). Entrepreneurial failure: The case of franchisees. *Journal of Small Business Management, 46*(1), 73-90.

Milliken, F. J., & Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups *Academy of Management Review, 21*(2), 402-433.

Miner, J. B., Smith, N. R., & Bracker, J. S. (1994). The role of entrepreneurial task motivation in the growth of technologically innovative firms: Interpretations from follow-up data. *Journal of Applied Psychology, 79*(4), 627-630.

Mohammed, S., & Angell, L. C. (2003). Personality heterogeneity in teams: Which differences make a difference for team performance? *Small Group Research, 34*(6), 651-677.

Mohammed, S., & Angell, L. C. (2004). Surface- and deep-level diversity in workgroups: examining the moderating effects of team orientation and team process on relationship conflict. *Journal of Organizational Behavior, 25*(8), 1015-1039.

Mount, M. K., Oh, I., & Burns, M. (2008). Incremental validity of perceptual speed and accuracy over general mental ability. *Personnel Psychology, 61*(1), 113-139.

Muchinsky, P. M., & Monahan, C. J. (1987). What is person-environment congruence? Supplementary versus complementary model of fit. *Journal of Vocational Behavior, 31*(3), 268-277.

Mumdziev, N., & Windsperger, J. (2011). The structure of decision rights in franchising networks: A property rights perspective. *Entrepreneurship Theory and Practice, 35*(3), 449-465.

Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.

Muthén, L., & Muthén, B. (1998-2012). *MPlus User's Guide. Version 7*. Los Angeles, CA: Muthén & Muthén.

Ndulue, T. I. (2012). Impact of training and development on workers performance in an organization. *International Journal of Research in Management, Economics and Commerce, 2*(9).

Neuman, G. A., Wagner, S. H., & Christiansen, N. D. (1999). The relationship between work-team personality-composition and the job performance of teams. *Group & Organization Management, 24*(1), 28-45.

Nieß, C., & Biemann, T. (2014). The role of risk propensity in predicting self-employment. *Journal of Applied Psychology, 99*(5), 1000-1009.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organizational Science, 5*(1), 14-37.

Ozer, D. J., & Benet-Martinez, V. (2006). Personality and the prediction of consequential outcomes. *Annual Review of Psychology, 57*(1), 401-421.

Peeters, M. A. G., Van Tuijl, H. F. J. M., Rutte, C. G., & Reymen, I. M. M. J. (2006). Personality and team performance: A meta-analysis. *European Journal of Personality, 20*(5), 377-396.

Pelled, L. H. (1996). Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science, 7*(6), 615-631.

Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. (1999). Exploring the black box: An analysis of work group diversity, conflict, and performance. *Administrative Science Quarterly, 44*(1), 1-28.

Pizanti, I., & Lerner, M. (2003). Examining control and autonomy in the franchisor-franchisee relationship. *International Small Business Journal, 21*(2), 131-159.

Ployhart, R. E. (2004). Organizational staffing: A multilevel review, synthesis, and model. *Research in Personnel and Human Resources Management, 23*, 121-176.

Podsakoff, P. M., & MacKenzie, S. B. (1989). *A second generation measure of organizational citizenship behavior*. Indiana University. Bloomington.

Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interactions in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of Educational and Behavioral Statistics, 31*(4), 437-448.

Raudenbush, S. W., & Bryk, A. S. (2001). *Hierarchical Linear Models*. Thousand Oaks: Sage.

Rennesund, Å. B., & Saksvik, P. Ø. (2010). Work performance norms and organizational efficacy as cross-level effects on the relationship between individual perceptions of self-efficacy, overcommitment, and work-related stress. *European Journal of Work and Organizational Psychology, 19*(6), 629-653.

Renzulli, L. A., Aldrich, H., & Moody, J. (2000). Family matters: gender, networks, and entrepreneurial outcomes. *Social Forces, 79*(2), 523-546.

Richard, O. C., Barnett, T., Dwyer, S., & Chadwick, K. (2004). Cultural diversity in management, firm Performance, and the moderating role of entrepreneurial orientation dimensions. *Academy of Management Journal, 47*(2), 255-266.

Riordan, C. M. (2000). Relational demography within groups: Past developments, contradictions, and new directions. *Research in Personnel and Human Resources Management, 19*, 131-173.

Robbins, S. P. (2001). *Organizational behavior*. Upper Saddle River, NJ: Pearson Prentice Hall.

Robbins, S. P., & Judge, T. A. (2012). *Essentials of organizational behavior*. Essex: Pearson Education Limited.

Robbins, S. P., Judge, T. A., & Campbell, T. C. (2013). *Organizational Behaviour*. Harlow: Pearson Prentice Hall.

Roberts, B. W., Jackson, J. J., Fayard, J. V., Edmonds, G., & Meints, J. (2009). Conscientiousness. In M. Leary & R. Hoyle (Eds.), *Handbook of individual differences in social behavior* (pp. 369-381). New York: NY: Guildford.

Robie, C., & Ryan, A. M. (1999). Effects of nonlinearity and heteroscedasticity on the validity of conscientiousness in predicting overall job performance. *International Journal of Selection and Assessment, 7*(3), 157-169.

Roth, P. L. (1994). Missing data: A conceptual review for applied psychologists. *Personnel Psychology, 47*(3), 537-560.

Rothmann, S., & Coetzer, E. P. (2003). The Big Five personality dimensions and job performance. *SA Journal of Industrial Psychology, 29*(1), 68-74.

Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. New York: John Wiley & Sons, Inc.

Saavedra, R., Earley, P. C., & Van Dyne, L. (1993). Complex interdependence in task-performing groups. *Journal of Applied Psychology, 78*(1), 61-72.

Sadri, G., & Robertson, I. T. (1993). Self-efficacy and work-related behavior: A review and meta-analysis. *Applied Psychology: An International Review, 42*(2), 139-152.

Sawyer, R. K. (2001). Emergence in sociology: Contemporary philosophy of mind and some implications for sociological theory. *American Journal of Sociology, 107*(3), 551-585.

Schafer, J. L. (2001). Multiple imputation with PAN. In L. M. C. A. G. Sayer (Ed.), *New methods for the analysis of change* (pp. 357-377). Washington, DC, US: American Psychological Association.

Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods, 7*(2), 147-177.

Schafer, J. L., & Yucel, R. M. (2002). Computational strategies for multivariate linear mixed-effects models with missing values. *Journal of Computational and Graphical Statistics, 11*(2), 437-457.

Schneider, B., Smith, D. B., & Sipe, W. P. (2000). Personnel selection psychology: Multilevel considerations. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions*. San Franscisco: Jossey-Bass.

Seibert, S. E., Silver, S. R., & Randolph, W. A. (2004). Taking empowerment to the next level: A multiple-level model of empowerment, performance, and satisfaction. *Academy of Management Journal, 47*(3), 332-349.

Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: A meta-analytic review. *Journal of Applied Psychology, 96*(5), 981-1003.

Semrau, T., & Sigmund, S. (2012). Networking ability and the financial performance of new ventures: A mediation analysis among younger and more-mature firms. *Strategic Entrepreneurship Journal, 6*(4), 335-354.

Shane, S. A. (1996). Hybrid organizational arrangements and their implications for firm growth and survival: A study of new franchisors. *Academy of Management Journal, 39*(1), 216-234.

Sinharay, S., Stern, H. S., & Russell, D. (2001). The use of multiple imputation for the analysis of missing data. *Psychological Methods, 6*(4), 317-329.

Somech, A. (2006). The effects of leadership style and team process on performance and innovation in functionally heterogeneous teams. *Journal of Management, 32*(1), 132-157.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal, 38*(5), 1447-1465.

Spreitzer, G. M. (2008). Taking stock: A review of more than twenty years of research on empowerment at work. In C. L. C. J. Barling (Ed.), *Handbook of organizational behavior* (pp. 54-72). Thousand Oaks, CA: Sage.

Srivastava, A., Bartol, K. M., & Locke, E. A. (2006). Empowering leadership in management teams: Effects on knowledge sharing, efficacy, and performance. *Academy of Management Journal, 49*(6), 1239-1251.

Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin, 124*, 240-261.

Stam, W., & Elfring, T. (2008). Entrepreneurial orientation and new venture performance: The moderation role of intra- and extraindustry social capital. *Academy of Management Journal, 51*(1), 97-111.

Stewart, G. L., & Barrick, M. R. (2000). Team structure and performance: Assessing the mediating role of intrateam process and the mdoerating role of task type. *Academy of Management, 43*(2), 135-148.

Sturman, M. C. (2003). Searching for the inverted u-shaped relationship between time and performance: Meta-analyses of the experience/performance, tenure/performance, and age/performance relationships. *Journal of Management, 29*(5), 609-640.

Sudman, S., Bradburn, N. M., & Schwarz, N. (1996). *Thinking about answers: The application of cognitive processes to survey methodology*. San Francisco, CA: Jossey-Bass.

Sung, S. Y., Choi, J. N., & Kim-Jo, T. (2014). Personality dissimilarity and work-related outcomes: Asymmetric effects and moderating role of group tenure. *Group Dynamics: Theory, Research, and Practice, 18*(1), 1-19.

Team, R. D. C. (2008). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing.

Tesluk, P. E., & Jacobs, R. R. (1998). Toward an integrated model of work experience. *Personnel psychology, 51*, 321-355.

Tett, R. P. (1998). Is Conscientiousness always positively related to job performance? *The Industrial-Organizational Psychologist, 36*, 24-29.

Thomas, K. W., & Velthouse, B. A. (1990). Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. *Academy of Management Review, 15*, 666-681.

Ucbasaran, D., Shepherd, D. A., Lockett, A., & Lyon, S. J. (2013). Life after business failure: The process and consequences of business failure for entrepreneurs. *Journal of Management, 39*(1), 163-202.

Van de Ven, A. H., & Ferry, D. L. (1980). *Measuring and asessing organizations*. New York: John Wiley & Sons.

Van Iddekinge, C. H., Putka, D. J., & Campbell, J. P. (2011). Reconsidering vocational interests for personnel selection: The validity of an interest-based selection test in relation to job knowledge, job performance, and continuance intentions. *Journal of Applied Psychology, 96*(1), 13-33.

Van Knippenberg, D., De Dreu, C. K., & Homan, A. C. (2004). Work group diversity and group performance: an integrative model and research agenda. *Journal of Applied Psychology, 89*(6), 1008-1022.

Van Knippenberg, D., & Schippers, M. C. (2007). Work group diversity. *Annual Review of Psychology, 58*, 515-541.

Verhaeghen, P., & Salthouse, T. A. (1997). Meta-analyses of age-cognition relations in Adulthood: Estimates of linear and nonlinear age effects and structural models. *Psychological Bulletin, 122*(3), 231-249.

Wallace, J. C., Mathe, K., Paul, J., & Johnson, P. D. (2011). Structural and psychological empowerment climates, performance, and the moderating role of shared felt accountability: A managerial perspective. *Journal of Applied Psychology, 96*(4), 840-850.

Wiklund, J., & Shepherd, D. (2003). Aspiring for, and achieving growth: The moderating role of resources and opportunities. *Journal of Management Studies, 40*(8), 1919-1941.

Williams, K. D., & Nida, S. A. (2011). Ostracism: Consequences and Coping. *Current Directions in Psychological Science, 20*(2), 71-75.

Williams, K. D., & O'Reilly, C. (1998). Demography and diversity in organizations: A review of 40 years of research. *Research in Organizational Behavior, 20*, 77-140.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*(3), 601-617.

Windsperger, J. (2001). The fee structure in franchising: a property rights view. *Economics Letters, 73*(2), 219-226.

Windsperger, J. (2004). Centralization of franchising networks: evidence from the Austrian franchise sector. *Journal of Business Research, 57*(12), 1361-1369.

Woehr, D. J., Loignon, A. C., Schmidt, P. B., Loughry, M. L., & Ohland, M. W. (2015). Justifying aggregation with consensus-based constructs: A review and examination of cutoff values for common aggregation indices. *Organizational Research Methods, 18*(4), 704-737.

Wright, P. M., & Nishii, L. H. (in press). *Strategic HRM and organizational behavior: integrating multiple levels of analysis*. Oxford: Wiley-Blackwell.

Zahra, S. A., Neubaum, D. O., & El-Hagrassey, G. M. (2002). Competitive analysis and new venture performance: Understanding the impact of strategic uncertainty and venture origin. *Entrepreneurship: Theory & Practice, 27*(1), 1-28.

Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal, 53*(1), 107-128.

Zhao, H., Seibert, S., & Hills, G. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology, 90*(6), 1265-1272.

Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management, 36*(2), 381-404.

Zheng, C., & Prislin, R. (2012). Beyond risk propensity - the influence of evaluation period and information relevance on risk taking behavior. *Academy of Entrepreneurship Journal, 18*(1), 1-19.

Zohar, D., & Luria, G. (2005). A multilevel model of safety climate: cross-level relationships between organization and group-level climates. *Journal of Applied Psychology, 90*(4), 616-628.

Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation seeking*. New York: Cambridge University Press.