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**Drivers and Obstacles on the Way to the One Million Dollar Business
Opportunity: The Interplay of Human Capital and Intra-Team Trust in
Entrepreneurial Team Opportunity Recognition and Selection**

Inga Freiin vom Holtz

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Vorsitzender:

Prof. Dr. Dr. Holger Patzelt

Prüfer der Dissertation:

1. Prof. Dr. Nicola Breugst
2. Assistant Prof. Dr. Anne Domurath
(Wilfrid Laurier University, Kanada)

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ABBREVIATIONS

BEST	Building entrepreneurial success teams
CEO	Chief executive officer
cf.	Confer (compare)
e.g.	Exempli gratia (for example)
et al.	Et alii (and others)
EPFL	École Polytechnique Fédérale de Lausanne
i.a.	Inter alia
i.e.	Id est
OLS	Ordinary least squares
s.d.	Standard deviation
TMT	Top management team
TUM	Technische Universität München
VIF	Variance inflation factor

ABSTRACT

The present dissertation examines how intra-team trust in entrepreneurial teams affects the influence of prior experience on opportunity recognition performance. The empirical results of an experimental study with 75 entrepreneurial teams in Germany show that intra-team trust is a hindering condition for the relationship between prior experience and the opportunity recognition performance. The negative moderating role of intra-team trust in entrepreneurial teams can be supported for the relationship between joint team experience and opportunity recognition performance, the relationship between entrepreneurial experience and opportunity recognition performance, and the relationship between industry experience and opportunity recognition performance. The opportunity recognition performance of entrepreneurial teams was analyzed in both phases of the opportunity process: the opportunity recognition and the opportunity selection phase. Taken together, the present dissertation contributes most to the literature on entrepreneurial teams.

Keywords: Entrepreneurial teams, opportunity recognition, opportunity selection, prior experience, intra-team trust

ZUSAMMENFASSUNG

Die vorliegende Dissertation untersucht, wie sich Vertrauen in Gründerteams auf den Zusammenhang zwischen Vorerfahrung und dem Erkennen und Auswählen von Geschäftsideen auswirkt. Die empirischen Ergebnisse eines Experiments mit 75 Gründerteams in Deutschland zeigen, dass Vertrauen in Gründerteams eine erschwerende Bedingung für das Zusammenspiel zwischen Vorerfahrungen und dem Erkennen und Auswählen von Geschäftsideen ist. Wie gut Gründerteams Geschäftsideen erkennen, wird in beiden Phasen des Ideenerkennungsprozesses untersucht, sowohl in der Phase, in der Gründerteams Ideen erkennen, als auch in der Phase, in der Gründerteams eine Idee aus dem Set an erkannten Ideen aussuchen. Zusammengefasst trägt die vorliegende Dissertation am meisten zur Literatur über Gründerteams bei.

Schlagwörter: Gründerteams, Erkennen und Auswählen von Geschäftsideen, Vorerfahrung, Vertrauen im Team

1 INTRODUCTION

1.1 Setting the stage

"Quality is more important than quantity. One home run is much better than two doubles."

Steve Jobs

In an interview with Bloomberg Businessweek¹ during the years before the iPhone launch, Steve Jobs, legendary founder of Apple and one of TIME's 20 most influential Americans of all time², explained the importance of quality by using an example from baseball. He wanted to highlight that one brilliant strike is much better than two average ones and, likewise, one brilliant business opportunity is much more valuable than several average ones.

Thus, encouraged by Steve Jobs' quote and the overwhelming success of Apple, recognizing and selecting the one-million-dollar business opportunity should be an inherent goal of all entrepreneurs worldwide. However, the path towards the one-million-dollar business opportunity is a difficult one. Like baseball teams strive for home runs, entrepreneurial teams strive for the one-million-dollar business opportunity, but they are often impeded by various challenges. With the present thesis, I aim to advance the understanding of the obstacles entrepreneurial teams might face on their way to the one-million-dollar business opportunity.

The remainder of this introduction is structured as follows: In section 1.2, I provide a brief overview of the theoretical frame of the present work. The research question I intend to answer in this thesis is derived in section 1.3. Finally, the structure of this thesis is outlined in section 1.4

1.2 Entrepreneurship research as the frame of this thesis

Entrepreneurial opportunities

Despite some early work on entrepreneurship in the middle of the last century, entrepreneurship as a research field is comparably young (van Burg, Romme, & Georges, 2014). Research on entrepreneurship started with the work of Schumpeter (1942), who laid the foundation for the contemporary understanding of entrepreneurship and already highlighted that entrepreneurs aim to create new ways to introduce goods and services, which already describes the interplay between entrepreneurs and opportunities. The entrepreneurship literature includes two main components: the entrepreneurial opportunities and the entrepreneurial actors who recognize, evaluate, and exploit them (Shane & Venkataraman,

¹ <http://bgr.com/2014/04/14/steve-jobs-memorable-quotes/>

² <http://newsfeed.time.com/2012/07/25/the-20-most-influential-americans-of-all-time/slide/all/>

2000). However, until the turn of the millennium, most entrepreneurial scholars focused exclusively on the entrepreneur in order to derive an understanding of the entrepreneurship field, and neglected the presence of entrepreneurial opportunities (Venkataraman, 1997). Thus, Shane and Venkataraman (2000) highlight the necessity to include the concept of opportunities in entrepreneurship studies in order to advance entrepreneurship as a research field. Otherwise, a comprehensive understanding of the entrepreneurial process would not be possible. Consequently, in the last 15 years, entrepreneurial scholars have paid more and more attention to entrepreneurial opportunities (Davidsson, 2015). While in conceptual work on entrepreneurial opportunities, scholars theorize on all three steps of the entrepreneurial process (e.g., Eckhardt & Shane, 2003; Shane & Venkataraman, 2000; Venkataraman, 1997), empirical work often focuses on specific phases of the opportunity process, such as opportunity recognition and selection (e.g., Grégoire, Barr, & Shepherd, 2010; Gruber, MacMillan, & Thompson, 2008; Haynie, Shepherd, & McMullen, 2009; Ucbasaran, Westhead, & Wright, 2009), as scholars argue that one of the most crucial skills of an entrepreneur is the ability to recognize and select the right opportunity (Ardichvili, Cardozo, & Ray, 2003).

Entrepreneurial teams

At the beginning of entrepreneurship research, the entrepreneurial context was often studied following the myth of the lone entrepreneur (Kamm, Shuman, Seeger, & Nurick, 1990). In the 1980s, scholars slowly discovered the relevance of entrepreneurial teams for entrepreneurial activities, as they realized that it was difficult for one individual to combine all the abilities required to successfully start a venture, especially in a technological environment (Gartner, 1985). Now, entrepreneurial scholars agree on the relevance of entrepreneurial teams for the entrepreneurial process, and thus as a research subject (Klotz, Hmieleski, Bradley, & Busenitz, 2014). Despite a common understanding that most ventures are founded and managed by entrepreneurial teams (e.g., Beckman, 2006; Lechler, 2001), and that high-performing ventures in particular are usually established by entrepreneurial teams (Steffens, Terjesen, & Davidsson, 2012), the research on entrepreneurial opportunities still focused mainly on the individual level (Short, Ketchen, Shook, & Ireland, 2010) in the tradition of Shane and Venkataraman's (2000) individual-opportunity nexus. Although entrepreneurial scholars were already aware of the importance of entrepreneurial teams (e.g., Gartner, 1985; Kamm et al., 1990), when they started to include entrepreneurial opportunities in their research, they again concentrated on the individual level (Shane & Venkataraman, 2000), which still influences the present research on entrepreneurial opportunities. Consequently, entrepreneurial scholars (e.g., Busenitz, Plummer, Klotz, Shahzad, & Rhoads, 2014; Foss, Klein, Kor, & Mahoney, 2008; Short et al., 2010) asked for more team-based research on opportunity recognition and selection, and considered team-based opportunity recognition and selection as a separate scholarly discipline in entrepreneurship (Foss et al., 2008).

This thesis intends to contribute to the research field of entrepreneurial teams. While I do not deny that individual entrepreneurs are also important for research on entrepreneurial opportunities, I want to offer a complementary perspective to the dominant focus on individuals in the research on opportunity recognition and selection by highlighting

the entrepreneurial team context for these important processes. Therefore, I focus solely on the joint opportunity recognition performance of entrepreneurial teams and do not examine the recognition and selection performance of entrepreneurial individuals in the present work.

In addition, an examination of entrepreneurial activity at the team level better reflects the current trends in the start-up environment. Reports on the German start-up environment show that more than 70% of all start-ups are currently founded by teams and that the trend towards team-based founding is increasing compared to previous years (Ripsas & Tröger, 2015).

Prior experience in entrepreneurship research

With his paper on the influence of prior knowledge on entrepreneurial opportunities, Shane (2000) laid the foundation for many research studies investigating the role of prior experience in the entrepreneurship field (e.g., Gruber et al., 2008; 2012, 2013; Ucbasaran, Westhead, & Wright, 2008, 2009; Wiklund & Shepherd, 2003). He argues that the prior knowledge of a person forms his or her individual "knowledge corridor" (p. 452), which affects how individuals evaluate new information and, consequently, recognize entrepreneurial opportunities. Thus, differences in the available knowledge corridors of entrepreneurial actors lead to the identification of different opportunities. Explaining the influence of prior knowledge on entrepreneurial opportunities is therefore a key part of the research in the entrepreneurial field (Shane & Venkataraman, 2000).

Many studies on entrepreneurial teams focus on the role of prior experience. In their review of entrepreneurial teams in 42 leading management, entrepreneurship, and organizational behavior journals, Klotz et al. (2014) find that prior experience is the most studied subject. Their review shows that most scholars examine the role of prior experience in venture performance, focusing on the educational level and specialization (Amason, 1996), prior venture affiliation (Beckman, 2006), prior success (Nelson, 2003), or educational prestige (Lester, Certo, Dalton, Dalton, & Cannella, 2006) to conceptualize prior experience.

The combination of the acknowledged relevance of prior experience for the discovery of entrepreneurial opportunities (Shane, 2000) as well as for the success of entrepreneurial teams (Klotz et al., 2014) raises the question of how prior experience influences the recognition and selection of opportunities in entrepreneurial teams. I intend to contribute to answering this question in the present study. More specifically, the available experience in an entrepreneurial team refers to the combined experience of all team members (Ucbasaran, Lockett, Wright, & Westhead, 2003). Prior experience has been conceptualized in many different ways in existing research (Klotz et al., 2014). As outlined above, the present thesis intends to advance the understanding of entrepreneurial team research, whereby three experience categories, namely team experience, human capital experience, and opportunity-related experience, are relevant to better understand how entrepreneurial teams recognize and select opportunities.

First, team experience refers to the experience a team has working together (Taylor & Greve, 2006). A common work history is beneficial for team performance, as team members are aware of their team members' strengths and characteristics (Eisenhardt & Schoonhoven, 1990). In addition, teamwork (Eisenhardt & Schoonhoven, 1990) and communication (Pfeffer, 1983; Zenger & Lawrence, 1989) are facilitated based on the adaptation within the team (Katz, 1982). Second, human capital experience significantly affects the recognition and exploitation of entrepreneurial opportunities (Ucbasaran et al., 2008). Individuals with a higher level of human capital possess higher mental abilities, leading to more promising behavior with respect to higher performance levels (Becker, 1975; Schultz, 1959). In an entrepreneurial context, behavior that is more promising enables a better performance in recognizing and selecting opportunities. Thus, entrepreneurial scholars agree that a better human capital profile equips entrepreneurs with more beneficial skills for recognizing and selecting opportunities (e.g., Baron & Ensley, 2006; Davidsson & Honig, 2003; Shane & Khurana, 2003; Ucbasaran et al., 2008). In the entrepreneurship context, human capital experience is normally divided into general human capital and entrepreneurship-specific human capital. General human capital refers to general experience, which can easily be applied to other industries, while entrepreneurship-specific human capital can only be used in an entrepreneurial context (Wiklund & Shepherd, 2003; Ucbasaran et al., 2008). Third, one of the most fundamental problems that most entrepreneurial teams have to solve is the so-called "technology-to-market linking" problem (Gruber et al., 2013, p. 282). In a technological venture, entrepreneurial teams are found even more frequently than in other venture contexts, as it is difficult for a single entrepreneur to possess all the necessary abilities (Gartner, 1985). In order to enable market entry and subsequent venture growth, entrepreneurial teams have to recognize business opportunities for their technology (Gruber et al., 2013; Kor, Mahoney, & Michael, 2007). They therefore have to combine their technological experience and their industry experience (Gruber et al., 2008). On the one hand, deep technological knowledge is necessary to understand the technological basis and identify technological application possibilities (Cohen & Levinthal, 1990; Danneels, 2002; 2007; Gruber et al., 2013). On the other hand, profound knowledge of the specific markets conditions, including customers, market characteristics, and competitors, is important to enable market success (Gruber et al., 2008; von Hippel, 1988).

Trust in entrepreneurship research

As outlined above, prior experience plays a major role in the recognition and selection of opportunities in entrepreneurial teams. However, thus far we know little about the conditions under which prior experience affects the opportunity recognition and selection. The present study aims to advance the understanding of the role of trust in the relationship between prior experience and opportunity recognition and selection in entrepreneurial teams.

Entrepreneurship scholars have already argued that the social context in which entrepreneurial activities are executed is crucial, and thereby point to the relevance of trust (e.g., Davidsson & Honig, 2003; Johannisson, Ramirez-Pasillas, & Karlsson, 2002). However, the interplay between trust and entrepreneurship is complex and is based on many different views and definitions of trust. In order to advance the understanding of trust in entrepreneurship, it is important

to understand that trust is not an objective but a socially constructed phenomenon, for which interpretation is essential (Welter & Smallbone, 2006). Opportunity recognition and selection can be considered a highly social process, in which entrepreneurs try to solve an entrepreneurial problem with the help of their teammates or external partners. Strong ties, e.g., high intra-team trust in entrepreneurial teams, affect entrepreneurial problem-solving tasks, e.g., recognizing and selecting opportunities. However, so far, scholars disagree as to whether trust has positive or negative effects on the opportunity recognition and selection performance (Gemmell, Boland, & Kolb, 2012). Given the diverse advantages of trust, most prior studies focus on the benefits of trust for entrepreneurship. Thus, scholars ask for more critical research on trust, including possible downsides (Welter, 2012).

With the present thesis, I aim to contribute to a more critical perspective on trust in the entrepreneurship context. I fully acknowledge that trust has many benefits for entrepreneurial activities. However, in order to advance the understanding of trust in the entrepreneurial context, in this thesis I focus on possible downsides of trust. Thus, my thesis should be understood as an attempt to complement the research on the upsides of trust by analyzing potential downsides, to contribute to a more comprehensive understanding of trust in entrepreneurship.

1.3 Research questions

While opportunity recognition is in the focus of many studies, we still know little about which factors influence the quality of the opportunity recognition performance in entrepreneurial teams.

First, existing research has found a positive effect of human capital experience on the number of opportunities recognized (e.g., Gruber et al., 2008; 2012; Ucbasaran et al., 2008). In addition, studies have also found a positive relationship between human capital and the quality of an opportunity, conceptualized as innovativeness (Ucbasaran et al., 2009).

Second, the positive influence of opportunity-related experience on the number of recognized opportunities is already supported (Gruber et al., 2013; Shepherd & DeTienne, 2005). In addition, studies have already shown a positive effect of opportunity-related experience on the quality of an opportunity, measured as innovativeness (Shepherd & DeTienne, 2005), or conceptualized as variation between opportunities recognized by an entrepreneurial team (Gruber et al., 2013).

Finally, we know that joint team experience of entrepreneurial teams positively influences venture performance (Eisenhardt & Schoonhoven, 1990; Roure & Maidique, 1986), but we know little about how joint team experience influences team performance, for example opportunity recognition performance. To the best of my knowledge, prior research has thus far not studied the influence of prior joint team experience on opportunity recognition performance, conceptualized neither as a quantitative nor as a qualitative performance measure for opportunity recognition.

In summary, the existing literature provides little insight on how prior experience, namely joint team experience, human capital experience, and opportunity-related experience, affects the quality of the opportunities recognized by entrepreneurial teams.

While many prior studies focus primarily on the first step of the opportunity process, namely opportunity recognition, the research on opportunity evaluation, and especially on the decision-making aspect of opportunity evaluation, namely the opportunity selection, is still scant (Haynie et al., 2009). Schultz (1959) assumes that the cognitive ability of an entrepreneur, which is necessary for the opportunity evaluation, might be strengthened by a higher educational level. Kor et al. (2007) argue that prior industry experience might be useful in identifying and evaluating new entrepreneurial opportunities. In summary, based on existing research it is not yet clear how prior experience influences the opportunity selection performance of entrepreneurial teams.

Although the interplay between opportunities and entrepreneurs is subject to many entrepreneurial studies, prior entrepreneurship scholars have already borrowed insights from related literature streams, for example from the creativity literature, in order to advance the understanding of opportunity recognition and selection (e.g., Perry-Smith & Coff, 2011). The intuitive link between creativity and entrepreneurship (Dimov, 2007) enables the application of creativity-based insights to the entrepreneurial context. In a creative context, opportunity recognition and selection is seen as idea generation and selection (e.g., Berg, 2016; Girotra, Terwiesch, & Ulrich, 2010). In the present work, I draw on insights from creative literature streams, namely the idea generation and the creative forecasting literature stream, both of which study the generation and selection of ideas. Two insights that are already anchored in these creativity literature streams are crucial for the present work: First, scholars acknowledge the importance of examining the performance in both phases, in the idea generation as well as in the idea selection phase, to gain a complete understanding of the team's performance, while they suggest measuring the performance in the respective phase separately. Second, the quality of an idea, conceptualized as business value, should determine the assessment of the quality, while the ability to discern the best idea out of the identified idea set should be the performance measure for the selection of ideas (Berg, 2016; Girotra et al., 2010). In the present study, I apply these two insights to the entrepreneurial context to gain a better understanding of the opportunity recognition and selection performance in entrepreneurial teams.

Despite many prior studies on entrepreneurial opportunities, as well as helpful insights from the creativity literature, our knowledge about the influence of prior experience on the quality of the recognized opportunities and the quality of the selection of one opportunity out of the recognized opportunity set is limited. Specifically, we do not sufficiently understand the conditions that hinder or facilitate entrepreneurial teams' achievement of a high performance based on their prior experience.

We already know that prior experience is crucial for the opportunity recognition process (e.g., Gruber et al., 2013; Ucbasaran et al., 2009). More specifically, it is not only the available prior experience that determines the result of the

opportunity recognition process, but also the ability of an entrepreneurial team to use that experience (Taylor & Greve, 2006). An entrepreneurial team's ability to use its available experience might be influenced by the social context, which plays an important role in entrepreneurial activities (Davidsson & Honig, 2003). So far, we do not know how the opportunity recognition process is influenced by the social context. One crucial factor describing the social context in an entrepreneurial team is trust (Welter & Smallbone, 2006), and intra-team trust is essential for entrepreneurial teams (Klotz et al., 2014). Thus, intra-team trust in entrepreneurial teams, which refers to the shared general cognition of trust in their team members (DeJong & Elfring, 2010, p. 536), might influence the ability of team members to use their prior experience to recognize and select opportunities. Dirks and Ferrin (2001) suggest that intra-team trust should rather be considered a facilitating or hindering condition for team performance than a main input factor. Prior studies on team research have shown that intra-team trust can be a moderating condition for team output (Dirks, 1999), and even a hindering condition for team performance (Langfred, 2004).

We know that trust has diverse benefits for entrepreneurship, as it reduces some risks that are related to entrepreneurial activities and facilitates relationships in the entrepreneurial environment. However, scholars have asked for a more critical perspective on trust in entrepreneurship, including the potential downsides, to achieve a more comprehensive picture of the role of trust in an entrepreneurial context (Welter, 2012). Thus, studies have investigated the negative effects of interpersonal trust from an entrepreneurial perspective (Goel & Karri, 2006; Gordon, 2006), whereby potential downsides of interpersonal trust in the recognition and selection of opportunities have already been identified (Zahra, Yavuz, & Ucbasaran, 2006).

Given all these points, the present thesis intends to deepen our understanding of opportunity recognition and selection, with a specific focus on the quality of the opportunities and the ability to discern the best opportunity. In addition, the influence of prior experience as well as the potentially negative condition of intra-team trust for opportunity recognition and selection is explored.

Figure 1 provides an overview of relevant research calls that motivated the present work, and which I hope to answer at least partially in the present study. With regard to opportunity recognition and selection, scholars have suggested to focus more on the nature of opportunity recognition than simply on the number of recognized opportunities (Ucbasaran et al., 2009). This approach includes the relevance of opportunity sets out of which an entrepreneurial team has to select the best opportunity (Gruber et al., 2008) and examines facilitating or hindering conditions for opportunity recognition (Grégoire et al., 2010). In addition, scholars have asked for additional research examining the influence of prior experience on opportunity recognition (Ucbasaran et al., 2009), to differentiate between different dimensions of prior experience (Shepherd & DeTienne, 2005) and to better understand the role of human capital (Haynie et al., 2009). According to prior studies, future research on intra-team trust should be more context-specific (DeJong & Elfring, 2010) should focus more on trust as a condition that hinders or facilitates the relationship between input factors and team performance

(Dirks, 1999) in order to potentially recognize additional relationships for which intra-team trust is a harmful condition (Langfred, 2004). In addition, studies on trust in entrepreneurship should be more critical and should include potential downsides (Welter, 2012).

<p>Opportunity recognition and selection</p>	<ul style="list-style-type: none"> • Ucbasaran et al. (2009): "Future research could focus on the nature of opportunity identification, rather than simply on the number of opportunities identified." (p. 113) • Gruber et al. (2008): "The notion of multiple opportunity identification prior to entry has yet to be acknowledged in the research literature." (p. 1662) • Grégoire et al. (2010): "Though we took great care to conduct our analyses with rigor, important avenues for future research remain [...] in studying the factors that may facilitate (or limit) efforts to recognize opportunities." (p. 427)
<p>Prior experience</p>	<ul style="list-style-type: none"> • Ucbasaran et al. (2009): "How prior experience affects opportunity identification itself is also a future research topic that emerges from our study." (p. 113) • Shepherd & DeTienne (2005): "We argue that it is important for entrepreneurship scholars investigating the relationship between prior knowledge and the identification of opportunities to distinguish between types of prior knowledge." (p.104-105) • Haynie et al. (2009): "However, we hope that these interesting findings spur more theoretical and empirical research on the 'compensating' role that human capital may play in decisions concerning entrepreneurial opportunity evaluation." (p. 357)
<p>Trust</p>	<ul style="list-style-type: none"> • DeJong & Elfring (2010): "Furthermore, our results suggest the need for more context-specific theories of intrateam trust." (p. 546) • Dirks (1999): "Researchers should consider trust as a concept that indirectly influences group performance by moderating the relationship between inputs (e.g., motivation) and group process and performance." (p. 453) • Langfred (2004): "Finally, while my focus has been on one particular boundary condition for the benefits of trust in teams, the findings should not be viewed as supporting one counterintuitive aberration, but rather as a general direction for the future [...]. It is likely that there are other conditions under which trust may be harmful, or at least may not have the positive effects normally associated with it." (p. 393) • Welter (2012): "This article also identifies fundamental gaps in the extant literature, suggesting interesting avenues for future research. Generally, future studies on trust in entrepreneurship should commence from a more critical perspective, acknowledging the bright and dark sides of trust [...] and the different contexts in which it occurs." (p. 205)

Figure 1: Overview of relevant research calls

Source: Own illustration

Thus, in an attempt to close the outlined research gaps, I try to make significant contributions to the following research questions in the present thesis:

1. Which factors influence the quality of the opportunities that are recognized by entrepreneurial teams?
2. Which factors influence the quality of the opportunity selection that is made by entrepreneurial teams?
3. Which role do different prior experience dimensions, namely team experience, human capital experience, and opportunity-related experience of entrepreneurial teams, play for the opportunity recognition and selection performance?

4. Which potentially negative role does intra-team trust play as a condition for the relationship between prior experience and opportunity recognition and selection performance in entrepreneurial teams?

1.4 Structure of this thesis

The present thesis is divided into five chapters. After the introduction in this chapter, I outline the theoretical development in chapter 2. The first section of the theory chapter (section 2.1) is dedicated to entrepreneurial opportunities. I explain the relevance of opportunity recognition and selection for entrepreneurship and describe why opportunity recognition and selection often happens in entrepreneurial teams. In the second section of the theory chapter (section 2.2), I explain the importance of experience for opportunity recognition performance, starting with team experience, followed by human capital experience and, finally, opportunity-related experience. The following section deals with the role of trust in opportunity recognition performance (section 2.3). I present the theoretical background of trust in entrepreneurship, the influence of trust on team performance, and potential downsides of trust. In the last section of this chapter (section 2.4), I derive the hypotheses. In doing so, I subsequently postulate a negative interaction effect of prior experience variables and intra-team trust on opportunity recognition performance, which refers in a first step to the opportunity recognition phase, and in a second step to the opportunity selection phase.

In chapter 3, I explain the methodological approach of the present thesis. My research is part of a large research project, for which we—my fellow PhD students Thomas Koch and Manuel Braun, and myself—conducted an experiment with 117 entrepreneurial teams consisting of 286 participants sampled throughout Germany. After providing an overview of the research design in section 3.1, I present the sample recruiting and description (section 3.2) by outlining participation criteria and incentives, as well as sample characteristics at the individual, team, and company level. The subsequent sections deal with the data collection (section 3.3) and the data coding (section 3.4). In section 3.5, I explain the applied measures, namely the dependent, the independent, the moderator, and the control variables. I derive two models, one referring to the performance in the opportunity recognition phase and one drawing on the performance in the opportunity selection phase in section 3.6. The last section of the methodology chapter (section 3.7) is dedicated to the data analysis, in which I explain the hierarchical regression analysis as well as the estimation technique.

The presentation of the results follows in chapter 4. I subsequently introduce the descriptive statistics (section 4.1), the results of the hypothesis testing for both models (section 4.2), and the influence of the control variables (section 4.3). The chapter ends with various robustness checks in order to discuss and confirm the main results (section 4.4.).

Chapter 5 is dedicated to the discussion of the results of the present thesis. In section 5.1, I debate how the empirical results contribute to the different literature streams, namely the literature on entrepreneurship, experience, trust, and creativity. In the following, I describe practical implications of the results (section 5.2), as well as limitations of the present work (section 5.3). Finally, I present avenues for future research and offer a conclusion to this thesis (section 5.4).

2 THEORY

In this section, I develop the theoretical basis for this thesis. In the first step, I summarize the existing research on opportunity recognition and selection (section 2.1) and highlight the relevance of prior experience for opportunity recognition and selection (section 2.2) as well as the importance of intra-team trust for opportunity recognition and selection (section 2.3), followed by a second step, in which I develop the hypothesis (section 2.4).

2.1 Entrepreneurial opportunities

This section gives an overview of the existing research on entrepreneurial opportunities in the literature (section 2.1.1) and specifically about entrepreneurial opportunities in entrepreneurial teams (section 2.1.2). At the end of the section, I outline reasonable performance measures for opportunity recognition and selection (section 2.1.3).

2.1.1 Opportunity recognition and selection

In their "seminal article" (Davidsson, 2015, p. 674) about the promise of entrepreneurship as a field of research, Shane and Venkataraman (2000) outline the problem that most researchers consider only the entrepreneur and her or his behavior when defining entrepreneurship (Venkataraman, 1997). Despite the initial definition of entrepreneurship by Schumpeter (1942), which involved the discovery and exploitation of new raw materials, at the turn of the millennium researchers focused on a unilateral entrepreneur-focused consideration of entrepreneurship and thus neglected the necessary presence of potentially promising opportunities (Venkataraman, 1997). Consequently, Shane and Venkataraman (2000) emphasize that, in order to gain a deep understanding of the entrepreneurial process, it is important to research both the entrepreneur and the entrepreneurial opportunity.

Given the diverse definitions and understandings of opportunities in entrepreneurship, I rely on Eckhardt and Shane (2003) for the present study, who follow the perspective of entrepreneurship established by Shane and Venkataraman (2000) and define entrepreneurship as "the discovery, evaluation, and exploitation of future goods and services" (Eckhardt & Shane, 2003, p. 336).

Since the study by Shane and Venkataraman (2000), research on entrepreneurial opportunities has gained in importance. Davidsson's review of 210 papers published in leading journals during the last 15 years, which used "opportunity" in their title, keyword, or abstract, shows the growing scholarly interest in the field of entrepreneurial opportunities (Davidsson, 2015). The relevance of this topic for the entrepreneurship literature is additionally underlined by many other scholars (e.g., Ardichvili et al., 2003; Shepherd & DeTienne, 2005). Consequently, researchers are well aware of the importance of opportunities for entrepreneurial action. Busenitz et al. (2014), for example, state that "opportunities are

increasingly becoming the most unique domain of entrepreneurship research and help reveal fruitful avenues for future research" (Busenitz et al., 2014, p. 13).

However, although scholars agree that entrepreneurial opportunities are a fundamental element of entrepreneurship, they have difficulty agreeing on a common concept of entrepreneurial opportunities (Short et al., 2010).

Davidsson's review mentioned above shows not only the increasing research interest in entrepreneurial opportunities, but also that there are many different concepts of entrepreneurial opportunities. Based on that insight, he defines three different categories of entrepreneurial opportunities, aiming to better distinguish between entrepreneurs and opportunities, between external factors and individual cognition, between entrepreneurial activities and their quality, and between parameters that explain entrepreneurial mechanisms and parameters that are relevant (Davidsson, 2015).

The first category, "external enablers" (p. 675), refers to the macro level, covering changes in macroeconomic developments such as demographic trends, technological inventions, and legal requirements. These macro-level changes can be seen as potential initiators for the foundation of new ventures, but they do not have a direct influence on a specific company (Davidsson, 2015). The second opportunity category offered by Davidsson (2015), "new venture ideas" (p. 675), draws on the company level, referring to the imagination of founding a new venture in order to create value by introducing new products and services in a new or existing market. This category focuses only on the idea of founding a new venture with the intention of bringing supply and demand together (Davidsson, 2015). Different entrepreneurs can see the assessment of the combination of supply and demand, and the subsequent potential future success of the new venture idea, differently (Davidsson, 2015). Davidsson (2015) also describes a third category, "opportunity confidence" (p. 675), which concerns the personal level, drawing on the particular assessment of an external enabler or a new venture idea as the basis for entrepreneurial action by an entrepreneur or an entrepreneurial team (Davidsson, 2015).

Besides the complexity of defining a clear opportunity concept, scholars also have difficulty agreeing on "the mechanisms by which opportunities influence entrepreneurial processes" (Davidsson, 2015, p. 677). Researchers disagree primarily on whether entrepreneurial opportunities are discovered or created (Alvarez & Barney, 2007; Shane, 2000; Short et al., 2010). Some scholars consider opportunities to be the possibility of offering new goods or services, and thus define opportunity as "the chance to introduce innovative (rather than imitative) goods, services, or processes to an industry or economic marketplace" (Gaglio, 2004, p. 534). Other entrepreneurial scholars argue that a sole focus on a one-time identification of a possibility to offer a product is not sufficient to explain the nature of an entrepreneurial opportunity, as its final form is the result of a dynamic, iterative, and socially embedded process in which creativity plays a major role (Dimov, 2007).

Alvarez and Barney (2007) thus distinguish between the discovery theory and the creation theory. The two theories differ along three main assumptions concerning the nature of opportunities, the nature of entrepreneurs, and the nature of decision-making (Alvarez & Barney, 2007). First, with regard to the nature of opportunities, both theories assume a disequilibrium, a so-called "competitive imperfection" (Alvarez & Barney, 2007, p. 11) as the basis for opportunity recognition (Davidsson, 2015). The discovery theory implies that the disequilibrium is due to macroeconomic changes, e.g., technological changes or demographic developments, and that entrepreneurial opportunities already exist (Alvarez & Barney, 2007; McKelvey, 1999). Consequently, entrepreneurs need to search for these opportunities (Levinthal, 2007). The creation theory assumes that entrepreneurial activities are responsible for the disequilibrium (Baker & Nelson, 2005; Sarasvathy, 2001). Hence, it does not make sense to search for opportunities as no opportunities exist yet; instead, entrepreneurs actively create opportunities based on market reactions (Baker & Nelson, 2005). Second, the two theories differ in how they see entrepreneurs. Under the discovery theory, there must be a distinguishing element, described as alertness (Kirzner, 1973), between entrepreneurs, who discover the already existing opportunities, and non-entrepreneurs, who do not recognize these opportunities, although they exist (Kirzner, 1973; Shane, 2003). Entrepreneurial alertness is "a distinctive set of perceptual and cognitive processing skills that direct the opportunity identification process" (Gaglio & Katz, 2001, p. 96). Consequently, entrepreneurs are better at perceiving market realities and deducing probable implications and consequences than other market participants (Gaglio & Katz, 2001). Under the creation theory, it is possible but not necessary that there are discrepancies between entrepreneurs and non-entrepreneurs before an individual engages in the process of opportunity creation (Alvarez & Barney, 2007). Scholars believe that the actual process of creating an opportunity is the central element that can trigger distinguishing traits, e.g., overconfidence, between founders and non-founders (Hayward, Shepherd, & Griffin, 2006). Third, the decision-making context differs between the theories. In discovery theory, decision-making happens under risk. This means that entrepreneurs have enough information to assume the possible results and related probabilities when deciding. Consequently, it is not a question of whether they can gather the relevant information but when, as opportunities already exist (Alvarez & Barney, 2007). In creation theory, decision-making takes place under uncertainty. Decision-making under uncertainty means that it is not possible to gather enough information to assess the decision with regard to potential results or related probabilities (Alvarez & Barney, 2007). The problem does not lie in constraints in terms of time or abilities (Miller, Fern, & Cardinal, 2007), the information simply cannot be gathered or studied to assume the potential results and related opportunities, as it does not yet exist (Alvarez & Barney, 2007). In summary, the core evidence of the discovery theory is that "it is those with the most accurate perceptions of the objective environment that can recognize them [opportunities]" (Gregoire, Shepherd, & Schurer Lambert, 2010, p. 117), whereas the opportunity creation theory "argue[s] that opportunities arise out of the subjective interpretations and creative actions" (Gregoire et al., 2010, p. 117).

Grégoire et al. (2010) argue that change is the initiator of entrepreneurial activities. This argumentation is in line with the first category of Davidsson (2015), external enablers. These changes can be based on new technologies, changing behavior of relevant market participants, or macroeconomic developments. However, the entrepreneurial opportunities are not these changes themselves, but "opportunities are courses of action that seek to derive benefits from these changes" (Grégoire et al., 2010, p. 415). Given the first option for change—a new technology—this would mean that entrepreneurial action aims at recognizing business alternatives for a specific market for the new technology (Eckhardt & Shane, 2003; Grégoire et al., 2010). By focusing on the change and the derived entrepreneurial opportunities, Grégoire et al. (2010) combine the discovery theory and the creation theory through the so-called "objective or subjective nature of opportunities" (Grégoire et al., 2010, p. 414). They argue that the circumstances of an opportunity represent the objective nature, whereas the subsequent derived actions to generate benefits reflect the subjective nature of an opportunity (Grégoire et al., 2010). They emphasize the relevance of the first step of the opportunity process, the opportunity recognition, as it is the required antecedent for the following opportunity evaluation process, as well as for a potential exploitation or adaptation. Thus, the recognition of promising opportunities enables not only the founding of new firms, but also the adaptation of existing ones (Grégoire et al., 2010).

In contrast to Venkataraman (1997) and Eckhardt and Shane (2003), who distinguish between three relevant processes for entrepreneurship, namely discovery, evaluation, and exploitation, some more recent scholars (e.g., McMullen & Shepherd, 2006; Grégoire et al., 2010) focus solely on the first two steps of the opportunity process: opportunity recognition and opportunity evaluation. They acknowledge the relevance of a potential exploitation of an opportunity for the entrepreneurial process, but do not see exploitation as part of the opportunity process, as the pursuit of an opportunity is seen as a consequence of the opportunity process (Grégoire et al., 2010). This means, for example, that the result of the opportunity process can also be not to pursue the recognized and evaluated opportunities (Grégoire et al., 2010). Only if the results of the opportunity process indicate that the expected profit would be higher than the costs would an exploitation be promising (Shane & Venkataraman, 2000).

In line with this research, the present study refers to the opportunity process including the opportunity recognition phase as well as the opportunity evaluation phase. In the following, I describe the two phases in detail.

The opportunity recognition phase covers the identification of new products or services in a new or existing market with the intention of deriving benefits and potentially generating profit (Grégoire et al., 2010) and is thus the focus of Davidsson's second category, new venture ideas. Based on Davidsson (2015), I rely on the understanding of Nicolaou, Shane, Cherkas, and Spector (2009) of opportunity recognition "as the identification of a chance to combine resources in a way that might generate a profit" (Nicolaou et al., 2009, p. 109,), which is also in line with prior research (Gaglio & Katz, 2001; Shane, 2000; Shane & Venkataraman, 2000).

New technologies are often the foundation for new products, and thus entrepreneurial activities (Shane, 2000). Technologies are fungible resources for which different market opportunities can potentially exist (Gruber et al., 2013). Thus, before concrete new products can be sold and the entrepreneurial exploitation can start, entrepreneurs have to recognize promising opportunities for the new technology (Shane, 2000). This process of recognizing opportunities is not only demanding but also crucial for entrepreneurship, as it increases the likelihood of generating profit (Gaglio & Katz, 2001; Shane, 2000; Shane & Venkataraman, 2000).

During the opportunity evaluation phase, individuals or teams assess the potential of deriving future profit (Eckhardt & Shane, 2003; Gupta, Goktan, & Gunay, 2014). Scholars have paid considerable attention to the evaluation of opportunities (e.g., Chattopadhyay, Glick, & Huber, 2001; Krueger & Brazeal, 1994; Sarasvathy, 2001). Based on Dimov (2010), the third category of Davidsson (2015), opportunity confidence, refers to opportunity evaluation, during which an entrepreneur assesses the favorability of an opportunity (Davidsson, 2015). Although opportunity confidence initially focuses on an individual perspective, it can also refer to the team level (Foss & Klein, 2012) or be the result of a joint opportunity evaluation process (Dimov, 2007; Gemmill et al., 2012). Despite prior studies on opportunity evaluation, the decision-making aspect of opportunity evaluation—referred to in this thesis as opportunity selection—is still not sufficiently examined in the research (Haynie et al., 2009).

Haynie et al. (2009) argue that "opportunity evaluation is ultimately about envisioning the future—specifically the wealth generating resource combinations to be controlled by the entrepreneur post exploitation" (Haynie et al., 2009, p. 338). Based on this understanding, they derive three elements of the opportunity evaluation decision-making process. First, when making a decision, entrepreneurs should focus on the "attractiveness" (p. 338) of an opportunity. Thus, they have to determine whether this opportunity would generate profit for the venture. Second, the perspective should be "future-focused" (p. 338). This means entrepreneurs should consider whether the pursued opportunity would generate profit in the future market. Third, the evaluation is a "first-person assessment" (p. 338). Hence, entrepreneurs should assess whether they have the necessary capability to exploit the opportunity (Haynie et al., 2009). In summary, when selecting an opportunity, entrepreneurs should focus on the future market in which they can generate profit, and on their own human resources that are required to do so.

2.1.2 Opportunity recognition and selection in entrepreneurial teams

While entrepreneurship research has its origin in the middle of the 20th century, going back to the ideas of Joseph Schumpeter and Frank Knight (Low & MacMillan, 1988), entrepreneurship research at that time was often seen in the light of the myth of the lone entrepreneur (Kamm et al., 1990). The recognition of the importance of entrepreneurial teams in general, and specifically in the technology-based environment, started in the 1980s. Gartner, for example, argues that "high technology industries might require more skills than one individual would be likely to have, necessitating that individuals combine their abilities in teams in order to start an organization successfully" (Gartner, 1985,

p. 703). Kamm et al. underline the importance of entrepreneurial teams as follows: "Teams are significant for researchers and entrepreneurs in two primary ways: 1) they are a more common occurrence than the entrepreneurship literature leads one to expect; and 2) they affect their firms' performance" (Kamm et al., 1990, p. 7). However, when opportunities grew in importance for the entrepreneurship field, studies focused on the individual entrepreneur to analyze the discovery, evaluation, and exploitation of opportunities (e.g., Shane & Venkataraman, 2000). But in particular over the last years, entrepreneurial scholars have agreed on the importance of entrepreneurial teams (Klotz et al., 2014). Many studies acknowledge that in most cases it is an entrepreneurial team and not a lone entrepreneur that establishes and operates the start-up (e.g., Beckman, 2006; Lechler, 2001; West, 2007). Based on prior research (e.g., Davidsson & Honig, 2003; Kamm et al., 1990), Steffens et al. (2012) conclude that, first, high-performing ventures are mostly founded by entrepreneurial teams and, second, novice entrepreneurs largely choose to work in an entrepreneurial team with at least two members. Foss et al. (2008) even denote "team-based entrepreneurial judgment and discovery as a distinctive competency" (Foss et al., 2008, p. 74). However, entrepreneurial opportunities are still mostly analyzed at an individual level and, consequently, more attention should be paid to the team level to advance entrepreneurship as a research field (Short et al., 2010). Likewise, in their study about the preceding 25 years of entrepreneurship research with a clear focus on entrepreneurial opportunities, Busenitz et al. (2014) also underline the importance of teams for future research on entrepreneurial opportunity recognition.

How individuals or teams discover and evaluate new and promising ideas is a core question not only for the entrepreneurship field, but also for the field of social and cognitive psychology, which started analyzing this issue even earlier (e.g., Amabile, 1996; Glover, Ronning, & Reynolds, 1989; Sternberg, 1999). Creativity scholars agree in aiming at a new and helpful idea (Amabile, 1996). The relationship between "creativity and entrepreneurship is intuitive" (Dimov, 2007, p. 718). However, it is important to distinguish between an idea from a creative perspective and an opportunity from an entrepreneurial perspective. An idea symbolizes what could be, while an opportunity aims to realize this idea. To put it differently, every opportunity needs an original idea, but not every idea is a promising opportunity. Consequently, the entrepreneurial creativity process is the iterative development of an initial idea (Dimov, 2007).

It is important to understand how entrepreneurial teams can achieve a high performance in the entrepreneurial creativity process. Therefore, Perry-Smith and Coff (2011) analyze the recognition and decision-making phase of the entrepreneurial creativity process. They conducted a study with 41 groups that were tasked with solving an entrepreneurial creativity task. They argue that it is possible that some teams perform well in one of the entrepreneurial creativity process phases but have difficulty succeeding in the other. Consequently, it is important to examine both phases of the process, the recognition as well as the decision-making evaluation—referred to in this study as selection—to derive comprehensive insight into the creativity performance process (Perry-Smith & Coff, 2011). As a main result of the study, they find that "superior entrepreneurial creativity arises when teams are effective at both, generating diverse alternatives and culling them to select the best solution" (Perry-Smith & Coff, 2011, p. 247). Therefore, the team level

is appropriate, or even necessary, to study entrepreneurial recognition and selection, which is the case for the present study.

2.1.3 Performance measurement for opportunity recognition and selection

With the exception of studies like that of Perry-Smith and Coff (2011), which includes recognition as well as decision-making evaluation, entrepreneurial scholars mostly focus on the number of opportunities identified to assess the performance of an opportunity process (e.g., Gruber et al., 2008, 2012, 2013; Shepherd & DeTienne, 2005). Therefore, I borrow insights from the creativity literature to advance the understanding of entrepreneurial opportunity recognition and selection. This is consistent with the close relationship between creativity and entrepreneurship (cf. Dimov, 2010), and the research call to further advance the understanding of the entrepreneurial creativity process (Perry-Smith & Coff, 2011). Thus, I use two aspects of the creativity literature: the idea generation literature stream and the creative forecasting literature stream, which both cover the process of recognizing and selecting ideas.

The idea generation literature focuses primarily on brainstorming a large number of ideas (e.g., Diehl & Stroebe, 1987; Osborn, 1957). To study the brainstorming performance of individuals or teams, social psychology researchers typically set up an experiment in which participants have to brainstorm different ideas. Afterwards, research assistants assess the performance of the participants by counting the number of generated ideas or by rating the average quality of all ideas (Girotra et al., 2010). However, many creativity scholars began early on to aim at the one genius idea (e.g., Amabile, 1983; Oldham & Cummings, 1996; Shalley, 1995), and thus the opinion that the combination of both generating ideas and selecting the best one gained in importance (Perry-Smith & Coff, 2011). In line with this notion of the importance of teams generating and selecting the best idea, Girotra et al. (2010) conclude that, for most companies—and thus for most teams—it is more advantageous to generate and select one world-changing idea than to develop a huge number of average ideas. Thus, they set up an experiment in which participants had to identify different ideas for applying an innovation to the business context and adapted the way in which they measured quality. There are contexts—e.g., if it is necessary to minimize risk—in which the number of generated ideas is the best indicator of individual, team, or company performance. However, if the challenge is to find the best way to exploit a pioneering innovation, it is important to identify and select the *one* brilliant idea (Berg, 2016; Girotra et al., 2010). To better understand how team performance with regard to generating and selecting ideas can be enhanced, Girotra et al. (2010) analyze performance differences between teams that jointly solved an innovation problem and teams that first worked individually on the same problem and then came together to solve the problem. In their study, they define "the performance of a group as the quality of the best ideas identified" (Girotra et al., 2010, p. 591) and analyze the "ability to discern the best idea" (Girotra et al., 2010, p. 595). In order to measure the quality of an idea, raters assessed "the utility of the ideas to a commercial organization that might develop and sell the products" (Girotra et al., 2010, p. 598). To do so, they rated

the business value of each idea separately. After rating all ideas of a team, they checked whether teams had selected the best idea within their set of ideas.

With their study and their definition of team performance, Girotra et al. (2010) advance the research on idea generation—and, consequently, social psychology—in three ways. First, they do not assume that a large number of ideas automatically means better ideas. Second, they focus on the quality of the best idea instead of studying the average quality of all generated ideas. Third, they analyze the entire creative process, including generation and selection (Girotra et al., 2010).

The creative forecasting literature connects the creativity and the innovation literature by highlighting the relevance of selecting the right idea. Given the insight that choosing the best idea is crucial for the creativity and the innovation context, it is obvious that the two adjunctive literature streams are connected through the relevance of this selection (Berg, 2016). So far, only few scholars (e.g., Byrne, Shipman, & Mumford, 2010) have analyzed the overlap between the two literature fields. Scholars mostly focus on only one of the two research fields (Berg, 2016). While the creativity literature studies the development of new and valuable ideas, the innovation literature addresses the subsequent favorable transformation of creative ideas (Amabile, 1988). In order to choose the right idea, it is crucial to estimate future benefits. However, the prediction of future success for a new idea is difficult, as the concrete outcome is often unclear until the idea is offered in the market (Berg, 2016).

Analogous to entrepreneurial scholars, who distinguish between the opportunity recognition, evaluation, and exploitation phase to illustrate the entrepreneurial process (e.g., Eckhardt & Shane, 2003), innovation scholars explain the path from a creative idea to an innovation by means of an evolutionary process that is distinguished into three phases, namely variation, selection, and retention (Berg, 2016). Entrepreneurs or entrepreneurial teams are normally involved in all three phases of the entrepreneurial process, while in organizations three different main actors determine each respective phase of the evolutionary process. First, in the variation phase, creators develop different ideas. Second, in the selection phase, managers select the best idea out of the developed idea set. Third, customers decide on the market success (Burgelman, 1991). While the understanding of the first two phases is similar in entrepreneurship and innovation literature, the emphasis of the third phase is different. When analyzing opportunity exploitation, entrepreneurial scholars try to understand how new companies can be successfully founded (Shane & Venkataraman, 2000), whereas innovation scholars aim to better understand the response from the market and the necessary adaptations, as the company is already established (Burgelman, 1991). Consequently, in the innovation literature, actors within an organization determine the first two phases—developing and selecting ideas—while the audience outside an organization dominates the third phase. With regard to the actors within an organization in the innovation literature, creators have to engage solely with their own ideas, while managers have to explore all ideas and decide which idea will reach the audience (Berg, 2016). However, it is important to keep in mind that managers often were creators earlier in their career (Berg, 2016). To

develop new ideas, creators alternate between divergent thinking, e.g., looking for new perspectives, and convergent thinking, e.g., assessing options based on clear criteria (Guilford, 1967), whereas managers primarily apply convergent thinking (Guilford, 1967). In doing so, managers have to take the role of an entrepreneur (Mintzberg, 1971). They ask creators to generate new ideas, but they keep the responsibility for choosing which idea the organization should pursue (Berg, 2016). In doing so, they can make two main mistakes: They may select an idea that is not successful in the market, or they may reject an idea that would have been successful in the market. Both potential mistakes need to be prevented at the same time to ensure the right allocation of employees and money and, thus, future benefits (Csaszar, 2012). Consequently, the insight of the creativity literature that it is important to possess the abilities to generate a brilliant idea and to discern the best idea (e.g., Girotra et al., 2010; Perry-Smith & Coff, 2011) helps managers as well as entrepreneurs avoid the two main selection mistakes. In this thesis, I intend to contribute to the understanding of which factors are relevant to select the best opportunity out of a recognized opportunity set to prevent both main selection mistakes and safeguard future benefits.

Given the close relationship between creativity and entrepreneurship (cf. Dimov, 2007) and the research call to further advance the understanding of the entrepreneurial creativity process (Perry-Smith & Coff, 2011), the insights from the idea generation as well as the creative forecasting literature should be applied to the entrepreneurial opportunity process, which I do in this thesis. First, it is important to include the recognition as well as the selection of opportunities in the analysis. Second, the actions of recognizing opportunities and selecting opportunities should be regarded separately, as different aspects are relevant in the two phases, which determine the performance in the respective phase. Third, the performance measure for opportunity recognition in an innovative context should refer to the quality of the best opportunity, while future market success should determine the assessment of quality. Fourth, the performance for opportunity evaluation decision-making should be measured as the ability to discern the best opportunities out of the generated set of opportunities.

2.2 Importance of prior experience for opportunity recognition and selection

In this section, I first present the general role of prior knowledge in opportunity recognition and selection (section 2.2.1) and then describe three relevant experience categories, namely team experience (section 2.2.2), human capital experience (section 2.2.3), and opportunity-related experience (section 2.2.4).

2.2.1 Prior knowledge

Austrian scholars assume that a precondition for entrepreneurial action is the asymmetric distribution of information among people (Hayek, 1945). In addition, von Hippel (1994) finds that people are more likely to process information that they are already familiar with. Based on this insight, Shane (2000) argues that everyone has an individual "knowledge corridor" (p. 452) consisting of his or her prior experience. The individual prior knowledge influences how

new information is assessed and potentially used for the recognition of opportunities. Consequently, entrepreneurs are more likely to recognize opportunities within their knowledge corridor. Based on this argumentation, Shane (2000) underlines the importance of prior experience for entrepreneurial opportunity recognition, which is also acknowledged by many entrepreneurial scholars (e.g., Ardichvili et al., 2003).

After an opportunity is recognized, it is important to predict the future market success of this opportunity (Berg, 2016). Creative forecasting is "the skill of predicting the outcomes of new ideas" (Berg, 2016, p. 2), which helps actors predict future market success. Based on the creativity literature (Amabile, 1996, Guilford, 1967), Berg (2016) concludes that prior experience plays a key role in the process of creative forecasting, as it helps actors evaluate ideas.

The importance of prior knowledge in entrepreneurial teams is also underlined by the fact that many researchers have analyzed the topic in prior studies. Klotz et al. (2014) conducted a review of 42 articles focusing on entrepreneurial teams in leading management, entrepreneurship, and organizational behavior journals, to structure and classify prior research on entrepreneurial teams. They find that prior knowledge is the subject that receives the most attention.

As prior knowledge is crucial for the recognition and evaluation of entrepreneurial opportunities (Shane, 2000), as well as for the overall performance of entrepreneurial teams (Klotz et al., 2014), the question arises how different experience dimensions influence the performance of entrepreneurial teams with regard to opportunity recognition and selection. This question is addressed in the present thesis.

Prior knowledge of an entrepreneurial team is the combined experience of all members of the team (Ucbasaran et al., 2003). Based on prior research (Eisenhardt & Schoonhoven, 1990; Gruber et al., 2008, 2012, 2013; Ucbasaran et al., 2003, 2008, 2009), I classify the experience dimensions that are relevant for opportunity recognition and selection in entrepreneurial teams into three categories: team experience, human capital experience, and opportunity-related experience. The three experience categories are explained in the following.

2.2.2 Team experience

In different studies, the expression "team experience" refers to different aspects of experience as a team. Taylor and Greve (2006), for example, distinguish between project teams that come together for a short period of time and established teams that exist for longer periods of time. In the first case, they measure team experience as the number of projects that the team has conducted together, whereas in the second case, team experience is operationalized as the time the team has already worked together. As entrepreneurial teams normally work together permanently for a longer period of time, they belong to the second category. Prior joint team experience of the entrepreneurial team is essential when analyzing the effect of team experience on performance.

2.2.2.1 Joint team experience

If entrepreneurial team members are used to working together, they know the strengths and characteristics of their team members and have already developed practices for how to work together (Eisenhardt & Schoonhoven, 1990). Katz (1982) argues that the adaptation that happens when people are used to working with each other leads to communication facilitation. In contrast, if team members are not or not yet attuned to each other, they may have problems communicating with each other (Pfeffer, 1983).

An effective team formation process in entrepreneurial teams, during which team members adapt to each other, can enhance future success (Forbes, Borchert, Zellmer-Bruhn, & Sapienza, 2006). However, there is only little existing literature on entrepreneurial team formation thus far (Forbes et al., 2006), as entrepreneurial teams are often only identified after they have already passed different formation phases (Gartner, 1985). Team activities have different emphases in different phases of the team formation process (Taylor & Greve, 2006). Initially, teams focus on building a team and, consequently, on finding a way to work together effectively instead of solving content problems (Taylor & Greve, 2006). After the team has established work routines, they can better dedicate themselves to content-related tasks (Taylor & Greve, 2006). Teams with prior work experience have already established work modes within the team and are therefore more successful in combining their prior experience to solve a problem than newly formed groups (Taylor & Greve, 2006). Thus, prior joint team experience is a crucial factor in team performance (Taylor & Greve, 2006).

Roure and Maidique (1986) and Eisenhardt and Schoonhoven (1990) were the first to study the influence of the experience that an entrepreneurial team has working together on performance. Both studies find that higher prior joint team experience leads to higher performance, while using different setups and different samples of U.S.-based technology start-ups.

Given the importance of joint team experience for entrepreneurial performance, the influence of joint team experience on opportunity recognition and selection will be analyzed in this study.

2.2.3 Human capital experience

Human capital theory assumes that growing knowledge leads to increasing mental ability. As a consequence, individuals with higher mental abilities are more likely to achieve better results (Becker, 1975; Schultz, 1959). Thus, individuals with a higher level of human capital should achieve a higher performance level, including being more successful in recognizing and selecting opportunities than individuals with a lower level of human capital (Ucbasaran et al., 2008). Entrepreneurs can consciously decide to increase their human capital through additional education or work experience, but human capital can also be a consequence of the primary decision to go to university or to take another job for other reasons (Ucbasaran et al., 2008).

Scholars agree on the relevance of human capital for performance. Many studies have addressed the influence of human capital on different forms of performance, e.g., company survival (Gimeno, Folta, Cooper, & Woo, 1997), company performance (Bosma, van Praag, Thurik, & Wit, 2004), or opportunity recognition performance (Ucbasaran et al., 2008). An entrepreneur's higher level of human capital should lead to better performance (Becker, 1975; Davidsson & Honig, 2003), including a better opportunity recognition performance (Ucbasaran et al., 2008). As explained above, scholars see opportunity recognition from two different perspectives. The discovery stream assumes that entrepreneurs discover opportunities that are already available and need to be recognized, whereas the creation stream sees opportunity as the result of an iterative creativity process (Alvarez & Barney, 2007; Dimov, 2007; Gaglio, 2004; Shane, 2000; Short et al., 2010). Both opportunity recognition perspectives agree that human capital is related to opportunity recognition, as entrepreneurs with a higher level of human capital should have more skills based on prior experience to either discover or create opportunities (Ucbasaran et al., 2008; Witt, 1998). Prior research assumes a positive relationship between human capital and entrepreneurial activity. However, not all scholars agree on a positive relationship and point to different aspects influencing the relationship between human capital and entrepreneurship (Davidsson & Honig, 2003).

Based on Becker (1975, 1993), two human capital categories can be distinguished, namely general human capital and specific human capital. General human capital includes general experience and abilities that can be adapted to different contexts, such as other industries (Ucbasaran et al., 2008). Consequently, high levels of general human capital are relevant for diverse business environments (Gimeno et al., 1997). General human capital normally refers to educational experience, measured as years of education, or work experience, measured as years of prior work experience (Wiklund & Shepherd, 2003). Specific human capital covers specific experience and abilities that can only be executed in a specific context (Ucbasaran et al., 2008). Thus, higher specific human capital is only advantageous in the same business environment (Gimeno et al., 1997). Entrepreneurship-specific human capital is one form of specific human capital, which usually refers to prior entrepreneurial experience (Gimeno et al., 1997; Ucbasaran et al., 2008; Wiklund & Shepherd, 2003). Several entrepreneurial scholars have analyzed the two human capital categories and their influence on entrepreneurial activities (e.g., Bosma et al., 2004; Colombo & Grilli, 2005; Gimeno et al., 1997; Ucbasaran et al., 2008; Wiklund & Shepherd, 2003).

Human capital plays a key role in understanding how top management teams (TMT) influence company performance (Dhaouadi, 2014). Many studies aiming to understand the influence of the top management team on the performance of a company follow the upper echelon theory (e.g., Lo & Fu, 2016; Norburn & Birley, 1988; Wiersema & Bantel, 1992). To analyze the relationship between top management teams and performance, upper echelon scholars often study human capital factors, such as educational or work experience at the team level (e.g., Bantel & Jackson, 1989). Entrepreneurial scholars frequently base their assumptions on upper echelon insights (e.g., Amason, Shrader, & Tompson, 2006; Beckman, Burton, & O'Reilly, 2007; Chowdhury, 2005; Ucbasaran et al., 2008; Wiklund & Shepherd, 2003;

Zarutskie, 2010), as the entrepreneurial team is the top management team of a new venture. Ucbasaran et al. (2003) reason that "the overall level of human capital in an entrepreneurial founding team can be linked to the quantity and quality of human capital embodied in each member of the team" (Ucbasaran et al., 2003, p. 111). When studying the relationship in more detail, the aggregated human capital experience at the top management team level influences team processes in a first step and, in a second step, indirectly impacts company performance (Zarutskie, 2010). As explained above, opportunity recognition and selection are central sub processes of the entrepreneurial process (Shane & Venkataraman, 2000). Thus, they are assumed to be influenced by the aggregated human capital experience of an entrepreneurial team.

Based on the insight that opportunity recognition is a central question for entrepreneurship research (Gaglio & Katz, 2001), Ucbasaran et al. (2009) argue that it is important to better understand the relationship between general as well as specific human capital of entrepreneurs and opportunity recognition. In order to solve problems such as recognizing opportunities, and make decisions such as selecting one opportunity out of a developed opportunity set, prior experience is crucial (Ucbasaran et al., 2009). The necessary experience can be gained through educational experience, referring to the general human capital category, or specific work experience, referring to the specific human capital category (Davidsson & Honig, 2003). In the following, I describe both experience types, educational experience as well as entrepreneurial experience, in detail.

2.2.3.1 Educational experience

Education is a crucial element of general human capital, as it is assumed to be linked to knowledge, problem-solving skills, motivation, and self-confidence, enhancing an entrepreneur's chances of achieving his or her goals (Cooper, Gimeno-Gascon, & Woo, 1994; Wiklund & Shepherd, 2003).

When analyzing the relationship between educational experience and entrepreneurial activity, scholars usually refer to the level of education (e.g., Colombo & Grilli, 2005; Cooper et al., 1994; Ucbasaran et al., 2008; Wiklund & Shepherd, 2003). The level of education is typically expressed in years of education, either by directly surveying the years of education (e.g., Cooper et al., 1994) or by asking participants about their highest educational degree, which is then translated into years of education (e.g., Wiklund & Shepherd, 2003).

2.2.3.2 Entrepreneurial experience

Entrepreneurship-specific human capital is one type of specific human capital that is valuable primarily in the entrepreneurial context (Bosma et al., 2004). Thus, entrepreneurial scholars (e.g., Bosma et al., 2004, Brüderl & Preisendörfer, 1998; Colombo & Grilli, 2005; Gimeno et al., 1997; Gruber et al., 2008; 2012; Ucbasaran et al., 2008, 2009) typically draw on entrepreneurship-specific experience when studying the link between specific human capital

and entrepreneurial activity. Entrepreneurship-specific experience usually refers to prior founding experience and is measured as the number of ventures an entrepreneur has already founded (e.g., Ucbasaran et al., 2008, 2009). Entrepreneurs with prior founding experience have gathered factors, e.g., managerial experience, enhanced reputation, and better networks, that can be used to recognize and pursue entrepreneurial opportunities (Ucbasaran et al., 2008; Shane & Khurana, 2003).

Entrepreneurs with prior entrepreneurial experience may have obtained a special understanding of the entrepreneurial process. This knowledge can only be gained by actually founding a venture and cannot be substituted through other activities (Delmar & Shane, 2006). Actors that gain experience in a special area create complex cognitive structures that can later be used to solve problems (Gruber et al., 2008). In the entrepreneurial context, these frameworks may enable entrepreneurs to achieve a higher opportunity recognition performance based on developed opportunity recognition schemata (Gruber et al., 2008). Consistent with these arguments, prior research shows that entrepreneurs with entrepreneurship-specific experience have better cognitive schemata for business opportunities than those without entrepreneurial experience (Baron & Ensley, 2006) and achieve a higher opportunity recognition performance (Ucbasaran et al., 2008). Gruber et al. (2008), for example, find that one success factor for technology-based entrepreneurship is to first recognize a set of different business opportunities and then select the best opportunity out of those developed. Prior entrepreneurial experience helps to successfully execute this two-step process.

As outlined above, it is important to better understand the relationship between general as well as specific human capital of entrepreneurs and opportunity recognition (Ucbasaran et al., 2009). Thus, it makes sense to analyze both types of human capital experience to advance the understanding of the relationship between human capital experience and opportunity recognition performance (Ucbasaran et al., 2008). Ucbasaran et al. (2009) conducted a study in which they analyzed the differences between serial and new entrepreneurs with regard to opportunity recognition and exploitation performance. They found that entrepreneurs without prior entrepreneurial experience, i.e., those who had not founded a venture before, could compensate for a lower level of entrepreneurship-specific human capital by enhancing their general human capital through additional education or training to improve their skills. Thereby, they showed the relevance of general as well as entrepreneurship-specific human capital in opportunity recognition. In addition, in a prior study, Ucbasaran et al. (2008) found that entrepreneurship-specific human capital has a stronger influence on opportunity recognition than general human capital.

2.2.4 Opportunity-related experience

Entrepreneurial teams often discover or develop a technology on which they want to build their venture. In order to become a successful technology venture, one of the most important steps is to recognize appropriate and promising business opportunities for this technology (Gruber et al., 2013; Kor et al., 2007). The so-called technology-to-market linking (Gruber et al., 2013, p. 282) can be seen as the basic problem that has to be solved to enter a market and enable

venture success. Based on Dougehrty (1992) and Danneels (2002), Gruber et al. (2008) explain the technology-to-market linking problem as follows: "In its most basic form, technology-to-market linking can be seen as the combination of technological knowledge with information on market demand, i.e. end-user domains where the technology, as embodied in a product, can be meaningfully employed and can create benefits for its users" (Gruber et al., 2008, p. 1653).

Thus, recognizing opportunities means looking for potential market applications for the developed technology (Gregoire et al., 2010). Despite the relevance for the entrepreneurship, strategy, and organizational literature (Dougehrty, 1992; Gruber et al., 2008) as well as for practice (Shane, 2004), there is only little research on the technology-to-market linking problem (e.g., Gruber et al., 2008, 2012; Helfat & Lieberman, 2002).

To generate profit, entrepreneurial teams have to discover at least one potential market opportunity. However, there are often different market possibilities to exploit the technology (Shane, 2000). Thus, in order to enhance the chances of success, entrepreneurs have to identify different business opportunities for different potential markets in a first step and then select the most promising one in a second step (Gruber et al., 2008). The difficulty in identifying different or even all possible business opportunities has been shown by prior research. Shane (2000), for example, conducted a study in which entrepreneurs had to recognize business opportunities for a given technology that was developed by the Massachusetts Institute of Technology. Each of the eight participants identified only one opportunity, although there were at least eight different business options for this technology. In addition, he found that all participating entrepreneurs recognized opportunities that reflected their prior market knowledge. Based on Venkataraman (1997), he concludes that "individuals who have developed particular knowledge through education and work experience will be more likely than other people to discover particular entrepreneurial opportunities in response to a given technological change" (Shane, 2000, p. 465).

To solve the fundamental technology-to-market linking problem within an entrepreneurial team, two experience dimensions besides entrepreneurial experience are necessary, namely technological experience and industry experience (Danneels, 2002; 2007; Gruber et al., 2008; 2013), which can be summarized as opportunity-related experience. The two opportunity-related experience dimensions are described in the following.

2.2.4.1 Technological experience

Following Penrose (1959), scholars (e.g., Danneels, 2007) of the resource-based view in strategic management explain that one technology can be successfully applied in completely different markets. This means that in technological ventures the technology knowledge goes beyond a specific product and can generate benefits in different markets to enhance venture success (Gruber et al., 2008). The available technological experience in an entrepreneurial team is crucial for the technology leveraging process, which is needed to solve the technology-to-market linking problem and which

consists of two phases (Gruber et al., 2013). In a first "delinking" step (p. 283), the entrepreneurial team has to understand and assess the technological basis, e.g., properties, components, and functionalities, of the venture, independent of a business application (Gruber et al., 2013). In a second "relinking" step (p. 283), the entrepreneurial team has to identify business applications for its technological capital (Gruber et al., 2013). Consequently, entrepreneurial teams with a higher level of technological experience will be more successful in the technology leveraging process, as it is easier for them to understand and assess their technological basis and apply it to customer requirements (Cohen & Levinthal, 1990; Danneels, 2002; 2007; Gruber et al., 2013).

Possessing a high level of knowledge in a specialized field, e.g., technological experience, leads to higher performance in this specialization area (Gruber et al., 2012). However, prior research indicates that a deep specialization in one field could also hinder a broad perspective on a problem or task and could thus restrain cognitive flexibility (Dearborn & Simon, 1958). Technology specialists usually focus only on technological functions or features and often have only minor contact to markets (Dougherty, 1992; Jolly, 1997). Thus, they may spend too much time on the technological aspect of the technology-to-market linking problem instead of also taking the time to recognize a set of business opportunities (Dougherty, 1992; Gruber et al., 2012). Consistent with this negative view on technological experience, Gruber et al. (2012) find that higher levels of technological experience negatively influence the opportunity recognition of entrepreneurs, measured as the number of opportunities recognized.

2.2.4.2 Industry experience

Entrepreneurs recognize opportunities that reflect their prior knowledge (Shane, 2000). Thus, when looking for business opportunities to solve the technology-to-market linking problem, the prior industry experience plays a major role (Gruber et al., 2013; Shane, 2000). Shane (2000) defines three major dimensions of prior knowledge that are relevant for the recognition of a potential market: prior knowledge of markets, prior knowledge of ways to serve markets, and prior knowledge of customer problems. All three knowledge dimensions are gained through prior work experience within a specific industry.

Looking for potential business opportunities can be understood as an organizational search problem, which consists of "the acquisition of knowledge on market opportunities" (Gruber et al., 2008, p. 1654). The literature on organizational learning argues that search activities are crucial for the recognition of opportunities leading to higher performance (Gruber et al., 2008). There are two different ways of searching, namely locally and globally (Gruber et al., 2008). Local search focuses on the environment that people already have experience in (March & Simon, 1958), whereas global search intends to gain new experience (March, 1991). When defining the algorithm for technological search, scholars normally use local search, as it is less risky (Stuart & Podolny, 1996). Shane (2000) applies this insight to the entrepreneurial context and concludes that entrepreneurs are more likely to recognize opportunities that are related to their prior industry experience. To put it differently, each entrepreneur has an individual cognitive framework based on

prior industry experience, which differs from the cognitive framework of other entrepreneurs depending on their prior industry experience. Thus, the individual cognitive framework, which is based on prior industry experience, is crucial for the recognition of opportunities (Baron & Ensley, 2006).

Entrepreneurs with prior experience in an industry are familiar with market characteristics, e.g., suppliers, sales channels, and capital requirements (von Hippel, 1988). Thus, they have an information advantage compared to entrepreneurs without that industry experience, as this information is not available to everyone but can be used to recognize opportunities (Shane, 2000).

In the abovementioned study with eight entrepreneurs (Shane, 2000) who recognized opportunities for the same given technology (3D printing), the identified opportunities of all entrepreneurs reflected their prior industry experience. For example, an entrepreneur with prior experience in the architectural environment identified a 3D printing business solution for the architectural market, while a pharmaceutical background led to a pharmaceutical 3D printing solution (Shane, 2000). Consequently, if a single entrepreneur has prior experience in different industries, he or she should be more likely to recognize a larger opportunity set than a single entrepreneur who possess experience in only one industry. An entrepreneurial team can use the experience of all members in different industries. Consequently, an entrepreneurial team with experience in more industries should recognize a larger opportunity set than an entrepreneurial team with experience in fewer industries (Gruber et al., 2013). Gruber et al. (2013) prove that entrepreneurial teams that have worked in more diverse industries recognize a larger set of business opportunities before exploiting one of these opportunities than entrepreneurial teams with less diverse industry experience.

2.3 Importance of intra-team trust in opportunity recognition and selection

In this section, I explain the relevance of intra-team trust in opportunity recognition and selection. First, I give an overview of different forms of trust and outline their role for entrepreneurship (section 2.3.1). Second, I describe the role of trust in team performance and present two different perspectives, namely the social capital perspective and the emergent state perspective (section 2.3.2). Third, I illustrate the potential negative effects of trust on opportunity recognition and team performance (section 2.3.3).

2.3.1 Trust and entrepreneurship

In many different research fields, e.g., psychology, sociology, and organizational and economic theory, scholars attribute an important role to trust. Due to the extensive use of this concept in diverse disciplines, there is no common definition, and different definitions exist even within literature streams (Welter & Smallbone, 2006). Some scholars (e.g., Endreß, 2004) even mention that the use of trust in research is much higher than the use of trust in the daily routine. In the field of entrepreneurship, scholars started analyzing the role of trust in entrepreneurial activities rather

late (e.g., Goel & Karri, 2006; Welter & Smallbone, 2006; Zahra et al., 2006). However, the topic has meanwhile substantially gained in importance (Welter, 2012). Different scholars (e.g., Davidsson & Honig, 2003; Johannisson et al., 2002) underline the relevance of the social context in which entrepreneurial activities take place.

The role of trust in the entrepreneurial process is complex, in particular because there are many different views of trust in the entrepreneurship field (Welter & Smallbone, 2006). In her critical review of the entrepreneurship literature on trust, Welter (2012) calls trust an "elusive concept" (p. 195) without any common definition and outlines different forms of trust. Some scholars (e.g., Sako, 1992) refer to trust as, e.g., contract, competence, and goodwill, while others distinguish between institution-based, characteristic-based, and process-based trust (e.g., Zucker, 1986). Other scholars (e.g., McAllister, 1995) use the source as differentiation and distinguish between cognitive-based and affective-based trust.

When it comes to different levels of trust, scholars (e.g., Humphrey & Schmitz, 1998) distinguish between personal, collective, and institutional trust. To enable a clearer classification, Welter (2012) distinguishes only between personal and institutional trust and subsumes collective trust into these two categories. Personal trust, which happens on the micro level, refers to relationships between two or more people based on emotions, intentions, goodwill, benevolence, characteristics of individuals, experiences, knowledge, and competencies (Welter, 2012). On the macro level, institutional trust refers to cultural rules, formal regulations, business infrastructure, and government (Welter, 2012). Both forms of trust are important for entrepreneurship. Entrepreneurial activities are rather indirectly influenced by institutional growth, as entrepreneurs need to perceive the economic environment as stable before they establish new ventures (Welter, 2012). Personal trust draws on strong personal ties, e.g., long-term relationships in the social network, which are crucial for successful entrepreneurial activities (Jenssen & Greve, 2002) in early phases of the entrepreneurial process, as well as for the survival of new ventures (Brüderl & Preisendörfer, 1998; Davidsson & Honig, 2003). One central element of definitions referring to personal trust is reciprocity. Reciprocity means that trust towards someone will be returned and, consequently, the trusted person acts in an expected and benevolent way (Welter, 2012). Past behavior based on honesty, loyalty, sympathy, and empathy, as well as personal characteristics determine the trustworthiness of a person (Nooteboom, 2002), which leads to trusting behavior on the part of the other involved people (Mayer, Davis, & Schoorman, 1995). When it comes to analyzing and understanding the role of trust in entrepreneurship, one of the biggest challenges is that it is not an objective phenomenon, but a socially constructed phenomenon for which interpretation by the actor is essential (Welter & Smallbone, 2006).

Trust plays an important role not only in entrepreneurship in general, but specifically in opportunity recognition and selection. Recognizing business opportunities is a highly social process, as entrepreneurs often try to solve this problem in a team or with the help of partners. Strong ties between the involved partners, expressed through trust or other connecting elements, e.g., a shared vision, are crucial for entrepreneurial opportunity recognition (Gemmell et al.,

2012). However, results concerning the influence of trust on opportunity recognition are discordant. Gemmill et al. (2012) conducted 32 interviews with founders of technology start-ups and found that the strongest tie of an entrepreneur is crucial for his or her behavior in opportunity recognition. Participants performed best in identifying business opportunities when they interacted with a small, selected "inner group" (p. 1060), in which at least one of the group members was a "trusted partner" (p. 1060). Gordon (2006) quantitatively analyzes the role of interpersonal trust towards another individual or group in the process of entrepreneurial opportunity recognition. He finds that entrepreneurs with a high level of interpersonal trust recognize fewer opportunities than those with a lower level of interpersonal trust. Trust between team members is assumed to be essential for decision-making, e.g., selecting an opportunity, in entrepreneurial teams (Talaucar, Grundei, & Werder, 2005). A high level of trust within the entrepreneurial team will enable the exchange of information between team members, whereas in cases of low trust levels, team members may withhold information when they are uncertain whether their comments are wise enough. In addition, if entrepreneurial team members trust each other, they are more likely to give each other advice in order to improve the quality of decision-making (Talaucar et al., 2005). Talaucar et al. (2005) studied the influence of the organizational model of the entrepreneurial team on strategic decision-making, measured as comprehensiveness and speed, depending on the level of trust. They asked the participating entrepreneurial teams whether they had established a departmental model in which entrepreneurial team members had individual decision-making authority for their departments, and/or a CEO model, in which the CEO instructed the other entrepreneurial team members, as both models can be combined. They find only weak indications concerning the influence of trust, but assume based on their observations that intra-team trust prevents loss of comprehensiveness and enables faster decision-making.

2.3.2 Trust and team performance

As illustrated above, many classifications, forms, and definitions of trust exist. Two perspectives of trust are especially relevant when it comes to team performance: the social capital perspective and the emergent state perspective (DeJong & Elfring, 2010; Klotz et al., 2014). I explain both perspectives in the following.

2.3.2.1 Social capital perspective

In their literature review on entrepreneurial teams, Klotz et al. (2014) identify prior experience and social capital as two main categories of team characteristics that strongly influence entrepreneurial team outcomes. The importance of prior experience for entrepreneurship in general, and more specifically for opportunity recognition and selection, is already explained in section 2.2. The influence of intra-team trust, one aspect of social capital, on these entrepreneurial processes is described in the following.

Prior studies show the relevance of social capital for entrepreneurial activities in general, and especially for opportunity recognition (e.g., Davidsson & Honig, 2003; Gordon, 2006; Ozgen & Baron, 2007). A central element of the relationship between social capital and opportunity recognition is the need to handle information asymmetry and resource uncertainty in entrepreneurship (Eckhardt & Shane, 2003). Information asymmetry describes the difference between actors who possess early information about a new way of using resources, e.g., based on technological change, and actors who receive the same information later. Thus, due to their information advantage, early-informed actors might recognize resource-related opportunities earlier (Eckhardt & Shane, 2003). Resource uncertainty refers to the fact that entrepreneurs are often not sure whether they can acquire the necessary resources (Eckhardt & Shane, 2003). Consequently, they might refuse opportunities based on the fear that they might not be able to purchase the necessary resources.

There are different definitions with varying emphases on social capital. Adler and Kwon (2002) categorize the different definitions into external, internal, and both external and internal ties to facilitate the understanding of different research aspects. They describe social capital as a "resource available to actors as a function of their location in the structure of their social relations" (Adler & Kwon, 2002, p. 18). External ties refer to available external resources and networks that are used to capture information and competencies that are not available internally, whereas internal ties focus on the structure, characteristics, and dynamics within a team or organization that increase its ability to achieve common goals. Besides the bridging perspective, which focuses on external ties, and the collective perspective, which emphasizes internal ties, a third, neutral perspective includes external as well as internal ties (Adler & Kwon, 2002).

Scholars disagree on the link between social capital and trust. Some see trust as one form of social capital (Coleman, 1988), others as a source (Putnam, 1993) or a result of social capital (Lin, 1999). To summarize the different understandings, Adler and Kwon (2002) argue that the valuable goodwill, referring to sympathy, trust, and forgiveness that individuals have towards others, is the key element for social capital research. Thus, when analyzing how a team achieves a common goal with the help of its members' valuable goodwill, one central element is trust (Inglehart, 1997). Consequently, trust is important to understand social processes between actors, e.g., entrepreneurial team members.

2.3.2.2 Emergent state perspective

When analyzing the influence of intra-team trust on team performance, trust is often seen as a psychological or a so-called emergent state (e.g., DeJong & Elfring, 2010). Emergent states are "constructs that develop over the life of the team and impact team outcomes" (Ilgen, Hollenbeck, Johnson, & Jundt, 2005, p. 520). Although trusting another person generally relates to the individual level, when analyzing trust in teams, researchers (e.g., DeJong & Elfring, 2010) study trust as a team-level construct and refer to intra-team trust as a shared expectation including all team members. Thus, intra-team trust is an important emergent state providing crucial information about teams (DeJong & Elfring, 2010).

Many scholars agree that diminishing uncertainty is a crucial element of trust, leading to positive expectations towards the trusted individuals (e.g., Mayer et al., 1995; Rousseau, Sitkin, Burt, & Camerer, 1998). Focusing on intra-team trust in the present study, I follow DeJong and Elfring (2010), who define interpersonal trust "as a psychological state of individuals involving confident, positive expectations about the actions of another" (DeJong & Elfring, 2010, p. 536). In addition, they explain that the term intra-team trust refers to "shared generalized perceptions of trust that team members have in their fellow teammates" (DeJong & Elfring, 2010, p. 536). They underline that intra-personal trust and intra-team trust are analogous in nature and outcome (DeJong & Elfring, 2010).

The influence of intra-team trust in established teams, for example entrepreneurial teams, is assumed to be stronger than in short-term teams, such as project teams, as intra-team relations and the subsequent implications are more important in established teams (Saunders & Ahuja, 2006). Scholars agree that intra-team trust plays an important role in team performance (DeJong & Elfring, 2010; Langfred, 2004; Porter & Lilly, 1996; Zand, 1972), especially in entrepreneurial teams (Klotz et al., 2014), but literature on how intra-team trust influences team performance is scant (Dirks & Ferrin, 2001).

Dirks and Ferrin (2001) distinguish two different ways in which trust may influence outcomes and define the circumstances that determine the appropriate way. First, trust can directly affect team performance and, second, trust can indirectly influence team performance by enabling or constraining main effects as a moderator. Prior studies analyze the direct effect of trust on different outcomes, e.g., team performance (Friedlander, 1970; Klimoski & Karol, 1976). However, trust is often the condition that determines the link between special forms of input and team performance as output (Dirks & Ferrin, 2001). The level of trust shows how people appreciate the behavior of others in vulnerable or risky situations (Dirks & Ferrin, 2001). This impression is based on how they evaluate past situations and how they predict future actions (Dirks & Ferrin, 2001). Consequently, a central element when analyzing trust lies in the interpretation of past behavior or expected future behavior. Thus, the interpretation of situations is the condition that influences the outcome (Dirks & Ferrin, 2001). To understand whether trust influences the outcome directly or indirectly, Dirks and Ferrin (2001) apply the concept of "situational strength" (p. 461), which is often used to study the influence of psychological states (e.g., Davis-Blake & Pfeffer, 1989; House, Shane, & Herold, 1996). They distinguish between "strong situations" (p. 462), in which trust directly influences the output, and "weak situations" (p. 461), in which trust is the condition that facilitates or hinders the outcome, for example team performance. In strong situations, everyone would act in a likewise manner and, consequently, there is no room for interpretation (Dirks & Ferrin, 2001). In weak situations, the interpretation plays a major role (Dirks & Ferrin, 2001). To put it differently, when analyzing the effects of different influencing factors, there are situations in which trust is the main determinant of the outcome, and there are other situations in which trust acts as a moderator of another main determinant (Dirks & Ferrin, 2001).

In a prior study, Dirks (1999) shows that intra-team trust helps to understand the effect of motivation on team performance and team processes, as trust channels the team members' energy towards a better outcome. Prior entrepreneurial studies are in line with this approach and understand intra-team trust as a condition that indirectly influences the outcome if there is another, stronger input factor. Chen and Wang (2008), for example, analyze the influence of external social networks on the innovative capability of a new venture depending on the intra-team trust within the entrepreneurial team. They find that intra-team trust is an important moderator.

2.3.3 Negative effects of trust

While suggesting that scholars should pay more attention to the moderating role of trust as a condition that hinders or facilitates causal relationships, Dirks and Ferrin (2001) emphasize that especially the negative effects of trust should be analyzed in more detail, as researchers mostly focus on the positive effects of trust. When analyzing negative effects of trust, early studies primarily analyze the risk of betrayal and malfeasance (e.g., Granovetter, 1985). In his study about the dark side of interpersonal trust, McAllister (1997), for example, mentions four situations in which higher interpersonal trust is disadvantageous, namely if relationships are manipulated, if trustworthiness is mistakenly assumed, if relationships with trust problems continue, and if existing trusting relationships incur high costs. Hence, prior studies focus mainly on the intentional negative consequences of trust.

Moreover, many scholars are still studying the positive effects of trust in the entrepreneurial field, as well as in other fields (e.g., Bergh, Thorgren, & Wincent, 2011; Fink & Kessler, 2009; Neergaard & Ulhoi, 2006). However, entrepreneurial scholars (e.g., Goel & Karri, 2006; Gordon, 2006; Li, Wang, Huang, & Bai, 2013; Welter, 2012; Zahra et al., 2006) as well as other scholars (e.g., Langfred, 2004) have already started analyzing the negative implications of trust. More specifically, scholars have already found some indication of the negative effect of trust on opportunity recognition performance.

Gordon (2006), for example, studies the influence of interpersonal trust towards another individual or group on opportunity recognition performance, which is measured as the number of opportunities identified, and finds that a higher level of interpersonal trust leads to a lower number of identified business opportunities and, consequently, to a poorer opportunity recognition performance.

Zahra et al. (2006) analyze the influence of relational trust within groups or networks in the different phases of new business creation in established companies. They argue that relational trust is crucial in the different phases of corporate entrepreneurial activities, including the recognition and selection of new business opportunities. They outline five different phases of new business creation in established companies, namely opportunity recognition, opportunity evaluation, refinement and framing, championing, and initiation and internationalization. Hence, the two first phases are equal

to the entrepreneurial process for new venture creation. Zahra et al. (2006) mention four potential downsides of relational trust, each in the opportunity recognition or opportunity evaluation phase. They explain that the main risks during opportunity recognition are thinking alike, concentrating on existing sources, rejecting alternative sources, and concentrating on already known opportunities. The main risks are described in the following based on Zahra et al. (2006). When thinking alike, actors ignore the external environment, including sources that are farther away, and fail to develop strategic vision. In addition, concentrating on existing sources leads to more suspicion towards unknown sources. When rejecting alternative sources, actors fail to even consider other sources that could be better. If entrepreneurs concentrate on familiar opportunities, they are more hesitant to pursue radically new opportunities, although these radically new opportunities might substantially advance the opportunity recognition. The possible negative effects of high relational trust in the opportunity evaluation phase are a lack of objectivity, overconfidence and flawed evaluations, overlooking due diligence, and overemphasizing intangibles (Zahra et al., 2006). According to Zahra et al. (2006), the crucial element that explains the risk of relational trust in this phase is an informal evaluation of opportunities by a group or network. They argue that informal evaluations lead to less rigorous analysis and that high relational trust between the involved people may thus lead to an assessment that is less formal. These informal assessment situations can enable a less strict evaluation of risky or extreme business opportunities based on a lower fear of failure due to the high level of trust (Zahra et al., 2006). Thus, the assessment of the decision-makers is flawed and less objective, important aspects are overlooked, and crucial economic impacts are not considered (Zahra et al., 2006). Consequently, high unexpected additional costs can arise (Zahra et al., 2006). In addition, in an environment of high trust, decision-makers may be less likely to question the proposed results on which they base their decision (Zahra et al., 2006).

Langfred (2004) studies the role of trust in self-managing teams. In self-managing teams, the interdependent team members can decide who is responsible for which task and how the task will be accomplished (Cohen, Ledford, & Spreitzer, 1996; Langfred, 2004). Consequently, an entrepreneurial team is a self-managing work team. Langfred (2004) analyzes whether team members in self-managing work teams are more reluctant to monitor each other if intra-team trust is high. Monitoring team members means that one observes and supervises what the other members do (Langfred, 2004). In self-managing teams, there is no supervisor who is responsible for supervising the team members. Consequently, it should be the task of the team members themselves to monitor each other (Langfred, 2004). However, a high level of intra-team trust can act as a social effect preventing team members from articulating that there is a need for monitoring within the team (Langfred, 2004). Team members could fear that their calls for monitoring will be perceived by their teammates as a lack of trust and that the teammates could thus sanction that behavior (Feldman, 1984). Langfred (2004) highlights two reasons that make it difficult for members of teams with a high level of intra-team trust to question their teammates' behavior. First, they wish to fit into the team dynamic and be considered a "team player" (p. 386). Second, they fear being rejected or even punished by other team members. Each individual team

member struggles with these wishes and fears. Consequently, conforming decisions are often easier for all team members, as they do not risk hurting other team members' feelings (Langfred, 2004). In teams with a high level of intra-team trust, team members are more likely to feel forced to conform to the team opinion, as intra-team trust leads them to approve the team influence (Baron, Vandello, & Brunzman, 1996). Langfred (2004) contributes to the literature on negative effects of trust at the team level with his finding that team members in self-managing work teams are more reluctant to monitor each other if intra-team trust is high.

Despite first studies on the negative effects of trust, Welter (2012) suggests in her review of the entrepreneurship literature on trust that future research about the relationship between trust and entrepreneurship should take a critical stance and better include the potential downsides of trust, which is part of the present thesis.

2.4 Hypothesis development

In this section, I first summarize the theoretical background outlined above. Based on that summary, I then derive the hypotheses on how different experience dimensions influence opportunity recognition performance under the condition of intra-team trust in entrepreneurial teams.

Opportunities play an important role in understanding the entrepreneurial process (Shane & Venkataraman, 2000). According to recent studies (e.g., Grégoire et al., 2010), opportunity recognition and opportunity evaluation are the core stages of the entrepreneurial process. Opportunity evaluation can be understood as a decision-making process through which entrepreneurs assess and select an opportunity (Haynie et al., 2009). Scholars (e.g., Foss et al., 2008) acknowledge the relevance of team-based opportunity recognition and selection and call for future research to analyze the role of teams (Busenitz et al., 2014). Prior research (e.g., Perry-Smith & Coff, 2011) finds that teams achieve superior entrepreneurial creativity when they are effective in both recognizing opportunities and selecting the best opportunity out of the developed opportunity set. Thus, it is important to analyze both phases and not only one when drawing conclusions about team performance in the opportunity process. For most companies, recognizing and selecting one brilliant idea is much better than having a large number of average opportunities, as they can only act on one opportunity, not on many (Girotra et al., 2010). Consequently, when evaluating whether teams perform well in the opportunity process, scholars should assess how valuable the team's best opportunity is and whether the team selected the best out of all recognized opportunities within the team (Girotra et al., 2010).

Prior experience plays an important role in opportunity recognition, as entrepreneurs identify only opportunities in their knowledge corridor (Shane, 2000). The relevance of prior knowledge at the entrepreneurial team level—i.e., the experience brought together by all entrepreneurial team members (Ucbasaran et al., 2003)—for opportunity recognition has already been acknowledged (Klotz et al., 2014). Crucial experience dimensions for entrepreneurial teams can be classified into three categories, namely team experience (Eisenhardt & Schoonhoven, 1990), human capital experience

(Ucbasaran et al., 2003; 2008; 2009), and opportunity-related experience (Gruber et al., 2008; 2012, 2013). One important dimension in the team experience category is the joint team experience of the entrepreneurial team (Eisenhardt & Schoonhoven, 1990), which refers to the prior experience working as a team (Taylor & Greve, 2006). Joint team experience influences team performance (Taylor & Greve, 2006), as it leads, for example, to communication facilitation (Pfeffer, 1983). Another category that is crucial for performance in general (Bosma et al., 2004), and specifically for opportunity recognition (Ucbasaran et al., 2008), is human capital. General human capital and specific human capital are the two main aspects (Becker, 1975, 1993) in this category. In the entrepreneurial context, educational experience is an important representative of general human capital (Cooper et al., 1994; Wiklund & Shepherd, 2003), whereas entrepreneurial experience best illustrates entrepreneurship-specific human capital (Ucbasaran et al., 2008). Both experience dimensions, educational experience and entrepreneurial experience, are crucial for the opportunity process (Ucbasaran et al., 2009). The third relevant category for opportunity recognition and selection is opportunity-related experience, which consists of technology experience and industry experience and is required to solve the technology-to-market linking problem, which is the basic problem for entrepreneurial opportunity recognition and selection (Gruber et al., 2008).

The social context plays a crucial role in entrepreneurship (Davidsson & Honig, 2003). One of the important social factors in entrepreneurship is trust (Welter & Smallbone, 2006), as intra-team trust is essential for entrepreneurial teams (Klotz et al., 2014). Scholars (e.g., Dirks & Ferrin, 2001) suggest that, when it comes to team performance, intra-team trust should be studied as a condition rather than a main input factor. The potential negative effect of interpersonal trust has recently gained attention from entrepreneurial scholars, also including opportunity recognition and opportunity selection (e.g., Goel & Karri, 2006; Gordon, 2006; Zahra et al., 2006).

The above summary of the relevant theoretical background outlines the importance of a high performance in the opportunity recognition and selection by entrepreneurial teams. In addition, it explains the relevance of different experience dimensions as well as the role of intra-team trust for opportunity recognition and selection. In order to study the interacting effect of prior experience dimensions and intra-team trust on the opportunity process, I follow Dirks and Ferrin (2001) and draw on the concept of "situational strength" (p. 461). According to Dirks and Ferrin (2001), from an intra-team trust perspective, the present situations are "weak situations" (p. 461), as interpretation plays an important role. To put it differently, the interpretation of past behavior or expected future behavior is the central element in studying intra-team trust (Dirks & Ferrin, 2001). Thus, in this case, prior experience is the determinant that directly influences the output. Consequently, in the present study, intra-team trust is the condition that hinders or facilitates the influence of several prior experience dimensions on opportunity recognition and selection performance.

In this study, I analyze the relationships between the five relevant experience dimensions, namely joint team experience, educational experience, entrepreneurial experience, technological experience, and industry experience, and the opportunity recognition performance of entrepreneurial teams under the condition of intra-team trust. The opportunity recognition performance of entrepreneurial teams includes the performance in the opportunity recognition phase as well as in the opportunity selection phase. According to Girotra et al. (2010) the performance in opportunity recognition should be measured as the quality of the best opportunity, referring to the opportunity recognition phase, and the ability to select the best opportunity, drawing on the opportunity selection phase. Consequently, I develop two models, Model A and Model B, each of which measures the performance in one of the opportunity process phases, opportunity recognition or opportunity selection. Model A refers to the opportunity recognition phase and shows the influence of the different experience dimensions on the quality of the selected opportunity, which is measured as the business value of the selected opportunity, under the condition of intra-team trust. Model B draws on the opportunity selection phase and analyzes whether the entrepreneurial team has selected the best opportunity out of the opportunity set developed by the team. Thus, Model B illustrates the relationship between the different experience dimensions and the selection performance, which is measured as the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, under the moderating influence of intra-team trust.

The hypotheses for both models, Model A with the quality of the selected opportunity as performance measure, and Model B with the selection performance as performance measure, are derived in the following. First, I develop the hypothesis for the interaction effect between joint team experience and intra-team trust for both theoretical models (section 2.4.1). Second, I hypothesize the interaction effect between educational experience and intra-team trust for both theoretical models (section 2.4.2). Third, I theorize on the interaction effect between entrepreneurial experience and intra-team trust for both theoretical models (section 2.4.3). Fourth, I postulate the interaction effect between technological experience and intra-team trust for both theoretical models (section 2.4.4). Finally, I hypothesize the interaction effect between industry experience and intra-team trust for both theoretical models (section 2.4.5). Figure 2 shows the theoretical model for the quality of the selected opportunity as performance measure in the opportunity recognition phase, including the five hypotheses for this model. Figure 3 illustrates the theoretical model of the selection performance as performance measure in the opportunity selection phase, including the five corresponding hypotheses. Both illustrations present an overview of the hypotheses derived in this section.

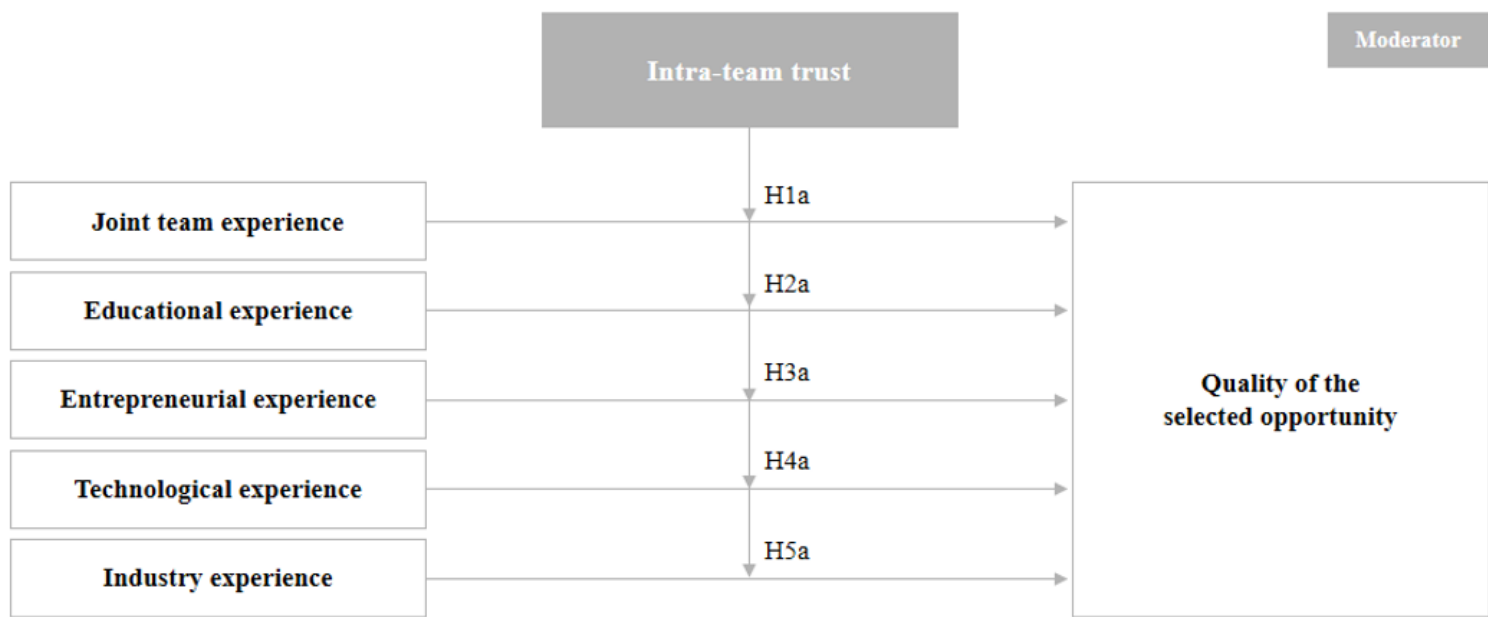


Figure 2: Theoretical model for the quality of the selected opportunity as performance measure in the opportunity recognition phase

Source: Own illustration

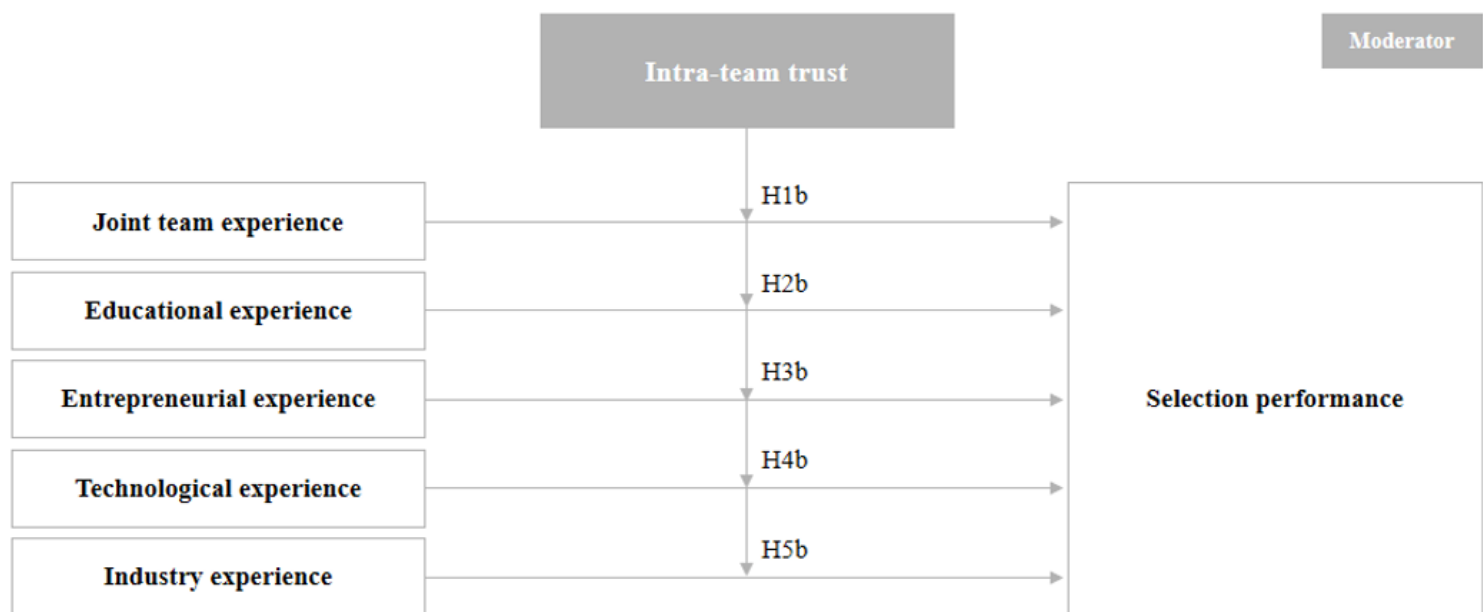


Figure 3: Theoretical model for selection performance as performance measure in the opportunity selection phase

Source: Own illustration

2.4.1 The negative interaction effect between joint team experience and intra-team trust on opportunity recognition performance

As argued in section 2.2.2.1 joint team experience of entrepreneurial teams plays an important role in performance (e.g., Eisenhardt & Schoonhoven, 1990; Roure & Maidique, 1986) and is assumed to influence opportunity recognition and selection in entrepreneurial teams.

Drawing on existing research, I outline three explanation approaches for why a higher level of joint team experience normally leads to better opportunity recognition performance.

First, higher joint team experience leads to better communication. When teams have a common work history, they have gone through a process of socialization together (Katz, 1982). During the socialization process, team members assimilate to each other. Therefore, it is easier for them to communicate. Conversely, if teams have only a low level of joint team experience, communication difficulties are still present (Pfeffer, 1983). Prior research (Taylor & Greve, 2006) supports this positive influence, showing that higher joint team experience leads to better team performance.

Second, a higher level of joint team experience is assumed to lead to better coordination and more effective decision-making within the team, as team members are already used to working together closely and making joint decisions (Cohen, 1997).

Finally, scholars (e.g., Eisenhardt & Schoonhoven, 1990; Roure & Maidique, 1986) recognized early on that joint work experience of entrepreneurial teams is an important determinant for performance. Roure and Maidique (1986) find that ventures of entrepreneurial teams with a longer joint team experience are more successful than ventures of entrepreneurial teams with a shorter joint team experience. The success of the venture is measured as sales performance and venture age. They argue that the entrepreneurial process is characterized by limited time and money. Thus, the entrepreneurial team has to use the restricted time and money to achieve the best possible results. If they need to spend time to develop a good and stable relationship within the team, that time cannot be used for other important activities (Roure & Maidique, 1986). Consequently, given the same available time for different entrepreneurial teams, teams with longer prior joint team experience have an advantage over teams without or with less prior joint team experience, as they can spend more time on content-related tasks. Eisenhardt and Schoonhoven (1990) assume that joint team experience will have a positive impact on the performance of the entrepreneurial team. They argue that, if the entrepreneurial teams have common work experience, they are very likely to have already found ways to communicate and cooperate effectively within the team. Thus, performance routines are already established and team members are better aware of the abilities and strengths of other team members. In addition, in line with Roure and Maidique (1986), Eisenhardt and Schoonhoven (1990) underline the advantage of using more available time to solve content problems instead of team problems. The assumptions are supported by their results, as they find that joint team experience positively predicts the sales growth of technology-based ventures in the United States. More recent entrepreneurship scholars still

acknowledge the influence of common work history of entrepreneurial teams on entrepreneurial activities, but focus more on the heterogeneity of team tenures, referring to team member entries and exits (e.g., Beckman et al., 2007; Ucbasaran et al., 2003). Thus, it is even more important to close the gap and analyze the influence of joint team experience on opportunity recognition performance in entrepreneurial teams, instead of using venture performance as the outcome.

In summary, these arguments indicate that a common work history leads to positive effects that should help entrepreneurial teams achieve a higher opportunity recognition performance. In the present study, I call these advantageous effects of a prior team working history the "treasure trove of joint team experience."

Taylor and Greve (2006) argue that two different factors are necessary to come to an innovative idea, namely the available prior experience (Ahuja, 2000; Powell, Koput, & Smith-Doerr, 1996) in combination with the ability of a team or an individual to use that available prior experience (Brown & Duguid, 1991; von Hippel, 1988). Thus, it is possible that the prior experience required to recognize and select an opportunity that will lead to a great innovation is available within an entrepreneurial team, but that the entrepreneurial team is unable to use this experience as their treasure troves of experience are blocked for different reasons.

Prior research (Dirks & Ferrin, 2001) already argues that intra-team trust can be a condition that prevents a team from achieving the best possible team performance. In the following, I outline four reasons why intra-team trust may negatively influence the interplay between experience and opportunity recognition performance in entrepreneurial teams.

First, entrepreneurs tend to over-trust in relationships, e.g., when making deals (Goel & Karri, 2006). According to Goel and Karri (2006), entrepreneurs are often more willing to trust, as they are used to uncertainty. Conversely, non-entrepreneurs want to protect themselves from these uncertainties. The tendency to over-trust among entrepreneurs can be explained by the fact that entrepreneurs tend to assume that the other involved actor, whom they trust, will contribute his or her share to the trusting fundament. Thus, if intra-team trust prevents teams from using the available experience in the team to achieve higher performance, it is likely that entrepreneurial teams, which tend to over-trust, are affected by this problem.

Second, prior research has already shown that a high level of interpersonal trust can negatively affect performance in the opportunity process. Gordon (2006), for example, studies the role of interpersonal trust towards another individual or group in the entrepreneurial opportunity recognition process. He finds that entrepreneurs with a high level of interpersonal trust achieve a poorer opportunity recognition performance than entrepreneurs with a lower level of interpersonal trust. Consequently, based on the highlighted negative influence of interpersonal trust on performance in the opportunity process, I assume a negative role of intra-team trust when analyzing entrepreneurial team performance in

the opportunity process. As explained in section 2.3.2.2, intra-team trust refers to the shared generalized perceptions of trust that team members have in the other members (DeJong & Elfring, 2010).

Third, prior team research (Langfred, 2004) already shows that intra-team trust can act as a negative condition for team output. Langfred (2004) finds that, in teams with a high level of intra-team trust, team members are more reluctant to express the need to question other team members. This connection can be explained by two reasons: First, they want to be seen as team players and often assume that it is necessary to conform to the common opinion in order to fit into the team dynamic. Second, they are afraid of a negative retaliation reaction by other team members, e.g., rejection or even punishment (Langfred, 2004). In teams with a high level of intra-team trust, members are more likely to think they have to conform to the team opinion (Baron et al., 1996). Consequently, high intra-team trust in entrepreneurial teams can prevent team members from using their treasure trove of prior experience, as they hesitate to question the current discussion, problem-solving approach, or decision-making status.

Finally, Zahra et al. (2006) mention concrete possible downsides of interpersonal trust in the opportunity recognition and the opportunity selection phase. While recognizing opportunities, high interpersonal trust can lead to thinking alike, concentrating on existing sources, rejecting alternative sources, and focusing on already known opportunities (Zahra et al., 2006). Assessments that are less formal, leading to less rigorous analysis, are the main problems for opportunity selection when interpersonal trust is high. A lack of objectivity, overconfidence and flawed evaluations, overlooking due diligence, and an overemphasis of intangibles are the consequences (Zahra et al., 2006). According to DeJong and Elfring (2010), interpersonal trust and intra-team trust are analogous in nature and outcome. Thus, I apply the outlined risk of interpersonal trust to intra-team trust. I assume that the risks mentioned by Zahra et al. (2006) in the opportunity recognition and selection phase can block the available treasure troves of experience in an entrepreneurial team, leading to a lower team performance in both opportunity process phases.

In summary, these arguments indicate that high intra-team trust probably prevents entrepreneurial teams from making the most effective use of their treasure trove of experience, when it would be necessary to use the complete treasure trove of experience to achieve the best possible opportunity recognition performance.

In the following, I explain the concrete interaction problems between joint team experience and intra-team trust for the opportunity recognition and selection phase. First, I postulate a negative moderating role of intra-team trust on the relationship between joint team experience and the quality of the selected opportunity. In doing so, I explain how potential downsides of intra-team trust during the opportunity recognition phase may prevent entrepreneurial teams from making the best possible use of their available treasure trove of joint team experience to recognize high-quality opportunities (section 2.4.1.1). Second, I hypothesize a negative moderating influence of intra-team trust on the link between joint team experience and selection performance. Hence, I draw on the outlined risks of intra-team trust during

the opportunity selection phase, which also prevents teams from effectively using their joint team experience (section 2.4.1.2).

2.4.1.1 Quality of the selected opportunity

The higher the joint team experience is, the better the communication (Katz, 1982; Pfeffer, 1983; Taylor & Greve, 2006) and coordination (Cohen, 1997; Eisenhardt & Schoonhoven, 1990). Thus, established performance routines (Eisenhardt & Schoonhoven, 1990) normally lead to more effective performance output (Cohen, 1997). However, I assume that entrepreneurial teams with higher intra-team trust levels are less able to benefit from these communication and coordination advantages. Even the already established performance routines (Eisenhardt & Schoonhoven, 1990) may not be sufficient to push the entrepreneurial teams to the best possible output, as the teams are more and more limited by the impulse to look for familiar aspects instead of searching in unfamiliar fields, where the best possible opportunity may be. In teams with high joint team experience, a high level of interpersonal trust might lead members to think alike, leading to strategic blindness (Zahra et al., 2006). They concentrate on existing sources and opportunities and even reject alternative ones (Zahra et al., 2006). Thus, teams fail to come up with rigorous evaluations, which should be based on an objective and systematic assessment. In addition, completely new fields are not explored, which carries the risk that helpful ideas may be overlooked, ignored, or suppressed, leading to a limited and even biased opportunity recognition (Zahra et al., 2006). This effect might even be stronger if the highly trusting entrepreneurial team has a longer joint team experience, as it relies even more on its established performance routines within the familiar field. Thus, the communication and coordination advantage of high joint team experience might show negative consequences in highly trusting teams.

The longer the common work history is, the more team members are aware of their teammates' strengths and abilities (Eisenhardt & Schoonhoven, 1990) and the more time the team normally has to concentrate on content-related tasks and problems, e.g., recognizing opportunities, instead of handling team issues (Eisenhardt & Schoonhoven, 1990; Roure & Maidique, 1986). However, the higher the intra-team trust level is, the more difficult is it to question a teammate (Langfred, 2004), especially when other team members are aware of his or her strengths and abilities based on a longer common work history. Consequently, challenging another team member's opinion, while being aware of his or competence, could probably be understood as an abuse of confidence (Langfred, 2004). However, to achieve a higher performance, it would probably be helpful to challenge each other's opinions to best advance the opportunity recognition performance. In addition, the higher the intra-team trust level is, the more the team is preoccupied with other team-related issues, e.g., the fear of not fitting into the team dynamic (Langfred, 2004). This is especially problematic as the team may think that it has saved valuable time in the process as they are already adapted to each other (Eisenhardt & Schoonhoven, 1990; Roure & Maidique, 1986).

In summary, these arguments indicate that a high level of intra-team trust prevents entrepreneurial teams from making the best possible use of the described treasure troves of joint team experience. Consequently, they will achieve a lower performance in the recognition phase, which is measured as the quality of the selected opportunity in the present study. Thus,

Hypothesis 1a: Intra-team trust will moderate the relationship between joint team experience and the business value of the selected opportunity, such that entrepreneurial teams with higher intra-team trust will be more likely to select an opportunity with a lower business value than entrepreneurial teams with lower intra-team trust.

2.4.1.2 Selection performance

A higher level of joint team experience usually leads to more effective decision-making, as the entrepreneurial team is already used to working together and making joint decisions (Cohen, 1997). However, if teams have a common work history, high intra-team trust might lead to a more informal assessment of opportunities. Informal assessments are often insufficient due to a lack of objectivity, overconfidence, inaccurate evaluations, and overlooked due diligences (Zahra et al., 2006). In addition, informal evaluation overemphasizes intangibles, leading to overvalued potential upsides and undervalued potential downsides (Zahra et al., 2006). In an informal environment, proposed decisions are often scrutinized less, which can lead to a worse decision quality (Zahra et al., 2006). The more joint team experience a highly trusting entrepreneurial team has, the more likely it is to rely on informal assessments. An entrepreneurial team with high joint team experience has a long history of joint decision-making and probably sees no need for a detailed formal assessment, especially if trust is high, so the tendency towards informal evaluation might be stronger. Thus, team members are less likely to scrutinize proposed decisions of their teammates and, consequently, the team is not able to achieve the best possible selection performance.

Additionally, if team members that are aware of the competences of other team members based on a long common team history (Eisenhardt & Schoonhoven, 1990) highly trust each other, they probably do not want to hurt their teammates' feelings. The fear of hurting a teammate may be stronger the longer the joint work experience is. Conforming decisions are often easier for all team members, as they do not risk hurting other team members' feelings (Langfred, 2004). However, if bad decisions are not questioned by team members, the team cannot achieve the best possible selection performance.

Taking these arguments together, I assume that entrepreneurial teams with a high level of intra-team trust perform worse in selecting an opportunity, measured as the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, than entrepreneurial teams with a low level of intra-team trust. Thus,

Hypothesis 1b: Intra-team trust will moderate the relationship between joint team experience and the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, such that the difference between the business value of the selected opportunity and the average business value of all the recognized opportunities is more likely to be smaller for entrepreneurial teams with higher intra-team trust than for entrepreneurial teams with lower intra-team trust.

2.4.2 The negative interaction effect between educational experience and intra-team trust on opportunity recognition performance

Based on prior research on general human capital, I suggest two reasons why the level of education, referred to as educational experience in this study, normally positively influences the opportunity recognition performance. I refer to these benefits of a higher level of education as the "treasure trove of educational experience."

First, a high education level is assumed to increase entrepreneurial performance. If an entrepreneur receives formal education, e.g., through university, he or she may gather additional experience that helps to be successful in entrepreneurial activities (Davidsson & Honig, 2003). Education can be seen as an investment that later pays off in the form of performance (Gimeno et al., 1997). Education is a source of knowledge, skills, problem-solving ability, discipline, motivation, and self-confidence. These factors can help individuals solve tasks and achieve a high level of productivity (Cooper et al., 1994; Ucbasaran et al., 2008). Scholars even argue that a high level of education can be seen as proof of higher inherent productivity (Arrow, 1973). The positive influence of an entrepreneur's high level of education on the opportunity recognition performance has already been shown. Prior entrepreneurial scholars have already found evidence of a positive relationship between a high level of education and the opportunity process. Davidsson and Honig (2003), for example, find that a higher level of education helps nascent entrepreneurs recognize opportunities. In addition, Schultz (1959) assumes that an entrepreneur's high level of education might strengthen his or her cognitive abilities for the opportunity evaluation.

Second, scholars (e.g., Wiklund & Shepherd, 2003) argue that a high education level helps entrepreneurs achieve their aspirations because they possess more knowledge and better skills. Thus, it is difficult for entrepreneurs with a low level of education to achieve their aspiration level, even if they are highly motivated (Wiklund & Shepherd, 2003). Consequently, even if entrepreneurial teams with a low level of education strive for a high opportunity recognition performance, realizing it could be difficult due to a lack of education.

The outcome of the opportunity recognition process is determined not only by the available prior experience, but also by an entrepreneurial team's ability to use the available experience (Taylor & Greve, 2006). As outlined above with regard to joint team experience, intra-team trust can be a condition that prevents entrepreneurial teams from making the best possible use of their prior experience (cf. section 2.4.1). When it comes to prior educational experience, the

mentioned downsides of intra-team trust for the opportunity recognition and selection phase (Zahra et al., 2006) are the same; they do not prevent the entrepreneurial team from using the positive effects of joint team experience, but the outlined risks prevent entrepreneurial teams from making the best possible use of their available treasure trove of educational experience.

In the following, I hypothesize a negative interaction effect of educational experience and intra-team trust, first on the quality of the selected opportunity (section 2.4.2.1), and second on the selection performance (section 2.4.2.2).

2.4.2.1 Quality of the selected opportunity

A higher education level normally enables entrepreneurs to achieve a high performance in entrepreneurial activities (Davidsson & Honig, 2003; Gimeno et al., 1997). Highly educated people are better equipped with skills, problem-solving ability, discipline, motivation, and self-confidence (Cooper et al., 1994; Ucbasaran et al., 2008). These abilities should help entrepreneurial teams recognize higher-quality opportunities. However, if highly educated entrepreneurial teams have a high level of intra-team trust, team members might have problems questioning each other (Langfred, 2004), as they are aware of their teammates' good education. When they question the proposed opportunity, they are also challenging the skills and problem-solving abilities the teammate used to identify the opportunity. I assume that the higher the education level of the teammate is in a highly trusting team, the harder is it to challenge the proposed opportunities, as questioning the skills and problem-solving abilities of highly educated people could be understood even more as a lack of trust and could consequently lead to rejection. Thus, I assume that challenging the propositions of other team members in a highly-educated entrepreneurial team would be easier if intra-team trust is lower, as team members' fear of being rejected by other team members is smaller. Not challenging other opinions within the team carries the risk of potentially not advancing the solution to the best quality level that could be achieved based on the available treasure trove of educational experience.

In addition, a higher education level generally enables entrepreneurs to achieve their aspirations (Wiklund & Shepherd, 2003). Thus, entrepreneurial teams should normally benefit from their high education levels when it comes to recognizing valuable opportunities. However, high intra-team trust might force team members to think alike and focus on known fields (Zahra et al., 2006) in highly educated entrepreneurial teams. Consequently, if a brilliant opportunity that would meet the aspiration level with regard to quality lies outside the familiar environment, it is difficult for the team to recognize this opportunity. The more the team members trust each other in highly educated teams, the more problems they are likely to have in identifying this brilliant opportunity, as they feel even more pressured to stay in their known field. Consequently, a lower level of trust would allow the recognition of opportunities outside the familiar environment and would probably be beneficial in achieving higher performance. This effect might be even stronger if the aspiration level in a highly trusting team is higher due to better education, as there are even fewer opportunities in the familiar field that meet the higher aspiration level.

These arguments provide the theoretical basis for the hypothesis that entrepreneurial teams with a high level of intra-team trust fail to fully use their treasure trove of educational experience and thus achieve a lower opportunity recognition performance. Thus,

Hypothesis 2a: Intra-team trust will moderate the relationship between educational experience and the business value of the selected opportunity, such that entrepreneurial teams with higher intra-team trust will be more likely to select an opportunity with a lower business value than entrepreneurial teams with lower intra-team trust.

2.4.2.2 Selection performance

Achieving a high education level provides entrepreneurs with skills, problem-solving ability, discipline, motivation, and self-confidence (Cooper et al., 1994; Ucbasaran et al., 2008). These competences enable entrepreneurs to be successful in entrepreneurial activities (Davidsson & Honig, 2003). Thus, entrepreneurial teams should benefit from their education level when selecting an opportunity out of the recognized opportunity set. Nevertheless, in highly educated entrepreneurial teams, a high level of intra-team trust might lead to less formal, and thus insufficient, assessments. Insufficient assessments of opportunities lead to a worse decision quality (Zahra et al., 2006). Consequently, in a highly trusting entrepreneurial team, a team member is less likely to scrutinize the opportunity selection proposed by another team member, which ultimately leads to a worse selection performance. I assume that it is even less likely that team members will scrutinize the selection proposition of a teammate in a highly trusting team if the education level is higher, as the skills and problem-solving abilities of the teammate that made the proposition are even better, and the other team members thus see even less need to challenge the proposition.

In addition, aspiration levels can commonly be more easily achieved when entrepreneurs possess a high level of education (Wiklund & Shepherd, 2003). Consequently, entrepreneurial teams with a higher level of education should normally make a better selection, as they want to choose the best option out of the recognized opportunity set. However, if highly educated entrepreneurial teams are characterized by high trust, they are likely to make more conforming decisions. Team members seek conforming decisions in order to prevent hurting the feeling of other team members (Langfred, 2004). This is likely to also include conforming, but worse selections. In contrast, highly educated entrepreneurial teams with lower levels of trust are less likely to fear the risk of hurting team members and will therefore insist on the best decision, even if it is not conforming. It might even be more difficult to avoid a conforming decision in highly trusting teams if the aspiration level is higher, as there are fewer opportunities that meet the aspiration level.

Consequently, I hypothesize that the level of education and the level of intra-team trust in an entrepreneurial team negatively interact when the team has to select an opportunity. Thus,

Hypothesis 2b: Intra-team trust will moderate the relationship between educational experience and the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, such that the difference between the business value of the selected opportunity and the average business value of all the recognized opportunities is more likely to be smaller for entrepreneurial teams with higher intra-team trust than for entrepreneurial teams with lower intra-team trust.

2.4.3 The negative interaction effect between entrepreneurial experience and intra-team trust on opportunity recognition performance

Having investigated the effects of general human capital on opportunity recognition and selection, I turn next to entrepreneurship-specific human capital. Following the argument by Ucbasaran et al. (2008) that entrepreneurship-specific human capital plays a major role in the opportunity process, I outline four reasons why entrepreneurial teams with high entrepreneurial experience normally achieve a higher opportunity recognition performance. In the present work, I refer to these benefits of entrepreneurship-specific human capital as the "treasure trove of entrepreneurial experience."

First, entrepreneurial teams that have already founded start-ups have already gathered special insights into entrepreneurial activities that they can use to achieve a higher performance. Delmar and Shane (2006) argue that entrepreneurial teams that have already founded ventures may have gained a special understanding of entrepreneurial activities. In line with this argumentation, Ucbasaran et al. (2008) argue that prior founding experience leads to abilities that can be used for the opportunity process.

Second, entrepreneurs with a higher level of entrepreneurial experience have developed so-called "schemata" (Gruber et al., 2008, p. 1655) or "patterns" (Baron & Ensley, 2006, p. 1332) that help them to achieve a higher performance in the opportunity process. According to Gruber et al. (2008), expert information processing theory assumes that experience in a specific field leads to complex cognitive structures. When later solving problems in this field, e.g., the entrepreneurial field, the developed cognitive structures can be used to achieve a higher performance, e.g., the opportunity recognition performance. Ucbasaran et al. (2008) argue that prior entrepreneurship experience can enable entrepreneurs to recognize opportunities that they would not have recognized if they had only relied on their general human capital, because these opportunities would not have been in their experience scope. In line with this argumentation, Baron and Ensley (2006) find that entrepreneurs with prior founding experience have developed meaningful patterns for opportunity recognition. Thus, they are better able to "connect the dots" (p. 1341) between apparently unrelated events than novice entrepreneurs, e.g., in case of change, when they look for business opportunities.

Third, entrepreneurship-specific human capital is less transferable. Abilities and skills gained through prior founding experience are harder to transfer to alternative fields (Gimeno et al., 1997). Entrepreneurs with prior founding experience have already successfully completed the opportunity process for their prior ventures. Thus, they are likely eager to apply their specific abilities and skills to a new opportunity recognition and selection challenge.

Finally, entrepreneurial scholars have already found a positive relationship between prior entrepreneurial experience and performance in the opportunity process (Baron & Ensley, 2006, Gruber et al., 2008; Ucbasaran et al., 2008).

As described above, intra-team trust can lead to team behavior in the opportunity recognition and selection phase that prevents entrepreneurial teams from fully applying the available experience. This probably also holds true for the treasure trove of entrepreneurial experience. Thus, I assume that high levels of intra-team trust negatively influence the relationship between entrepreneurial experience and the quality of the selected opportunity (section 2.4.3.1), as well as the link between entrepreneurial experience and the selection performance (section 2.4.3.2).

2.4.3.1 Quality of the selected opportunity

Entrepreneurial teams with a higher level of entrepreneurial experience have already developed skills that can enable them to better recognize opportunities through their previous activities. They have gained a special understanding of entrepreneurial activities (Delmar & Shane, 2006), better understand markets and customer needs (Gruber et al., 2012), and have developed schemata or patterns, which commonly facilitates the opportunity recognition for them (Baron & Ensley, 2006; Gruber et al., 2008) According to Ucbasaran et al. (2008) these patterns normally enable entrepreneurs to identify opportunities that they would not have identified without entrepreneurial experience, as these opportunities would not have been in their recognition scope. However, a high level of intra-team trust might limit the recognition scope of teams with high entrepreneurial experience, as they might focus only on familiar sources and opportunities. Thus, it is difficult for them to identify opportunities outside their familiar recognition scope (Zahra et al., 2006). Consequently, a lower level of trust would expand their opportunity horizon and thus enable better opportunity recognition performance, as the opportunity with the highest quality may lie outside the familiar scope. The more entrepreneurial experience a team has, the more distinctive the pattern might be. Thus, it might be even more difficult to look outside familiar fields if intra-team trust is high.

Additionally, abilities that are gained through prior founding experience are harder to transfer to other areas (Gimeno et al., 1997). To put it differently, the skills that are necessary to recognize opportunities can normally best be applied when searching for opportunities. Therefore, entrepreneurs with prior opportunity recognition experience should be eager to execute these abilities when it comes to an opportunity recognition task, as it is the problem for which they can best use this knowledge. However, in teams with high entrepreneurial experience, high intra-team trust might prevent individual team members from challenging the suggestions made by other team members. Individuals hesitate to

challenge their teammates' propositions in order to avoid hurting their feelings (Langfred, 2004). As a consequence, they might be hesitant to rely on their entrepreneurial experience in the discussion, which would be needed to recognize an opportunity with a higher quality. Teams with the same entrepreneurial experience but a lower level of intra-team trust are probably less likely to hesitate to express their opinion based on prior founding experience, which is potentially necessary to identify high-quality opportunities. It might be even more difficult to challenge teammates in highly trusting teams if teammates have more prior founding experience, as the teammates see themselves as experts and would be even more hurt if they were challenged.

Taken together, I assume that intra-team trust can be seen as a negative condition for the relationship between entrepreneurial experience and opportunity recognition performance. Thus,

Hypothesis 3a: Intra-team trust will moderate the relationship between entrepreneurial experience and the business value of the selected opportunity, such that entrepreneurial teams with higher intra-team trust will be more likely to select an opportunity with a lower business value than entrepreneurial teams with lower intra-team trust.

2.4.3.2 Selection performance

The treasure trove of entrepreneurial experience consists of a specific understanding of entrepreneurial activities (Delmar & Shane, 2006), a more detailed knowledge of markets and customer needs (Gruber et al., 2012), and already developed schemata or patterns for a successful opportunity process (Baron & Ensley, 2006; Gruber et al., 2008). Normally, a better equipped treasure trove of entrepreneurial experience leads to a higher performance in the opportunity process (Baron & Ensley, 2006; Ucbasaran et al., 2008). Thus, entrepreneurial teams with distinct prior founding experience should normally achieve a higher selection performance in the opportunity process, as they can benefit from their already established knowledge and cognitive patterns. However, in entrepreneurial teams with high entrepreneurial experience, a high level of intra-team trust might lead to a tendency towards less formal evaluation and an insufficient assessment of options. That is, decisions proposed by other team members are questioned less, leading to worse evaluations (Zahra et al., 2006). I assume that the team is consequently unable to fully leverage the available treasure trove of entrepreneurial experience, leading to a lower selection performance. Entrepreneurial teams with the same entrepreneurial experience but lower intra-team trust would more formally evaluate the recognized options and, thus, potentially better apply the available treasure trove of entrepreneurial experience when selecting one opportunity. Consequently, they would achieve a higher selection performance level. The assessment of opportunities might even be less diligent in highly trusting teams with more prior founding experience, as team members might see themselves as entrepreneurial experts and might therefore see no need for a comprehensive evaluation of opportunities.

Moreover, it is more difficult to transfer abilities that were acquired through prior founding experience to another business context (Gimeno et al., 1997). In entrepreneurial teams with a high level of entrepreneurial experience, team members should be eager to apply their knowledge of how to best select an opportunity and thus reach a better selection performance. However, in entrepreneurial teams with high entrepreneurial experience, team members might hesitate to question the selection propositions of other team members if intra-team trust is high. They might be reluctant to question their teammates, as conforming decisions are often more agreeable to all team members (Langfred, 2004). It is probably difficult for individual team members in highly trusting teams to question their teammates, as they know that their teammates have entrepreneurship-specific knowledge that can be best applied to the task and see themselves as experts, so they would probably be hurt if questioned. However, to fully use the available entrepreneurial experience in the team for the selection, each team member would need to contribute his or her experience. As a consequence, if teams are limited by high trust, they can only reach a lower selection performance. Entrepreneurial teams with the same entrepreneurial experience but less trust would be able to make a better selection, as all team members would potentially use their prior founding experience. Consequently, they would most likely achieve a higher performance.

In summary, these arguments indicate that high intra-team trust prevents entrepreneurial teams from making the best use of their treasure troves of entrepreneurial experience for the opportunity selection. Thus,

Hypothesis 3b: Intra-team trust will moderate the relationship between entrepreneurial experience and the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, such that the difference between the business value of the selected opportunity and the average business value of all the recognized opportunities is more likely to be smaller for entrepreneurial teams with higher intra-team trust than for entrepreneurial teams with lower intra-team trust.

2.4.4 The negative interaction effect between technological experience and intra-team trust on opportunity recognition performance

To solve the technology-to-market linking problem, the available technological and industry experience within an entrepreneurial team plays a crucial role (Gruber et al., 2008). In the following, I outline three reasons why high technological knowledge is normally an advantage for entrepreneurial teams when it comes to opportunity recognition. In the present work, I refer to these benefits of high technological knowledge as the "treasure trove of technological experience."

First, to solve the technology-to-market linking problem, an entrepreneurial team needs to conduct a two-step technology leveraging process. First, they must understand and assess the technological basis, e.g., properties, components, and functionalities. This delinking step should happen independently of a business application. Second, for the relinking step, business applications for the available technological capital have to be recognized. For both steps, it is important

that an entrepreneurial team possesses deep technological knowledge. Thus, the technological level is crucial to understand the leveraging capacity of a technology. As a consequence, entrepreneurial teams with a high level of technological experience should have an advantage in the opportunity process compared to teams with a lower level of technological experience (Cohen & Levinthal, 1990; Danneels, 2002; 2007; Gruber et al., 2013).

Second, a high level of technological experience enables a good performance in the corresponding specialized activities. When looking for opportunities, for example, the technological feasibility of a potential product must be assessed (Danneels, 2002), but deep technological knowledge can prevent specialists from taking a broad perspective on a problem-solving task, as they primarily focus on technological functions, instead of also including the market side (Gruber et al., 2012). However, when it comes to specialized activities, e.g., the quality of the selected opportunity and the selection performance, the influence of deep technological experience on the opportunity recognition performance should be positive.

Finally, there is a close link between the technological aspiration level of an organization and the recognition of opportunities. Cohen and Levinthal (1990) argue that organizations can be distinguished by their technological aspiration level. Organizations with a low aspiration level are comparably unaware of external technological opportunities, as they conduct only little innovative action. However, organizations with a high technological aspiration level are aware of technological opportunities developed by others. As a consequence, they push their technological activities further and stay aware of external opportunities. I assume that this insight can be applied to entrepreneurial teams. Applying this insight to entrepreneurial teams would mean that teams with a high technological aspiration level based on high technological knowledge are better aware of technological opportunities. Thus, entrepreneurial teams with a higher technological aspiration level should achieve a better performance in recognizing and selecting opportunities.

However, I assume that intra-team trust also negatively influences how entrepreneurial teams solve the technology-to-market linking problem, the core problem entrepreneurial teams try to solve when recognizing (section 2.4.4.1) and selecting opportunities (section 2.4.4.2).

2.4.4.1 Quality of the selected opportunity

In order to solve the technology-to-market linking problem, entrepreneurial teams execute a technology leveraging process consisting of two steps. For the first step, delinking, they analyze the technological basis. In the second step, relinking, they search for business applications for the technology. Both steps are triggered by technological experience (Cohen & Levinthal, 1990; Danneels, 2002; 2007; Gruber et al., 2013). Thus, high technological experience should usually enable entrepreneurial teams to recognize opportunities with a higher quality as they can better understand and apply the technological basis to potential markets. However, in entrepreneurial teams with high technological experience, high trust might lead teams to think alike and concentrate on already known sources and opportunities. Thus, they

are not able to recognize opportunities outside their familiar field (Zahra et al., 2006). Therefore, highly trusting entrepreneurial teams might not be able to fully apply their technology leveraging ability, as they are restricted by the focus on known environments. Less trust would probably enable the team to fully use the technology leveraging skills and, as a consequence, the team may recognize an opportunity with a higher quality that lies outside the familiar environment. If the technological experience is higher in highly trusting entrepreneurial teams, it might be even more difficult to look outside the familiar field, as the technological specialization is higher and, thus, they focus even more on a narrow perspective when looking for opportunities.

In addition, innovative organizations based on high technological knowledge have a high technological aspiration level, which enables them to better recognize external technological opportunities (Cohen & Levinthal, 1990). Transferring this insight to entrepreneurial teams means that those with higher technological experience should be more likely to recognize high-quality opportunities, as they are more aware of innovative opportunities. However, as outlined above, entrepreneurial teams with high technological experience might tend to think alike and focus on familiar fields if they highly trust each other. Thus, they potentially have difficulty fully recognizing emerging technological opportunities outside their familiar scope (Zahra et al., 2006). In addition, not only their leveraging capacity, but also their technological aspiration advantage is limited by their specialization and their need to think alike.

Furthermore, I assume that challenging other team members' opinions is even more difficult in highly trusting entrepreneurial teams if individuals are aware of the high technological knowledge of their teammates. They probably fear even more that questioning proposed opportunities could be understood as a lack of trust (Langfred, 2004). Thus, in entrepreneurial teams with high technological experience, high trust might lead to less scrutinizing of options, and consequently to a suboptimal quality of the selected opportunity.

In summary, these arguments suggest that intra-team trust negatively moderates the influence of technological experience on the quality of the selected opportunity. Thus,

Hypothesis 4a: Intra-team trust will moderate the relationship between technological experience and the business value of the selected opportunity, such that entrepreneurial teams with higher intra-team trust will be more likely to select an opportunity with a lower business value than entrepreneurial teams with lower intra-team trust.

2.4.4.2 Selection performance

A high level of technological experience is generally beneficial for high performance in activities that focus on technology (Gruber et al., 2012). When it comes to the opportunity evaluation, entrepreneurs need to assess the technological feasibility of a potential product, which is usually easier for them if they possess high technological knowledge (Danneels, 2002). Consequently, if the technological experience is high in an entrepreneurial team, they should be

better able to make a good selection about which opportunity to pursue. However, if intra-team trust is high in an entrepreneurial team with high technological experience, there are two factors that might prevent teams from fully using their technological knowledge for their selection performance. First, they might tend to conduct less formal evaluations and thus insufficiently assess opportunities due to a lack of objectivity and overconfidence (Zahra et al., 2006). Consequently, when making a decision, they are less likely to challenge the assumptions of their teammates (Zahra et al., 2006). Second, homogenous decisions are more agreeable for all team members as nobody's feelings are hurt (Langfred, 2004). Consequently, long controversial decision discussions about the technological advantages, feasibilities, and possibilities are unlikely, but would probably be necessary to fully leverage the technological experience of the team. Controversial discussions are potentially even less likely in highly trusting entrepreneurial teams if the technological experience is higher, as each team member relies on the technological ability of his or her teammates. As a consequence, the team is not able to fully use the available treasure trove of technological experience and has more difficulties when selecting an opportunity.

These arguments provide the theoretical basis for my next hypothesis. Thus,

Hypothesis 4b: Intra-team trust will moderate the relationship between technological experience and the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, such that the difference between the business value of the selected opportunity and the average business value of all the recognized opportunities is more likely to be smaller for entrepreneurial teams with higher intra-team trust than for entrepreneurial teams with lower intra-team trust.

2.4.5 The negative interaction effect between industry experience and intra-team trust on opportunity recognition performance

Having investigated the effects of technological experience on the technology-to-market linking problem, I turn next to the available industry experience in entrepreneurial teams and outline four reasons why higher industry experience normally positively influences the opportunity recognition performance. In the present thesis, I refer to these advantages of higher industry experience as the "treasure trove of industry experience."

First, entrepreneurial teams recognize opportunities that reflect their prior knowledge. In the already mentioned study, Shane (2000) shows that, when looking for technology-based business opportunities, entrepreneurs reflect on their prior industry experience. In order to analyze how the industry knowledge corridor of entrepreneurial teams influences the opportunity process, entrepreneurial scholars (e.g., Gruber et al., 2013) sum up the number of different industries in which the entrepreneurial team members have already worked. A high level of industry experience enables entrepreneurial teams to have a broader search space. Local search is more common in the entrepreneurship field than global

search, as actors typically focus on the fields in which they already have experience (March & Simon, 1958). Consequently, an entrepreneurial team with a higher industry experience has a broader field in which it can conduct a local search.

Second, entrepreneurial teams with high industry experience have an information advantage. They are better aware of characteristics of different markets, e.g., the value chain, sales channels, or required capital (von Hippel, 1988), or even pricing, cost structure, market share, revenue, and cost trends (Dimov, 2010). This kind of information is essential for making the right decisions, but is difficult to get for entrepreneurs who are not familiar with a specific market (Dimov, 2010; Shane, 2000). The identified opportunities may differ along many factors, e.g., market size, market growth, competitive environment, or stability. Thus, prior market knowledge is important to recognize business opportunities with a high value (Gruber et al., 2008).

Third, industry experience enables entrepreneurs to better recognize and evaluate opportunities within their industry (Kor et al., 2007; Ronstadt, 1988), as they can better assess the feasibility and potential success (Dimov, 2010). Entrepreneurs that are aware of inter-industry differences, e.g., regarding technology, distribution, marketing, and pricing, develop more innovative opportunities to offer products and services (Kor et al., 2007).

Finally, prior entrepreneurial studies have already shown a positive relationship between prior industry experience and performance in the opportunity process (e.g., Gruber et al., 2013).

In line with the other already described experience dimensions, intra-team trust might lead to team behavior that prevents entrepreneurial teams from fully applying their available industry experience. In a last step, I assume that intra-team trust negatively influences the link between industry experience and the quality of the selected opportunity (section 2.4.5.1), as well as the relationship between industry experience and the selection performance (section 2.4.5.2).

2.4.5.1 Quality of the selected opportunity

Entrepreneurial teams with prior experience in an industry better understand important market characteristics and thus have an information advantage, as this kind of information is difficult to get (Dimov, 2010; von Hippel, 1988; Shane, 2000). The information advantage is crucial to recognize highly valuable business opportunities (Gruber et al., 2008). In addition, if entrepreneurs know an industry, it is easier for them to evaluate the feasibility and potential success of opportunities (Dimov, 2010). Consequently, they can normally better recognize opportunities within this industry (Kor et al., 2007; Ronstadt, 1988). When looking for business opportunities, entrepreneurial teams draw on their prior industry knowledge. To put it differently, opportunity recognition happens in knowledge corridors which arise from prior experience in an industry (Shane, 2000). If an entrepreneurial team has a high level of industry experience, the team members taken together have experience in more industries and together reflect a broader industry knowledge corridor

(Gruber et al., 2013). In addition, the awareness of differences between industries enables entrepreneurs with experience in different industries to develop more innovative opportunities to offer products and services (Kor et al., 2007). Thus, entrepreneurial teams that represent more different industries should be more likely to recognize higher-value opportunities. However, in entrepreneurial teams with high industry experience, high intra-team trust might be a negative condition for opportunity recognition performance. Team members might avoid questioning each other, as challenging the propositions of others could be understood as a lack of trust (Langfred, 2004), especially when they are aware of their teammates' industry-related skills and abilities. As a consequence, the team member whose statements are questioned could reject or even sanction the team member that did not fit into the team dynamic (Langfred, 2004). Thus, challenging the opinions of teammates could be seen as not acting like a team member should act and not really belonging to the team. To avoid the rejection of the team, individuals might hesitate to contribute their complete knowledge of industries in which they have already worked, if intra-team trust is high. If they were willing to challenge their fellow teammates, they could use their specific industry knowledge to question the proposed solutions, which would be necessary to achieve a higher quality of the selected opportunity. However, they hesitate because they fear rejection by their teammates. Consequently, a greater part of the treasure trove of industry experience of an entrepreneurial team could be used if they trusted each other less. The higher the trust, the more valuable industry experience goes unused, and the lower the quality of the opportunities.

Consequently, I assume that intra-team trust has a negative moderating effect on the relationship between industry experience and the quality of the selected opportunity. Thus,

Hypothesis 5a: Intra-team trust will moderate the relationship between industry experience and the business value of the selected opportunity, such that entrepreneurial teams with higher intra-team trust will be more likely to select an opportunity with a lower business value than entrepreneurial teams with lower intra-team trust.

2.4.5.2 Selection performance

The treasure trove of industry experience consists of a better understanding of crucial market characteristics and the related information advantage (Dimov, 2010; von Hippel, 1988; Shane, 2000), the ability to better assess the feasibility and potential success of opportunities (Dimov, 2010), and the related skills to better evaluate opportunities within the familiar industries (Kor et al., 2007; Ronstadt, 1988). The extent of the industry knowledge corridor of an entrepreneurial team is determined by the sum of industries in which one or more team members have already worked (Gruber et al., 2013; Shane, 2000). Therefore, if entrepreneurial teams have experience in more industries, they should be better able to evaluate and balance different opportunities in different industries and thus achieve a higher selection performance. However, in entrepreneurial teams with high industry experience, opportunities might be assessed less formally if intra-team trust is high. A less formal assessment is often due to a lack of objectivity and overconfidence, leading to

a less accurate assessment (Zahra et al., 2006). While overemphasizing intangibles, assessments tend to overestimate potential advantages and underestimate potential disadvantages. Consequently, when making a decision, different options are less challenged (Zahra et al., 2006). In addition, highly trusting teams tend to make conforming decisions, which do not carry the risk of hurting the feelings of one or several team members (Langfred, 2004), as team members are more likely to feel forced to conform to the team opinion when intra-team trust is high (Baron et al., 1996). Consequently, higher intra-team trust can prevent entrepreneurial teams from benefiting from their treasure trove of industry experience, whereas entrepreneurial teams with a lower intra-team trust level can better use their industry experience.

These arguments provide the theoretical basis for my last hypothesis. Thus,

Hypothesis 5b: Intra-team trust will moderate the relationship between industry experience and the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, such that the difference between the business value of the selected opportunity and the average business value of all the recognized opportunities is more likely to be smaller for entrepreneurial teams with higher intra-team trust than for entrepreneurial teams with lower intra-team trust.

2.4.6 Summary

In this section, I developed 10 hypotheses referring to the interaction effects between joint team experience and intra-team trust, between educational experience and intra-team trust, between entrepreneurial experience and intra-team trust, between technological experience and intra-team trust, and between industry experience and intra-team trust for opportunity recognition performance. Table 1 gives an overview of the derived hypotheses to summarize the theory development.

Joint team experience × intra-team trust	H1a	Intra-team trust will moderate the relationship between joint team experience and the business value of the selected opportunity, such that entrepreneurial teams with higher intra-team trust will be more likely to select an opportunity with a lower business value than entrepreneurial teams with lower intra-team trust.
	H1b	Intra-team trust will moderate the relationship between joint team experience and the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, such that the difference between the business value of the selected opportunity and the average business value of all the recognized opportunities is more likely to be smaller for entrepreneurial teams with higher intra-team trust than for entrepreneurial teams with lower intra-team trust.
Educational experience × intra-team trust	H2a	Intra-team trust will moderate the relationship between educational experience and the business value of the selected opportunity, such that entrepreneurial teams with higher intra-team trust will be more likely to select an opportunity with a lower business value than entrepreneurial teams with lower intra-team trust.
	H2b	Intra-team trust will moderate the relationship between educational experience and the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, such that the difference between the business value of the selected opportunity and the average business value

		of all the recognized opportunities is more likely to be smaller for entrepreneurial teams with higher in intra-team trust than for entrepreneurial teams with lower in intra-team trust.
Entrepreneurial experience × intra-team trust	H3a	Intra-team trust will moderate the relationship between entrepreneurial experience and the business value of the selected opportunity, such that entrepreneurial teams with higher intra-team trust will be more likely to select an opportunity with a lower business value than entrepreneurial teams with lower intra-team trust.
	H3b	Intra-team trust will moderate the relationship between entrepreneurial experience and the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, such that the difference between the business value of the selected opportunity and the average business value of all the recognized opportunities is more likely to be smaller for entrepreneurial teams with higher in intra-team trust than for entrepreneurial teams with lower in intra-team trust.
Technological experience × intra-team trust	H4a	Intra-team trust will moderate the relationship between technological experience and the business value of the selected opportunity such that entrepreneurial teams with higher intra-team trust will be more likely to select an opportunity with a lower business value than entrepreneurial teams with lower intra-team trust.
	H4b	Intra-team trust will moderate the relationship between technological experience and the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, such that the difference between the business value of the selected opportunity and the average business value of all the recognized opportunities is more likely to be smaller for entrepreneurial teams with higher in intra-team trust than for entrepreneurial teams with lower in intra-team trust.
Industry experience × intra-team trust	H5a	Intra-team trust will moderate the relationship between industry experience and the business value of the selected opportunity, such that entrepreneurial teams with higher intra-team trust will be more likely to select an opportunity with a lower business value than entrepreneurial teams with lower intra-team trust.
	H5b	Intra-team trust will moderate the relationship between industry experience and the difference between the business value of the selected opportunity and the average business value of all their recognized opportunities, such that the difference between the business value of the selected opportunity and the average business value of all the recognized opportunities is more likely to be smaller for entrepreneurial teams with higher in intra-team trust than for entrepreneurial teams with lower in intra-team trust.

Table 1 Overview of derived hypotheses

Source: Own illustration

3 METHODOLOGY

This chapter provides an overview of the research setting and the methodology. In section 3.1, I give an overview of the research design, followed by a description of the sample recruiting process and the participating sample in section 3.2. The comprehensive data collection process is illustrated in section 3.3. I then explain the data coding process in section 3.4. In section 3.5, I introduce the measures I employed to test the developed hypotheses. Section 3.6 presents the two "prior experience—opportunity recognition performance models." This chapter concludes with section 3.7, the data analysis, which I used to test the two models.

3.1 Research design

The Entrepreneurship Research Institute (ERI) at Technische Universität München (TUM) established a series of large team research studies called Building Entrepreneurial Success Teams (BEST). The present thesis is part of the BEST III study. This section explains the importance of entrepreneurial teams, which was the core motivation for conducting the BEST studies and illustrates the process and setting of the BEST III study.

To understand what is essential to build successful entrepreneurial teams, the Entrepreneurship Research Institute at TUM under the leadership of Professor Dr. Dr. Holger Patzelt and Professor Dr. Nicola Breugst established BEST, a series of large team research studies, to examine the key success factors in entrepreneurial teams. Based on the results of the two previous BEST studies, the Entrepreneurship Research Institute at TUM under the leadership of Professor Patzelt and Professor Breugst conducted a third large research study, called Building Entrepreneurship Success Teams III (BEST III). This study was established in cooperation with the Chair of Entrepreneurship and Technology Commercialization at École Polytechnique Fédérale de Lausanne (EPFL) under the leadership of Professor Marc Gruber. The operational project team of BEST III was composed of Manuel Braun, Thomas Koch, and myself.

The BEST III study took place from January 2014 to May 2015 and focused on opportunity recognition and selection in entrepreneurial teams. To understand key success factors of opportunity recognition and selection in entrepreneurial teams, our team conducted a large field experiment, in which we collected a unique data set with 288 entrepreneurs from 117 entrepreneurial teams across different industries throughout Germany.

While the operational project team collaborated for the data collection, we addressed different research questions. For the data analysis, we therefore split up the sample into different subsamples for our dissertations. Braun (in preparation) is studying how the collective team identity of entrepreneurial teams influences the identification of market opportunities. The project of Koch (in preparation) is an opportunity-level investigation of creativity processes, focusing specifically on the originality and business value of opportunities. I analyze the influence of prior experience under the condition of intra-team trust on the opportunity recognition and selection performance, using a sample of 183 entrepreneurs

from 75 entrepreneurial teams of our study. The remaining 42 entrepreneurial teams participated under a special treatment which was necessary for my colleagues' dissertations and which I explain in section 3.2.1.1. In the following, I initially continue to write in the first person plural while explaining the parts of the study we conducted as a team, starting with the development of the research design up to the coding of the collected data. I then switch to the first person singular when writing about the parts of the study that are only relevant for my research question and for my models.

As Figure 4 shows, the BEST III study was conducted over a total of 17 months and consisted of five different phases: the development of the research design, the identification of potential start-ups, the recruitment of participating teams, the execution of onsite visits, and the coding of the collected data. In January 2014, we started phase 1, in which we developed the research design based on a comprehensive literature review and regular meetings with our supervisors. In this phase, we elaborated the opportunity recognition and selection task, developed the technology description, and designed a computer-based survey (sections 3.3.1 and 3.3.4). After having prepared a comprehensive BEST III research design that best addressed our research questions, we began phase 2, in which we identified potential entrepreneurial teams based on clear participation criteria (section 3.2.1.1), developed incentives for participation (section 3.2.1.2), and created an overview of potential start-ups (section 3.2.1.3). This was followed by phase 3, in which we recruited the participating entrepreneurial teams in Germany by means of flyers, personal e-mails, phone calls, and direct contact at start-up fairs (section 3.2.1.3). We started phase 4 by conducting test runs of the onsite visits (section 3.3.2). After that, we conducted the actual 117 onsite visits (section 3.3.3). A comprehensive coding process concluded the data collection process. The coding process consisted of the video material coding and the business value assessment for all recognized opportunities by three raters with broad experience across industries (section 3.4). In the following sections, I describe all five phases in detail.

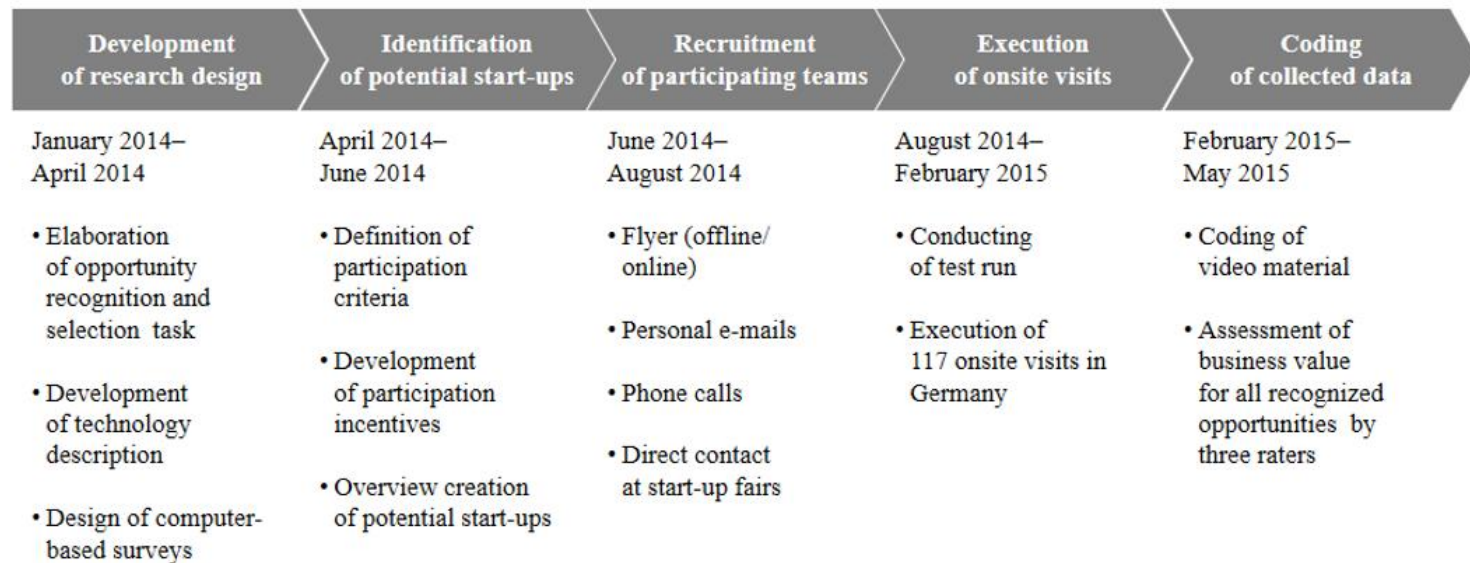


Figure 4: Timeline of the BEST III study

Source: Own illustration

3.2 Sample recruiting and description

In this section, I give an overview of the recruiting process for the sample (section 3.2.1) by explaining the participation criteria (section 3.2.1.1), the incentives for participation (section 3.2.1.2), and the participation approach (section 3.2.1.3). I then describe the sample (section 3.2.2) by elaborating on characteristics at the individual (section 3.2.2.1), team (section 3.2.2.2), and company level (section 3.2.2.3).

3.2.1 Sample recruiting

3.2.1.1 Participation criteria

We began the recruiting process by defining five participation criteria for our study, namely entrepreneurial teams, geographical focus, start-up age, start-up industry, and founding intent.

Entrepreneurial teams: Following Kamm et al., we defined "an entrepreneurial team as two or more individuals who jointly establish a business in which they have an equity (financial) interest" (Kamm et al., 1990, p. 7). To ensure that participating teams work in their core team during our experiment, we decided to work with the entrepreneurial team and not the complete team including all other employees. This guaranteed on the one hand that they had already gone through at least one opportunity recognition and selection process together, including the subsequent selection of which opportunity to follow, i.e., the initial opportunity recognition and selection process for their start-up. On the other hand, we ensured that we were working with clearly defined teams and minimizing any uncertainty regarding team affiliation.

Geographical focus: Following Zott and Huy (2007), we set a clear focus on German start-ups, aiming to reduce sample variation based on different environmental influences, e.g., legislation, business context, or resources. Focusing on German start-ups also meant working only with entrepreneurs who are fluent in German, which ensured the absence of linguistic barriers, and thus disadvantages for some teams. We could therefore assume that all participants understood exactly what they had to do and could contribute to the discussion whenever they wanted. Conducting the complete experiment in German—the language in which the participating entrepreneurial teams normally interact, discuss, and decide—supported our goal of generating a realistic everyday situation for the experiment (section 3.3.4).

Start-up age: In line with other entrepreneurial team studies (Lechler, 2001; Amason et al., 2006) and the previous BEST studies (Rathgeber, 2013), we required that the maximum age of the participating start-ups should be six years. In general, the first six years are crucial for the success or failure of a start-up (Amason et al., 2006). By setting a clear age limit, we guaranteed that all participating start-ups were still in a life cycle phase in which formal and informal structures are still lacking that, once established, will modify performance outcomes (Shepherd, Douglas, & Shanley, 2000).

Start-up industry: To ensure that the results of the presented study can be generalized to entrepreneurial teams working on different business models and in different industries, we decided not to focus on a specific industry. Thus, we did not select the participating teams according to the venture's industry. Based on this broad perspective, our results have the potential to inform entrepreneurial team research in general and not based on specific industry characteristics.

Founding intent: It was not necessary for the start-up to already have been legally founded, as we wanted to analyze team-related relations and not formal venture characteristics. However, to ensure that the teams had a clear founding intent, which was important for the comparability of the results between participating teams, the entrepreneurial teams had to intend the legal founding within the next six months.

3.2.1.2 Participation incentives

Our overall goal was to understand what factors contribute to successful opportunity recognition and selection in entrepreneurial teams. In order to gain a deep understanding, it was necessary to develop an experiment setup covering all relevant aspects of the opportunity recognition and subsequent opportunity selection (cf. section 3.3.3). This required a considerable time commitment from all participating entrepreneurial teams, as the complete entrepreneurial team had to work jointly for at least 90 minutes during the onsite visits. Time is a limited resource in entrepreneurial teams (Ensley, Pearson, & Pearce, 2003). Hence, it was necessary to develop incentives that would be helpful for the entrepreneurial teams to ensure not only that we would find enough teams willing to participate, but also to have highly motivated participating teams striving for good results during the experiment, and thus guaranteeing external validity. To develop incentives that met these requirements, we built on the BEST I study (Bernlochner, 2014). Before the actual

start of the study, the operational project team of the BEST I study had conducted interviews with four entrepreneurs to understand which incentives were suitable for the required sample of entrepreneurial teams. Based on this interview feedback, we determined three participation incentives, namely direct feedback after the experiment, a comprehensive feedback booklet, and further cooperation with the Entrepreneurship Research Institute (ERI). The incentives are described in the following.

Direct feedback after the experiment: At the end of each onsite visit, we shared and discussed our first impression of the team interactions with the entrepreneurial team. Many participating teams told us that this informal feedback was helpful for them. The first impression an entrepreneurial team makes is often important, e.g., during pitches or product presentations. However, they seldom have a chance to get such honest feedback. Thus, they appreciated the possibility of direct feedback.

Comprehensive feedback booklet: At the end of the study, all participating teams received a comprehensive feedback booklet with clear and easily implementable tips on how they could improve their teamwork in the long run. In preparing these booklets, we used data gathered during the onsite visits, with a strong focus on the videotaped opportunity recognition and selection task and the subsequent final interview (cf. section 3.3.3). The feedback was based not only on their team performance, but was also put in compared against those of the other 116 participating entrepreneurial teams. The large sample of 117 entrepreneurial teams across different industries formed a unique benchmark.

Cooperation with ERI: Our goal was to build a long-term relationship between the Entrepreneurship Research Institute and the participating entrepreneurial teams. We therefore offered the entrepreneurial teams the opportunity to conduct project studies at our institute. During a project study, three to five ERI students work with the start-up for three to six months on a task given by the start-up and supervised by an entrepreneurial team member or start-up employee. In addition, one researcher of the operational research team supports the project work. Project studies are fruitful for both sides, start-ups and students: Start-ups receive support from highly motivated students who are eager to understand how successful start-ups work, while our students get real insights in the day-to-day business of a highly motivated start-up.

3.2.1.3 Participation approach

The participant recruiting process consisted of two phases: first, the identification of potential start-ups and, second, the recruitment of the participating teams.

Identification: Our starting point for the identification of potential start-ups were incubators, namely university-based business incubators and private business incubators, which are an important instrument for new venture creation (Petrou, Liargovas, & Daskalopoulou, 2010). In addition, we used venture capital fund portfolios, online platform databases, business plan competitions, start-up co-working spaces, blogs, websites, and social networks for start-ups,

as well as other contacts, e.g., former colleagues, as additional start-up identification channels, which in total led to the identification of 638 start-ups. Figure 5 shows an overview of the applied identification channels. The identification phase itself consisted of two steps: First, two research assistants prepared a large and comprehensive overview of start-ups in Munich and Berlin that met the specified participation criteria, based on comprehensive Internet research. Second, the operational research project team reviewed this overview and extended it by adding the information of appropriate start-ups in other relevant German cities. The following list provides an overview of the sources we drew on to identify potential participating start-ups:

University-based business incubators	UnternehmerTUM, Strasczeg Center for Entrepreneurship, Entrepreneurship Center Ludwig Maximilian Universität München, Center for Innovation Karlsruhe Institut für Technologie, Technologie Transfer Initiative Universität Stuttgart, Startup Center Hochschule der Medien Stuttgart
Private business incubators	Venture Stars, ProjectA Ventures, Rocket Internet, ProSiebenSat.1 Accelerator
Venture capital fund portfolios	EarlyBird, Holzbrinck Ventures, Target Partners, Redalpine Venture Partners
Online platform databases	Deutsche Start-ups Database, TechCrunch CrunchBase, BayStart-up App, Startup Genome
Business plan competitions	European Institute of Innovation and Technology Idea Challenge, Deutscher Gründerpreis, Münchner Business Plan Wettbewerb
Start-up co-working spaces	Beta Haus (Hamburg), Werk 1 (Munich)
Start-up fairs	Bits & Pretzels (Munich)
Blogs, websites and social networks for start-ups	gruenderszene.de, junge-gründer.de, gründerküche.de, fuer-gruender.de, aktivsenioren.de
Other contacts	Former colleagues, friends, family

Figure 5: Identification channels

Source: Own illustration

Recruitment: We used three different contact modes to get in contact with potential participating teams. First, we distributed online and offline flyers, which can be summarized as a general contact mode. Second, we worked with personal e-mails and phone calls, which represent a personalized contact mode. Third, we held conversations at start-up fairs, which can be categorized as a direct contact mode.

Flyers: Our most important contact mode for potential participating entrepreneurial teams was a self-designed BEST III study flyer that we distributed online through our institute website and offline in start-up accelerators, start-up incubators, and start-up co-working spaces. The flyer summarized the motivation for and the goal of our study and explained the necessary participant commitment as well as the participation procedure. It also described the incentives for participants and gave an overview of our research team including contact details for all researchers. In addition, two participating teams of prior BEST studies recommended the participation. Figure 6 shows our BEST III flyer.

BEST Building Entrepreneurial Success Teams | **TUM Entrepreneurship Research Institute**

Was sind die Erfolgsfaktoren bei der Entwicklung kreativer Ideen in Gründerteams?

- In der Gründungsphase spielt der **Ideenfindungsprozess** eine zentrale Rolle um schnelle und erfolgversprechende Entscheidungen zu treffen.
- Zusammen mit einer dreistelligen Anzahl von Start-ups untersuchen wir diese Prozesse, um **Erfolgsfaktoren** für exzellente Ideen zu bestimmen.
- Mit Begeisterung für das Thema Entrepreneurship wollen wir die Arbeit von Gründerteams verbessern und diese **Teams erfolgreicher machen**.

Wie läuft unsere Studie ab?

- Wir begleiten Sie bei einem ca. 30-minütigen **Kreativitäts-Workshop** und zeichnen die Diskussion auf Video auf.
- Zudem werden im Rahmen eines Interviews und Fragebogens weitere Faktoren Ihrer täglichen Zusammenarbeit erhoben.
- Der Zeitaufwand beträgt einmalig insgesamt ca. 90 Minuten pro Team.
- Für die Durchführung **besuchen wir Sie gerne in Ihren Büroräumen**, alternativ kann die Studie auch an unserem Institut erfolgen.

Welche Vorteile ergeben sich für Ihr Team?

- Sie können sich auf unserer Webseite **als attraktiver Arbeit- und Praktikumsgeber präsentieren** und damit Ihre Visibilität erhöhen.
- Gerne schreiben wir **Stellenanzeigen** für Sie aus.
- Zudem sind **kostenfreie Projektstudien** zu einem für Sie relevanten Thema (Studententeam 3 Monate Vollzeit) möglich.
- Sie erhalten auf Wunsch eine **individuelle Rückmeldung** der Stärken und Herausforderungen in der Teaminteraktion.
- Sie erhalten eine zusammenfassende **Aufbereitung der Ergebnisse** und einen **Vergleich mit anderen Unternehmen**.

Sie möchten an der Studie teilnehmen oder haben Fragen? Kontaktieren Sie uns!

Inga vom Holtz	0160 95437801	inga.vom-holtz@tum.de
Manuel Braun	0176 21643357	manuel.braun@tum.de
Thomas Koch	0172 1409718	thomas.koch@tum.de

QR Code

"Die Zusammenarbeit im Rahmen der BEST Studie war auch für uns immer sehr spannend und wir waren insbesondere von dem professionellen Ablauf beeindruckt."
Dr. Tim Kettenring, CEO, miBaby GmbH

"Uns hat die Teilnahme Spaß gemacht und die Ergebnisse haben uns dabei geholfen, mehr über unser Team zu lernen."
Andrea Pfundmeier, CEO, boxcryptor GmbH

Prof. Dr. Nicola Breugst	Prof. Dr. Dr. Holger Patzelt	Prof. Dr. Marc Gruber	Dipl.-Wi.-Ing. Inga vom Holtz	Dipl.-Kfm. Manuel Braun	Master VWL Thomas Koch

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TUM | TUM School of Management Entrepreneurship Research Institute | www.ent.wi.tum.de/best

Figure 6: BEST III study flyer

Source: BEST research team

Personal e-mails and phone calls: Based on the comprehensive overview created in the identification phase, we contacted 593 start-ups in Germany by means of personal e-mails and follow-up calls where necessary. Drawing on a standard e-mail text, we tried to make the e-mails as personalized as possible by addressing them by their first name, already indicating their office address where the onsite visit would normally take place, and referring directly to their start-up, product, or team. We used these personalized e-mails to underline the fact that we were interested in their

specific team participation, based on our opinion that this team could make a good contribution to our study. Personalization is a common attention-seeking strategy in e-mail surveys for small and medium-sized enterprises (Newby, Watson, & Woodliff, 2003). To ensure that the teams had all the necessary information, we attached the BEST III study flyer to all e-mails. If the teams did not respond after an additional friendly follow-up e-mail, we called them and tried again to establish a personal level by talking about their start-up, product, or team.

Start-up fairs: We used the opportunities of start-up fairs, e.g., Bits & Pretzels, to get in touch directly with potential participating teams, explaining to them in detail our study and their participation advantage based on our flyer.

As shown in Table 2, the response rate of the overall BEST III study was 19.7%. The specific response rates range from 6.1% in Berlin to 77.8% in the state of Bavaria. These two extreme values can be explained by two major factors detected during the phone calls and onsite visits. The rather low response rate in Berlin is due to the overabundance of studies and feedback offers as well as the time constraints set by the operational research team, as we spent only a few weeks in the cities outside Bavaria. The high response rate in the state of Bavaria can be explained by the limited opportunities to participate in studies and get feedback on their teamwork, which is also true for Freiburg, as well as the absence of time constraints arising from the lack of availability of the operational team, which is also true for Munich. The three areas with the most participating teams, Munich (61), Stuttgart/Karlsruhe (17), and Hamburg (14), have response rates between 20.2% and 25.3%.

City	Number of contacted start-ups	Number of participating start-ups	Response rate
Munich	241	61	25.3%
Berlin	179	11	6.1%
Stuttgart/Karlsruhe	84	17	20.2%
Hamburg	62	14	22.6%
Freiburg	18	7	38.9%
State of Bavaria	9	7	77.8%
Total	593	117	19.7%

Table 2: BEST III response rate

Source: Own illustration

3.2.2 Sample description

While we collected data on 117 entrepreneurial teams for the complete BEST III study, for the present study I focus on 75 entrepreneurial teams with a total of 183 entrepreneurs. The remaining 42 entrepreneurial teams participated under a special treatment that was necessary for the research questions of my fellow operational research team members

Manuel Braun and Thomas Koch, but were excluded for my study. In the following section, I describe the sample of my study based on characteristics at the individual (age and gender of participants), team (team size and team gender mix of participating entrepreneurial teams), and company level (start-up location, start-up industry, start-up age, start-up phase, and start-up revenue). Furthermore, to underline that the sample of the present study is representative of the current German entrepreneurial environment, I selectively refer to the 2015 German Start-up Monitor (Ripsas & Tröger, 2015), which surveyed 3,000 German entrepreneurs to better understand and outline the German entrepreneurial environment.

3.2.2.1 Individual-level characteristics

Participant age: The average age of all participants was 31.2 years (s.d. 6.9), ranging from 21 years to 58 years. This is rather young compared to other entrepreneurial studies with entrepreneurs. Baron and Ensley (2006) analyzed meaningful patterns in opportunity recognition, working with a sample of experienced and novice entrepreneurs in the United States. The average age of the experienced entrepreneurs was 39 years, whereas the participating first-time entrepreneurs were on average 31 years old. Obschonka, Silbereisen, and Schmitt-Rodermund (2011) researched the pathway to successful entrepreneurship from a lifespan perspective. The participating novice entrepreneurs were on average 37 years old, whereas the average age of experienced entrepreneurs was 50 years old. Figure 7 shows that all participating age groups are well represented in my sample. The age group with the most participants, namely 87 (47.5%), was that of 26- to 30-year-olds, which supports the fact that most German entrepreneurs are between 25 and 34 years old (Ripsas & Tröger, 2015), followed by 41 (22.4%) 31- to 35-year-old participants, 24 (13.1%) 21- to 25-year-old participants, 14 (7.7%) 36- to 40-year-old participants, seven (3.8%) 46- to 50-year-old participants, six (3.3%) 41- to 45-year-old participants, and finally the 10-year age group between 51 and 60 years with four participants (2.2 %).

Participant gender: My sample reflects the gender distribution in the start-up environment with 17 female participants (9.3%) and 166 male participants (90.7%), as currently only 13% of all German entrepreneurs are female (Ripsas & Tröger, 2015). The gender distribution of my sample is also in line with previous entrepreneurial studies. Ucbasaran et al. (2009) analyzed data from 630 entrepreneurs with a 14% share of women. Ensley et al. (2003) collected data from 70 entrepreneurial teams with approximately 10% women. According to Gupta, Turban, and Bhawe (2008), the traditionally low share of female entrepreneurs can be explained by the fact that women show lower levels of entrepreneurial drive than men. However, as shown in the 2015 German Start-up Monitor, there is currently a trend in Germany toward more female entrepreneurs. The percentage of female entrepreneurs increased from 10% in 2014 to 13% in 2015 (Ripsas & Tröger, 2015).

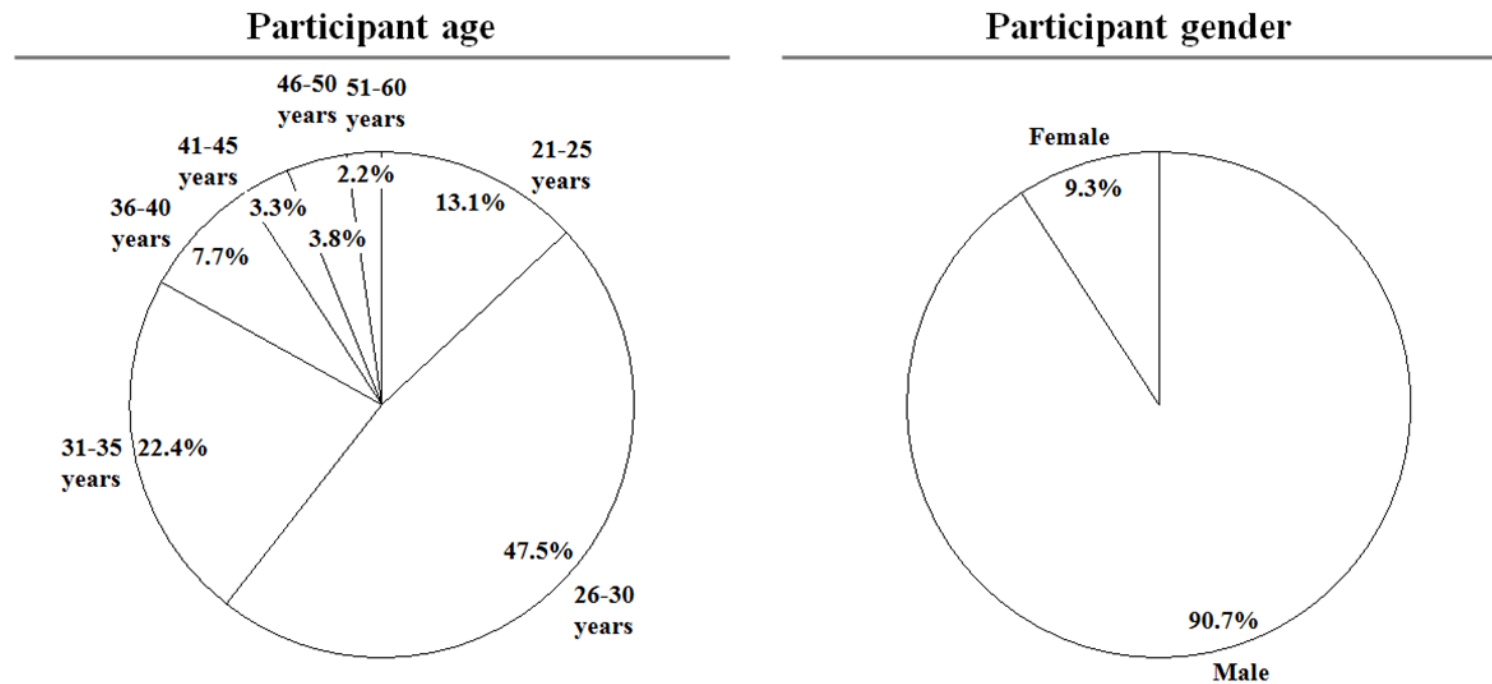


Figure 7: Sample description at the individual level—participant age and gender

Source: Own illustration

3.2.2.2 Team-level characteristics

Team size: The average team size of my sample was 2.6 (s.d. 0.9), which is in line with prior entrepreneurial team studies. The sample of Ucbasaran et al. (2003) had a mean team size of 2.0. Ensley and Hmieleski (2005) relied on a sample with an average team size of 2.1. The entrepreneurial teams in the study by Chowdhury (2005) consisted on average of 2.2 members, and the entrepreneurial teams in the study by Gruber et al. (2013) comprised an average of 3.1 team members. In addition, the team size of 2.6 reflects the current German entrepreneurial team landscape, with an average of 2.4 team members (Ripsas & Tröger, 2015). As Figure 8 illustrates, team sizes ranged from two to six members; accordingly, the majority (64.0%) of all participating entrepreneurial teams had two members (48 teams), followed by 23 teams (30.7%) with three members, three teams (4.0%) with four members, and one team (1.3%) with five members. Thus, 95% of all participating teams had two or three members.

Team gender mix: Only 12 (16.0%) of the participating entrepreneurial teams were mixed teams; all other teams were homogenous in gender, namely 61 male teams (81.3%) and two female teams (2.7%). The team gender mix of the present sample reflects the abovementioned disparity between male and female entrepreneurs. This is in line with prior research, emphasizing that both women and men seek out team members of the same gender (Steffens et al., 2012).

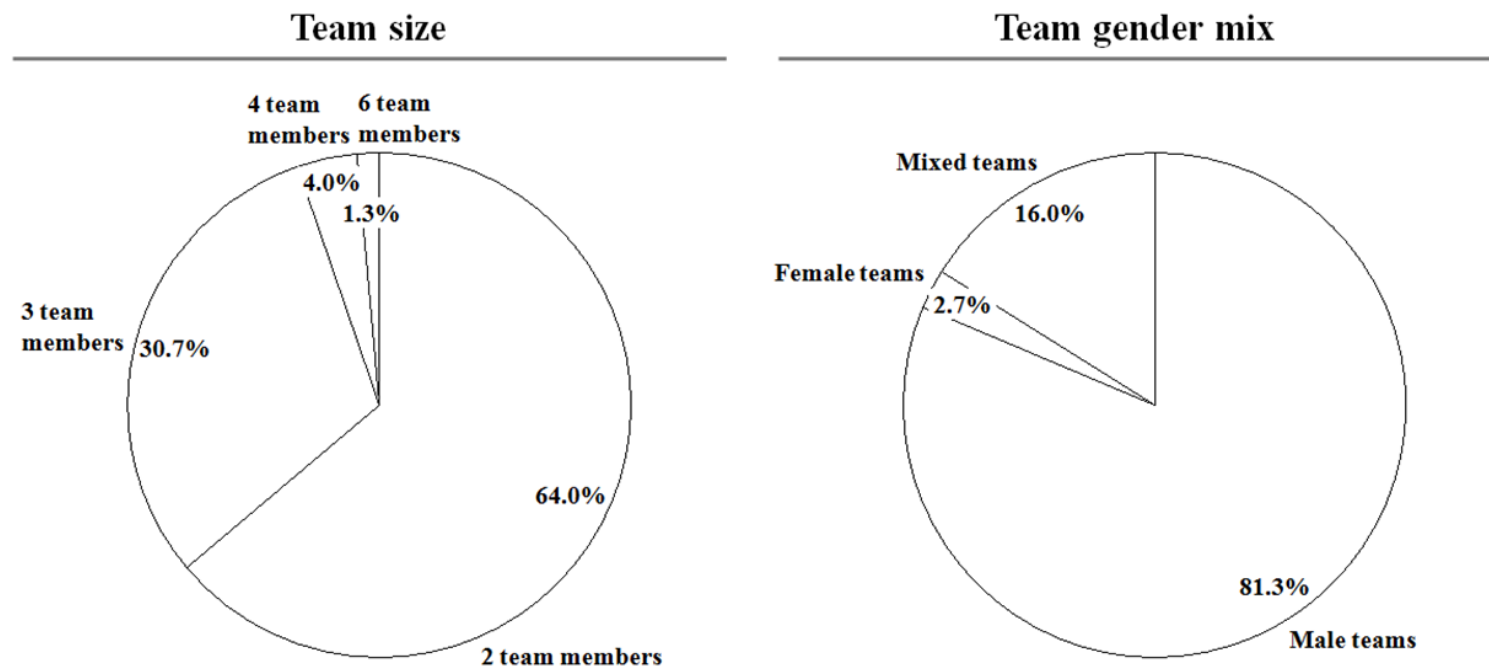


Figure 8: Sample description at the team level—team size and gender mix

Source: Own illustration

3.2.2.3 Company-level characteristics

Start-up location: In line with prior research on entrepreneurial teams (Gruber et al., 2008; Ucbasaran et al., 2009; Steffens et al., 2012), we concentrated our study on one country, in our case Germany, to reduce sample variation based on different environmental influences, e.g., legislation, business context, or resources (Zott & Huy, 2007). The present sample covers four of the five main start-up regions in Germany (Ripsas & Tröger, 2015), namely Munich, Hamburg, Berlin, and Stuttgart/Karlsruhe. Only the Rhine-Ruhr region was not part of the BEST III study. Hence, the local representation can be considered broad. The majority, 39 (52.0%) of all participating start-ups, were located in Munich, followed by 12 start-ups (16.0%) in Hamburg, 11 start-ups (14.7%) in Stuttgart/Karlsruhe, five start-ups (6.7%) in Berlin, and four start-ups (5.3%) each in Freiburg and in the state of Bavaria.

Start-up industry: To ensure that the results of the present study are applicable to entrepreneurial teams across all industries, we had no restrictions with respect to the industry background of the participating start-ups. Thus, my sample covers a broad range of industry backgrounds. As depicted in Figure 9, my sample is divided as follows: 26.7% Hardware & Software, 17.3% Media & Entertainment, 12.0% Consumer Goods, 8.0% Service Provider, 6.7% Trade, 5.3% Machinery and Plant Engineering, 5.3% Consulting, 4.0% Telecommunication, 2.7% Banking & Finance, 2.7% Transport, Travel & Tourism and 9.3% Others (one start-up in each Energy & Environment, Healthcare, Culture, Advertising, Construction, Social Business and Education).

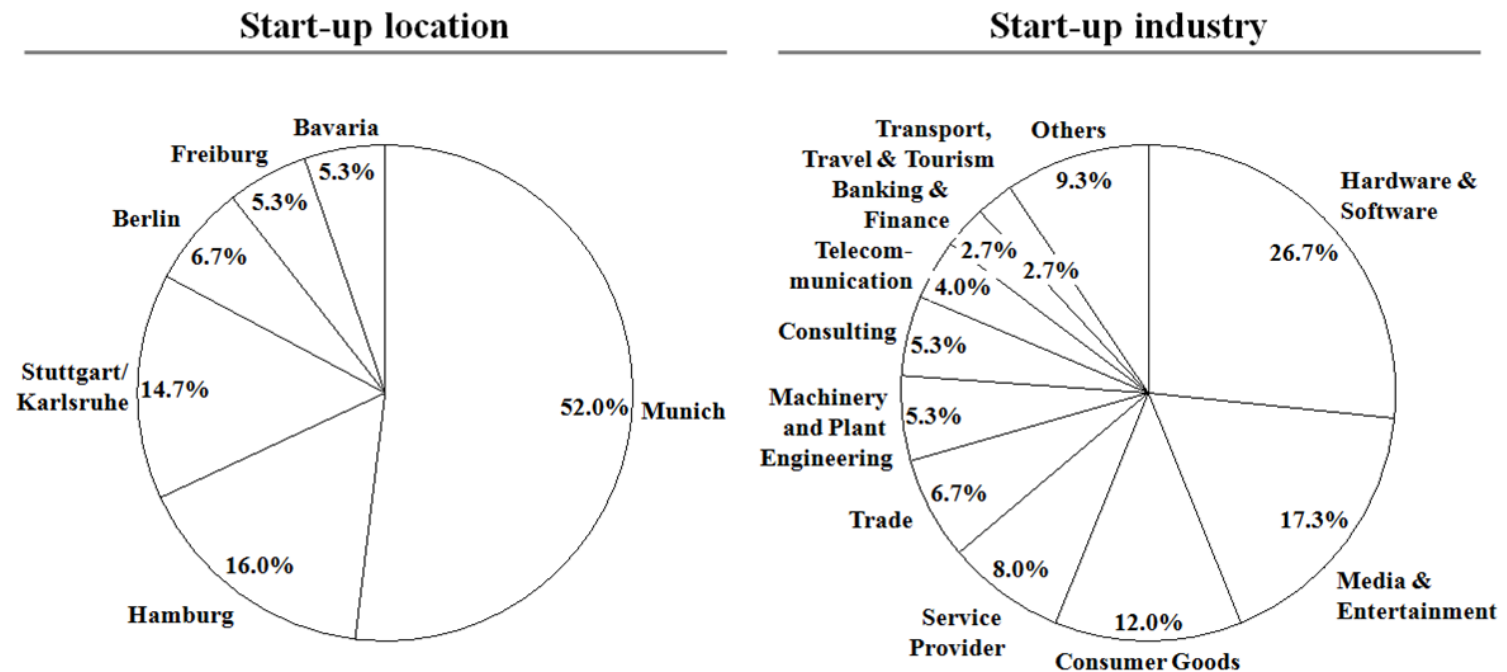


Figure 9: Sample description at the company level—start-up location and industry

Source: Own illustration

Start-up age: The average start-up was 1.1 years old (s.d. 1.2), ranging from less than one year to five years. As shown in Figure 10, most start-ups, namely 27 (36.0%), were younger than one year, followed by 25 (33.3%) one-year-old start-ups, 13 (17.3%) two-year-old start-ups, six (8.0%) three-year-old start-ups, three (4.0%) four-year-old start-ups, and one (1.3%) five-year-old start-up. Compared to prior studies on entrepreneurial teams, the start-ups in my sample are rather young. The start-ups that participated in the studies by Amason et al. (2006) and Lechler (2001) were on average 3.5 years old. Given that the focus of our study is on the opportunity recognition phase, the comparatively young age of the participating start-ups is appropriate, because opportunity recognition takes place in an early phase of the entrepreneurial process (DeTienne, 2010).

Start-up phase: Referring to Kazanjian and Drazin (1990), the life cycle of start-ups can be divided into four phases: conception and development, commercialization, growth, and stability. All start-ups in my sample had already passed the conception and development phase, consistent with our focus on start-ups that are already formally registered or in the process of registration. 23 (30.7%) start-ups were still in the commercialization phase, 39 (52.0%) were in the growth phase, and 13 (17.3%) were already in the stability phase. This means that over 80% of all participating start-ups were in the commercialization or growth phase, in which decision-making is still centralized but formalization has already started (Kazanjian & Drazin, 1990).

Start-up revenue: Because nearly 80% of all participating start-ups were only one year old or even younger and, correspondingly, 82.7% were still in the commercialization or growth phase, it is not surprising that 20 start-ups (26.7%) had not yet generated revenue. In these early phases, the practices and processes that are often an important basis for revenue (Wall et al., 2004) are not as well established as in more mature companies (Shepherd, Douglas, Shanley, 2000).

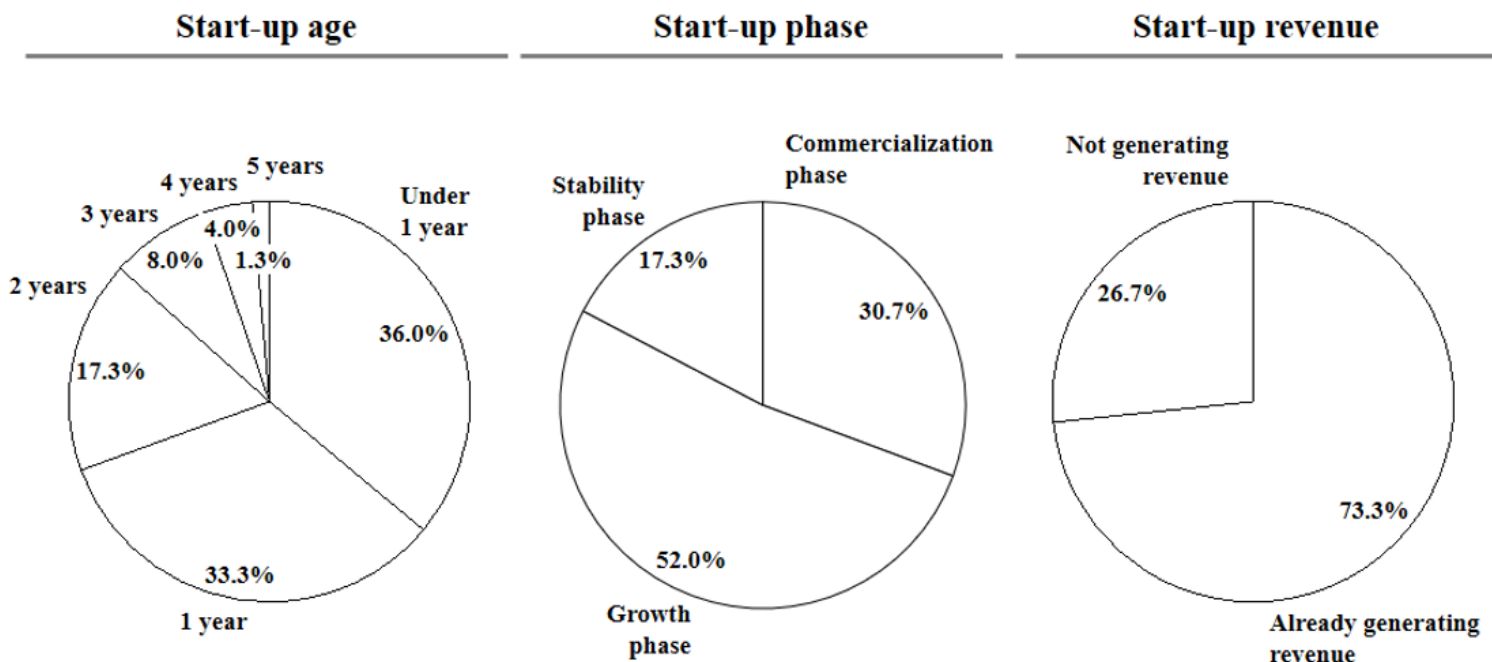


Figure 10: Sample description at the company level—start-up age, phase, and revenue

Source: Own illustration

3.3 Data collection

This section illustrates the comprehensive process of our data collection. First, I present the reasons for choosing an experiment as research method (section 3.3.1). Second, I illustrate the conducted test runs and resulting feedback (section 3.3.2). Third, I describe the actual data collection during the onsite visits (section 3.3.3) and, fourth, I explain the use of videotaping (section 3.3.4) as a central element of our data collection.

3.3.1 Experiment as research method

Davidsson and Honig (2003) indicate that, while analyzing the recognition of entrepreneurial opportunities is one of the most crucial elements for entrepreneurial scholars, it is also one of the most difficult activities to study. The process of opportunity recognition should be studied in real time to avoid any bias (e.g., success bias, retrospective bias), which

requires money and other resources, as opportunity discovery often happens in unforeseen settings. We therefore decided on an experimental setup to gather the data for our study. In prior research on opportunity recognition, the retrospective biases often limit detailed insights (Grégoire et al., 2010). This means that, in studies that work with the actual technology of participating entrepreneurial teams, the opportunity recognition and selection task has happened in the past and can only be reconstructed. By asking the participating entrepreneurial teams to solve a hypothetical opportunity recognition and selection task, the results of the present study are not affected by this retrospective limitation. Besides, the use of an experiment makes it possible for researchers to study a single step or several selected steps of the opportunity process (McMullen & Shepherd, 2006). This was beneficial for our study, as we wanted to focus only on the opportunity recognition and selection phase without including the opportunity exploitation phase. In addition, the results of our experimental setup are better comparable across teams, as they all had to solve the same hypothetical task based on the same hypothetical technology under identical circumstances with regard to timeline, information, and available material. The advantage of using experiments in entrepreneurship literature is acknowledged by various scholars (e.g., Chandler & Lyon, 2001, Gregoire et al., 2010).

3.3.2 Test runs

In order to identify potential problems or irritations during the onsite visits, we conducted two test runs of the complete onsite visit procedure with two different entrepreneurial teams that fulfilled our participation criteria before the start of the onsite visits. The positive and consistent feedback we received from both teams concerning the survey design, opportunity recognition and selection task, onsite visit scope, technical equipment, and presence of researchers supported the goal that the developed experiment was coherent and could be conducted in the exact way in which we designed it. The consistent feedback of the two test runs was as follows:

- Survey design: The questions in the survey are clear and understandable. The survey length is acceptable, and it is not difficult to stay focused during the complete survey.
- Opportunity recognition and selection task: The technology and task descriptions are clear, comprehensive, and detailed enough to understand what is required without getting confused. In addition, 30 minutes to solve the opportunity recognition and selection task is an agreeable time span, as there is enough time to identify and discuss different opportunities without getting bored or distracted.
- Onsite visit scope: The scope and length of the complete onsite visit are convenient, ensuring that the participating entrepreneurial teams stay motivated and interested throughout the complete onsite visit procedure.
- Technical equipment: The two cameras and the microphone do not irritate participants. After the first few minutes, participants even stop noticing them.
- Presence of researchers: It is preferable for the operational research team not to be present during the opportunity recognition and selection task to prevent a feeling of observation. Researchers are also not present in

normal entrepreneurial team discussions and meetings of the entrepreneurial teams and are thus perceived as an irritation. Moreover, as teams should work on the team task under comparable circumstances to their normal setting to enhance the generalizability of our findings, we decided that the researchers should leave the room during the team task.

3.3.3 Onsite visits

Where possible, we conducted the onsite visits in a meeting room at the start-up office, so that the entrepreneurial teams were in their normal day-to-day environment. Alternatively, we executed the onsite visits in a meeting room at our institute. The majority, namely 54 (72%) onsite visits, took place in the respective start-up's office, while we used a meeting room at our institute for 21 (28 %) onsite visits. To minimize external influences, we ensured that there were no interruptions during the complete onsite visit, neither in person nor by phone.

As shown in Figure 11, the complete onsite visit consisted of six different phases: the informal warm-up, the formal introduction, the first part of the BEST III survey, the actual experiment, namely the opportunity recognition and selection task, the second part of the BEST III survey, and the final interview.

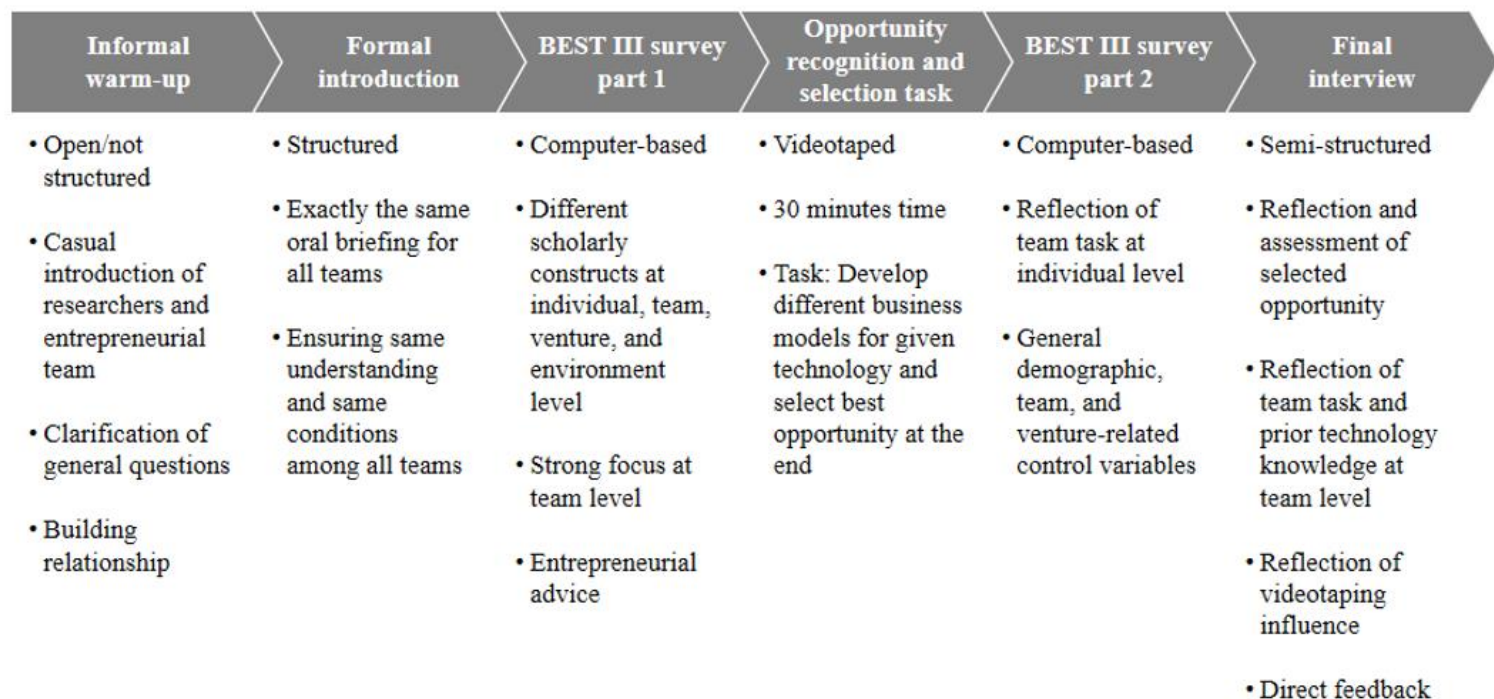


Figure 11: BEST III Onsite visit procedure

Source: Own illustration

We started the onsite visit with an unstructured, informal warm-up, during which we introduced ourselves and the BEST III study. We explained the underlying motivation, the overall goal of the comprehensive research study, and

the incentives for participation. Afterwards, the entrepreneurial teams introduced themselves as well as their start-ups and described their current company situation including challenges and problems. At the end, there was enough time to clarify general questions. The informal warm-up served as a possibility to build a relationship with the entrepreneurial team and get a first impression of it, by better understanding the team structure and the team dynamics, as well as the current company situation.

To ensure that all entrepreneurial teams had the same understanding and worked under the same conditions, we conducted a formal oral briefing of all teams in exactly the same structured way. The briefing was based on a text written beforehand that included a detailed description of the following 90 minutes.

To make answering the survey questions as pleasant as possible for the participants, we decided to use a computer-based survey prepared and conducted with Unipark, a commonly used online survey tool for research. The first part of the BEST III survey focused on important constructs for entrepreneurial team research. In doing so, we placed a strong focus on team-level constructs, which are important for the interaction and performance of teams. Prior studies already show the importance of intra-team trust for team performance (DeJong & Elfring, 2010; Dirks, 1999; Dirks & Ferrin, 2001). Consequently, we included intra-team trust as one team-level construct in our survey. In addition, we included constructs at the individual, company, and environment level. We selected all constructs during a comprehensive literature review.

To ensure that the participants, who were all native German speakers, understood the questions, the complete survey was in German. As the original scales were published in English, we needed to translate them into German. To do so, we used a back-and-forth translation approach based on Brislin (1970) by having the original English versions of the constructs translated into German by two doctoral students who are fluent in English and German. Afterwards, another doctoral student translated the German versions back into English. In a final step, we compared the two versions to minimize translation errors.

The survey started with an introductory part that embedded the survey in the BEST III study, specified the focus of the following questions, and introduced the research team. For each construct, we provided a separate page to prevent other constructs from distracting the participants or influencing their answers. They had to rate all questions on a 7-point Likert scale, with 1 indicating "not at all" and 7 indicating "completely agree." With respect to the research focus on entrepreneurial teams, participants were asked to refer only to the entrepreneurial team, not to the complete team including other employees, for questions concerning their team (Kamm et al., 1990). We used a progress tracker on each page to allow participants to estimate the remaining time to complete the survey. There was no time limit for completing the survey, which guaranteed that the participants had enough time to answer the questions without being stressed, which could have influenced the answers.

In addition to the 75 entrepreneurial teams that form the sample for this thesis, 42 additional entrepreneurial teams participated in the BEST III study under a special treatment (cf. section 3.2.1.1). This special treatment was important for the research question of my colleagues Thomas Koch and Manuel Braun. Teams in the manipulated group had to read a text that highlighted the importance of teams for entrepreneurial success. Consequently, these teams were team-primed. Teams in the control group, which were used as the sample for my thesis, had to read a neutral text concerning general information about entrepreneurship and were thus neutral-primed. As a reinforcement task, all participants had to answer the question of what advice they would give younger entrepreneurs. The answers of both groups were analyzed concerning the relative frequency of team-related words (e.g., "team," "us"). This word analysis served as a test of whether or not the manipulation had been successful. Team-primed participants used team-related words and advice more frequently than neutral-primed participants. Consequently, we could assume that the manipulation was successful, which was relevant for my colleagues' theses but does not play any role in my thesis. The reinforcement task for the neutral-primed control group can be seen as an additional question about what entrepreneurial advice participants would give young entrepreneurs. As the findings were not clear in advance, we formulated an open question referring to their previous entrepreneurial activities.

Our main research goal in the BEST III study was to understand important success factors for entrepreneurial team-based opportunity recognition and selection, which addresses the technology-to-market linking problem (cf. section 2.2.4). Hence, the main part of the BEST III onsite visits was an opportunity recognition and selection task. The entrepreneurial teams were given a technology description and were tasked with identifying different business opportunities for the given technology and selecting the best opportunity out of all recognized opportunities in the end. We assumed that we would derive the main insights into the opportunity recognition and selection process in entrepreneurial teams from this part of the onsite visits. Consequently, we put additional effort into designing the task. If researchers try to understand the actual opportunity recognition and selection process of a team, they always have the problem of a retrospective bias (Grégoire et al., 2010). As a consequence, and in line with prior research on entrepreneurship (Grégoire et al., 2010), we decided to work with a hypothetical task based on a hypothetical technology. Using the identical hypothetical technology for all teams had the additional advantage that the results—in this case the recognized opportunities—were better comparable across teams.

During the development of the research design (cf. section 3.1), we had to choose a suitable technology for our experiment. The selection was based on three criteria, namely technology relevance, task fit, and sample fit. First, the selected technology should be technologically as well as economically relevant. Second, it should be possible to recognize different opportunities for the given technology. Third, the technology should be understandable for all participants, independent of their background. Based on the decision to include all industries in the BEST III study, the background among the participants could be different, ranging from strong technology knowledge to non-existing technology knowledge. We decided on mobile 3D scanning as the technology for the opportunity recognition and selection task,

as this technology fulfilled all three defined requirements. First, the Institute for Visual Computing at Eidgenössische Technische Hochschule (ETH) Zurich³ has researched the development of this technology. In addition, Mantis Vision⁴, an Israel-based technology start-up, collaborated with Google on a mobile 3D scanning solution for end customers. Thus, 3D scanning is both technologically and economically relevant. Second, there are many different application possibilities for this technology. Hence, participating teams can recognize different business opportunities for 3D scanning. Third, 3D printing is a well-known technology. Consequently, it should be easy for all participants, independent of their background, to understand the technology of 3D scanning and recognize different business opportunities.

In addition, using 3D scanning as a predefined technology is consistent with prior opportunity recognition research. Shane (2000) and Grégoire et al. (2010) already used a similar technology, i.e., 3D printing, for their opportunity recognition studies. It did not make sense to use exactly this technology for our study, as many different business applications for 3D printing are already well-known by now and the participants' familiarity with existing opportunities based on this technology would have influenced the results.

We structured the technology description consistent with Grégoire et al. (2010), starting with a short explanation of the technology, based on the indication that a leading technological university is currently investigating the development of this technology. Afterwards, we described the underlying technological function in detail, followed by the advantages in comparison to other technologies. The detailed technology description can be found in the appendix. In the end, the need to commercialize this technology was expressed and a clear opportunity recognition task was formulated. The actual twofold opportunity recognition and selection task was formulated as follows:

- "Which alternative market opportunities would you pursue with this technology?"
- "What business opportunity should be prioritized in your opinion?"

The first question was based on Grégoire et al. (2010). We added the second question because our study also included the selection of one opportunity in the end. Other than that, we did not further specify how participating teams should solve the task.

For meetings that took place at our institute, we already prepared a meeting room before the entrepreneurial team arrived. Otherwise, when we went to the office of the start-up, we first prepared the room before the defined procedure

³ The Computer Vision and Geometry Group of the Institute for Visual Computing developed the mobile 3D technology (<http://www.ivc.ethz.ch/>).

⁴ Mantis Vision is working on a mobile 3D technology for end-customers, so that everyone has the access and tools to imagine, create, and experience in 3D. (<http://www.technologyreview.com/news/529116/start-up-wants-you-to-capture-the-world-in-3-d/>; <http://www.mv4d.com/>).

started. Paper-printed technology descriptions, including the detailed description of the opportunity recognition and selection task were laid out on the table for all team members. It was important that each team member had his or her own copy of the description to ensure that everyone had enough time to read through it carefully, could mark relevant parts in the description, and always had the possibility to go back to the description during the opportunity recognition and selection task whenever necessary. All entrepreneurial teams had the same material—post-its, flip charts, markers, pens, and plain paper—available to use during the task. In addition, the videotaping equipment—two cameras in the corners of the room and one microphone on the table—was already installed by a member of the operational team (cf. section 3.3.4).

Based on test run feedback (cf. section 3.3.2), we decided that all researchers would leave the meeting room to minimize any external irritation and prevent a feeling of observation during the task. In doing so, we tried to increase the likelihood that entrepreneurial teams would act as they normally did in team discussions and, consequently, that the results would be generalizable to the entrepreneurial teams' regular work settings. One researcher came back after 25 minutes, indicating that there were only 5 minutes left to come to a selection, and again left the room. After 30 minutes, the researchers interrupted the teamwork and asked the participants to stop the discussion.

The structure and concept of the second part of the BEST III survey were similar to the first. We relied on a computer-based German survey, starting with an introduction page and without any time limitations. Only the focus was different than in the first part of the survey. Participants had to answer questions concerning general individual demographics as well as team- and start-up-related control variables. In addition, they had to reflect on the task at the individual level.

To complete the onsite visit, we conducted a semi-structured final interview with the entrepreneurial team. At the beginning, the team had to describe the selected opportunity and assess its market potential as well as its feasibility based on Grégoire et al. (2010). We asked them two questions: "Do you think there is a market for your selected opportunity?" and "Do you think that your selected opportunity is feasible?" In addition, they were asked to explain the selection criteria: "What were the main criteria for your selection?" After that, they were supposed to reflect on their teamwork during the opportunity and selection task in general, and with regard to their individual roles and behaviors. We explicitly asked whether their behavior during the opportunity and selection task differed from their normal behavior. We also discussed the potential influence of the videotaping equipment and asked them about their previous knowledge about 3D scanning. In the end, we took the opportunity to give the entrepreneurial team direct feedback based on our first impression and already identified performance improvement potential. This feedback was often followed by an interesting discussion about entrepreneurial teams in general and about specific experiences, challenges, and problems. The entrepreneurial teams had questions concerning different topics, e.g., the results of previous BEST studies, as well as concerning the conducted experiment, including the performed opportunity recognition and selection task. As a result, the onsite visits took between 90 and 120 minutes.

After each onsite visit, the operational research team took notes regarding their first impressions of the entrepreneurial teams, special characteristics of individual participants, and the team dynamics. These observations aimed to provide a deeper understanding of the entrepreneurial team and were used to prepare the comprehensive feedback that the participating teams received in return for their participation.

3.3.4 Videotaping of the opportunity recognition and selection task

In order to allow for a complete analysis of the comprehensive opportunity recognition and selection task, we used cameras to videotape the complete process. This procedure made it possible to subsequently code the video material several times along different dimensions, if necessary. Since it was important to make sure that we recorded all relevant data, we installed two separate cameras, guaranteeing that all team members were videotaped, and one separate microphone, ensuring that each word could be caught during the coding process. It was crucial to preserve the entrepreneurial team's confidence and prevent potential nervousness as a reaction to the video recording to ensure that participating teams behaved as authentically as possible (Fontana & Frey, 2011). We therefore installed the complete equipment before the teams entered the meeting room, thereby minimizing the distraction of the entrepreneurial team through cameras and microphone, and thus potential problems associated with the fact that entrepreneurial teams were videotaped (Flick, 2009).

In order to receive meaningful results, it was necessary to minimize observation errors. Two potential observation errors could be relevant in our setup, demand characteristics and the Hawthorne effect, which we minimized by means of the following steps.

Demand characteristics are the sum of cues that are given to the participants by the researcher during a study (Orne, 1962). As shown in prior studies, these instructions can consciously or unconsciously influence the behavior of the participants (Berkowitz, 1971; Orne, 1962; Podsakoff, Podsakoff, MacKenzie, & Klinger, 2013). In order to minimize this effect triggered by the cues given to the entrepreneurial teams by the operational research team, the instructions given by the researchers at the beginning of the opportunity recognition and selection process had to be as neutral as possible and identical for all entrepreneurial teams. We therefore wrote down the oral instruction and practiced the exact wording several times before starting the actual onsite visits. In addition, we were only present at the beginning of the task. Hence, further instruction influence can be neglected.

The Hawthorne effect describes the effect that participants adapt their behavior if circumstances in the study change (Calhoun, 2002; Gregory, 2004). We used two approaches to minimize this potential problem. First, where possible, we conducted onsite visits in a meeting room of the respective start-up, which was the case for 72% of all onsite visits (cf. section 3.3.3). We thereby reduced the potential risk that participants would behave differently in an unknown environment. Second, the researchers were only present at the beginning of the task, and for a short reminder after 25

minutes to indicate that there were only five minutes left. Test run feedback indicated that the presence of researchers influenced the behavior of the participants, whereas the installation of cameras did not. By minimizing the presence of people who were not part of the entrepreneurial team during the task, we reduced the risk that participants would adapt their behavior due to the presence of people who were normally not there during team discussions.

While the entrepreneurial teams participating in the test run did not feel distracted by the presence of the video recording equipment, prior research indicates that videotaping can influence the behavior of participants (Long, Angera, & Hako-yama, 2006; Podsakoff et al., 2013). Hence, we used two different control mechanisms to ensure that the cameras did not influence the teams. First, they individually had to answer questions regarding their behavior in the second part of the survey (cf. section 3.3.3) and, second, we asked the entrepreneurial teams again in the final interview whether the cameras had distracted them.

In the second part of the survey, participants had to reflect on their behavior during the opportunity recognition and selection task by answering four questions. All questions were rated on a 7-point Likert scale from 1 ("not at all") to 7 ("completely agree"). First, we asked participants to assess their own behavior during the opportunity recognition and selection task ("I acted differently than usual."), which was on average answered with 1.9 (s.d. 1.0). Second, they were asked to rate team members' behavior ("My team members acted differently than usual."), with an average answer of 1.8 (s.d. 1.1). Third, they had to evaluate the experimental situation ("The situation felt artificial/unnatural."), which was on average rated 2.8 (s.d. 1.5). Fourth, we asked them to review the discussion mode ("The way that we discussed could have occurred at a normal team meeting."), which had an average rating of 6.3 (s.d. 1.1). The quantitative results show that the Hawthorne effect does not pose a major threat to the present study.

In the final interview, we asked the entrepreneurial team directly whether the cameras had irritated them, whether they had even noticed them, and whether there were other differences between their normal behavior and their behavior during the task. The answers in the final interview also supported the quantitative findings that the teams did not act differently, again indicating that our participants were not aware of any differences to their regular behavior, which would have been typical for the Hawthorne effect.

A potential error of coding video material is the observer bias, which describes the problem that researchers watch the videos from a subject perspective and therefore incorrectly analyze the participants' behavior (Snyder & Frankel, 1976). In this study, research assistants did not code team behavior, but recognized opportunities, for which they could have had preferences. To minimize the risk of observer bias, two different research assistants individually coded each recognized opportunity.

Due to the importance of the video material for our results, it was necessary to adequately safeguard the complete video data (Miles & Huberman, 1994; Yin, 2011). We therefore prepared three different hard disks and one server to have at

least two versions of the complete material saved in two different locations. In addition, everyone who had access to the data had to sign a confidentiality agreement, including the commitment to delete all data on private computers after the analysis, to ensure an appropriate handling of the collected data.

3.4 Data coding

In this section, I explain the use of NVivo as the data analysis software and illustrate the complete coding process, which consisted of four different phases.

Due to the large amount of video material, we decided to work with NVivo, a commonly used data analysis software in research that helps to structure, organize, and analyze collected data, e.g., videotaped data. We coded the comprehensive video material by developing elaborate transcripts of the complete opportunity recognition and selection task. The advantage of this procedure is that NVivo transcripts facilitate the processing of the transcript.

The complete data coding process of the collected video data consisted of four different phases. The first phase was the preparation phase, in which we structured the actual opportunity coding process. In the second phase, a first round of the opportunity coding, four research assistants coded all videos for the first time. In the third phase of our coding process, the second round of the opportunity coding, a fifth research assistant coded all videos again to minimize subjectivism and coding errors. The last phase was the opportunity assessment by three raters who assessed the business value of all recognized opportunities. The three raters had broad experience across industries. In the following, I describe the four phases in detail.

The complete coding process started with the preparation phase. In order to structure the complete opportunity recognition process and facilitate further coding of the video material, the first step was to develop a coding manual. This manual was based on coding manuals already used in prior studies (Harvey, 2013; Harvey & Kou, 2013), but it was adapted to the specific BEST III setup. To divide the complete opportunity recognition and selection task into different sections, we defined nine different phases: an introduction phase, a reading phase, a clarification phase, a technical discussion phase, an individual brainstorming phase, a structural phase, an opportunity recognition phase, an evaluation phase, and a selection phase. For some phases, it was necessary to further distinguish different forms. For example, we divided the clarification phase into problem-solving, common understanding, and distracted conversation during clarification. The most important phase was the opportunity recognition phase, for which we recorded a short description of each recognized opportunity in the transcript, as well as the corresponding opportunity number to track how many opportunities an entrepreneurial team had recognized. In addition, we distinguished between recognition of a new opportunity and discussion of an already recognized opportunity during the task. Table 3 gives an overview of the different phases and their further differentiation. In addition, we defined different notions in NVivo for the respective phases and provided a short description of each phase to ensure consistent coding results. In a second step, the complete

operational research team coded three videos together to develop a common understanding of the coding process and thus provided three different benchmark transcripts for the following coding rounds. The complete coding scheme can be found in the appendix.

Phase	Further differentiation
Introduction phase	-
Reading phase	-
Clarification phase	Problem-solving
	Common understanding
	Distracted conversation during clarification
Technical discussion phase	General technical discussion
	Technical discussion about features or advantages
Individual brainstorming phase	-
Structural phase	Process coordination
	Classification
	Repetition of already recognized opportunities
Opportunity recognition phase	Recognition of a new opportunity
	Further development of an already recognized opportunity
Evaluation phase	-
Decision phase	-

Table 3: Overview of different phases of the opportunity recognition and selection process

Source: Own illustration

For the first round of the opportunity coding, we had the support of four research assistants. We started this round by training these four research assistants. The training was based on the coding manual, which could be used as a template, and on the three benchmark transcripts. At the beginning, we explained to the research assistant team how the videos should be coded and which phases should be described in detail. As described above, it was important for us that the opportunity recognition phase be elaborated in detail. To ensure consistency among research assistants, we created one exemplary transcript with the complete research assistant team. For the sake of consistency throughout the complete coding process and among research assistants, we regularly provided individual feedback on transcripts and conducted meetings with the complete research assistant team to clarify open question and align all transcripts. Each research assistant coded one quarter of all videos.

The overall goal of the second round of the opportunity coding was to ensure the accuracy and consistency of the coding results, and to minimize a subjective bias. We therefore used a fifth research assistant, who coded all videos for a second time after having been trained analogously to the other research assistants. The fifth research assistant used a refined coding manual that included more details and existing transcripts. Where necessary, the fifth research assistant

made transcript adjustments with the help of NVivo. The agreement between the first and the second opportunity coding round was 80% ($\kappa = 0.78$), indicating high agreement (LeBreton & Senter, 2007).

At this stage, we had recorded all recognized opportunities of all entrepreneurial teams. That is, for each team we had a set of opportunities that they had identified. In a next step, we assessed the quality of the recognized opportunities to address the qualitative performance of the entrepreneurial teams. Based on Girotra et al. (2010), three raters with broad experience across industries assessed the business value of each opportunity as a measure of its quality on a scale from 1 ("low") to 10 ("high"). To ensure raters' independence, each rater individually assessed the business values. Based on the fact that the individual assessments were similar, the average of the three individual assessments was calculated, which led to the final assessment of each recognized opportunity. Averaging the score of similar assessments of individual raters is in line with prior research (Goncalo & Staw, 2006; Saad, Cleveland, & Ho, 2015). Cohen's kappa between the three individual rater assessments was $\kappa = 0.86$, proving high inter-rater agreement among the three individual raters (LeBreton & Senter, 2007).

The complete data coding process is illustrated in Figure 12.

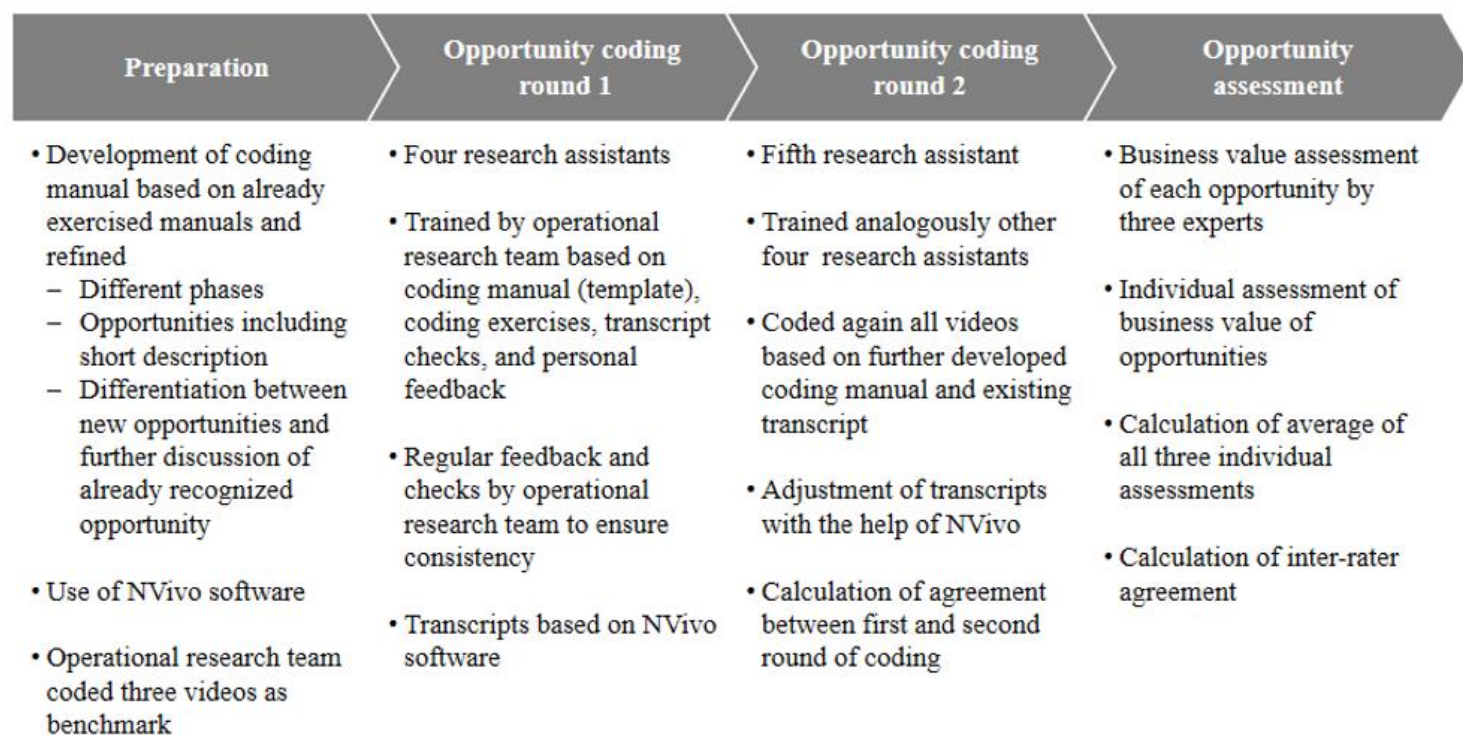


Figure 12: Coding process

Source: Own illustration

3.5 Measures

In the following section, I first introduce the dependent opportunity recognition performance variables (section 3.5.1), second, the independent prior experience variables (section 3.5.2), third, the moderator intra-team trust (section 3.5.3), and fourth, the necessary control variables for my models (section 3.5.4).

3.5.1 Dependent variables

In many prior entrepreneurship studies (Gruber et al., 2008; Shepherd & DeTienne, 2005; Ucbasaran et al., 2009), opportunity recognition performance is measured as the number of opportunities recognized. But as described in chapter 2, for most start-ups it is more important to recognize one brilliant opportunity than many average opportunities, and to select the best opportunity out of the recognized opportunity set (Girotra et al., 2010).

Thus, I decided to use the quality of the selected opportunity as the performance measure for the opportunity recognition phase, and the selection performance as the performance measure for the opportunity selection phase. Each of these two measures is the dependent variable of one of my "prior experience—opportunity recognition performance models." The core element of the BEST III study was the opportunity recognition and selection task, for which participants had 30 minutes' time to recognize different business opportunities and select the best business opportunity at the end (cf. section 3.3.3). In order to measure the opportunity recognition performance of each team, three independent raters assessed the business value of all recognized opportunities (cf. section 3.4). These business value assessments of all opportunities served as the basis for the chosen opportunity recognition performance measure variables, the quality of the selected opportunity, and the selection performance. The quality of the selected opportunity was measured as the business value of the selected opportunity, while the selection performance was measured as the difference between the business value of the selected opportunity and the average business value of all recognized opportunities within an entrepreneurial team.

Quality of the selected opportunity: Based on Girotra et al. (2010) and their understanding of the business value as "the utility of the ideas to a commercial organization that might develop and sell the product" (Girotra et al., 2010, p. 597), the business value of each selected opportunity was assessed on a scale from 1 ("low") to 10 ("high") as a measure of quality. In a first step, each rater assessed the business value of a recognized opportunity independently. Due to the fact that the raters' quality assessments were similar, the quality of the selected opportunity measure was calculated as the average of the three individual assessments, which is in line with prior research (Goncalo & Staw, 2006; Saad et al., 2015) (cf. section 3.4). By assessing the utility of a recognized opportunity for a start-up that might develop and sell the product, which was relevant in our study, two aspects were taken into account by the raters: whether the opportunity was feasible, and whether it was profitable. Only feasible opportunities are worth further involvement

(Ardichvili et al., 2003; Ozgen & Baron, 2007), and only potentially profitable opportunities can be the basis of successful start-ups (Baron & Ensley, 2006). Feasibility of an opportunity can be understood as "how easily it could be translated into a commercial product" (Poetz & Schreier, 2012, p. 250), while technical and economic aspects should be taken into account (Poetz & Schreier, 2012). As entrepreneurs seek profit, it only makes sense to pursue recognized opportunities that could potentially generate a high profit when introduced to a market and, consequently, could create high economic value (Companys & McMullen, 2007; Shane & Venkataraman, 2000). Opportunities with a high business value are expected to be highly feasible, i.e., easily translated into a commercial product, and highly profitable, i.e., expected to generate a high profit. Examples of recognized opportunities with a high business value were pure licensing, augmented reality gaming, or online fashion retail. On the one hand, the three mentioned examples could easily be translated into a commercial product. The three products would be a license that can be bought by other companies, an augmented reality game for end users, and an online fashion app that offers the possibility to order clothes that perfectly fit the customer's body. On the other hand, in all three cases, the possibility for big markets is high. That is, that there are many potential customers—companies acquiring the license, end users purchasing the augmented reality game, and customers using the online fashion app to buy their clothes—which would potentially generate high profit. Opportunities with a low business value are expected to be hardly feasible and hardly profitable. This was the case, for example, for the recognized opportunities planet mapping and scanning of the ocean floor around harbors. In both cases, it would be difficult to transform the opportunity into a product due to the challenging environments in outer space and the ocean. Besides, the potential markets for these two opportunities would be rather small. If opportunities have an average business value, they have either high feasibility and low profitability, low feasibility and high profitability, or average feasibility and average profitability. The opportunity programming industrial robots by scanning would probably have a big market; for example, companies in the industrial goods industry could be potential customers, but it would be difficult to translate the opportunity into a product from a technical perspective. The opportunity fashion scan in stores would be easily feasible, analogously to the opportunity online fashion app, but the potential market for this opportunity seems small. If someone is already in a store, he or she can easily try on new clothes, so there is no need to use an app. An example of an opportunity with average feasibility and average profitability is scanning fruit to get weight information. It would be feasible to translate the opportunity into a fruit app, but it would take some effort to do so. Besides, there could be a market of people who are health-conscious, but this market would not be big. Figure 13 illustrates the underlying relationship between feasibility and profitability for the business value assessment of recognized opportunities. Before independently assessing all recognized opportunities, the three independent raters agreed on the understanding explained above to ensure a consistent rating across all opportunities and among all raters.

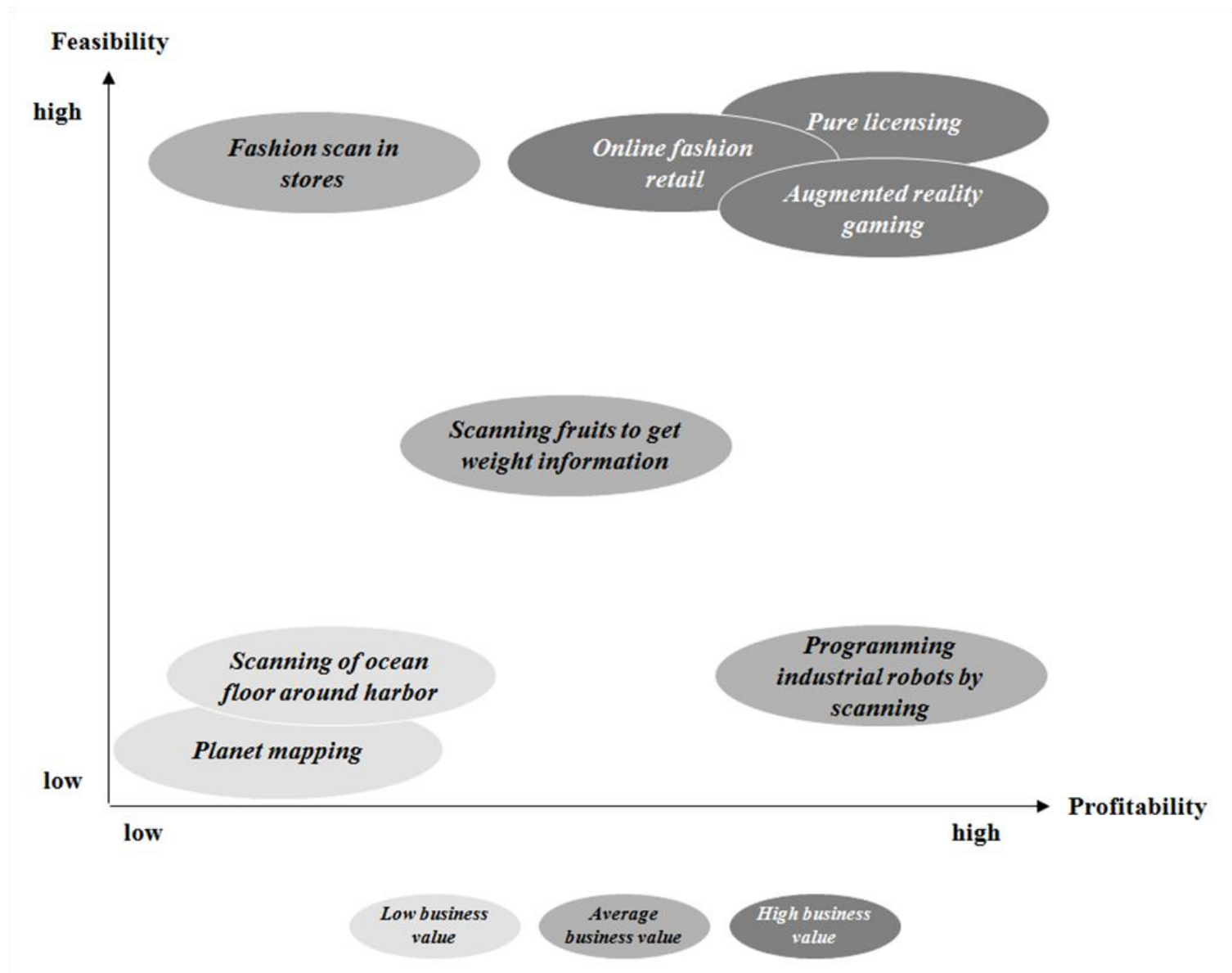


Figure 13: Overview of examples of recognized opportunities with low, average, and high business value

Source: Own illustration

Selection performance: The three raters assessed not only the selected opportunities, but also all other opportunities recognized by each entrepreneurial team, based on the process described above. The selection performance for each entrepreneurial team was derived by calculating the difference between the business value of the selected opportunity and the average business value of all recognized opportunities within the team. Consequently, if the variable "selection performance" has a value above zero, the selection performance is high because the team selected an opportunity that has a higher business value than the average business value of all opportunities recognized by the team. In contrast, if the selection performance has a value below zero, the selection performance is low because the selected opportunity has a below-average business value. If the selection performance has a value below zero, the entrepreneurial team has recognized at least one opportunity with a better business value, but has difficulty identifying the best opportunity

among those it recognized. For entrepreneurial teams that have selected an opportunity with an average business value, the variable takes a value of zero. There are two possible reasons for a value of zero: First, the entrepreneurial team recognized opportunities with higher business values as well as opportunities with lower business values during the opportunity recognition and selection task. The opportunities with a higher business value could have been selected as well, and would have been a better selection. Second, all recognized opportunities of an entrepreneurial team have the same business value (e.g., five). With regard to the business value, it did not matter which opportunity they selected. Consequently, they had neither a high selection performance nor a low selection performance. In both cases, the team had an average selection performance.

The two dependent opportunity recognition performance variables described above—the quality of the selected opportunity and the selection performance—as well as their corresponding measures are shown in Figure 14.

Category	Variable	Measure
Opportunity recognition performance	Quality of the selected opportunity	Assessment of the business value of the selected opportunities from 1 (low business value) representing a bad business opportunity to 10 (high business value) representing a good business opportunity.
	Selection performance	Difference between the business value (BV) of the selected opportunity and the average business value (BV) of all recognized opportunities within an entrepreneurial team. <ul style="list-style-type: none"> • Selection performance > 0: High selection performance Selected opportunity has an above-average BV • Selection performance = 0: Average selection performance Selected opportunity has an average BV • Selection performance < 0: Low selection performance Selected opportunity has a below-average BV

Figure 14: Overview of dependent variables

Source: Own illustration

3.5.2 Independent variables

During the onsite visits, we asked participants to answer two comprehensive surveys (cf. section 3.3.3). I subsequently used these answers to derive the independent variables of my model representing the prior experience in the entrepreneurial team. The independent prior experience variables can be divided into three different categories: team experience, human capital experience, and opportunity-related experience. In an entrepreneurial team setting, prior experience does not refer to an individual entrepreneurial team member; instead, prior experience within an entrepreneurial team is the available experience of all team members taken together (Ucbasaran et al., 2003). Following Wiersema and Bantel (1992), who "used the average level of a given demographic trait in a team to represent the group's overall perspective" (Wiersema & Bantel, 1992, p. 95), I decided that the average value of all individual member values of a team best represents the team's overall characterization. Thus, I used the average value representing the prior entrepreneurial team experience, where possible and reasonable.

Team experience

Entrepreneurial team members with team experience, meaning that they are used to working together, have established routines in working together and know the strengths and characteristics of their team members (Eisenhardt & Schoonhoven, 1990) (cf. section 2.2.2).

Joint team experience refers to the length of experience an entrepreneurial team has working together. Thus, I measured joint team experience as the number of years an entrepreneurial team has already worked together. For all participating teams, all team members indicated the same number of years. Thus, it was neither necessary nor reasonable to calculate an average.

Human capital experience

Following Becker (1975), human capital is generally divided into general human capital and specific human capital as outlined in section 2.2.3. General human capital refers to general aspects of experience (Wiklund & Shepherd, 2003). It is the knowledge that is obtained through educational or general work experience (Colombo & Grilli, 2005). One of the general human capital variables usually used is educational experience. Specific human capital reflects the ability required to be successful in a specific domain (Wiklund & Shepherd, 2003). One form of specific human capital is entrepreneurship-specific human capital, which refers to the ability to successfully manage a new venture based on prior founding experience (Colombo & Grilli, 2005, Ucbasaran et al., 2009). To analyze entrepreneurship-specific human capital, entrepreneurial experience is commonly measured. Consequently, educational experience and entrepreneurial experience form the human capital experience category in my models.

Educational experience refers to the average level of education in an entrepreneurial team. Thus, the average entrepreneurial experience of all team members best represents the entrepreneurial team's overall educational level.

Each participant had to indicate their highest educational level, which was then translated into years of education, following prior research (Wiklund & Shepherd, 2003). In a last step, the average of all team members was derived. Based on the German educational system, participants had seven choices when indicating their education level, namely secondary school (Hauptschule/Realschule), university entrance qualification (Abitur), apprenticeship, bachelor's degree, master's/graduate degree, master of business administration (MBA), and doctoral degree. As I was interested in the work-related education, secondary school and university entrance qualification were transformed into a value of zero. An apprenticeship or bachelor's degree was translated into three years of education, a master's or graduate degree into five years, a master of business administration⁵ into seven years, and a doctoral degree into eight years.

Entrepreneurial experience refers to the average founding experience in an entrepreneurial team. Analogous to educational experience, the average of the foundations of all team members best represents the entrepreneurial team's characteristics. Based on prior entrepreneurial opportunity recognition research (Ucbasaran et al., 2008, 2009), each participant had to specify the number of already founded ventures in the survey, after which the team average was calculated.

Opportunity-related experience

The so-called technology-to-market linking problem (Gruber et al., 2008) can be seen as the basic problem that has to be solved by entrepreneurs to enter a market and enable the success of a venture (cf. section 2.2.4). To solve this fundamental problem, two treasure troves of experience are necessary within the entrepreneurial team, namely technological experience and industry experience (Danneels, 2002; 2007; Gruber et al., 2008, 2013). On the one hand, technological experience is necessary to understand and transform technologies into feasible opportunities. On the other hand, industry experience is necessary to recognize business models that are promising for existing or future markets. Taken together, technological experience and industry experience form the opportunity-related experience category in my models.

Technological experience refers to the technology knowledge within an entrepreneurial team. In line with prior research (Gruber et al., 2008, 2012, 2013), we analyzed the average technological experience in an entrepreneurial team. Following Gruber et al. (2013), participants had to assess the level of technological experience of their entrepreneurial team at founding on a 7-point Likert scale ranging from 1 ("very low") to 7 ("very high"). To create a team-level value, I averaged the individual assessment of all team members. To assess the team members' inter-rater agreement for the team's level of technological experience for intra-team trust, the rwg was calculated based on LeBreton and Senter (2007), which took the value of 0.66, and thus fell only slightly below the threshold of 0.7 (LeBreton & Senter, 2007).

⁵ According to Zimmermann, Friedenberger, Gerharz, and Kamps (2015), who created the Staufenberg MBA trends 2015/2016 report, the majority of MBA programs in Germany last two years.

Industry experience refers to the available market knowledge in the entrepreneurial team. Entrepreneurs are likely to recognize opportunities that reflect their prior industry experience (Shane, 2000; Venkataraman, 1997). Thus, it is important to measure the number of all industries individual team members have worked in, because the number of all industries forms the basis that is reflected during the opportunity recognition and selection task. In line with prior entrepreneurial research (Gruber et al., 2013), I defined the number of all industries in which individual team members had worked, without counting industries repeatedly in the event that multiple team members had worked in that industry. In total, 18 industries are reflected in the sample of 75 entrepreneurial teams and 183 participants, namely Hardware & Software, Media & Entertainment, Consumer Goods, Service Provider, Trade, Machinery & Plant Engineering, Consulting, Telecommunication, Banking & Finance, Transport, Travel & Tourism, Energy & Environment, Healthcare, Culture, Advertising, Construction, Social Business and Education.

Category	Variable	Measure
Team experience variable	Joint team experience	Number of years working as a team
Human capital experience variables	Educational experience	Average years of education
	Entrepreneurial experience	Average number of start-ups founded
Opportunity-related experience variables	Technological experience	Average of self-assessed technological experience in team
	Industry experience	Number of industries experienced in team

Figure 15: Overview of independent variables

Source: Own illustration

Figure 15 gives an overview of the three relevant team experience categories and their respective experience variables. In addition, the operationalization of each variable is indicated. Joint team experience refers to the number of years the entrepreneurial team has already worked together. Educational experience indicates the education level, measured as

average years of education. Entrepreneurial experience refers to prior founding experience, measured as the average number of already founded start-ups. Technological experience is measured as the self-assessed average technological experience on a 7-point Likert scale from 1 ("very low") to 7 ("very high") within the entrepreneurial team. For industry experience, it was necessary and reasonable to use the number of all industries in which individual or multiple team members already had experience.

3.5.3 Moderator

Prior studies have already shown the importance of intra-team trust for team performance (DeJong & Elfring, 2010; Dirks, 1999; Dirks & Ferrin, 2001). Based on Dirks (1999), intra-team trust moderates the relationship between input and team performance, and thus has an indirect effect on team performance (cf. section 2.3).

Intra-team trust: In the first part of the survey, participants had to assess intra-team trust within the entrepreneurial team on a 7-point Likert scale ranging from 1 ("not at all") to 7 ("completely agree"). We used the intra-team trust scale developed by DeJong and Elfring (2010) and also applied in prior research to analyze intra-team trust in teams (e.g., Zheng, 2012). It consists of the following five items:

- I am able to count on my team members for help if I have difficulties with my job.
- I am confident that my team members will take my interests into account when making work-related decisions.
- I am confident that my team members will keep me informed about issues that concern my work.
- I can rely on my team members to keep their word.
- I trust my team members.

For the necessary translation into German, we used the already explained back-and-forth translation approach based on Brislin (1970) (cf. section 3.3.3). In the instructions for the items, we asked participants to refer only to their entrepreneurial team members, and not to additional employees of their start-up, when answering the questions. Cronbach's alpha of intra-team trust was 0.78, and thus above the requested threshold of 0.7 (Hair, 2010). To assess the inter-rater agreement for intra-team trust, the rwg was calculated based on LeBreton and Senter (2007), which took the value of 0.9 and was thus also above the requested threshold of 0.7 (LeBreton & Senter, 2007).

3.5.4 Control variables

Number of recognized opportunities: The 75 participating entrepreneurial teams recognized between 3 and 27 opportunities (mean = 11.3, s.d. = 4.6). Consequently, the different teams had sets of opportunities that varied widely in number, from which they had to select their best opportunity. To ensure that the difference in sets of recognized opportunities did not influence their opportunity recognition performance, which was measured as the quality of the selected

opportunity (Model A) and the selection performance (Model B), I controlled for the number of recognized opportunities.

Team size: Prior studies show the relationship between team size and team performance. West and Anderson (1996) find that teams with more members possess more information. Eisenhardt and Schoonhoven (1990) identify increasing sales volumes in larger teams. Roberts (1991) even concludes that team size has a positive influence on different performance indicators. Thus, the available experience within an entrepreneurial team and, consequently, the resulting team performance could be strongly influenced by the number of team members. For example, a five-member team probably has prior experience in more industries than a two-member team. Consequently, the five-member team can draw on more industries in the opportunity recognition and selection task. Thus, I included team size as a control variable, as has already been done in prior entrepreneurship research (Chen & Wang, 2008; Colombo & Grilli, 2005; Gruber et al., 2008; Steffens et al., 2012).

Average member age: As experience could depend on the age of team members (Ucbasaran et al., 2003), I followed prior research (Baron & Ensley, 2006; Ucbasaran et al., 2008, 2009) and included the age of participants in my models, which was operationalized as the average member age, measuring the average age of all team members in an entrepreneurial team.

3.6 Prior experience—opportunity recognition performance models

Based on the hypotheses developed in chapter 2, I derived two "prior experience—opportunity recognition performance models," which are illustrated in this section.

Model A analyzes the influence of prior experience on the quality of the selected opportunity under the condition of intra-team trust (Figure 16), whereas Model B studies the influence of prior experience on the selection performance under the condition of intra-team trust (Figure 17). The data analysis for both moderation models is explained in the following section.

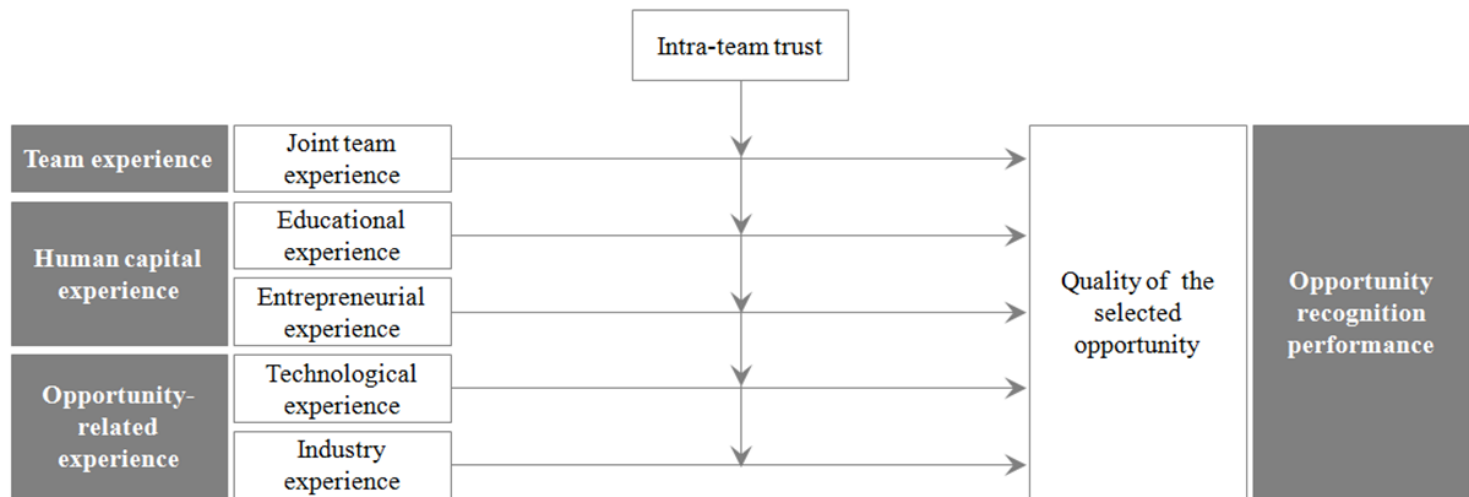


Figure 16: Model A: Influence of prior experience on the quality of the selected opportunity under the condition of intra-team trust

Illustration: Own source

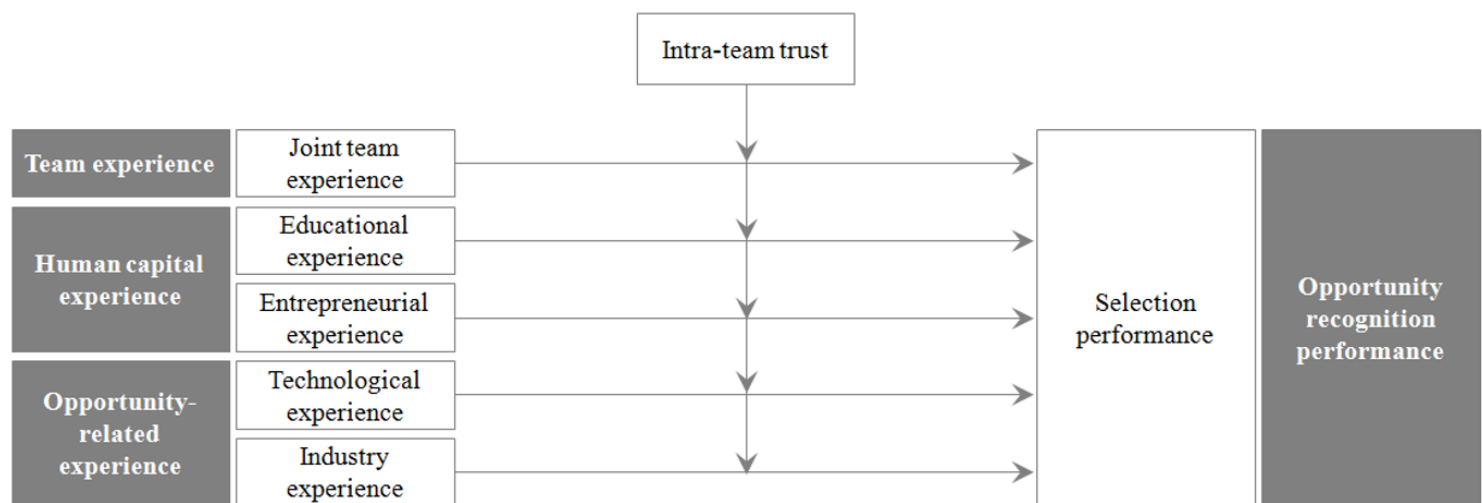


Figure 17: Model B: Influence of prior experience on the selection performance under the condition of intra-team trust

Illustration: Own source

3.7 Data analysis

This section gives an overview of the data analysis, starting with the explanation of the hierarchical regression analysis (section 3.7.1) and followed by the description of the applied estimation technique (section 3.7.2).

3.7.1 Hierarchical regression analysis

To test my "prior experience—opportunity recognition performance models," I used the hierarchical regression analysis, because "the hierarchical approach is particularly appropriate when analyzing potentially correlated independent variables or when investigating multiplicative terms" (Shepherd, Patzelt, & Wolfe, 2011, pp. 1245–1246). In this regression procedure, variables are entered in a defined order, starting with a base model that consists of control variables, independent variables, and moderator variables, followed by an interaction model that also includes the interaction terms.

The base model draws on the standard regression model, which analyses the linear relationship between the independent variable, in this study prior experience, and the dependent variable, in this study opportunity recognition performance (Jaccard & Turrisi, 2003). The error term captures all other influences that are not observable. The constant term and the coefficient are estimated (Wooldridge, 2010).

The moderation model includes the moderation hypotheses (cf. Jaccard 2003). In the work at hand, the moderation hypotheses refer to the relationship between prior experience and opportunity recognition performance under the condition of intra-team trust.

As shown in section 3.6, my study comprises two dependent variables. Thus, my analysis refers to two models, Model A with the quality of the selected opportunity as dependent variable, and Model B with the selection performance as dependent variable. I tested both models independently from each other based on the same hierarchical approach, starting with a base model and followed by a moderation model. The two models differ only in the dependent variable; all other variables, i.e., the independent prior experience variables, the moderator intra-team trust, the interaction terms between prior experience variables and intra-team trust, and the control variables were the same. Before running the analysis, I mean-centered the variables (cf. chapter 4).

3.7.2 Estimation technique

In order to estimate the regression models, I used the ordinary least squares (OLS) technique. For each observation of the sample, OLS predicts the dependent variable by minimizing the sum of squared residuals (Kohler & Kreuter, 2012). Following Hair (2010), the assumption of homoscedasticity must be met when relying on the ordinary least squares technique.

Homoscedasticity assumes that the variance of the dependent variable is constant for different values of the independent variables (Hair, 2010) that is, that the predictors are responsible for the error (Cameron & Trivedi, 2010). Two tests⁶

⁶ Both test are performed after a non-robust estimation of the respective model.

can be conducted to test for homoscedasticity, namely the Breusch-Pagan/Cook-Weisberg test and the White test (Wooldridge, 2003). The Breusch-Pagan test analyzes only linear forms of heteroscedasticity. This means that the test verifies whether the error variances increase in case of an increasing predicted value of the dependent variable or whether the error variances decrease in case of a decreasing predicted value of the dependent variable. The White test is a special case of the Breusch-Pagan test and can be understood as a general test for heteroscedasticity, as it allows a nonlinear effect between the independent variable and error variances. The assumption of homoscedasticity has to be rejected if the p-values of the respective tests are small. Consequently, the analyzed data is heteroscedastic. The results of the Breusch-Pagan/Cook-Weisberg test for Model A with the quality of the selected opportunity as dependent variable ($\chi^2 (1) = 19.32, p > \chi^2 = 0.000$), and for Model B with the selection performance as dependent variable ($\chi^2 (1) = 16.69, p > \chi^2 = 0.0097$), as well as the results of the White test for both models⁷ ($\chi^2 (74) = 183.00, p = 0.000$) indicate that the data is not homoscedastic and are thus heteroscedastic due to small p-values in all tests (Wooldridge, 2003).

In case of heteroscedastic data, it is important to adapt the estimation technique (Wooldridge, 2003). One frequently applied approach is the use of the so-called "sandwich estimator" (Kauermann & Carroll, 2001, p. 1387) introduced by Huber (1967) and White (1980). While using the sandwich estimator, coefficients remain unchanged (Cameron & Trivedi, 2010). Thus, it does not change the interpretation of OLS results (Kohler & Kreuter, 2012). I therefore adapted the estimation technique for my models and used the sandwich estimator for my analysis.

⁷ The results are identical for both models because for the White test only the independent variables are analyzed, which are identical for both models.

4 RESULTS

In this section, I present the results of the study at hand. First, I give an overview of the descriptive statistics and show that multicollinearity is not an issue in the developed models (section 4.1). Second, I illustrate the results of the hypothesis testing for both models, including a description of the interaction diagrams (section 4.2). Third, I illustrate the empirical influence of the selected control variables (section 4.3) and fourth, I present the results of different robustness checks to support the results of the hypothesis testing (section 4.4).

4.1 Descriptive statistics

Table 4 gives an overview of the descriptive statistics, namely the mean values (before mean-centering) and the standard deviation, as well as the correlation of all variables that are part of the models.

The quality of the selected opportunity, the dependent variable of Model A, is significantly correlated to the independent variable joint team experience ($r = -0.23^*$) and the control variable average member age ($r = -0.23^*$). The teams' opportunity selection performance, the dependent variable of Model B, is positively related to the control variable number of recognized opportunities ($r = 0.20^\dagger$), but this correlation does not reach conventional levels of significance ($p < 0.1$). Additionally, there are further significant correlations between different variables for Model A and for Model B. First, I discovered significant relationships between independent variables, namely between joint team experience and educational experience ($r = -0.23^*$) as well as between educational experience and industry experience ($r = 0.27^*$). Second, a positive link between the moderator intra-team trust and the predictor technological experience ($r = 0.11^\dagger$) was shown, but this correlation does not reach conventional significance levels ($p < 0.1$). Third, there is a significant relationship between an independent variable and a control variable, namely between entrepreneurial experience and average member age ($r = 0.41^{**}$). In addition, the relationships between educational experience and average member age ($r = 0.22^\dagger$), as well as between industry experience and number of recognized opportunities ($r = 0.19^\dagger$), are positively related, but these correlations do not reach conventional levels of significance ($p < 0.1$). Fourth, the control variables team size and number of recognized opportunities are significantly related ($r = 0.48^{**}$), whereas the link between team size and average member age is negative (-0.21^\dagger) but does not reach conventional levels of significance ($p < 0.1$).

In addition, the dependent variables of the two models, the quality of the selected opportunity and the selection performance, are significantly correlated, with a value of 0.90 ($p < 0.01$). As the two models are assessed separately, a high correlation between dependent variables of the two models does not cause a problem. The two dependent variables contribute to our understanding of how entrepreneurial teams identify and select a high-quality opportunity. However, the significant correlation between the different predictors in one model as described above could raise the concern of

multicollinearity (Smith & Sasaki, 1979). To test for multicollinearity, the variance inflation factor (VIF) has to be calculated. A high variance inflation factor indicates a high likelihood of multicollinearity (Hair, 2010).

High multicollinearity does not affect the least squares estimates of the regression coefficient, but it leads to high standard errors of the coefficients (Smith & Sasaki, 1979). In addition, the "expected distance between the vector of least-squares coefficients and the vector of true regression coefficients increase with some estimates frequently having either unreasonably large values or unreasonable signs" (Smith & Sasaki, 1979, p. 35). The value and sign can even substantially oscillate due to high multicollinearity. To put it differently, in case of high multicollinearity, scaling effects lead to nonessential collinearity, which is responsible for high variance inflation factors (Dalal & Zickar, 2012). Essential collinearity is based on substantive relationships between the variables, whereas nonessential collinearity is simply caused by the scaling of the variables (Cohen, Cohen, West, & Aiken, 2003; Dalal & Zickar, 2012).

Some authors suggest that nonessential collinearity can be avoided by mean-centering the variables and, consequently, that the calculated variance inflation factors show only the essential collinearity (e.g., Dalal & Zickar, 2012), while others find that centering only facilitates the interpretation of the regression coefficients (e.g., Echambadi & Hess, 2007). In the work at hand, the variance inflation factors for all mean-centered variables are between 1.14 and 2.94, as shown in Table 5. Thus, they are clearly below the commonly used threshold of 10 (Hair, 2010). As the variance inflation factors are only calculated for control variables and predictors and not for dependent variables, the results are identical for both models, as the two models differ only in their dependent variable.

The difference between regression results with mean-centered variables and regression results with variables that are not mean-centered does not affect the conclusion of the analyses but the interpretation of the coefficients, especially in the case of regression models with interaction effects (Dalal & Zickar, 2012). If variables of the regression model are mean-centered, the coefficient shows the "effects of each variable when the other variables are at their mean values" (Echambadi & Hess, 2007, p. 443). In contrast, in the case of uncentered variables, the coefficients indicate the "effects of each variable when the other variables are at zero" (Echambadi & Hess, 2007, p. 442).

In regression models with interaction terms, the zero-point is crucial, because the interpretation of the coefficients "depends on a meaningful zero-point" (Dalal & Zickar, 2012, p. 351). Thus, to draw the right conclusions, it is better to interpret regression results with mean-centered variables than with uncentered variables (Dalal & Zickar, 2012). According to Dalal and Zickar (2012), it is not necessary to mean-center the variable, "when meaningful zero-point naturally occurs and zero falls within the range of the data" (Dalal & Zickar, 2012, p. 352), which is not the case for my data. Thus, I mean-centered all variables, except the dependent variables for the following analyses.

	Mean	s.d.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Team size	2.44	0.70										
2. Average member age	31.63	6.60	-0.21†									
3. No. of recognized opportunities	11.35	4.55	0.48**	-0.18								
4. Joint team experience	1.15	1.19	-0.05	0.17	0.03							
5. Educational experience	4.66	1.60	-0.07	0.22†	0.08	-0.23*						
6. Entrepreneurial experience	1.59	0.81	-0.08	0.41**	0.01	-0.02	-0.02					
7. Technological experience	4.45	1.32	-0.02	0.13	-0.01	-0.07	0.12	0.16				
8. Industry experience	6.61	2.84	0.16	0.17	0.19†	0.00	0.27*	0.00	0.13			
9. Intra-team trust	6.43	0.44	0.04	0.11	0.00	0.00	0.06	-0.06	0.11†	0.20		
10. Quality of the selected opportunity	7.36	2.10	0.09	-0.23*	0.05	-0.23*	0.14	-0.05	0.02	0.11	-0.13	
11. Selection performance	1.68	1.82	0.14	-0.09	0.20†	-0.12	0.09	0.00	0.08	0.14	-0.14	0.90**

n = 75; † p < 0.1; * p < 0.05; ** p < 0.01

Table 4: Descriptive statistics and correlations of the variables

Variable	VIF	1/VIF
<i>Control variables</i>		
Team size	1.46	0.68
Average member age	1.61	0.62
Number of recognized opportunities	1.64	0.61
<i>Predictors</i>		
Joint team experience	1.41	0.71
Educational experience	1.40	0.71
Entrepreneurial experience	1.44	0.69
Technological experience	1.15	0.87
Industry experience	1.59	0.63
Intra-team trust	1.90	0.53
Joint team experience × intra-team trust	2.12	0.47
Educational experience × intra-team trust	2.43	0.41
Entrepreneurial experience × intra-team trust	1.64	0.61
Technological experience × intra-team trust	1.14	0.88
Industry experience × intra-team trust	2.94	0.34

Note: VIFs for model 3 and 6; all variables are mean-centered except dependent variables

Table 5: Variance inflation factors for full interaction model (Model A and Model B)

4.2 Results of the hypothesis testing

Figure 18 gives an overview of the different models that were calculated to test the hypotheses derived in chapter 2. As shown in section 3.6, I developed two models focusing on entrepreneurial team performance in arriving at a high-quality opportunity, namely Model A with the quality of the selected opportunity as dependent variable, and Model B with the selection performance as dependent variable. The dependent variables of the two models highlight different aspects of high-quality opportunities in entrepreneurial teams. Control variables, independent variables, the moderator variable, as well as interaction effects are identical in both models. As outlined in section 3.7.1, I conducted hierarchical regression analyses in three steps for each model. First, I calculated the models with control variables only, which leads to Model 1 for Model A, and Model 4 for Model B. Second, I included the main effects of all predictors, the independent variables, namely joint team experience, educational experience, entrepreneurial experience, technological experience, and industry experience, as well as the main effect for the moderator intra-team trust. Consequently, I got Model 2 for Model A and Model 4 for Model B. The first and the second step result in the base models of each model. Third, I also included the interaction effects, leading to the full models, namely Model 3 for Model A and Model 6 for Model B. The overview in Figure 18 is meant to enable an easier understanding of the following results.

Prior experience – opportunity recognition performance model	Base models		Interaction model
<u>Model A:</u> Quality of the selected opportunity as dependent variable	<u>Model 1:</u> Only control variables	<u>Model 2:</u> Including main effects of all predictors	<u>Model 3:</u> Full model including interaction effects
<u>Model B:</u> Selection performance as dependent variable	<u>Model 4:</u> Only control variables	<u>Model 5:</u> Including main effects of all predictors	<u>Model 6:</u> Full model including interaction effects

Figure 18: Overview of calculated models

Source: Own illustration

4.2.1 Results of the hypothesis testing for Model A

The results of the hypothesis testing for Model A, with the quality of the selected opportunity as the independent variable, are depicted in Table 6. As described in the data analysis (cf. section 3.7) in the methodology part of this

dissertation, I used the OLS estimation technique. As explained above, I started with two models leading to the main effects, namely Model 1 and Model 2, followed by the interaction model, Model 3.

Model 1, which consists exclusively of control variables, namely team size, average member age, and number of recognized opportunities, accounts for a small variance in the dependent variable ($R\text{-squared} = 0.06$) and is not significant ($F(3, 71) = 1.33, p > 0.1$). For Model 2, I also included the main effects of the independent variables joint team experience, educational experience, entrepreneurial experience, technological experience, and industry experience, as well as the moderator intra-team trust. Joint team experience and intra-team trust have a negative, not significant effect on the quality of the selected opportunity, while the other four experience variables have a positive, but also not significant effect on the quality of the selected opportunity. The inclusion of the main effects contributes to an increase in explained variance of 0.09 and, consequently, $R\text{-squared}$ is 0.15. Model 2 is also not significant ($F(9, 65) = 1.03, p > 0.1$).

Model 3 represents the full model, as it also contains the interaction effects that are the basis for my hypothesis tests. The explained variance increases to 0.13 and, consequently, $R\text{-squared}$ is 0.28. Model 3 is significant at the 5% level ($F(14, 60) = 2.16, p < 0.05$).

Hypothesis 1a assumes a negative relationship between joint team experience and the quality of the selected opportunity under the condition of intra-team trust, which is supported by a negative and significant coefficient of the interaction term ($b = -1.06, p < 0.01$).

Hypothesis 2a supposes a negative relationship between educational experience and the quality of the selected opportunity under the condition of intra-team trust, which is rejected due to a negative, but not significant coefficient of the interaction term ($b = -0.13, p > 0.1$).

Hypothesis 3a expects a negative relationship between entrepreneurial experience and the quality of the selected opportunity under the condition of intra-team trust, which is supported by a negative and significant coefficient of the interaction term ($b = -2.26, p < 0.01$).

Hypothesis 4a presumes a negative relationship between technological experience and the quality of the selected opportunity under the condition of intra-team trust, which is rejected due to a negative, but not significant coefficient of the interaction term ($b = -0.32, p > 0.1$).

Hypothesis 5a postulates a negative relationship between industry experience and the quality of the selected opportunity under the condition of intra-team trust, which is supported by a negative and significant coefficient of the interaction term ($b = -0.31, p < 0.05$).

In summary, for Model A, with the quality of the selected opportunity as the dependent variable, the hypothesized negative interaction effects between joint team experience and intra-team trust (H1a), between entrepreneurial experience and intra-team trust (H3a), and between industry experience and intra-team trust (H5a) are supported. To better understand the nature of these interactions, I provide graphs displaying these interactions in section 4.2.3. However, the other two postulated negative interaction effects—between educational experience and intra-team trust (H2a), and between technological experience and intra-team trust (H4a)—are rejected. The full interaction model including all five described interaction effects explains a considerable amount of variance ($R\text{-squared} = 0.28$) and is significant at the 5% level ($F(14, 60) = 2.16, p < 0.05$).

4.2.2 Results of the hypothesis testing for Model B

The hypothesis testing for Model B, with the selection performance as the dependent variable, is similar to that for Model A, with the quality of the selected opportunity as the dependent variable. The hypothesis testing started with Model 4, which includes only control variables, followed by Model 5, which is extended by the main effects of the independent variables and the moderator, and finished by testing Model 6, the full model with all interaction effects.

As explained above, the significant positive correlation between the dependent variable of Model A, the quality of the selected opportunity, and the dependent variable of Model B, the selection performance, is high, namely 0.9 (cf. Table 4). Thus, it is not surprising that the results for Model B, which are shown in Table 7, are similar to those for Model A, which are illustrated in Table 6. As for Model 2 of Model A, Model 5 of Model B depicts negative and not significant main effects for joint team experience and intra-team trust, as well as positive and not significant main effects for educational experience, entrepreneurial experience, technological experience, and industry experience. There are also high similarities between the interaction model of Model A and the interaction model of Model B. The hypothesized negative interaction effects between joint team experience and intra-team trust (H1b: $b = -0.94, p < 0.01$), between entrepreneurial experience and intra-team trust (H3b: $b = -1.93, p < 0.01$), and between industry experience and intra-team trust (H5b: $b = -0.27, p < 0.05$) are supported. However, the postulated negative interaction effects between educational experience and intra-team trust (H2b: $b = -0.05, p > 0.1$) as well as between technological experience and intra-team trust (H4b: $b = -0.12, p > 0.1$) are rejected due to negative but not significant coefficients of the interaction terms.

The explained variance increases from Model 4 ($R\text{-squared} = 0.04$) to Model 5 ($R\text{-squared} = 0.10$), and again to Model 6 ($R\text{-squared} = 0.23$). Similarly to Model A, the base models of Model B are not significant (Model 4: $F(3, 71) = 1.18, p > 0.1$; Model 5: $F(9, 65) = 0.92, p > 0.1$), whereas the full interaction model of Model B is significant ($F(14, 60) = 3.18, p < 0.01$).

Variable	Model A					
	Base models				Interaction model	
	Model 1		Model 2		Model 3	
<i>Controls</i>						
Team size	0.15	(0.27)	0.15	(0.27)	0.37	(0.27)
Average member age	-0.07+	(0.04)	-0.09+	(0.04)	-0.07	(0.05)
Number of recognized opportunities	-0.01	(0.06)	-0.03	(0.06)	-0.09	(0.07)
<i>Predictors</i>						
Joint team experience			-0.25	(0.19)	-0.07	(0.19)
Educational experience			0.18	(0.16)	0.27+	(0.16)
Entrepreneurial experience			0.14	(0.39)	-0.03	(0.32)
Technological experience			0.03	(0.22)	0.16	(0.20)
Industry experience			0.11	(0.08)	0.23*	(0.09)
Intra-team trust			-0.67	(0.51)	-1.87**	(0.60)
Joint team experience × intra-team trust					-1.06**	(0.35)
Educational experience × intra-team trust					-0.13	(0.40)
Entrepreneurial experience × intra-team trust					-2.26**	(0.82)
Technological experience × intra-team trust					-0.32	(0.45)
Industry experience × intra-team trust					-0.31*	(0.15)
<i>Model estimation results</i>						
R-squared	0.06		0.15		0.28	
Comparison to			Model 1		Model 2	
ΔR-squared			0.09		0.13	
F	1.33		1.03		2.16*	
	F(3,71) = 1.33		F(9,65) = 1.03		F(14,60) = 2.16	

n = 75; † p < 0.1; * p < 0.05; ** p < 0.01; dependent variable (DV) = quality of the selected opportunity; note: constant term not displayed; results derived from robust regression

Table 6: Results of the hierarchical linear regression predicting the quality of the selected opportunity

Variable	Model B					
	Base models			Interaction model		
	Model 4		Model 5		Model 6	
<i>Controls</i>						
Team size	0.13	(0.24)	0.12	(0.26)	0.29	(0.24)
Average member age	-0.01	(0.03)	-0.02	(0.04)	0.00	(0.04)
Number of recognized opportunities	0.06	(0.05)	0.06	(0.05)	0.00	(0.06)
<i>Predictors</i>						
Joint team experience			-0.14	(0.15)	0.01	(0.15)
Educational experience			0.04	(0.14)	0.11	(0.14)
Entrepreneurial experience			0.01	(0.30)	-0.16	(0.25)
Technological experience			0.11	(0.20)	0.21	(0.19)
Industry experience			0.08	(0.07)	0.18*	(0.07)
Intra-team trust			-0.72	(0.45)	-1.72**	(0.54)
Joint team experience × intra-team trust					-0.94**	(0.28)
Educational experience × intra-team trust					-0.05	(0.37)
Entrepreneurial experience × intra-team trust					-1.93**	(0.62)
Technological experience × intra-team trust					-0.12	(0.40)
Industry experience × intra-team trust					-0.27*	(0.12)
<i>Model estimation results</i>						
R-squared	0.04		0.10		0.23	
Comparison to			Model 5		Model 6	
ΔR-squared			0.06		0.13	
F	1.18		0.92		3.18**	
	F(3,71) = 1.18		F(9,65) = 0.92		F(14,60) = 3.18	

n = 75; † p < 0.1; * p < 0.05; ** p < 0.01; dependent variable (DV) = selection performance; note: constant term not displayed; results derived from robust regression

Table 7: Results of the hierarchical linear regression predicting the selection performance

4.2.3 Interaction effects

For each of the two models, three interaction effects are significant, as shown in Table 6 and Table 7. The similarity of significant interaction effects between both models is not surprising due to the high positive correlation between the dependent variables of the two models (cf. Table 4). One interaction effect of each of the three experience categories is significant. First, in the team experience category, the interaction effect between joint team experience and intra-team trust is significant for both models. Second, the interaction effect between entrepreneurial experience, which is part of the human capital experience category, and intra-team trust is significant in Model A and in Model B. Third, for the opportunity-related experience category, the interaction effect between industry experience and intra-team trust is significant for both models. Figure 19 classifies the significant interaction effects in the applied categories.

Experience category	Experience variable	Model A: Interaction effect with intra-team trust	Model B: Interaction effect with intra-team trust
Team experience variable	Joint team experience	Significant at the 1% level	Significant at the 1% level
Human capital experience variables	Educational experience	Not significant	Not significant
	Entrepreneurial experience	Significant at the 1% level	Significant at the 1% level
Opportunity-related experience variables	Technological experience	Not significant	Not significant
	Industry experience	Significant at the 5% level	Significant at the 5% level

Figure 19: Overview of significant interaction effects for Model A and Model B

Source: Own illustration

In the following, I describe in detail the interaction diagrams for the significant interaction effects for both models. The interaction diagrams show the value for the dependent variable—in this case, the measurement for opportunity recognition performance, namely the quality of the selected opportunity for Model A, and the selection performance for

Model B—on the y-axis. The mean-centered respective experience variable is depicted on the x-axis in all diagrams. Following prior research (Breugst, Patzelt, Shepherd, & Aguinis, 2012) on regression models with interaction effects, the relationship between the independent variable (the respective experience variable) and the dependent variable (the quality of the selected opportunity in Model A, and the selection performance in Model B) is shown for a high level and a low level of the moderator intra-team trust. A high level of intra-team trust is illustrated as the mean-plus-one standard deviation, whereas a low level of intra-team trust is depicted as the mean-minus-one standard deviation (cf. Breugst et al., 2012).

The significant interaction effect between joint team experience and intra-team trust for Model A with the quality of the selected opportunity as dependent variable is depicted in Figure 20. For entrepreneurial teams with low joint team experience, i.e., those that do not have a long history of working together, the level of intra-team trust does not substantially influence the value of the quality of the selected opportunity. The two lines, the one for a high level of intra-team trust and the one for a low level of intra-team trust, are close together. The more joint team experience an entrepreneurial team has, the more relevant the level of intra-team trust. This relationship is illustrated by the growing distance between the two intra-team trust lines. For entrepreneurial teams with high joint team experience, the condition of high intra-team trust leads to a low value for the quality of the selected opportunity, whereas the condition of low intra-team trust enables a high value for the quality of the selected opportunity. Thus, a high level of intra-team trust is disadvantageous for entrepreneurial teams with high joint experience.

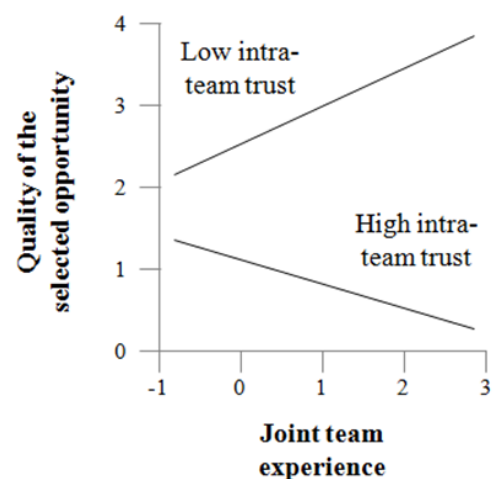


Figure 20: Model A: Interaction diagram for joint team experience and intra-team trust

Source: Own illustration

Figure 21 illustrates the significant interaction effect between entrepreneurial experience and the quality of the selected opportunity. The effect is similar to the interaction effect between joint team experience and the quality of the selected opportunity, which is shown in Figure 20. The influence of different intra-team trust levels on the quality of the selected

opportunity is not strong for entrepreneurial teams with low entrepreneurial experience, as the two intra-team trust lines, for high and for low intra-team trust, are close together. However, it is strong for entrepreneurial teams with high entrepreneurial experience, as there is a large distance between the two lines for intra-team trust. Entrepreneurial teams with low entrepreneurial experience, i.e., those in which the average number of start-ups already founded by the members of the team is small, achieves comparable values for the quality of the selected opportunity for low as well as for high intra-team trust levels. In contrast, entrepreneurial teams with higher entrepreneurial experience, i.e., those in which the team members have on average already founded more start-ups, reach only a low value for the quality of the selected opportunity in case of high intra-team trust, and a high value for the quality of the selected opportunity in case of low intra-team trust. Consequently, not trusting each other in entrepreneurial teams with high entrepreneurial experience is beneficial for the quality of the selected opportunity.

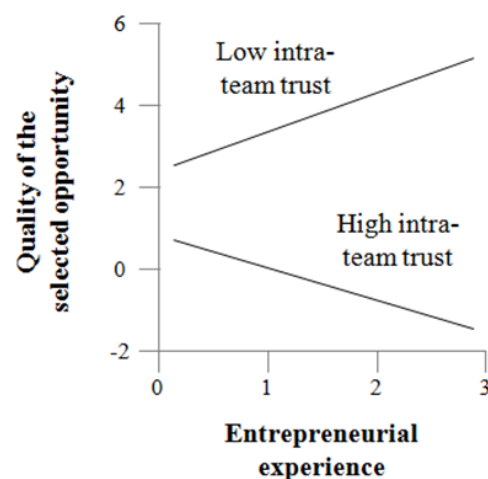


Figure 21: Model A: Interaction diagram for entrepreneurial experience and intra-team trust

Source: Own illustration

The significant interaction effect between industry experience and intra-team trust for Model A is depicted in Figure 22. Entrepreneurial teams with low industry experience, i.e., those in which the members of the team do not have experience in many different industries, reach only a low quality of the selected opportunity for both levels of intra-team trust. In contrast, entrepreneurial teams with higher industry experience, based on prior experience in many different industries, achieve a higher value for the quality of the selected opportunity compared to teams with lower industry experience for both intra-team trust levels. The positive effect between industry experience and the quality of the selected opportunity is stronger for teams with a low level of intra-team trust than for teams with a high level of intra-team trust. That is, under the condition of low intra-team trust, entrepreneurial teams with high industry experience obtain a higher quality of the selected opportunity compared to the condition of high intra-team trust.

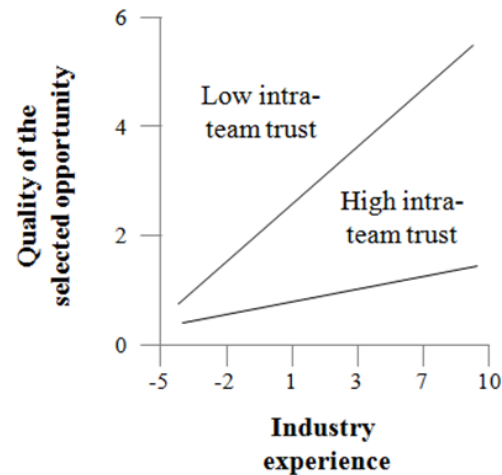


Figure 22: Model A: Interaction diagram for industry experience and intra-team trust

Source: Own illustration

As explained above, the high positive correlation of 0.9 ($p < 0.01$) (cf. Table 4) between the dependent variables of both models leads to similar results for the analyzed interaction effects (cf. Table 6 and Table 7). Thus, it is not surprising that the interaction diagrams for the three significant interaction effects for Model B look similar to the interaction diagrams for Model A.

Figure 23 shows the interaction effect between joint team experience and intra-team trust for model B with selection performance as the dependent variable. Analogous to Figure 20, which depicts this interaction effect for Model A, intra-team trust as a condition does not influence the selection performance for entrepreneurial teams with low joint team experience, whereas in entrepreneurial teams with high joint team experience, the influence of intra-team trust as a condition for the selection performance was strong. Entrepreneurial teams with low joint team experience show similar selection performance values for low as well as for high intra-team trust levels. In contrast, entrepreneurial teams with high joint team experience reach only a low value for the selection performance in case of high-intra-team trust, and a high value for the selection performance in case of low intra-team trust.

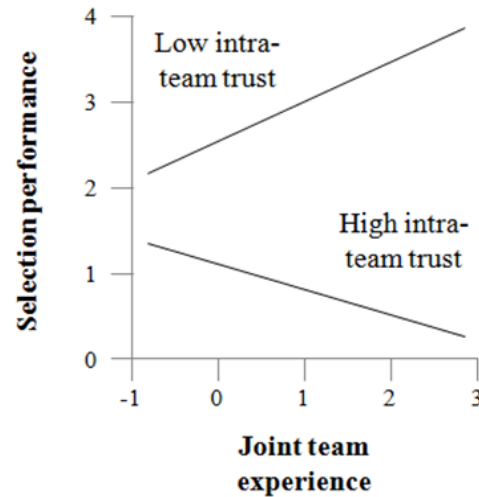


Figure 23: Model B: Interaction diagram for joint team experience and intra-team trust

Source: Own illustration

The significant interaction effect between entrepreneurial experience and intra-team trust for Model B is illustrated in Figure 24, which is similar to the interaction diagram of this interaction effect of Model A (cf. Figure 21). Entrepreneurial teams with low entrepreneurial experience achieve comparable values for selection performance under both intra-team trust conditions. However, entrepreneurial teams with high entrepreneurial experience achieve a better selection performance under the condition of low intra-team trust, whereas they show a worse selection performance under the condition of high intra-team trust. Thus, intra-team trust is a negative condition for the selection performance for entrepreneurial teams with high entrepreneurial experience.

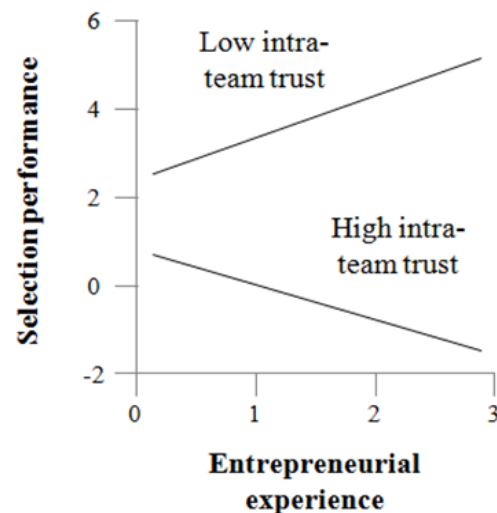


Figure 24: Model B: Interaction diagram for entrepreneurial experience and intra-team trust

Source: Own illustration

Figure 25 shows the significant interaction effect between industry experience and intra-team trust for Model B, which is equivalent to Model A in Figure 22. Entrepreneurial teams with high industry experience achieve higher values for the selection performance than entrepreneurial teams with low industry experience for both intra-team trust levels. However, for teams with lower levels of intra-team trust, the relationship between industry experience and the selection performance is more positive than for teams with higher levels of intra-team trust.

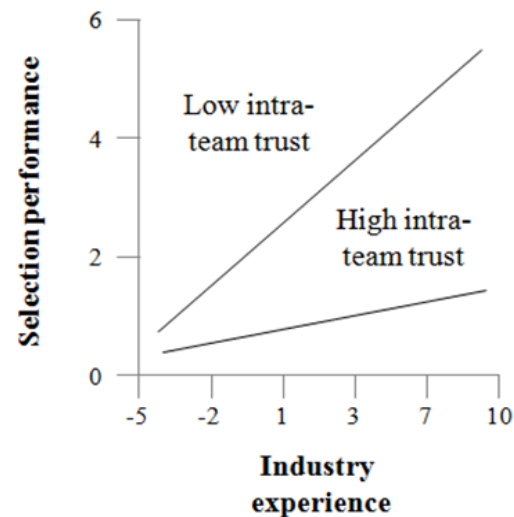


Figure 25: Model B: Interaction diagram for industry experience and intra-team trust

Source: Own illustration

4.3 Influence of control variables

I included three control variables—team size, average member age, and number of recognized opportunities—in both models, based on prior use in related papers (Baron & Ensley, 2006; Chen & Wang, 2008; Colombo & Grilli, 2005; Gruber et al., 2008, 2012, 2013; Shepherd & DeTienne, 2005; Steffens et al., 2012) or potential theoretical relevance (cf. section 3.5.4). For both models, the control variables have no significant influence on the dependent variable in the full interaction models. In Model A, with the quality of the selected opportunity as dependent variable, I find small negative coefficients for average member age ($b = -0.07$, $p > 0.1$) and number of recognized opportunities ($b = -0.09$, $p > 0.1$). The positive coefficient for team size is higher, but also not significant ($b = 0.37$, $p > 0.1$). In Model B, with the selection performance as dependent variable, the coefficients for average member age ($b = 0.00$, $p > 0.1$) and number of recognized opportunities ($b = 0.00$, $p > 0.1$) are small and not significant, whereas the coefficient for team size is higher but also not significant ($b = 0.29$, $p > 0.1$). Thus, in both models the selected control variables do not significantly influence the respective performance measure for opportunity recognition.

4.4 Robustness checks

I conducted different robustness checks to minimize the risk that the regression results and, consequently, the hypothesis testing would be influenced by the model specifications or biases in the data. First, I applied a robustness check without the use of control variables (section 4.4.1). Second, I tested both models relying on the same dependent variables, but excluding my personal assessments of the business values. That is, only the assessments of the two other industry experts were taken into account for all recognized opportunities (section 4.4.2). Third, I tested the models using only one intra-team trust item, the central one, out of all five items (section 4.4.3). Fourth, I included only start-ups that were three years old or younger (section 4.4.3) because these start-ups represent the majority in the present study, and because relationships in older start-ups might be different due to different information processing demands. Fifth, I checked the results on a smaller sample from a common location by focusing on start-ups in Munich, which is the city that contributes the most start-ups to our study (section 4.4.5). Sixth, I conducted different robustness checks with individual interaction effects, starting with individual interaction effects along the used experience variables, namely joint team experience, educational experience, entrepreneurial experience, technological experience, and industry experience. In a following step, I tested the interaction effects of the defined experience categories, namely team experience, human capital experience, and opportunity-related experience, as well as combinations of these categories (section 4.4.6). At the end of this section, I summarize the results of all robustness checks (section 4.4.7).

The results of the hypothesis testing for Model A (cf. Table 6) and for Model B (cf. Table 7) support hypotheses H1a, H1b, H3a, H3b, H5a, and H5b, and reject hypotheses H2a, H2b, H4a, and H4b. Hence, the robustness checks support the original results if the coefficients for the interaction effects between joint team experience and intra-team trust (H1a and H1b), between entrepreneurial experience and intra-team trust (H3a and H3b), and between industry experience and intra-team trust (H5a and H5b) for both models are negative and significant. Otherwise, the robustness checks do not support the original results for these hypotheses. However, the negative interaction effects between educational experience and intra-team trust (H2a and H2b), as well as between technological experience and intra-team trust (H4a and H4b), are not significant for both models in the original hypothesis testing. Thus, the robustness checks do not support the original results for these hypotheses if the coefficient is negative and significant. Otherwise, they support the original results.

4.4.1 Results of the hypothesis testing without control variables

The included control variables do not significantly influence the dependent variable of the respective "prior experience—opportunity recognition performance model," as already shown above (cf. section 4.3). To counteract potential criticism on the inclusion of control variables (e.g., based on Spector & Brannick, 2011), I recalculated both models without control variables, in line with prior research (e.g., Breugst et al., 2012; Breugst & Shepherd, in press) to test the result. Table 8 shows the results of the robustness check without control variables. The results clearly support H1a

($b = -0.97, p < 0.01$) and H3a ($b = -2.24, p < 0.01$). The coefficient for the interaction effect between industry experience and intra-team trust (H5a) is negative, but this correlation does not reach conventional levels of significance ($b = -0.28, p < 0.1$). For Model B, the significance for H1b ($b = -0.99, p < 0.01$), H3b ($b = -1.90, p < 0.01$) and H5b ($b = -0.26, p < 0.05$) is supported. Additionally, for both models the rejection of the hypotheses concerning educational experience (H2a: $b = -0.08, p > 0.1$; H2b: $b = -0.09, p > 0.1$) and technological experience (H4a: $b = -0.13, p > 0.1$; H4b: $b = -0.08, p > 0.1$) is approved. Taken together, the results for the regression models without control variables support the original results and my hypothesis tests for the full models.

4.4.2 Results of the hypothesis testing without my business value assessment

As described in section 3.4, three industry experts individually assessed the business value of all recognized opportunities, after which the average of these three assessments was calculated. This average value served as a measure of the quality of the selected opportunity, the dependent variable of model A. In addition, the assessment of the business values of all recognized opportunities was the basis for the calculation of the dependent variable for model B, namely the difference between the business value of the selected opportunity and the average business value of all recognized opportunities within an entrepreneurial team. The fact that I was one of these three experts and was aware of the hypothesized relations between experience and opportunity recognition performance could have influenced my assessment of the business values. Thus, I reran a robustness check without my assessments, using only the assessments of the other two experts to calculate the dependent variables. The results of the robustness check that included the assessments of only two expert raters are depicted in Table 9. For both models, the negative condition of intra-team trust for the relationship between joint team experience and the opportunity recognition performance (H1a: $b = -1.08, p < 0.01$; H1b: $b = -0.95, p < 0.01$), between entrepreneurial experience and the opportunity recognition performance (H3a: $b = -2.30, p < 0.01$; H3b: $b = -1.94, p < 0.01$), and between industry experience and the opportunity recognition performance (H5a: $b = -0.31, p < 0.05$; H5b: $b = -0.27, p < 0.05$) was confirmed. In addition, the rejection of the hypotheses concerning the negative condition of intra-team trust for the link between educational experience and opportunity recognition performance (H2a: $b = -0.14, p > 0.1$; H2b: $b = -0.06, p > 0.1$) as well as between technological experience and opportunity recognition performance (H2a: $b = -0.33, p > 0.1$; H2b: $b = -0.12, p > 0.1$) were supported. Thus, the results of this robustness check fully support the results of the original models relying on the three different coders including my own coding, which is a testament to the great care we invested in coding the quality of the opportunities.

Variable	Model A (without controls)				Model B (without controls)			
	Base model		Interaction model		Base model		Interaction model	
	Model 2		Model 3		Model 5		Model 6	
<i>Predictors</i>								
Joint team experience	-0.38+	(0.22)	-0.21	(0.18)	-0.16	(0.15)	-0.00	(0.14)
Educational experience	0.08	(0.16)	0.15	(0.16)	0.03	(0.14)	0.10	(0.15)
Entrepreneurial experience	-0.17	(0.32)	-0.31	(0.23)	-0.05	(0.26)	-0.17	(0.17)
Technological experience	0.02	(0.22)	0.15	(0.20)	0.10	(0.20)	0.20	(0.18)
Industry experience	0.10	(0.08)	0.20*	(0.08)	0.10	(0.06)	0.20**	(0.06)
Intra-team trust	-0.80	(0.55)	-1.90**	(0.54)	-0.77	(0.47)	-1.70**	(0.50)
Joint team experience × intra-team trust			-0.97**	(0.36)			-0.99**	(0.27)
Educational experience × intra-team trust			-0.08	(0.37)			-0.09	(0.36)
Entrepreneurial experience × intra-team trust			-2.24**	(0.76)			-1.90**	(0.60)
Technological experience × intra-team trust			-0.13	(0.43)			-0.08	(0.40)
Industry experience × intra-team trust			-0.28+	(0.15)			-0.26*	(0.11)
<i>Model estimation results</i>								
R-squared	0.1		0.23		0.07		0.21	
Comparison to			Model 2				Model 5	
ΔR-squared			0.13				0.14	
F	0.86		2.23*		0.78		3.72**	
	F(6,68) = 0.86		F(11,63) = 2.23		F(6,68) = 0.78		F(11,63) = 3.72	

n = 75; † p < 0.1; * p < 0.05; ** p < 0.01; Model A: dependent variable (DV) = quality of the selected opportunity; Model B: dependent variable (DV) = selection performance; note: constant term not displayed; results derived from robust regression

Table 8: Results of the hypothesis testing without controls

Variable	Model A (only two raters)						Model B (only two raters)					
	Base models				Interaction model		Base models				Interaction model	
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
<i>Controls</i>												
Team size	0.16	(0.28)	0.17	(0.27)	0.39	(0.27)	0.15	(0.24)	0.14	(0.25)	0.31	(0.24)
Average member age	-0.07+	(0.04)	-0.08+	(0.05)	-0.07	(0.05)	-0.01	(0.03)	-0.01	(0.04)	0.00	(0.04)
Number of recognized opportunities	-0.00	(0.06)	-0.03	(0.06)	-0.09	(0.07)	0.07	(0.05)	0.06	(0.06)	0.00	(0.06)
<i>Predictors</i>												
Joint team experience			-0.26	(0.19)	-0.07	(0.19)			-0.15	(0.15)	-0.00	(0.15)
Educational experience			0.19	(0.16)	0.27+	(0.16)			0.05	(0.14)	0.12	(0.14)
Entrepreneurial experience			0.15	(0.39)	-0.03	(0.32)			0.02	(0.30)	-0.15	(0.24)
Technological experience			0.03	(0.22)	0.16	(0.21)			0.11	(0.20)	0.21	(0.19)
Industry experience			0.11	(0.08)	0.24**	(0.09)			0.08	(0.07)	0.19*	(0.07)
Intra-team trust			-0.69	(0.51)	-1.91**	(0.61)			-0.76	(0.46)	-1.77**	(0.55)
Joint team experience × intra-team trust					-1.08**	(0.35)					-0.95**	(0.28)
Educational experience × intra-team trust					-0.14	(0.40)					-0.06	(0.37)
Entrepreneurial experience × intra-team trust					-2.30**	(0.81)					-1.94**	(0.60)
Technological experience × intra-team trust					-0.33	(0.45)					-0.12	(0.40)
Industry experience × intra-team trust					-0.31*	(0.15)					-0.27*	(0.12)
<i>Model estimation results</i>												
R-squared	0.05		0.15		0.28		0.05		0.11		0.23	
Comparison to			Model 1		Model 2				Model 4		Model 5	
ΔR-squared			0.10		0.13				0.06		0.12	
F	1.20		1.02		2.24*		1.26		1.00		3.39**	
	F(3,71) = 1.26		F(9,65) = 1.02		F(14,60) = 2.24		F(3,71) = 1.26		F(9,65) = 1.00		F(14,60) = 3.39	

n = 75; † p < 0.1; * p < 0.05; ** p < 0.01; Model A: dependent variable (DV) = quality of the selected opportunity; Model B: dependent variable (DV) = selection performance; note: constant term not displayed; results derived from robust regression

Table 9: Results of the hypothesis testing without my business value assessment (only two independent raters)

4.4.3 Results of the hypothesis testing for only one intra-team trust item

We asked participants in the survey to answer the following five questions concerning intra-team trust in their entrepreneurial team (cf. section 3.5.3).

- I am able to count on my team members for help if I have difficulties with my job.
- I am confident that my team members will take my interests into account when making work-related decisions.
- I am confident that my team members will keep me informed about issues that concern my work.
- I can rely on my team members to keep their word.
- I trust my team members.

To minimize the risk that the results of the regression and the derived conclusions might depend on how I measured my moderator intra-team trust, I ran a robustness check with only one intra-team trust item. I selected the item that in my opinion best represented and summarized intra-team trust in teams, namely the last one, "I trust my team members." I chose this item because it included the words "trust" as well as "my" and "team members." Thus, the item refers to the role of trust for the relationships between the respondent and his or her fellow team members, which in my opinion best represents and summarizes intra-team trust in teams. Table 10 illustrates the results of the robustness check with only one intra-team trust item. The rejection of H2a ($b = 0.17$, $p > 0.1$) and H2b ($b = 0.31$, $p > 0.1$), which refer to educational experience, as well as H4a ($b = -0.52$, $p > 0.1$) and H4b ($b = -0.29$, $p > 0.1$), which focus on technological experience, is fully supported similar to the robustness checks described above. The negative relationship between industry experience and opportunity recognition performance under the condition of intra-team trust is supported for Model A (H5a: $b = -0.45$, $p < 0.01$) as well as for Model B (H5b: $b = -0.38$, $p < 0.05$). In addition, the negative link between joint team experience and opportunity recognition performance under the condition of intra-team trust is supported for Model A (H1a: $b = -0.75$, $p < 0.05$). The coefficient for Model B is negative, but this correlation does not reach conventional levels of significance (H1b: $b = -0.60$, $p < 0.1$). The relationship between entrepreneurial experience and opportunity recognition performance under the condition of intra-team trust is negative, but not significant for both models (H3a: $b = -0.95$, $p > 0.1$; H3b: $b = -0.64$, $p > 0.1$). Overall, the results of the robustness check with only one intra-team trust item can be seen as supporting the main results, despite the lack of support for hypotheses H1b, H3a, and H3b.

4.4.4 Results of the hypothesis testing for three-year-old or younger start-ups

In my sample, 71 start-ups (95%) were three years old or younger. Thus, only four start-ups (5%) were older, namely the three four-year-old start-ups and the one five-year-old start-up. As

information processing demands in entrepreneurial teams are largely influenced by the novelty of the venture (Amason et al., 2006), entrepreneurial teams of older start-ups might solve the opportunity recognition and selection task differently. Consequently, I conducted an additional robustness check that included only start-ups three years old or younger, as these start-ups can be seen as the main part of the sample with regard to the start-up age. Table 11 shows the results of this test, which fully supports the initial hypotheses testing. The negative and significant coefficients for H1a ($b = -0.98, p < 0.05$), H3a ($b = -2.34, p < 0.01$) and H5a ($b = -0.35, p < 0.05$), as well as the lack of significance for H2a ($b = -0.21, p > 0.1$) and H4a ($b = -0.52, p > 0.1$), support the results for Model A. Similarly, the coefficients for H1b ($b = -1.10, p < 0.05$), H3b ($b = -1.88, p < 0.01$), and H5b ($b = -0.33, p < 0.05$) are negative and significant, whereas the coefficients for H2b ($b = -0.15, p > 0.1$) and H4b ($b = -0.21, p > 0.1$) are negative but not significant. Thus, the original results for Model B are also fully supported.

4.4.5 Results of the hypothesis testing for start-ups in Munich

In addition, I ran a robustness check that included only start-ups in Munich to further narrow the local focus (cf. Zott & Huy, 2007), as Munich is the city in which most of the start-ups in my sample, namely 39 (52%), have their office.

The results of the robustness check only partially support the original hypothesis testing results (cf. Table 12). This can be explained by the fact that a sample of only 39 start-ups is likely to lack the power to test several interaction effects. Only the support of the hypotheses concerning entrepreneurial experience (H3a: $b = -3.50, p < 0.01$ and H3b: $b = -2.92, p < 0.01$), as well as the rejection of the hypotheses for educational experience (H2a: $b = -1.82, p > 0.1$ and H2b: $b = -1.66, p > 0.1$), are confirmed for both models. In addition, the rejection of the negative relationship between technological experience and opportunity recognition performance under the condition of intra-team trust is confirmed for Model A ($b = 0.60, p > 0.1$). However, for Model B the interaction is even significantly positive ($b = 0.89, p < 0.05$) in this test. The direction of the interaction effect for industry experience is consistent with the findings of the original models, but the negative coefficient is not significant (H5a: $b = -0.23, p > 0.1$ and H5b: $b = -0.30, p > 0.1$). In contrast to the negative original findings, the relationship between joint team experience and opportunity recognition performance under the condition of intra-team trust is positive but not significant (H2a: $b = 0.26, p > 0.1$ and H2b: $b = 0.56, p > 0.1$). Thus, only five out of ten original results could be supported, i.e., only 50%.

Variable	Model A (one intra-team trust item)						Model B (one intra-team trust item)					
	Base models			Interaction model			Base models			Interaction model		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6						
<i>Controls</i>												
Team size	0.15	(0.27)	0.21	(0.28)	0.51	(0.34)	0.13	(0.24)	0.19	(0.26)	0.43	(0.32)
Average member age	-0.07+	(0.04)	-0.09+	(0.05)	-0.08	(0.05)	-0.01	(0.03)	-0.02	(0.04)	-0.01	(0.04)
Number of recognized opportunities	-0.01	(0.06)	-0.04	(0.06)	-0.11	(0.07)	0.06	(0.05)	0.05	(0.06)	-0.01	(0.07)
<i>Predictors</i>												
Joint team experience		-0.26	(0.19)	-0.20	(0.20)			-0.16	(0.14)	-0.11	(0.16)	
Educational experience		0.17	(0.16)	0.20	(0.16)			0.03	(0.14)	0.05	(0.14)	
Entrepreneurial experience		0.14	(0.38)	0.08	(0.37)			0.00	(0.29)	-0.05	(0.30)	
Technological experience		0.05	(0.22)	0.14	(0.23)			0.13	(0.19)	0.20	(0.20)	
Industry experience		0.10	(0.07)	0.18*	(0.08)			0.07	(0.06)	0.13+	(0.07)	
Intra-team trust		-0.79+	(0.46)	-1.50**	(0.52)			-0.88*	(0.39)	-1.37**	(0.53)	
Joint team experience × intra-team trust				-0.75*	(0.33)					-0.60+	(0.31)	
Educational experience × intra-team trust				0.17	(0.33)					0.31	(0.31)	
Entrepreneurial experience × intra-team trust				-0.95+	(0.49)					-0.64	(0.41)	
Technological experience × intra-team trust				-0.52	(0.33)					-0.29	(0.31)	
Industry experience × intra-team trust				-0.45**	(0.17)					-0.38*	(0.16)	
<i>Model estimation results</i>												
R-squared	0.06	0.16	0.23	0.04	0.12	0.17						
Comparison to		Model 1	Model 2		Model 4	Model 5						
ΔR-squared		0.1	0.07		0.08	0.05						
F	1.33	1.21	3.38**	1.18	1.34	2.23*						
	F(3,71) = 1.33	F(9,65) = 1.21	F(14,60) = 3.38	F(3,71) = 1.18	F(9,65) = 1.34	F(14,60) = 2.23						

n = 75; † p < 0.1; * p < 0.05; ** p < 0.01; Model A: dependent variable (DV) = quality of the selected opportunity; Model B: dependent variable (DV) = selection performance; note: constant term not displayed; results derived from robust regression

Table 10: Results of the hypothesis testing with only one intra-team trust item

Variable	Model A (three years old or younger)						Model B (three years old or younger)					
	Base models			Interaction model			Base models			Interaction model		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6						
<i>Controls</i>												
Team size	0.30	(0.29)	0.29	(0.28)	0.48 +	(0.28)	0.23	(0.27)	0.20	(0.27)	0.31	(0.25)
Average member age	-0.04	(0.04)	-0.06	(0.05)	-0.05	(0.05)	-0.00	(0.03)	-0.01	(0.04)	0.00	(0.05)
Number of recognized opportunities	-0.06	(0.06)	-0.08	(0.07)	-0.12 +	(0.07)	0.03	(0.06)	0.03	(0.07)	-0.00	(0.07)
<i>Predictors</i>												
Joint team experience		-0.07	(0.28)	0.15	(0.24)			-0.08	(0.23)	0.09	(0.22)	
Educational experience		0.19	(0.18)	0.25	(0.16)			0.05	(0.15)	0.11	(0.14)	
Entrepreneurial experience		0.01	(0.42)	-0.09	(0.36)			-0.04	(0.32)	-0.13	(0.28)	
Technological experience		0.00	(0.23)	0.14	(0.22)			0.10	(0.21)	0.20	(0.20)	
Industry experience		0.11	(0.09)	0.22*	(0.09)			0.09	(0.08)	0.19*	(0.08)	
Intra-team trust		-0.47	(0.50)	-1.69**	(0.59)			-0.63	(0.46)	-1.61**	(0.54)	
Joint team experience × intra-team trust				-0.98*	(0.43)					-1.10*	(0.42)	
Educational experience × intra-team trust				-0.21	(0.45)					-0.15	(0.43)	
Entrepreneurial experience × intra-team trust				-2.34**	(0.81)					-1.88**	(0.66)	
Technological experience × intra-team trust				-0.52	(0.50)					-0.21	(0.46)	
Industry experience × intra-team trust				-0.35*	(0.17)					-0.33*	(0.13)	
<i>Model estimation results</i>												
R-squared	0.03	0.09	0.23	0.02	0.07	0.20						
Comparison to		Model 1	Model 2		Model 4	Model 5						
ΔR-squared		0.06	0.14		0.05	0.13						
F	0.91	0.74	2.97**	0.79	0.54	2.69**						
	F(3,67) = 0.91	F(9,61) = 0.74	F(14,56) = 2.97	F(3,67) = 0.79	F(9,61) = 0.54	F(14,56) = 2.69						

n = 71; † p < 0.1; * p < 0.05; ** p < 0.01; Model A: dependent variable (DV) = quality of the selected opportunity; Model B: dependent variable (DV) = selection performance; note: constant term not displayed; results derived from robust regression

Table 11: Results of the hypothesis testing with start-ups three years old or younger

Variable	Model A (Munich)						Model B (Munich)					
	Base models			Interaction model			Base models			Interaction model		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6						
<i>Controls</i>												
Team size	0.35	(0.47)	0.40	(0.51)	0.70	(0.66)	0.24	(0.42)	0.27	(0.48)	0.56	(0.55)
Average member age	-0.02	(0.04)	0.03	(0.04)	0.01	(0.05)	0.03	(0.03)	0.06	(0.03)	0.04	(0.05)
Number of recognized opportunities	-0.14+	(0.08)	-0.13	(0.09)	-0.17+	(0.10)	-0.05	(0.06)	-0.04	(0.07)	-0.08	(0.08)
<i>Predictors</i>												
Joint team experience		-0.40	(0.30)	-0.32	(0.32)		-0.40	(0.25)	-0.36	(0.22)		
Educational experience		0.21	(0.37)	0.52	(0.44)		0.12	(0.31)	0.43	(0.31)		
Entrepreneurial experience		-0.38	(0.54)	-0.52	(0.39)		-0.17	(0.43)	-0.27	(0.39)		
Technological experience		0.04	(0.33)	0.23	(0.34)		0.09	(0.30)	0.22	(0.29)		
Industry experience		-0.06	(0.13)	0.03	(0.16)		-0.03	(0.11)	0.05	(0.12)		
Intra-team trust		-0.17	(0.90)	-1.86	(1.21)		-0.16	(0.91)	-1.65+	(0.91)		
Joint team experience × intra-team trust				0.26	(1.25)				0.56	(0.87)		
Educational experience × intra-team trust				-1.82	(1.74)				-1.66	(1.32)		
Entrepreneurial experience × intra-team trust				-3.50**	(0.90)				-2.92**	(0.84)		
Technological experience × intra-team trust				0.60	(0.57)				0.89*	(0.42)		
Industry experience × intra-team trust				-0.23	(0.30)				-0.30	(0.22)		
<i>Model estimation results</i>												
R-squared	0.07	0.15	0.39	0.02	0.11	0.38						
Comparison to		Model 1	Model 2		Model 4	Model 5						
ΔR-squared		0.08	0.24		0.09	0.27						
F	1.25	0.86	2.48*	0.38	0.77	2.58*						
	F(3,35) = 1.25	F(9,29) = 0.86	F(14,24) = 2.48	F(3,35) = 0.38	F(9,29) = 0.77	F(14,24) = 2.58						

n = 39 † p < 0.1; * p < 0.05; ** p < 0.01; Model A: dependent variable (DV) = quality of the selected opportunity; Model B: dependent variable (DV) = selection performance; note: constant term not displayed; results derived from robust regression

Table 12: Results of the hypothesis testing with start-ups in Munich

4.4.6 Results of the hypothesis testing for individual interaction effects

Based on prior research (e.g., Verwaal, Commandeur, & Verbeke, 2009; Zott & Amit, 2007), I ran additional robustness checks. In a first step, I tested the original results by running the regression with individual interaction effects only. That is, I started with the individual interaction effects between joint team experience and intra-team trust, followed by the individual interaction effects between educational experience and intra-team trust. I then calculated the individual interaction effect between entrepreneurial experience and intra-team trust, followed by the individual interaction effect between technological experience and intra-team trust. Finally, I tested the individual interaction effect between technological experience and intra-team trust. In a second step, I reran the regression with combinations of individual interaction effects. I started by testing the original results with the interaction effects belonging to one experience category. First, I looked at the interaction effect between joint team experience and intra-team trust for the team experience category, then at the combination of the interaction effects between educational experience and intra-team trust and between entrepreneurial experience and intra-team trust for the human capital experience category. Finally, I calculated the combination of the interaction effects between technology experience and intra-team trust and between industry experience and intra-team trust for the opportunity-related experience category. In addition, I combined different experience categories to run the regression with combinations of the corresponding interaction effects.

For the first step, which included only individual interaction effects, I calculated five different interaction model regressions (Model 7 to Model 11), each with only one experience variable and intra-team trust as moderator. However, all regressions included the three selected control variables. Table 13 shows the results of the robustness checks with individual interaction effects for Model A. The relationship postulated in H1a, the negative relationship between joint team experience and the quality of the selected opportunity under the condition of intra-team trust, depicted in Model 7, is not supported ($b = -0.21$, $p > 0.1$). However, the negative relationship between entrepreneurial experience and the quality of the selected opportunity under the condition of intra-team trust (Model 9: $b = -1.98$, $p < 0.05$), as well as the negative relationship between industry experience and the quality of the selected opportunity under the condition of intra-team trust (Model 11: $b = -0.26$, $p < 0.01$), are confirmed by the tests. In addition, the rejection of the negative link between educational experience and the quality of the selected opportunity under the condition of intra-team trust (Model 8: $b = -0.18$, $p > 0.1$), as well as between technological experience and the quality of the selected opportunity under the condition of intra-team trust (Model 10: $b = -0.06$, $p > 0.1$), is supported by these robustness checks.

For the second step, which included combinations of interaction effects, I ran interaction model regressions with a combination of experience variables based on the defined experience categories (cf. Figure 19) and intra-team trust. Model 12 focuses on the category team experience. As this category has only one experience variable, namely joint team experience, this robustness check is consistent with Model 7, the individual interaction effect between joint team experience and intra-team trust. Model 13 includes the human capital experience category and, thus, the experience

variables educational experience and entrepreneurial experience. Similarly, Model 14 focuses on the opportunity-related experience category. Consequently, the regression model includes technological experience and industry experience. The last three models, Model 15 to Model 17, refer to the combination of two experience categories. Model 15 focuses on team and human capital experience and thus includes joint team experience, educational experience, and entrepreneurial experience. Team and opportunity-related experience categories are the basis for Model 16. Consequently, the regression model includes the interactions between joint team experience and intra-team trust, between technological experience and intra-team trust, and between industry experience and intra-team trust. The combination of human capital experience and opportunity-related experience, comprising educational experience, entrepreneurial experience, technological experience, and industry experience, is depicted in Model 17. Consequently, each interaction between a specific experience variable and the moderator intra-team trust is part of three out of the six models illustrated in Table 14. The negative relationship between joint team experience and the quality of the selected opportunity under the condition of intra-team trust, which was found by the original results (cf. Table 6), is only supported by the robustness check of Model 16 ($b = -0.88, p < 0.05$). The coefficients of the other two regression results are negative but not significant (Model 12: $b = -0.21, p > 0.1$; Model 15: $b = -0.49, p > 0.1$). The negative relationship between entrepreneurial experience and the quality of the selected opportunity under the condition of intra-team trust, which was found in the original results, is confirmed by the three respective robustness checks in Model 13 ($b = -2.16, p < 0.05$), Model 15 ($b = -2.21, p < 0.05$), and Model 17 ($b = -2.24, p < 0.05$). The third hypothesis, which is supported by the original results, is the one that focuses on industry experience. Model 14 ($b = -0.27, p < 0.01$) and Model 16 ($b = -0.40, p < 0.05$) show consistent results. The coefficient for Model 17 is negative but not significant ($b = -0.23, p > 0.1$). The negative relationships between educational experience and the quality of the selected opportunity under the condition of intra-team trust (H2a), as well as between technological experience and the quality of the selected opportunity under the condition of intra-team trust (H4a), are rejected in the original hypothesis testing. The robustness checks lead to similar results. Coefficients for the educational experience hypotheses are not significant in all models (Model 13: $b = 0.03, p > 0.1$; Model 15: $b = -0.13, p > 0.1$; Model 17: $b = 0.28, p > 0.1$). Coefficients for the technological experience hypotheses are all negative, and also not significant (Model 14: $b = -0.08, p > 0.1$; Model 16: $b = -0.24, p > 0.1$; Model 17: $b = -0.16, p > 0.1$).

Variable	Model A (interaction models)									
	Model 7		Model 8		Model 9		Model 10		Model 11	
	Joint team experience		Educational experience		Entrepreneurial experience		Technological experience		Industry experience	
<i>Controls</i>										
Team size	0.14	(0.28)	0.25	(0.27)	0.26	(0.29)	0.18	(0.29)	0.17	(0.27)
Average member age	-0.05	(0.03)	-0.08+	(0.04)	-0.06	(0.05)	-0.07+	(0.04)	-0.07+	(0.04)
Number of recognized opportunities	-0.00	(0.06)	-0.03	(0.06)	-0.02	(0.06)	-0.01	(0.06)	-0.03	(0.06)
<i>Predictors</i>										
Joint team experience	-0.34+	(0.20)								
Educational experience			0.29+	(0.15)						
Entrepreneurial experience					-0.03	(0.37)				
Technological experience							0.11	(0.22)		
Industry experience									0.18*	(0.07)
Intra-team trust	-0.47	(0.49)	-0.68	(0.52)	-1.16*	(0.55)	-0.55	(0.58)	-1.24*	(0.57)
Joint team experience × intra-team trust	-0.21	(0.41)								
Educational experience × intra-team trust			-0.18	(0.31)						
Entrepreneurial experience × intra-team trust					-1.98*	(0.95)				
Technological experience × intra-team trust							-0.06	(0.51)		
Industry experience × intra-team trust									-0.26**	(0.08)
<i>Model estimation results</i>										
R-squared	0.11		0.11		0.12		0.07		0.13	
F	1.03		1.49		1.97+		0.75		2.53*	
	F(6,68) = 1.03		F(6,68) = 1.49		F(6,68) = 1.97		F(6,68) = 0.75		F(6,68) = 2.53	

n = 75; † p < 0.1; * p < 0.05; ** p < 0.01; dependent variable (DV) = quality of the selected opportunity; note: constant term not displayed; results derived from the robust regression

Table 13: Results of the hypothesis testing for individual experience variables (Model A)

Variable	Model A (interaction models)											
	Model 12		Model 13		Model 14		Model 15		Model 16		Model 17	
	Team experience		Human capital experience		Opportunity-related experience		Team and human capital experience		Team and opportunity-related experience		Human capital and opportunity-related experience	
<i>Controls</i>												
Team size	0.14	(0.28)	0.35	(0.28)	0.19	(0.28)	0.33	(0.27)	0.20	(0.29)	0.36	(0.26)
Average member age	-0.05	(0.03)	-0.08	(0.06)	-0.08 [†]	(0.04)	-0.06	(0.05)	-0.06	(0.03)	-0.09	(0.06)
Number of recognized opportunities	-0.00	(0.06)	-0.04	(0.06)	-0.03	(0.06)	-0.05	(0.06)	-0.06	(0.06)	-0.06	(0.06)
<i>Predictors</i>												
Joint team experience	-0.34 [†]	(0.20)					-0.20	(0.19)	-0.17	(0.18)		
Educational experience			0.32 [†]	(0.16)			0.30 [†]	(0.15)			0.25	(0.16)
Entrepreneurial experience			0.05	(0.37)			-0.02	(0.35)			-0.00	(0.36)
Technological experience					0.12	(0.22)			0.10	(0.21)	0.17	(0.21)
Industry experience					0.18 [*]	(0.08)			0.24 ^{**}	(0.09)	0.15 [†]	(0.08)
Intra-team trust	-0.47	(0.50)	-1.22 [*]	(0.58)	-1.29 [*]	(0.58)	-1.18 [*]	(0.55)	-1.30 [*]	(0.57)	-1.75 ^{**}	(0.65)
Joint team experience × intra-team trust	-0.21	(0.41)					-0.49	(0.33)	-0.88 [*]	(0.33)		
Educational experience × intra-team trust			0.03	(0.26)			-0.13	(0.34)			0.28	(0.36)
Entrepreneurial experience × intra-team trust			-2.16 [*]	(0.99)			-2.21 [*]	(0.91)			-2.24 [*]	(0.10)
Technological experience × intra-team trust					-0.08	(0.53)			-0.24	(0.48)	-0.16	(0.49)
Industry experience × intra-team trust					-0.27 ^{**}	(0.09)			-0.40 [*]	(0.15)	-0.23	(0.15)
<i>Model estimation results</i>												
R-squared	0.11		0.17		0.13		0.20		0.19		0.22	
F	1.03		1.87 [†]		2.05 [†]		1.69		1.48		2.61 ^{**}	
	F(6,68) = 1.03		F(8,66) = 1.87		F(8,66) = 2.05		F(10,64) = 1.69		F(10,64) = 1.48		F(12,62) = 2.61	

n = 75; † p < 0.1; * p < 0.05; ** p < 0.01; dependent variable (DV) = quality of the selected opportunity; note: constant term not displayed; results derived from the robust regression

Table 14: Results of the hypothesis testing for experience categories (Model A)

Despite the lack of strong support for the negative relationship between joint team experience and the quality of the selected opportunity under the condition of intra-team trust, overall the results of the robustness checks described above can be understood as support for the original hypothesis testing (cf. Table 6).

Consistent with Model A, I ran all robustness checks with individual interaction effects of one experience variable and the moderator intra-team trust as well as a combination of experience variables and the interaction with intra-team trust along the defined experience categories.

Table 15 shows the results for regression models with only one experience variable. The negative relationship between joint team experience and the selection performance under the condition of intra-team trust in model 18 ($b = -0.32, p > 0.1$) is not supported, similarly to Model A. However, the significant link between entrepreneurial experience and the selection performance under the condition of intra-team trust is fully supported (Model 20: $b = -1.61, p < 0.05$). In addition, the coefficient for the interaction effect of industry experience and intra-team trust is negative, but this correlation does not reach conventional levels of significance (Model 22: $b = -0.16, p < 0.1$). The rejection of H2b, referring to entrepreneurial experience, and H4b, focusing on technological experience, is shown by the results of these robustness checks (Model 19 for entrepreneurial experience: $b = -0.04, p > 0.1$; Model 21 for technological experience: $b = 0.06, p > 0.1$).

Table 16 illustrates the results of the robustness check with several interaction effects for Model B. Analogous to Model A, each interaction effect of an experience variable and intra-team trust is represented in three out of six robustness checks. The negative relationship between joint team experience and the selection performance under the condition of intra-team trust is supported by two out of three models (Model 23: $b = -0.32, p > 0.1$; Model 26: $b = -0.51, p < 0.05$; Model 27: $b = -0.86, p < 0.01$). All three relevant models, namely Model 24 ($b = -1.76, p < 0.05$), Model 26 ($b = -1.80, p < 0.01$), and Model 28 ($b = -1.93, p < 0.01$), support the negative relationship between entrepreneurial experience and selection performance under the condition intra-team trust. The negative relationship between industry experience and selection performance under the condition of intra-team trust is supported by two models (Model 25: $b = -0.19, p < 0.05$; Model 27: $b = -0.35, p < 0.01$). The coefficient for Model 28 is negative but not significant ($b = -0.18, p > 0.1$). In addition, all respective models support the rejection of H2b, referring to educational experience (Model 24: $b = 0.13, p > 0.1$; Model 26: $b = -0.08, p > 0.1$; Model 28: $b = 0.32, p > 0.1$), and H4b, focusing on technological experience (Model 25: $b = 0.05, p > 0.1$; Model 27: $b = -0.09, p > 0.1$; Model 28: $b = 0.03, p > 0.1$). In summary, the results of the robustness checks described above can be seen as support for the original hypothesis tests for Model B.

Variable	Model B (interaction models)									
	Model 18		Model 19		Model 20		Model 21		Model 22	
	Joint team experience		Educational experience		Entrepreneurial experience		Technological experience		Industry experience	
<i>Controls</i>										
Team size	0.14	(0.25)	0.19	(0.24)	0.23	(0.24)	0.15	(0.24)	0.15	(0.24)
Average member age	0.00	(0.03)	-0.02	(0.03)	-0.00	(0.04)	-0.01	(0.03)	-0.01	(0.03)
Number of recognized opportunities	0.06	(0.05)	0.06	(0.05)	0.05	(0.05)	0.06	(0.05)	0.05	(0.05)
<i>Predictors</i>										
Joint team experience	-0.17	(0.15)								
Educational experience			0.12	(0.13)						
Entrepreneurial experience					-0.09	(0.26)				
Technological experience							0.14	(0.19)		
Industry experience									0.12+	(0.06)
Intra-team trust	-0.49	(0.43)	-0.64	(0.48)	-1.11*	(0.42)	-0.64	(0.41)	-1.05+	(0.53)
Joint team experience × intra-team trust	-0.32	(0.28)								
Educational experience × intra-team trust			-0.04	(0.24)						
Entrepreneurial experience × intra-team trust					-1.61*	(0.65)				
Technological experience × intra-team trust							0.06	(0.45)		
Industry experience × intra-team trust									-0.16+	(0.08)
<i>Model estimation results</i>										
R-squared	0.09		0.07		0.11		0.07		0.10	
F	1.46		1.18		3.06*		1.22		1.73	
	F(6,68) = 1.46		F(6,68) = 1.18		F(6,68) = 3.06		F(6,68) = 1.22		F(6,68) = 1.73	

n = 75; † p < 0.1; * p < 0.05; ** p < 0.01; dependent variable (DV) = selection performance; note: constant term not displayed; results derived from the robust regression

Table 15: Results of the hypothesis testing for individual experience variables (Model B)

Variable	Model B (interaction models)											
	Model 23		Model 24		Model 25		Model 26		Model 27		Model 28	
	Team experience		Human capital experience		Opportunity-related experience		Team and human capital experience		Team and opportunity-related experience		Human capital and opportunity-related experience	
<i>Controls</i>												
Team size	0.14	(0.25)	0.27	(0.24)	0.16	(0.24)	0.26	(0.25)	0.20	(0.25)	0.26	(0.23)
Average member age	0.00	(0.03)	-0.01	(0.04)	-0.02	(0.03)	0.00	(0.04)	-0.00	(0.03)	-0.01	(0.04)
Number of recognized opportunities	0.06	(0.05)	0.04	(0.05)	0.05	(0.06)	0.04	(0.05)	0.02	(0.06)	0.03	(0.06)
<i>Predictors</i>												
Joint team experience	-0.17	(0.15)					-0.10	(0.14)	-0.02	(0.15)		
Educational experience			0.14	(0.14)			0.14	(0.14)			0.07	(0.14)
Entrepreneurial experience			-0.06	(0.27)			-0.10	(0.27)			-0.15	(0.26)
Technological experience					0.15	(0.19)			0.15	(0.19)	0.21	(0.19)
Industry experience					0.11+	(0.07)			0.19*	(0.07)	0.11	(0.07)
Intra-team trust	-0.49	(0.43)	-1.10*	(0.46)	-1.14*	(0.54)	-1.07*	(0.44)	-1.23*	(0.53)	-1.58**	(0.55)
Joint team experience × intra-team trust	-0.32	(0.28)					-0.51*	(0.25)	-0.86**	(0.27)		
Educational experience × intra-team trust			0.13	(0.23)			-0.08	(0.31)			0.32	(0.34)
Entrepreneurial experience × intra-team trust			-1.76*	(0.70)			-1.80**	(0.67)			-1.93**	(0.71)
Technological experience × intra-team trust					0.05	(0.46)			-0.09	(0.43)	0.03	(0.42)
Industry experience × intra-team trust					-0.19*	(0.09)			-0.35**	(0.12)	-0.18	(0.13)
<i>Model estimation results</i>												
R-squared	0.09		0.12		0.11		0.15		0.17		0.17	
F	1.46		2.14*		1.43		2.13*		2.63**		1.84+	
	F(6,68) = 1.46		F(8,66) = 2.14		F(8,66) = 1.43		F(10,64) = 2.13		F(10,64) = 2.63		F(12,62) = 1.84	

n = 75; † p < 0.1; * p < 0.05; ** p < 0.01; dependent variable (DV) = selection performance; note: constant term not displayed; results derived from the robust regression

Table 16: Results of the hypothesis testing for experience categories (Model B)

4.4.7 Summary of robustness checks

Model A: Quality of the selected opportunity					
Robustness checks	H1a: Neg. effect joint teams experience × intra-team trust	H2a: Neg. effect educational experience × intra-team trust	H3a: Neg. effect entrepreneurial experience × intra-team trust	H4a: Neg. effect technological experience × intra-team trust	H5a: Neg. effect industry experience × intra-team trust
Without controls	-0.97**	-0.08	-2.24**	-0.13	-0.28+
Only inclusion of business value assessment of two experts	-1.08**	-0.14	-2.30**	-0.33	-0.31*
Only one intra-team trust item	-0.75*	0.17	-0.95+	-0.52	-0.45**
Only start-ups that are three years or younger	-0.98*	-0.21	-2.34**	-0.52	-0.35*
Only start-ups in Munich	0.26	-1.82	-3.50**	0.60	-0.23
Full data set	-1.06**	-0.13	-2.26**	-0.32	-0.31*

+ p < .1; * p < .05; ** p < .01

xx

Supporting the results of the full data set

xx

Not supporting the results of the full data set

Figure 26: Model A: Summary of the robustness checks including all interaction effects

Source: Own illustration

Figure 26 gives an overview of all five robustness checks that include all interaction effects for Model A. As depicted in Table 6, the results of the hypothesis tests relying on the full data set and the full models show that the negative interaction effects between joint team experience and intra-team trust (H1a), between entrepreneurial experience and intra-team trust (H3a), and between industry experience and intra-team trust (H5a) are significant. Thus, for these three hypotheses, robustness checks support the original results if the coefficients are negative and significant. Otherwise, the robustness checks do not support the original results for these three interaction effects. In contrast, the original results in Table 6 illustrate that H2a, the negative interaction effect between educational experience and intra-team trust, as well as H4a, the negative interaction effect between technological experience and intra-team trust, are not significant. Hence, the robustness checks do not support the original results for these two hypotheses if the coefficient is negative and significant; otherwise, they support the original results. H1a is supported by all robustness checks, with

the exception of the robustness check that only includes start-ups in Munich. As only 39 Munich start-ups participated in our study, the sample for this robustness check is quite small and, consequently, is likely to be underpowered. Thus, the results of this robustness check must be interpreted with care. H3a is supported by all robustness checks, with the exception of the one focused on only one intra-team trust item. At least the coefficient of this robustness check was negative, but it did not meet conventional levels of significance ($p < 0.1$). However, measuring intra-team trust with only one item is less accurate than measuring it with five items. H5a is clearly supported by three robustness checks. In addition, the result of the robustness check without control variables is negative, but does not reach conventional levels of significance ($p < 0.1$). The robustness check including only Munich start-ups, with a small sample of 39 teams, is negative but not significant. All robustness checks fully support the rejection of H2a and H4a, as no result is significantly negative. Despite some isolated robustness check results that do not support the original results, the overall pattern of all robustness checks can be seen as supporting the results of Model A.

The results of the robustness checks that include all five interaction effects for Model B are illustrated in Figure 27. The results of the comparison between the robustness check and the original findings are similar to those of model A (depicted in Figure 26), as the same three hypotheses are significant. H1b, the negative interaction effect between joint team experience and intra-team trust, is supported by three robustness checks. It is not supported by the test that includes only one intra-team trust item out of five, as the coefficient is negative but does not meet conventional significance levels ($p < 0.1$). Additionally, H1b is not supported by the robustness check with 39 Munich start-ups. The negative interaction effect between entrepreneurial experience and intra-team trust is found by four robustness checks. Only the robustness check with just one intra-team trust item does not support the original results. H5b is supported by four robustness checks, equally to Model A; only the last robustness check, which focuses on Munich start-ups, does not support the original results. The rejection of H2b and of H4b is found by all robustness checks. In summary, the results of all five robustness checks, including all interaction effects for Model B, can also be seen as supporting the original results.

In addition to the five robustness checks analyzed above in Figure 26 and Figure 27 the following two overviews focus on robustness checks that include individual interaction effects or a combination of interaction effects. Figure 28 gives an overview of these robustness checks for Model A. The first robustness check focuses on individual interaction effects, while the next three robustness checks include the different interaction effects of one category each, namely the team experience, human capital experience, and opportunity-related experience category. In addition, the final three robustness checks concentrate on a combination of categories and include all interaction effects of the respective categories. The results of all seven robustness checks are already described in detail in section 4.4.6 and are shown in Table 13 and Table 14. The robustness check results strongly support H3a, the negative interaction effect between entrepreneurial experience and intra-team trust (four out of four tests), as well as H5a, the negative interaction effect between industry experience and intra-team trust (three out of four tests).

Model B: Selection performance					
Robustness checks	H1b: Neg. effect joint teams experience × intra-team trust	H2b: Neg. effect educational experience × intra-team trust	H3b: Neg. effect entrepreneurial experience × intra-team trust	H4b: Neg. effect technological experience × intra-team trust	H5b: Neg. effect industry experience × intra-team trust
Without controls	-0.99**	-0.09	-1.90**	-0.08	-0.26*
Only inclusion of business value assessment of two experts	-0.95**	-0.06	-1.94**	-0.12	-0.27*
Only one intra-team trust item	-0.60+	0.31	-0.64	-0.29	-0.38*
Only start-ups that are three years or younger	-1.10*	-0.15	-1.88**	-0.21	-0.33*
Only start-ups in Munich	0.56	-1.66	-2.92**	0.89*	-0.30
Full data set	-0.94**	-0.05	-1.93**	-0.12	-0.27*

+ p < .1; * p < .05; ** p < .01

xx

Supporting the results of the full data set

xx

Not supporting the results of the full data set

Figure 27: Model B: Summary of the robustness checks including all interaction effects

Source: Own illustration

H1a, the negative interaction effect between joint team experience and intra-team trust, is only supported by the robustness check that includes team and opportunity-related experience variables. It is important to mention that robustness check 1 and robustness check 2 are identical, as they both solely test the interaction between joint team experience and intra-team trust. Robustness check 1 includes only individual interaction effects, namely between joint team experience and intra-team trust. Robustness check 2 focuses on interaction effects between experience variables of the team experience category and intra-team trust. However, the team experience category consists only of the joint team experience variable. Consequently, robustness check 2 includes only the individual interaction effect between joint team experience and intra-team trust. Thus, H1a is supported at least by one out of three robustness checks. The rejection of H2a and H4a is consistent across all robustness checks that include these interaction effects.

Model A: Quality of the selected opportunity					
Robustness checks	H1a: Neg. effect joint teams experience × intra-team trust	H2a: Neg. effect educational experience × intra-team trust	H3a: Neg. effect entrepreneurial experience × intra-team trust	H4a: Neg. effect technological experience × intra-team trust	H5a: Neg. effect industry experience × intra-team trust
Individual experience	-0.21	-0.18	-1.98*	-0.06	-0.26**
Team experience	-0.21	-	-	-	-
Human capital experience	-	0.03	-2.16*	-	-
Opportunity-related experience	-	-	-	-0.08	-0.27**
Team and human capital experience	-0.49	-0.13	-2.21*	-	-
Team and opportunity-related experience	-0.88*	-	-	-0.24	-0.40*
Human capital and opportunity-related experience	-	0.28	-2.24*	-0.16	-0.23
Full model	-1.06**	-0.13	-2.26**	-0.32	-0.31*

+ p < .1; * p < .05; ** p < .01

xx Supporting the results of the full model xx Not supporting the results of the full model

Figure 28: Model A: Summary of the robustness checks for individual interaction effects

Source: Own illustration

Figure 29 shows the results of the same robustness checks for Model B, which are constructed in a similar way as for Model A in Figure 28. These results are already explained in detail in section 4.4.6 and are illustrated in Table 15 and Table 16. H1b, the negative interaction effect between joint team experience and intra-team trust, is found by two out of three interaction effects, as robustness checks 1 and 2 are identical for H1b, similar to H1a. The negative interaction effect between entrepreneurial experience and intra-team trust (H3b) is supported by all robustness checks that include this interaction. Two out of four robustness checks support H5b, the negative interaction effect between industry experience and intra-team trust. The rejection of H2b, the negative relationship between educational experience and the selection performance under the condition of intra-team trust, as well as the rejection of H4b, the negative link between technological experience and the selection performance under the condition of intra-team trust, are supported by all robustness checks that include the respective interaction effects.

To summarize for Model B, the results of all seven robustness checks that include only individual interaction effects or combinations of individual interaction effects, but never all five interactions, can be seen as further supporting the original hypothesis tests.

Model B : Selection performance					
Robustness checks	H1b: Neg. effect joint teams experience × intra-team trust	H2b: Neg. effect educational experience × intra-team trust	H3b: Neg. effect entrepreneurial experience × intra-team trust	H4b: Neg. effect technological experience × intra-team trust	H5b: Neg. effect industry experience × intra-team trust
Individual experience	-0.32	-0.04	-1.61*	0.06	-0.16+
Team experience	-0.32	-	-	-	-
Human capital experience	-	0.13	-1.76*	-	-
Opportunity-related experience	-	-	-	0.05	-0.19*
Team and human capital experience	-0.51*	-0.08	-1.80**	-	-
Team and opportunity- related experience	-0.86**	-	-	-0.09	-0.35**
Human capital and opportunity-related experience	-	0.32	-1.93**	0.03	-0.18
Full model	-0.94**	-0.05	-1.93**	-0.12	-0.27*

+p < .1; * p < .05; ** p < .01

xx Supporting the results of the full model xx Not supporting the results of the full model

Figure 29: Model B: Summary of the robustness checks for individual interaction effects

Source: Own illustration

To test the original results, I ran a total of 24 robustness checks in two steps. First, I conducted five robustness checks including all interaction effects for Model A (cf. Figure 26), as well as the same five robustness checks for Model B (cf. Figure 27). Second, I ran seven robustness checks that focused on individual interaction effects or combinations of interaction effects for each Model (Figure 28 and Figure 29). Taking the results of all 24 robustness checks together, the pattern of results for both models is highly consistent with the original results.

5 DISCUSSION

In this section, I discuss the implications of the present study's findings based on a short summary of the empirical results. First, I elaborate on the contributions to different literature streams (section 5.1). Second, I outline the implications for practice (section 5.2). Third, I illustrate the limitations of the present study (section 5.3). Fourth, I present potential avenues for future research, followed by a conclusion (section 5.4).

The empirical results outlined in section 4 show that intra-team trust could be a condition that prevents entrepreneurial teams from fully leveraging their available experience, which leads to a lower opportunity recognition performance in both the opportunity recognition (Model A) and the opportunity selection (Model B) phase. In the present study, I identify one experience dimension for each experience category for which intra-team trust negatively influences the relationship between the respective experience dimension and the opportunity recognition performance: The experience dimensions are joint team experience for the team experience category, entrepreneurial experience for the human capital experience category, and industry experience for the opportunity-related experience category. The negative interaction effect between the respective experience dimension and intra-team trust is found for the performance in the opportunity recognition phase as well as in the opportunity selection phase. To put it differently, if there is a negative interaction effect between an experience dimension and intra-team trust, it is supported for both Model A and Model B, not only for one of the two models. Figure 30 gives an overview of the shortened hypotheses, including their status, that are the basis for the following discussion.

5.1 Contribution to the literature

Understanding the interplay between opportunities and entrepreneurial actors is crucial to advance the entrepreneurship literature (Shane & Venkataraman, 2000). New ventures are founded and managed mainly by entrepreneurial teams, not by individual entrepreneurs (e.g., Beckman, 2006; Lechler, 2001; West, 2007). Thus, scholars acknowledge the role of entrepreneurial teams for entrepreneurship in general (Klotz et al., 2014), and more specifically for opportunity recognition and selection (Foss et al., 2008), which are the two important and separate phases of the opportunity process (Grégoire et al., 2010; Perry-Smith & Coff, 2011). Existing studies have already shown the importance of prior experience (e.g., Gruber et al., 2008; Shane, 2000; Ucbasaran et al., 2008) and trust (e.g., Gordon, 2006; Zahra et al., 2006) for opportunity recognition performance. However, to the best of my knowledge, the influence of prior experience on opportunity recognition performance under the condition of intra-team trust in entrepreneurial teams has not been studied so far. Understanding this relationship is important, as comprehensive knowledge about how the available experience in a team can best be used can only be gathered if the condition under which prior experience has to be applied, e.g., intra-team trust, is also taken into account. Taylor and Greve (2006) state that it is not only the available prior

experience that is necessary to recognize an innovative idea (Ahuja, 2000; Powell et al., 1996), but also the ability of a team to apply that available prior experience (Brown & Duguid, 1991; von Hippel, 1988).

In order to shed light on the so far not analyzed relationship between prior experience, intra-team trust, and opportunity recognition performance, I build mainly on three literature streams: the entrepreneurship literature, the experience literature, and the trust literature, while borrowing insights from the creativity literature. In doing so, I identify several contributions to the mentioned literature streams. In this section, I discuss the implications of the empirical results of the present study for the different literature streams. First, I debate the contribution to the entrepreneurial literature (section 5.1.1). Second, I discuss the contribution to different literature streams that cover the used experience dimensions (section 5.1.2). Third, I outline the contributions to the literature on trust (section 5.1.3). Fourth, I discuss implications for the creativity literature streams (section 5.1.4).

Experience category	Experience dimension	Hypotheses (shortened)	Status
Team experience	Joint team experience	1a: Intra-team trust negatively influences the relationship between joint team experience and the quality of the selected opportunity.	Supported
		1b: Intra-team trust negatively influences the relationship between joint team experience and the selection performance.	Supported
Human capital experience	Educational experience	2a: Intra-team trust negatively influences the relationship between educational experience and the quality of the selected opportunity.	Rejected
		2b: Intra-team trust negatively influences the relationship between educational experience and the selection performance.	Rejected
	Entrepreneurial experience	3a: Intra-team trust negatively influences the relationship between entrepreneurial experience and the quality of the selected opportunity.	Supported
		3b: Intra-team trust negatively influences the relationship between entrepreneurial experience and the selection performance.	Supported
Opportunity-related experience	Technological experience	4a: Intra-team trust negatively influences the relationship between technological experience and the quality of the selected opportunity.	Rejected
		4b: Intra-team trust negatively influences the relationship between technological experience and the selection performance.	Rejected
	Industry experience	5a: Intra-team trust negatively influences the relationship between industry experience and the quality of the selected opportunity.	Supported
		5b: Intra-team trust negatively influences the relationship between industry experience and the selection performance.	Supported

Figure 30: Overview of hypotheses

Source: Own illustration

5.1.1 Contribution to the entrepreneurship literature

First, my findings advance the understanding of opportunities in the entrepreneurial context. Entrepreneurial scholars acknowledge the importance of studying both entrepreneurs and entrepreneurial opportunities to add to the understanding of entrepreneurship (Shane & Venkataraman, 2000). Thus, the role of opportunities is of high importance for the field of entrepreneurship (Davidsson, 2015). Many entrepreneurial scholars have analyzed the role of opportunities (e.g., Ardichvili et al., 2003; Busenitz et al., 2014; Shepherd & DeTienne, 2005) and set up studies to examine entrepreneurs' performance in the opportunity process (e.g., Gruber et al., 2008, 2012, 2013; Shepherd & DeTienne, 2005; Ucbasaran et al., 2009). According to prior work (e.g., McMullen & Shepherd, 2006; Grégoire et al., 2010), the opportunity process consists of two phases—the opportunity recognition phase and the opportunity selection phase—while the potential exploitation of an opportunity is the consequence of an opportunity process, and thus not a part of the opportunity process (Grégoire et al., 2010). Hence, when analyzing the opportunity process performance, it is important to include the performance in recognizing opportunities, as well as the performance in selecting one opportunity out of the recognized opportunity set (Perry-Smith & Coff, 2011). However, when assessing the opportunity recognition process, entrepreneurial scholars normally focus on the opportunity recognition phase and choose the number of opportunities recognized as the primary performance measurement (e.g., Gruber et al., 2008, 2012, 2013; Shepherd & DeTienne, 2005). Thus, for the performance measure of the opportunity recognition phase, they focus on the quantity of opportunities rather than the quality of opportunities and neglect the importance of the opportunity selection phase in the opportunity process. Importantly, as the quantitative measurement of opportunity recognition performance neglects the importance of the value of an opportunity (Shepherd & DeTienne, 2005), scholars have already started to additionally include the assessment of the quality of opportunities in their study. The quality of an opportunity is measured as innovativeness in prior entrepreneurial studies (e.g., Shepherd & DeTienne, 2005; Ucbasaran et al., 2009), or analyzed as the variation between the opportunities within an opportunity set developed by an entrepreneurial team (Gruber et al., 2013). Scholars have argued that "future research could focus on the nature of opportunity identification, rather than simply on the number of opportunities identified" (Ucbasaran et al., 2009, p. 113). My study follows this call by investigating the quality of opportunities, and thus addresses this important research gap.

In order to advance the understanding of entrepreneurial opportunity recognition performance, I borrow insights from different creativity literature streams, namely from the idea generation stream as well as the creative forecasting stream. Both literature streams are linked to the entrepreneurship literature based on the close relationship between creativity and entrepreneurship literature (cf. Dimov, 2010; Perry-Smith & Coff, 2011). Both the idea generation literature and the creative forecasting literature have already incorporated the quality of an idea and the ability to select the best idea as important dimensions of team performance. Scholars in the idea generation field argue that it is crucial that teams achieve a high performance in both the idea generation and the idea selection phase to be successful (e.g., Girotra et

al., 2010; Perry-Smith & Coff, 2011). Prior research on entrepreneurial creativity (Perry-Smith & Coff, 2011) has indicated that there can be performance differences in teams between the idea generation and the idea selection phase. Thus, the separate analysis of the two phases is reasonable. With regard to the quality of ideas, Girotra et al. (2010) explain that, for most companies and thus for most teams, it is more beneficial to generate and select one brilliant idea instead of recognizing many average ideas. In their experimental study, they measure team performance as the quality of the best idea recognized, and the ability to discern the best ideas out of the team's developed idea set. The creative forecasting literature connects the creativity and the innovation literature through the importance of choosing the best idea out of a developed idea set, and thereby also underlines the role of the best idea within an idea set as well as the relevance of the selection (Berg, 2016).

While building on insights of the idea generation literature and the creative forecasting literature, the findings of the present study advance the understanding of the opportunity process performance in different ways. First, focusing on the quality of the selected opportunity as a performance measure sheds light on the question of which factors influence the recognition of highly valuable opportunities in entrepreneurial teams. The importance of recognizing high-value opportunities has already been acknowledged by entrepreneurial scholars (Gaglio & Katz, 2001; Shepherd & DeTienne, 2005). Analyzing the quality of an opportunity is especially important, as in most prior studies, entrepreneurial scholars focus on the quantity of opportunities recognized without considering the importance of the quality of the opportunity (e.g., Gruber et al., 2012; Ucbasaran et al., 2008). By identifying intra-team trust as a negative condition for the relationship between prior experience and the quality of the opportunity, the present work delivers insights concerning the question of which circumstances contribute to a high opportunity recognition performance.

In addition, the findings of the present work advance the understanding of the decision-making aspect of opportunity evaluation. Despite the considerable attention paid to opportunity evaluation in prior studies (Chattopadhyay et al., 2001; Krueger & Brazeal, 1994; Sarasvathy, 2001), research on the selection aspect of the opportunity evaluation is scant (Haynie et al., 2009). The evaluation of opportunities by entrepreneurs or entrepreneurial teams aims at assessing the potential future profit, which is crucial for success (Eckhardt & Shane, 2003; Gupta et al., 2014). Thus, the ability to make a good choice is essential to ensure future benefits. To put it differently, it is possible that an entrepreneurial team recognizes the one-million-dollar opportunity among several other opportunities, but fails to select this world-changing opportunity, although that one opportunity would have ensured its future success. The empirical results of the present thesis show that, under certain circumstances, if high prior experience—namely joint team experience, entrepreneurial experience, and industry experience—interacts with high intra-team trust, entrepreneurial teams are less able to select the opportunity with the highest business value out of their recognized opportunity set. That is, although the entrepreneurial team's opportunity set includes opportunities with a higher business value, some teams are not able to select the highest-value opportunity. Hence, entrepreneurial teams should be aware of the negative interaction effects that hinder them in selecting the highest-value opportunity. The present findings thereby contribute to a

better understanding of entrepreneurial teams' full opportunity process performance, which includes both opportunity recognition and selection (Grégoire et al., 2010).

My results indicate that the interplay between prior experience and intra-team trust similarly influences the performance in recognizing and selecting opportunities. To put it differently, the condition of intra-team trust significantly affects joint team experience, entrepreneurial experience, and industry experience for both performance measures, the quality of the selected opportunity and the selection performance. In their study on 41 teams working on an entrepreneurial creativity task, Perry-Smith and Coff (2011) find that teams achieve superior entrepreneurial creativity when they are effective in both opportunity process phases, the opportunity recognition and the opportunity selection phase. In line with this insight that high overall opportunity process performance needs good results in both phases, the empirical results of the present work suggest that the identical mechanisms can prevent entrepreneurial teams in both opportunity phases from achieving superior performance. The insight that the interplay between prior experience and intra-team trust negatively influences both opportunity process phases further advances the understanding of entrepreneurial teams' performance in the opportunity process, including recognizing and selecting opportunities.

Second, the present work advances the entrepreneurial understanding regarding not only the opportunity, but also the entrepreneurial actor, in this case the entrepreneurial team. Most ventures are founded and managed by entrepreneurial teams rather than individual entrepreneurs (Beckman, 2006; Lechler, 2001; West, 2007). Fast-growing ventures in particular are usually founded by entrepreneurial teams (Davidsson, 2015). In their study about accomplishments and future challenges of opportunity research in the entrepreneurial context, Short et al. (2010) argue that, despite the commonly acknowledged relevance of entrepreneurial teams for the entrepreneurship domain, opportunity research is still concentrated mainly on the individual level. They conclude that future studies should focus more on entrepreneurial teams to better understand the opportunity process. In line with this argumentation, Foss et al. (2008) emphasize the importance of team-based opportunity recognition and judgment and the potential role of dynamic interactions between members of an entrepreneurial team that could influence opportunity recognition and judgment. Despite recent studies about opportunity recognition performance in entrepreneurial teams (e.g., Gruber et al., 2008; 2012, 2013), many aspects of how opportunity recognition and selection in entrepreneurial teams are best executed remain unclear (Gruber et al., 2012). The findings of the present study complement prior work on team-based opportunity recognition and selection in entrepreneurship by pointing to the potential downsides of high social capital, in particular a high level of intra-team trust. By illustrating that high intra-team trust can lead to a team setting in which entrepreneurial teams are less able to use their prior experience, leading to worse opportunity recognition and selection performance, the empirical results reveal potential barriers resulting from entrepreneurial team dynamics. Thus, studies focusing solely on the human capital available in the venture (e.g., Gruber et al., 2008; 2012, 2013) fall short of explaining the full complexity of opportunity recognition and selection that depends on the interplay of experiences represented in the team as well as trust, as an important attitude towards the team.

Third, the research outcomes of the present work add to the understanding of the role of trust in entrepreneurial contexts. As scholars have highlighted the importance of the social context for entrepreneurial activities (e.g., Davidsson & Honig, 2003; Johannisson et al., 2002), the role of trust for the entrepreneurship literature has gained increasing attention (Welter, 2012). However, as outlined in the theory chapter, the impact of trust during the entrepreneurial process is complex due to different views of trust in the entrepreneurial context (Welter & Smallbone, 2006).

In her critical review of trust in the entrepreneurship literature, Welter (2012) argues that most scholars consider trust to be a helpful and benign factor, and only few scholars to date have analyzed the negative effects of trust for entrepreneurship (e.g., Goel & Karri, 2006; Zahra et al., 2006). Thus, Welter (2012) calls for future studies to advance the understanding of the dark side of trust in the entrepreneurial context to close the "fundamental gaps" (p. 205) in the current literature and gather comprehensive knowledge about trust in entrepreneurship. In the theory chapter, I hypothesize that intra-team trust might be a negative condition for opportunity recognition performance, based on insights from research on the role of relational trust for new business creation in established companies (Zahra et al., 2006), as well as research on the relationship between intra-team trust and team performance (Langfred, 2004). I was able to borrow insights from the work of Zahra et al. (2006) for the context of my thesis for two reasons: First, relational trust, also referred to as intra-personal trust, is analogous in nature and outcome to intra-team trust (DeJong & Elfring, 2010). Second, the first two stages of the business creation process, namely opportunity recognition and opportunity evaluation, are similar in both established companies and new ventures (Zahra et al., 2006). In their study about the influence of relational trust on corporate entrepreneurial activities in established companies, Zahra et al. (2006) identify the potential downside of high relational trust at each stage of the business creation process. The potential negative effects of high relational trust in the opportunity recognition phase are thinking alike, concentrating on existing sources, rejecting alternative sources, and concentrating on already known opportunities. High relational trust in the evaluation phase often triggers informal assessments, leading to possible downsides in the opportunity evaluation phase, namely a lack of objectivity, overconfidence and flawed evaluations, overlooking due diligence, and an overemphasis on intangibles by the decision-makers involved. Thus, decision-making is less objective, and decision-makers are less eager to question recommendations (Zahra et al., 2006). Analogous to my work, Langfred (2004) focuses on intra-team trust and finds that a high level of intra-team trust in self-managing teams prevents team members from openly communicating their opinion—in that case, the need to monitor team members. He argues that team members fear that challenging their team members could be understood as lacking trust in them. Team members want to be seen as a "team player" (Langfred, 2004, p. 386); they therefore feel that they need to fit into the team dynamic and fear potential rejection or punishment by their fellow team members as a reaction. Consistent with this argumentation, Baron et al. (1996) indicate that highly trusting team members are more likely to argue in line with the common opinion based on a strong team influence. By applying the insight about potential negative effects of intra-team trust to entrepreneurial teams, I follow

the research call of Welter (2012), who asks for a more critical view on trust in the entrepreneurial context, and thereby advance the understanding of the manifold and complex influence of trust in the entrepreneurial process.

In addition, Welter (2012) outlines that the existing literature on trust in the entrepreneurial field focuses mainly on external ties, and thus analyzes primarily the benefits of a strong, trusting network for entrepreneurial activities (e.g., Brüderl & Preisendörfer, 1998; Davidsson & Honig, 2003; Jenssen & Greve, 2002). However, as explained in the theory chapter, personal trust refers to external as well as internal ties. While external ties comprise external resources and networks, internal ties refer to the structure, characteristics, and dynamics within a team or organization (Adler & Kwon, 2002; Welter, 2012). Consequently, my findings not only shed light on the negative effects of trust in entrepreneurship, but also advance the understanding of the interplay between personal trust and entrepreneurial activity by analyzing the attitude towards team members, which has so far not received sufficient attention in prior studies (Welter, 2012). Understanding this relationship is important, as comprehensive knowledge about trust in the entrepreneurship contexts needs to include insights regarding internal ties, which refer to the structure, characteristics, and dynamics within an entrepreneurial team (Adler & Kwon, 2002).

Besides an advanced understanding of the role of intra-team trust for entrepreneurial teams in general, and further awareness of the dark side of trust in the entrepreneurial context, the findings of my work shed light in particular on the relationship between intra-team trust and opportunity recognition performance. The importance of trust for entrepreneurship is especially high when it comes to social processes, e.g., recognizing and selecting opportunities, as entrepreneurs rely on the help of their team members or partners to achieve good results in opportunity recognition (Gemmell et al., 2012; Talaulicar et al., 2005). Strong ties between team members or partners, which are expressed, for instance, through a high level of trust, play an important role in opportunity recognition (Gemmell et al., 2012). Prior studies focus mainly on the direct effects between trust and opportunity recognition and selection, leading to discordant results. Gemmell et al. (2012) find that entrepreneurs of technological ventures achieve the highest opportunity recognition performance when they work with a small, selected "inner group" (p. 1060) with at least one "trusted partner" (p. 1060). In the study by Gordon (2006), however, which researches the role of interpersonal trust in opportunity recognition, participants with a high level of interpersonal trust identify fewer opportunities than participants with a lower level of interpersonal trust. Talaulicar et al. (2005) were one of the first to study the role of trust in the entrepreneurial context, analyzing the influence of the entrepreneurial team's organizational model on strategic decision-making contingent on trust. In their study, decision-making is measured in terms of its comprehensiveness and speed. The findings enable only weak indications, as the role of trust as a contingency for decision-making performance in an entrepreneurial context in Germany is not shown at a significant level. However, based on their observations, they conclude that intra-team trust might prevent a lack of comprehensiveness and could lead to faster decision-making. Given these points, the empirical results of my study advance the understanding of how trust influences opportunity recognition and selection in two ways: On the one hand, the results suggest that intra-team trust affects the opportunity

recognition performance in an indirect rather than a direct way. This means that intra-team trust can be a condition that either facilitates or hinders entrepreneurial teams in achieving a high performance regarding both opportunity recognition and opportunity selection. On the other hand, in contrast to prior studies (e.g., Talaulicar et al., 2005) the findings imply that intra-team trust is a negative contingency that prevents entrepreneurial teams from drawing on the experiences represented in the team to achieve a high team performance.

Fourth, the findings of the present work complement the existing research on the role of prior experience for entrepreneurial activities, and especially opportunity recognition and selection. I followed the note that the question of "how prior experience affects opportunity identification itself is also a future research topic that emerges from our study" (Ucbasaran et al., 2009, p. 113). As outlined in the theory chapter, one of the central elements of the field of entrepreneurship is that each individual has a "knowledge corridor" (Shane, 2000, p. 452) that strongly influences the decisions made throughout the entrepreneurial process. The individual knowledge corridor contains the prior experience, which is crucial for the evaluation of new information and, consequently, affects the opportunity recognition (Shane, 2000). Thus, when analyzing entrepreneurial teams, many studies focus on the prior experience of the team (Klotz et al., 2014), i.e., the combined experience of all team members (Ucbasaran et al., 2003). The creativity literature, which is intuitively linked to entrepreneurship (Dimov, 2007), also underlines the relevance of prior knowledge in generating and selecting ideas, as prior knowledge helps to predict future market success (Berg, 2016).

Consequently, the influence of prior experience on the performance in the opportunity process has been the subject of prior studies at the individual (e.g., Ucbasaran et al., 2008; 2009) as well as the team level (e.g., Gruber et al., 2008; 2012, 2013). However, existing research about the influence of prior experience on opportunity recognition is mostly limited by two factors: First, as explained above, most research about opportunity recognition performance focuses mainly or exclusively on quantitative performance measures (e.g., Gruber et al., 2008; 2012, 2013; Ucbasaran et al., 2008). Second, most studies include only particular aspects of prior experience. Some scholars focus exclusively on human capital experience and analyze the influence of general and entrepreneurship-specific human capital variables on opportunity recognition performance, measured as the number of identified opportunities (Ucbasaran et al., 2008), and sometimes including additional qualitative performance measures, such as innovativeness (Ucbasaran et al., 2009). Shepherd and DeTienne (2005) also analyze the opportunity recognition performance quantitatively, as the number of opportunities identified, and qualitatively, as innovativeness, but include only prior knowledge of customer problems. In their interaction model, Gruber et al. (2008) build on prior entrepreneurial experience and different functional experiences, namely technological experience, marketing experience, and management experience, to analyze the influence on quantitatively measured opportunity recognition performance. In their subsequent study (Gruber et al., 2012), they include human capital as well as opportunity-related experience variables, but still quantitatively measure the performance outcome. In another study (Gruber et al., 2013), they not only analyze the opportunity recognition performance as the number of opportunities identified, but also study the varieties of these opportunities, involving both opportunity-

related experience variables, namely technological experience and industry experience, as well as external knowledge sourcing relationships. In conclusion, the influence of prior team, human capital, and opportunity-related experience on qualitatively measured opportunity recognition and selection in the entrepreneurial context has, to the best of my knowledge, not been examined so far. However, as outlined in chapter 1, in order to start a successful venture, it is far more important to recognize and select one brilliant idea instead of many average ones (Girotra et al., 2010). Thus, it is crucial to understand the influence of prior experience on qualitatively measured opportunity recognition performance to gain insights into how highly valuable ideas are recognized and selected, which is the subject of the present thesis.

The influence of prior joint team experience has so far been analyzed only with regard to venture performance, measured as venture growth. Roure and Maidique (1986) as well as Eisenhardt and Schoonhoven (1990) are among the first to analyze the influence of joint team experience on venture performance, measured as sales growth, in US-based technology ventures. They find a positive relationship, but do not include the performance during the opportunity process. Zheng (2012) researches the influence of prior shared experience of founders on new venture growth, measured as venture sales and employee and market share growth, but also does not include the opportunity process in the analysis. To the best of my knowledge, the influence of joint team experience of entrepreneurial teams on opportunity recognition and selection performance has not been studied to date. Understanding this relationship is important because entrepreneurs rely on the help of their team members to reach superior opportunity recognition results (Gemmell et al., 2012; Talaucar et al., 2005). The joint effort of achieving high opportunity recognition performance might be strongly influenced by prior shared experience due to better communication (Katz, 1982), better coordination, and more effective decision-making (Cohen, 1997). Hence, to gain comprehensive insights about joint team efforts in opportunity recognition, prior joint team experience should be taken into account.

Prior studies have already analyzed the influence of human and social capital on entrepreneurial activities, but focus on opportunity exploitation (e.g., Davidsson & Honig, 2003) or venture performance (e.g., Bosma et al., 2004). Bosma et al. (2004) highlight that future studies should research the interrelationship between human and social capital and their influence on entrepreneurial performance, as the performance of entrepreneurs is determined primarily by their social and human capital. In addition, in their literature review on entrepreneurial teams, Klotz et al. (2014) find that prior experience and social capital are two major team characteristic categories that strongly impact entrepreneurial team performance. However, to the best of my knowledge, scholars have so far not studied the influence of human capital and other experience dimensions on opportunity recognition performance under the condition of social capital. The current study addresses this gap by including intra-team trust in the analysis of the human capital–opportunity recognition performance.

Thus, the empirical results of the present thesis add to the existing research on prior experience and opportunity recognition performance and advance the existing entrepreneurship literature in several ways. First, the present study analyzes the interaction between prior experience and social capital, namely intra-team trust, and finds a negative interaction effect regarding opportunity recognition performance. Second, the two models include three relevant experience categories among five experience dimensions. The empirical results show that intra-team trust negatively moderates the relationship between joint team experience and opportunity recognition performance for the team experience category, the relationship between entrepreneurial experience and opportunity recognition performance for the human capital experience category, and the relationship between industry experience and opportunity recognition performance for the opportunity-related experience category. Third, the present work measures opportunity recognition performance in the opportunity recognition as well as the opportunity selection phase, and recognizes that the same experience dimensions, namely joint team experience, entrepreneurial experience, and industry experience, negatively interact with intra-team trust in both opportunity phases. Finally, the research outcomes advance the understanding of how prior experience influences the quality of the opportunity recognition performance, measured as the quality of the selected opportunity and the selection performance.

5.1.2 Contribution to the experience literature

In this section, I discuss the contribution of the present findings to different experience literature streams, starting with team literature (section 5.1.2.1), followed by human capital literature (section 5.1.2.2), and finishing with the literature referring to the technology-to-market linking problem (section 5.1.2.3).

5.1.2.1 Team literature

First, the findings of my study contribute to the team formation literature. The team formation literature argues that the team formation process consists of different phases in which different tasks are more relevant. At the beginning of their collective work, teams focus more on team-related tasks and problems, e.g., how they can best work together, whereas in later stages content-related tasks and problems become more central (Taylor & Greve, 2006). In their study in the comic book industry, Taylor and Greve (2006) find that teams with longer prior work experience achieve a higher performance than those with shorter common work experience. However, they do not analyze the role of trust in the context of their study. The present work complements the findings of Taylor and Greve (2006) in three ways: First, the participants in my sample belong to different conservative industries, whereas Taylor and Greve (2006) worked with participants in a very specific setting, namely the comic book industry. They admit that "although the task of producing comics involves technical skills such as writing, layout, inking, and coloring, it does not use technology in the same way as products that require engineering" (Taylor & Greve, 2006, p. 736), and their results are consequently limited by the focus on the comic book industry. Complementing these insights, my study with teams from different industries

and a strong technological focus sheds light on aspects that they were not able to include in their study. Second, the entrepreneurial teams participating in my study worked together on a continuous basis, while in the study on the comic book industry, joint team experience is measured as the number of times the creative team worked together previously. Third, I include intra-team trust as a moderator and—in contrast to the positive main effects in the study by Taylor and Greve (2006)—find a negative interaction effect.

Finally, my results add to the existing upper-echelon research. Upper-echelon theory studies the influence of top management team characteristics on firm performance. As the entrepreneurial team is the top management team of a firm that is still rather young, entrepreneurship research often borrows insights from upper-echelon theory, and entrepreneurial scholars frequently base their assumptions on upper-echelon findings (e.g., Amason et al., 2006; Beckman et al., 2007; Chowdhury, 2005; Ucbasaran et al., 2008; Wiklund & Shepherd, 2003; Zarutskie, 2010). Thus, insights on how characteristics of entrepreneurial teams influence performance have the potential to advance upper-echelon theory. For example, in their study with 100 organizations, Finkelstein and Hambrick (1990) find that the tenure of top management teams significantly influences their performance and strategy. More recent research analyzes different aspects of team tenure. Liu, Li, Hesterly, and Cannella (2012), for example, study how top management team tenure influences invention performance. They distinguish between intra-firm tenure, competitor tenure, and outside industry tenure, and find that average intra-firm tenure has a negative effect on invention performance, whereas average competitor tenure and average outside industry tenure lead to higher invention performance. Ucbasaran et al. (2003) research the factors that influence the entry or exit of top management team members and find, for example, that the size of the top management team has a significant negative effect on the entry of new team members, while in family-owned firms team members are less likely to exit. While Liu et al. (2012) measure tenure at the team level as the average tenure of all team members in the organization, at a competitor, or outside the industry, and Ucbasaran et al. (2003) focus on the entry and exit of top management team members, I contribute to upper-echelon insights by studying the influence of the experience that top management teams already have working together as a team on team performance.

5.1.2.2 Human capital literature

The insights of the present work contribute to the human capital literature. When analyzing the influence of human capital on performance, scholars normally include both human capital categories: general human capital as well as specific human capital (e.g., Bosma et al., 2004; Colombo & Grilli, 2005; Gimeno et al., 1997; Ucbasaran et al., 2008; Wiklund & Shepherd, 2003). However, in many studies the results differ between the two categories. Cooper et al. (1994), for example, research the influence of human capital on different possible performance outcomes. In their longitudinal cross-industry and cross-country study of 1,053 new ventures, they include three human capital variables: general human capital, management-specific human capital, and industry-specific human capital. The results show that general human capital has an effect on survival and growth, management-specific human capital only marginally affects

survival and growth, and industry-specific know-how positively influences survival and growth. Colombo and Grilli (2005) study the influence of human capital on the growth of technology-based companies with a sample of 506 young Italian companies. They measure general human capital as educational and work experience, while entrepreneurship-specific human capital refers to prior business ownership. They find that, while the total years of education do not influence company growth, the years of specific education do positively affect company growth. The effect of economic and managerial education is even stronger than the effect of technical and scientific education. In addition, prior business ownership enables superior company growth. Likewise, in their study with 588 business owners, Ucbasaran et al. (2008) find that general human capital has less explanatory power for performance variance than entrepreneurship-specific human capital. General human capital variables refer to educational and work experience, while entrepreneurship-specific human capital variables include prior business ownership experience, entrepreneurial capabilities, technical capabilities, and information sources. Performance is measured as the number of opportunities identified and the number of opportunities pursued. Taken together, the findings of the present work build on prior human capital studies and advance the understanding of how differently general human capital and entrepreneurship-specific human capital influence performance. More precisely, my empirical results show that the relationship between human capital and entrepreneurial team performance might even be more complex by identifying intra-team trust as a negative condition in the human capital/performance relationship, more specifically for the effect of prior business ownership and the educational level.

Moreover, by including trust as a moderator, my study sheds light on the interaction between human capital and social capital in terms of social capital represented in trusting relationships within the entrepreneurial team. Prior research has already focused on the influence of human capital and social capital on entrepreneurial performance. In a longitudinal Dutch study, for example, Bosma et al. (2004) explore whether human and social capital pay off in terms of survival, profits, and generated employment. They distinguish different investment forms for human capital and social capital, namely entrepreneurship-specific investment, industry-specific investment, and general investment. Entrepreneurship-specific investment in human capital, for example, refers to prior business ownership, while general investment in social capital includes emotional support from spouses. They find that prior business ownership improves all performance measures, while support from the spouse leads to 40% more earnings. Thus, they conclude that specific investments in human and social capital have a positive effect on company performance. My results complement the existing research on the influence of human and social capital on entrepreneurial performance in two ways: First, I investigate the interaction effect of human as well as social capital. Thus, I add insights as to the social conditions under which human capital affects performance. Second, I measure performance at the team level rather than at the company level. Thus, the findings of the present study advance the understanding of the conditions under which human capital impacts team performance and identify intra-team trust as a negative condition for entrepreneurship-specific human capital.

Finally, human capital is another crucial characteristic of top management teams that is relevant for upper-echelon theory. Thus, the present work not only contributes to upper-echelon theory with new insight regarding the tenure of a top management team, but also complements existing work regarding the influence of human capital on the performance of top management teams. Zarutskie (2010), for example, finds that entrepreneurship-specific human capital has a stronger influence on the performance of top management teams—in her study, fund management teams—than general human capital. She measures general human capital as educational experience, while experience as a venture capitalist and start-up executive determines the entrepreneurship-specific human capital. As outlined above, my findings show a stronger, even significant negative interaction effect between entrepreneurship-specific human capital and intra-team trust on the performance of the top management team—in the present work, the entrepreneurial team—while the interaction between general human capital and intra-team trust is not significant.

5.1.2.3 Literature referring to the technology-to-market linking problem

The findings of the present study add to the organizational learning literature and the resource-based theory. In the organizational learning literature, a crucial element is organizational search, i.e., how companies adapt to external change and identify opportunities (Gruber et al., 2008). The resource-based theory argues that technological competence can be used for different purposes (Gruber et al., 2008). Thus, one technology can be applied in different markets (Gruber et al., 2008). In order to shed light on the technology-to-market linking problem, in which the organizational search problem consists of recognizing different market opportunities for a given technology, scholars have combined insights from the organizational learning literature and the resource-based view in strategic management (e.g., Gruber et al., 2008; 2012, 2013). However, studies on the technology-to-market linking problem are scant (Gruber et al., 2008; Helfat & Lieberman, 2002).

Gruber et al. (2013) find that entrepreneurial teams with higher industry experience, measured analogously to my study as more diverse industry experience, recognize a larger number of market opportunities, and that the recognized opportunities are more varied. My research outcome adds to this study in two ways: First, the quality of the recognized opportunities rather than the quantity is the crucial factor in determining the opportunity recognition performance. Second, the results show a negative moderating role of intra-team trust on the relationship between industry experience and opportunity recognition performance, opening up an avenue to our understanding of relevant team characteristics influencing the impact of experience on opportunity recognition.

In addition, Gruber et al. (2008) show that, in a technology-based environment, entrepreneurial teams that first identify a set of different market opportunities before selecting one opportunity out of their set achieve a higher performance than teams that do not recognize a set of opportunities. We conceptualized the present research study based on this awareness about the importance of opportunity sets and the related necessity of choosing the best opportunity, as well

as their related research call "that the notion of multiple opportunity identification prior to entry has yet to be acknowledged in the research literature" (Gruber et al., 2008, p. 1662). Thus, the participating teams had to recognize different opportunities for the given technology, namely 3D scanning, before selecting one opportunity. Now, the empirical research findings of my study advance the existing research by illustrating the negative interplay between prior experience and intra-team trust on the recognition of opportunity sets and the subsequent opportunity selection.

5.1.3 Contribution to the trust literature

First, my results contribute to the understanding of trust as a conditional effect in the prediction of team performance. Prior research focuses mainly on the positive main effects of trust, as scholars agree that a high level of trust has many direct advantages for teams and organizations (Dirks & Ferrin, 2001). However, Dirks (1999) argues that more studies should analyze intra-team trust as a condition rather than a main effect on team performance. The results of the study by Dirks (1999) show that intra-team trust indirectly influences the relationship between input factors—in his case, motivation—and team performance. With the present study, I follow his still timely research call that "researchers should consider trust as a concept that indirectly influences group performance by moderating the relationship between inputs (e.g., motivation) and group process and performance" (Dirks, 1999, p. 453). Thus, by recognizing that intra-team trust can be an inhibitor on the effect of prior experience on a team's opportunity recognition performance, my findings shed further light on the role of intra-team trust as a condition for team performance. In addition, in contrast to Dirks (1999), who brought together unknown individuals for his study and acknowledged that his findings are therefore best applicable to temporary work groups, I worked with established entrepreneurial teams, and my results can thus be applied to ongoing teams who have had the time to build up trust working on real-world tasks.

Second, the research outcomes of the present work contribute to the literature on negative effects of intra-team trust on team performance. Most prior team performance studies focus on the positive effect of high intra-team trust on team performance (e.g., DeJong & Elfring, 2010; Dirks, 1999). However, scholars suggest that future research should study more "context-specific theories of intra-team trust" (DeJong & Elfring, 2010, p. 546) to understand the influence of intra-team trust on team performance and pay more attention to the negative effects of intra-team trust (Langfred, 2004). The process of studying the negative effects of interpersonal trust started early, but focused mainly on manipulated relationships and misplaced trust (e.g., McAllister, 1997). More recent studies also include the influence of trust on team performance (e.g., Langfred, 2004). Thus, my research outcomes add to the previous literature about a potential downside of high levels of intra-team trust. In his abovementioned study about trust and team performance in self-managing teams, Langfred (2004) finds that high intra-team trust indeed hinders teams with high individual autonomy in achieving a high team performance. He argues that his findings should be understood as "one particular boundary condition for the benefits of trust in teams [...] [and that] it is likely that there are other conditions under which trust may be harmful, or at least may not have the positive effects normally associated with it" (Langfred, 2004, p. 393). The

empirical results of the present study identify another relationship, namely the one between prior experience and team performance, which can be negatively affected by high levels of intra-team trust and thus shed further light on the negative aspects of intra-team trust for team performance.

5.1.4 Contribution to the creativity literature

As described above, I borrowed insights from the creativity literature, based on the intuitive link between entrepreneurship and creativity (cf. Dimov, 2007), to build the design of the present study and thus advance the literature on entrepreneurship, trust, and human capital. Because of the intuitive link between creativity and entrepreneurship (Dimov, 2007), and thus idea generation and opportunity recognition (Perry-Smith & Coff, 2011), that I explain in the theory chapter, my findings can also contribute to the creativity literature.

In this section, I outline how the findings of my work contribute to this literature stream, more specifically to the idea generation stream and the creative forecasting stream, which both comprise the generation and selection of ideas.

First, the findings of my thesis illustrate that internal ties—in this case intra-team trust—can prevent teams from recognizing high-quality opportunities, and from being able to identify the highest-quality opportunity. In their study about idea generation, Girotra et al. (2010) make a strong point that, for many companies, is it more beneficial to generate one brilliant idea instead of many average ideas. Consequently, teams need the ability to generate a one-million-dollar idea, and the ability to discern the quality of the idea. They analyze how the structure of the team influences the idea generation and selection performance. Their results show that teams that first worked individually on a task and then jointly finished the task generated higher-quality ideas and were better able to discern the quality of the idea they had generated than teams that solved the task together from the beginning to the end. Thus, the outcome of their experimental research did not confirm the usually assumed advantage of idea generation in teams. As described in the theory chapter, internal ties refer to factors that could lead to collective cohesiveness and, consequently, help teams achieve common goals. The structure of the team and the level of trust within the team are two exemplary aspects of internal ties (Adler & Kwon, 2002). My findings show that the usually assumed advantage of a high level of intra-team trust diminishes the quality of the recognized opportunities and the ability to discern the quality of the opportunity. Thus, the empirical results of the present study complement the findings of Girotra et al. (2010) about internal ties and idea generation and selection performance, by showing that not only the structure of a team but also intra-team trust can be a negative condition for the team's opportunity recognition performance.

Second, my research outcomes demonstrate that, under the condition of intra-team trust, higher experience can hinder the ability to accurately forecast the market success of ideas. One central element of creative forecasting is predicting the future market success of ideas. Research about the connecting bridge between creativity and innovation, referred to as creative forecasting literature, is scant and mostly focused on the assessment of the novelty rather than the future

market success of new ideas (Berg, 2016). Prior work has shown that higher experience in a domain leads to a lower or at least no higher ability to accurately predict the market success of new ideas (Dailey & Mumford, 2006; Kornish & Ulrich, 2014; Moreau, Lehmann, & Markman, 2001). In his study on creative forecasting, Berg (2016) identifies differences between creators and managers regarding their ability to accurately predict future market success, and finds that their role of being the decision-maker may prevent managers from selecting the best idea. He concludes that "to uncover key moderators and boundary conditions, future research should examine creative forecasting in other contexts with other types of ideas at different levels of quality and stages of their development" (Berg, 2016, p. 28). Seeing the present study in the light of creative forecasting, for which generating and selecting ideas with a high market value is central, I followed the research call of Berg (2016), who worked with relatively well developed and comparably high-quality ideas in the circus industry. The present work focuses on new technology-based ideas that were recognized during the actual task. In addition, participants identified ideas with differing levels of quality. Thus, my findings, which identify intra-team trust as a negative condition for the relationship between prior experience and forecasting accuracy regarding market success, add to the existing forecasting literature results.

5.2 Practical implications

Besides the already discussed theoretical implications, the findings of the present study have several practical implications for entrepreneurial teams, as well as for coaches and advisors of entrepreneurial teams. In addition, practical implications can also be derived for managers of entrepreneurial teams, both in a start-up and in a corporate context. In the following, I first discuss the role of trust in practice and then outline the different practical implications based on a short summary of the results.

Trust is often perceived as a primarily positive factor, in theory as well as in practice. Much of the research on trust focuses on its positive effects (e.g., Bergh et al., 2011; Fink & Kessler, 2009; Neergaard & Ulhoi, 2006), as "trust can reduce some risks inherent within entrepreneurial activities and act as a governing mechanism for various entrepreneurial relationships" (Welter, 2012, p. 205), and it is normally considered helpful and benign. When analyzing teams, intra-team trust is normally seen an important ingredient in fostering team performance. Prior theoretical studies find positive effects of intra-team trust on entrepreneurial activities (e.g., Bergh et al., 2011) and on team performance (e.g., DeJong & Elfring, 2010; Dirks, 1999). In practice, many actors, e.g., entrepreneurial teams, perceive intra-team trust as a crucial factor for success. I observed this assumption during our onsite visits. In the first part of the BEST III survey, we asked participants to give general advice to younger entrepreneurs (cf. section 3.3.3). Many of them underlined the importance of intra-team trust for entrepreneurial teams and advised young entrepreneurs to look for co-founders whom they fully trusted. In the following, I present some of these pieces of advice focusing on intra-team trust.

"For me personally, part of a successful foundation is a great team. People whom you can trust, who bring their individual strengths to the team in the best way possible, who pull together to achieve the best possible for the company."

"If a problem cannot be solved, deal with it openly. The more the complete team knows, the higher the trust, the higher the cohesion, the better the performance of all."

"The team composition is more important than anything else. Of course, depending on the necessary qualifications, you should only include people in your team of whom you are 100% convinced, and whom you can trust 100%."

"The old truism is true: The most important thing is the team. Especially in hard phases, if the company's future is uncertain, when shared ideas fail in the market, the team is essential. Only if I look forward to going to work every morning, if I completely trust my co-founders, if all problems come up for discussion can such crises be survived."

One entrepreneurial team member even mentioned that it is important to trust each other and have experience working together, referring to joint team experience:

"It is important to have the right entrepreneurial team. You must be able to trust your co-founders; it will only then work in the long term. The most important thing for me is the founding team. You have to know each other, trust each other, and have experience working together."

However, despite many advantages of trust, the empirical results of the present study show that, when it comes to opportunity recognition performance, intra-team trust could be a negative condition that hinders teams in achieving a high team performance. Thus, it is important that entrepreneurial teams, as well as coaches and advisors of entrepreneurial teams, avoid perceiving intra-team trust as purely positive. They need to be aware of the negative influence of intra-team trust on the relationship between prior experience and opportunity recognition performance to best leverage the available treasure troves of experience, leading to a high opportunity recognition performance of the entrepreneurial team. Entrepreneurial teams with high intra-team trust should keep in mind that criticism of other team members needs to be allowed. More specifically, they should take into account that challenging the propositions of other team members is not a sign of lacking trust, but a necessary step to improve the overall team performance.

In the following, I summarize the results of the present work and subsequently derive practical implications. In brief, opportunity recognition and selection are among the most crucial elements for entrepreneurial success (Grégoire et al., 2010; Shane & Venkataraman, 2000). For most ventures, it is better to recognize and select one brilliant opportunity

instead of many average opportunities to ensure venture success (Girotra et al., 2010). The importance of the entrepreneurial team's prior experience for the opportunity recognition performance has already been acknowledged (e.g., Gruber et al., 2008; Klotz et al., 2014). Based on prior research (e.g., Eisenhardt & Schoonhoven, 1990; Gruber et al., 2008; Ucbasaran et al., 2008), I identify three experience categories in the present study, namely team experience, human capital experience, and opportunity-related experience, that are relevant for the opportunity recognition performance of entrepreneurial teams. However, Taylor and Greve (2006) argue that it is not only the team's available prior experience, but also its ability to use the prior experience that determines the path to an innovative opportunity. The empirical results of the present study highlight that intra-team trust can diminish the entrepreneurial team's ability to use its prior experience. Thus, I derive practical implications for entrepreneurial teams as well as their coaches and advisors.

First, while entrepreneurial teams need to strive to recognize and select one brilliant opportunity, they need to ensure that they choose the best opportunity out of the generated opportunity set. Especially for technology-based ventures, the best idea in the set is more likely to represent a promising opportunity or even the one-million-dollar opportunity. Therefore, entrepreneurial teams should generate an opportunity set, take into account the opportunities' high business value, and select the opportunity with the highest business value. The present study shows that the influencing performance factors are the same for the opportunity recognition and the opportunity selection phase. However, it is important that entrepreneurial teams are aware that opportunity recognition and opportunity selection are two different steps and that high performance is necessary in both to arrive at the one-million-dollar opportunity.

Second, entrepreneurial teams should ensure that their team members possess the necessary experience to recognize and select opportunities with a high value. However, they should be aware of the need to create a team condition in which they can best leverage their available experience. They need to know that, besides the many positive effects of intra-team trust on team processes and performance (Dirks, 1999), intra-team trust can also be a condition that prevents entrepreneurial teams from making full use of their treasure troves of experience. However, the practical implication of the present study cannot be that entrepreneurial teams must try to decrease the level of intra-team trust, or even look for team members whom they do not trust. The many positive effects of trust have been shown in many studies (cf. Welter, 2012), and entrepreneurial teams should not risk losing all these advantages. Thus, in line with Langfred (2004), I suggest that entrepreneurial teams should strive for a high level of intra-team trust, but should be aware of the potential downsides and take steps to avoid the subsequent unfavorable behavior. In the opportunity recognition phase, they need to prevent thinking alike, concentrating on existing sources, rejecting alternative sources, and concentrating on already known opportunities, whereas in the opportunity selection phase, the main problems are informal assessments based on less rigorous analysis, a lack of objectivity, overconfidence and flawed evaluations, overlooking due diligence, and overemphasizing intangibles (Zahra et al., 2006). To fully leverage the available experience, they need to overcome

the fear of being rejected or punished by other team members if they challenge their solutions (Langfred, 2004). Entrepreneurial team members need to realize that they need to challenge the opinions and solutions of other team members to achieve the best possible performance. I assume that, in entrepreneurial teams with a high level of intra-team trust, it would be beneficial if team members were simultaneously aware of their wish to conform to the team opinion (Baron et al., 1996) and be perceived as a team player (Langfred, 2004), and of the need to overcome this wish to be able to leverage the available experience to achieve the best possible team performance. Open discussions about the problematic side of high levels of trust within entrepreneurial teams as well as the support of coaches and advisors could help to resolve the contradictions between supporting and challenging trusting team members.

I assume that coaches and advisors of entrepreneurial teams could play a major role in resolving the conflict for individual team members between supporting their fellow team members by conforming to their opinion, and advancing the team performance by challenging fellow team members and questioning their solutions. Coaches and advisors should be aware of the potential downsides of intra-team trust for team performance in general and for the opportunity recognition performance in particular. Based on this awareness, I derive four concrete practical implications for the work of coaches and advisors of entrepreneurial teams. First, they should be aware of negative interaction effects between necessary ingredients for entrepreneurial success, namely experience and trust, when coaching and advising entrepreneurial teams. It is important that they are aware of the conflict and support the entrepreneurial team in realizing and resolving it when working with the team. Second, they should encourage team members to challenge each other's solutions and use their full experience to advance team performance. Therefore, it may help to openly discuss the conscious or unconscious fears with team members individually. Third, they should try to help teams separate the personal side of the team relationships, referring to trust, from the content side, referring to experience and solutions, when necessary. In case of problems, e.g., if a team member actually rejects or punishes another team member based on an intense discussion and assumed lack of trust, coaches and advisors should try to mediate and explain the underlying mechanism. Finally, they should themselves focus on challenging the discussions, propositions, and solutions of the entrepreneurial team. If the team itself is not able to leverage its full prior experience, a team discussion with a coach or an advisor may help to remove the blockage and encourage team members to bring their prior experience into the discussion.

Besides the entrepreneurial context, the findings of the present study have practical implications for an organizational context, which are outlined in the following. First, similar to coaches and advisors of entrepreneurial teams, managers of teams should be aware of the problematic interaction between prior experience and intra-team trust, and should support teams in resolving the conflict to achieve the best possible results. Second, team managers themselves should focus on challenging the results and solutions of their teams and support them in advancing the current result to the best possible level. Third, organization should try to establish a culture of open discussion and encourage employees to conduct controversial discussions. Finally, special team training could help teams develop a way to find the best

solution based on the available experience without hurting other team members' feelings. While in the entrepreneurial context, coaches and advisors play an important role in helping the team find the best way to achieve high performance, in organizational teams, trainings can support the supervisor in leading the team towards higher performance.

5.3 Limitations

Based on robust results concerning the negative interaction effect between prior experience, namely joint team experience, entrepreneurial experience, and industry experience, and intra-team trust with regard to opportunity recognition performance (cf. section 4), the present study makes several contribution to theory (cf. section 5.1) and to practice (cf. section 5.2). However, the present study has several limitations, which are discussed in the following.

First, the present study is limited by the sample size, consisting of 75 entrepreneurial teams with 183 participants. While a larger sample would have been desirable, the sample size is comparable to that of other experimental studies in an entrepreneurial team context, such as $n = 52$ teams (Breugst & Shepherd, in press) or $n = 41$ teams (Perry-Smith & Coff, 2011). In addition, most experimental studies are based on a sample of students, which limits the applicability to the entrepreneurial context (Lévesque & Schade, 2005). To analyze time allocation decisions with newly formed ventures, Lévesque and Schade (2005), for example, set up two experiments. The sample for the first experiment consists of 112 students, while 197 students participated in the second experiment. Gatewood, Shaver, Powers, and Gartner (2002) examine how positive and negative feedback influences expectations regarding a future business start-up in a web-based experiment with 179 students. Experimental studies with entrepreneurs are scant. In their study about new venture decision-making, Mullins and Forlani (2005), for example, work with a sample of 75 ventures, but include only 75 participants, the CEOs of the ventures. Nevertheless, it would make sense to reaffirm the findings in a broader sample including more teams, which might provide a sufficient level of power to detect interactions with a smaller effect size. Moreover, to transfer my findings to teams in a corporate setting, it might be necessary to test my model in a sample based on larger teams, as entrepreneurial teams are typically smaller than teams in a corporate environment (Breugst, Patzelt, & Rathgeber, 2015; Ucbasaran et al., 2003).

Second, the sample consists only of German entrepreneurial teams. The Global Entrepreneurship Monitor found substantial differences between countries with regard to general entrepreneurial activities, but also concerning the intensity of entrepreneurial motivation drivers (Burmeister & Schade, 2007; Koellinger, Minniti, & Schade, 2007). Thus, generalization to other nationalities might be limited. However, as German start-ups are often technology-based (Ripsas & Tröger, 2015), this context might be particularly helpful in understanding how entrepreneurial teams solve the technology-to-market linking problem.

Third, the present study was conducted exclusively with entrepreneurial teams. The setting of the present study, with entrepreneurial teams working on an opportunity recognition and selection task, allowed observations that would not

have been possible in other contexts. However, the pure focus on entrepreneurial teams as participants limits the applicability to other teams, as entrepreneurial teams differ along several aspects from teams in other contexts. Entrepreneurial teams act in extreme situations, as the entrepreneurial context is marked by ups and downs, alternating between phases that are characterized by high pressure, stress, uncertainty, and ambiguity, and phases that are characterized by stability and predictability (Breugst & Shepherd, *in press*; Schindehutte, Morris, & Allen, 2006). Consequently, entrepreneurial teams are used to uncertainty, as they often have to make decisions under great uncertainty (McMullen & Shepherd, 2006; McKelvie, Haynie, & Gustavsson, 2011). Thus, problem-solving and decision-making may differ in teams outside the entrepreneurial context. In addition, trust may operate differently in non-entrepreneurial teams. Scholars have already acknowledged differences in the way trust operates between self-managing teams, applicable to the entrepreneurial teams in the present study, and manager-led teams (Langfred, 2004), as well as between ongoing teams, applicable to the entrepreneurial teams in the present study, and short-term teams (DeJong & Elfring, 2010). As the entrepreneurial context differs from other contexts, future research should analyze whether the findings of the present study can also be applied to teams in other contexts, e.g., short-term teams or self-managing teams in organizations.

Fourth, the present study is limited by the experimental setup, as the artificial environment during the onsite visits could limit its external validity (Schade & Burmeister-Lamp, 2007). The findings of my thesis are based on onsite visits during which entrepreneurial teams had 30 minutes to recognize different business opportunities for a given technology and select one opportunity out of their recognized opportunity set at the end (cf. section 3.3.3). The opportunity recognition and selection task well reflects the actual opportunity recognition and selection of entrepreneurial teams. However, a real-life situation in a non-experimental setting may differ along several factors. The teams might first develop or select a technology on their own before looking for opportunities. They might have more time and even several discussion rounds for the task. Moreover, they might include external information and sources. In addition, the selection was hypothetical and without any consequences, e.g., monetary ones, which would probably not be the case in a real-life situation (cf. Burmeister & Schade, 2007). Thus, applying the findings to actual opportunity recognition and selection might be limited by the potential differences outlined above between the chosen experimental setup and real-life situations, but it may help to understand the fundamental factors contributing to entrepreneurial teams' opportunity recognition. Still, the limitations of an artificial environment may provide opportunities for future research.

Fifth, I used self-reported data to analyze the developed models. While three independent raters assessed the dependent variables, namely the quality of the selected opportunity and the selection performance (cf. section 3.4), the independent experience variables and the moderator intra-team trust were based on self-reported data. The variables joint team experience, educational experience, entrepreneurial experience, and industry experience were adapted by clear criteria. Joint team experience was defined as the number of years the team has already worked together. For educational experience, the educational level was translated into years of education, and for entrepreneurial experience, the number of already founded ventures was counted. However, participants had to assess the independent variable technological level

as well as the level of the moderator intra-team trust on a Likert scale from one to seven based on a self-estimation. Working with self-reported data implies the risk of self-reported bias, including social desirability response bias. The underlying problem of the self-reported bias is that it is not always clear whether the subjective perception of the participant reflects reality (Gupta & Beehr, 1982). Podsakoff and Organ (1986) distinguish different categories of self-reported data and outline the associated risks. They argue that, among others, the category "scaling the psychological states of participants," to which intra-team trust belongs, can be problematic, as it is difficult to verify it in other ways. It is hard to cross-validate the perception of participants' feelings and intentions. When researchers gather demographic or other factual data, for example, they are questioning participants concerning a specific fact, e.g., their age or, for the present study, how long they have already worked together as a team, how often they have already founded a venture, and which educational level they have achieved. In order to analyze psychological states, researchers "are asking persons to go well beyond that and to engage in a higher-order cognitive process – a process that involves not only recall but weighting, inference, prediction, interpretation, and evaluation" (Podsakoff & Organ, 1986, p. 533). A severe problem exists if researchers try to analyze correlations between two or more variables that are based on self-reported data from one participant, which are difficult to verify from an external source. The problem of analyzing correlation between variables that are both based on unverifiable self-reported data does not exist in the present study, as joint team experience, educational experience, entrepreneurial experience, and industry experience are easily verifiable through other sources, and even technological experience can be assessed by an external source. Thus, only the moderator intra-team trust refers to self-reported data, which is difficult to verify. In addition, participants tend to answer questions in order to position themselves in accordance with social norms and standards. Thus, self-reported data often leads to a social desirability response bias. Social response bias, also called socially desirable responding, represents a concern in organizational research and means that participants answer the questions according to what they think is expected of them to fit into current social norms and standards (Arnold & Feldman, 1981; Zerbe & Paulhus, 1987). Goel and Karri (2006) find that entrepreneurs in general tend to overtrust. Thus, it could be that entrepreneurs think a high level of intra-team trust is expected of them and answer accordingly.

Sixth, intra-team trust is a dynamic construct that changes over time. The interaction between two or more people is the medium of trust. Increasing trust of one actor leads on the one hand to a higher willingness to influence others, but on the other hand also to a higher willingness to be influenced by others (Zand, 1972). Thus, intra-team trust can vary depending on the point in time at which the data is collected. In addition, emergent states are "constructs that characterize properties of the team that are typically dynamic in nature and vary as a function of team context, inputs, processes, and outcomes" (Marks, Mathieu, & Zaccaro, 2001, p. 357). Hence, team inputs, processes, and outcomes would potentially lead to different data at another point in time. For the present study, the data was surveyed at only one point in time, and consequently the dynamic nature of the construct was not taken into account. To support the findings of my thesis, a longitudinal study design (cf. Langfred, 2007; Webber, 2008) could help to answer the question of how a

changing intra-team trust level influences the relationship between experience and opportunity recognition performance.

5.4 Avenues for future research and final conclusion

The recognition and selection of opportunities is one of the most crucial elements of entrepreneurship research (Shane & Venkataraman, 2000; Grégoire et al., 2010). Scholars have argued that most ventures are established by entrepreneurial teams (e.g., Beckman, 2006; Lechler, 2001; West, 2007) and that opportunity recognition and selection in entrepreneurial teams is thus a central element of opportunity research (e.g., Foss et al., 2008) that should be studied further (e.g., Busenitz et al., 2014). The relevance of prior experience for opportunity recognition performance has already been shown by prior studies (e.g., Baron & Ensley, 2006, Gruber et al., 2008; Ucbasaran et al., 2008). However, it is not yet clear under which circumstances prior experience influences the opportunity recognition performance, and which conditions hinder or facilitate the relationship. Thus, the present study sheds light on the interaction between prior experience and opportunity recognition under the condition of intra-team trust, which hinders entrepreneurial teams in achieving the best possible team performance. As outlined in section 5.1, the present study contributes to the entrepreneurship, experience, and trust literature in many ways. However, there are avenues for future research connected to the present study. In the following, I outline future research avenues that provide fruitful opportunities to complement the results of the present thesis.

First, prior research has already acknowledged the close connection between the performance of the entrepreneurial team and the venture performance (e.g., Ensley, Carland, & Carland, 2000; Watson, Ponthieu, & Critelli, 1995). Thus, a next logical step would be to investigate the relationship between the prior experience of an entrepreneurial team and the venture performance under the condition of intra-team trust. Prior research has already analyzed the influence of joint team experience on venture performance (e.g., Eisenhardt & Schoonhoven, 1990; Roure & Maidique, 1986) as well as the relationship between human capital experience and venture performance and survival (e.g., Delmar & Shane, 2006, Gimeno et al., 1997). In addition, the link between trust and company performance is the subject of prior studies (e.g., Davis, Schoorman, Mayer, & Tan, 2000; Fink & Kessler, 2009). Combining the different insights could complement the findings of the present study.

Second, future research could add to my work by analyzing the influence of other emergent states on the relationship between experience and opportunity recognition performance. Two emergent states that are closely related to trust are potency and psychological safety (Ilgen et al., 2005). Potency is defined as "the collective belief of group members that the group can be effective" (Shea & Guzzo, 1987, p. 26). Psychological safety can be understood as "a shared belief that the team is safe for interpersonal risk taking" (Edmondson, 1999, p. 354). Prior research has already investigated the influence of potency and psychological safety on team performance (e.g., Edmondson, 1999; Gully, Incalcaterra,

Aparna, & Beaubien, 2002). Perhaps they will be connected to a similar way of thinking in the team and restrict criticism on ideas, just like trust, which will hinder the teams in translating their experience into higher levels of opportunity recognition performance.

Third, other potential downsides of trust could be the subject of future studies with entrepreneurial teams. Besides the outlined risk of high trust in the opportunity recognition and selection phase, Zahra et al. (2006) also mention concrete risks in the implementation phase in their study about the dark side of relational trust in new business creation in established companies. Examples of risks in the implementation phase are a lack of effective control, a flatter learning curve based on less feedback, a problematic knowledge transfer as knowledge of trusted actors is valued higher, and opportunistic behavior or dissatisfaction if trusted actors fail to meet expectations (Zahra et al., 2006). Future studies could complement the present work by analyzing the downsides of the implementation phase in an entrepreneurial team.

Finally, the findings of the present study could be supported by adapting the way experience is measured. Especially the two experience dimensions of the opportunity-related experience category, namely technological experience and industry experience, offer the possibility of different measurement. To avoid the self-reported bias, the technological experience could be assessed by external raters or could be based on formal education. Relying even more on the understanding of industry experience described by Shane (2000) would suggest a measurement that captures "prior knowledge of markets, prior knowledge of ways to serve markets, and prior knowledge of customer problems" (Shane, 2000, p. 452). Both approaches could help to better understand how the technology-to-market linking problem can be successfully solved in an entrepreneurial team (cf. Gruber et al., 2008).

In conclusion, my thesis makes several remarkable contributions by shedding light on the as yet not analyzed negative condition of intra-team trust for the relationship between prior experience and opportunity recognition performance in entrepreneurial teams. The findings advance the understanding of the factors that influence the performance of entrepreneurial teams and increase the awareness of negative sides of trust in entrepreneurship. However, I acknowledge that some research is still needed to yield a sufficient understanding of the conditions under which entrepreneurial teams best work together to deliver successful opportunity recognition, and to fully recognize and understand the negative effects of trust in entrepreneurship. Future research could study potential positive and negative conditions that influence the performance of entrepreneurial teams by analyzing input factors facilitating or hindering team performance. In addition, future research avenues could comprise additional downsides of trust in entrepreneurial teams. Taken together, future research could complement my work by advancing the understanding of the conditions under which entrepreneurial teams best work together to achieve a high performance.

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APPENDIX

Appendix 1: Technology description

Mobile 3D Scanners

Researchers and engineers are currently developing a new technology for **mobile 3D scanning**. This technology enables an easy recognition of data on the shape and design of three-dimensional objects. The almost market-ready applications and sensors for mobile are highly innovative and have the potential to revolutionize a large variety of markets.

Researchers from a leading institution in Europe are developing this technology and thereby rely on conventional cameras and sensors (yaw-rate-sensors and acceleration sensors), which are featured with most smartphones/tablets. The technology works by continuously focusing the device on and around a specific environment or object, which shall be scanned. Thereby a 3D model is sequentially built up and displayed on the screen of the mobile device. In this process, graphic pixels are captured and the absolute size as well as direction are determined. The data reconstruction is accelerated by highly efficient algorithms and the graphics processor of the mobile device. As a consequence, 3D scans in high resolution can not only be generated everywhere and anytime, but are also presented directly on the display of the mobile device.

Initial tests have shown that this technology was compatible with most mobile terminals and operating systems. Current comparable methods are typically complex and require intense computing power. The new technology is faster, user-optimized and cheaper as comparable solutions for 3D scanning. Now, based on these results, you have the chance to commercialize this technology in an entrepreneurial way.

- *Which alternative market opportunities would you pursue with this technology?*
- *What business opportunity should be prioritized in your opinion?*

Source: Own illustration

Appendix 2: Coding scheme

Phase	Notion	Description
Introduction phase	Introduction phase	Introduction by researcher
Reading phase	Reading phase	Individual reading by participants
Clarification phase	Clarification phase; Problem solving <i>or</i> Clarification phase; Common understanding <i>or</i> Clarification phase; Distracted conversation during clarification	Discussion about problem solving approach Discussion about same understanding within the team (technology/task) Distracted conversation
Technical discussion phase	General technical discussion <i>or</i> Technical discussion about features or advantages	Discussion of general technical aspects Discussion on specific technical details
Individual brainstorming phase	Individual brainstorming phase	Individual brainstorming by participants
Structural phase	Structural phase; Process coordination (comment) <i>or</i> Structural phase; Clarification <i>or</i> Structural phase; Repeating of already recognized opportunities (comment)	Process structure/coordination/timeline to solve problem Discussion of a structure as basis for brainstorming or for classification/grouping opportunities during/after brainstorming Repeating of mentioned opportunities
Opportunity recognition phase	Opp. recognition phase, Opp# (introduction) description <i>or</i> Opp. recognition phase, Opp# (further development), description [for already mentioned opp.]	Phase of opportunity introduction Phase of further development of already mentioned opportunities (refining, information exchange, integrating/combining)
Evaluation phase	Evaluation phase, Opp# (and Opp#)	Evaluation and/or prioritization oriented discussion of an opportunities or after collecting several opportunities
Decision phase	Decision phase; Opp# (Opp. name)	Phase when team decides on one opportunity

Opp. = Opportunity

Source: Own illustration