

TECHNISCHE UNIVERSITÄT MÜNCHEN

Lehrstuhl für Betriebswirtschaftslehre – Entrepreneurship

**Growth of entrepreneurial ventures –  
Issues in venture internationalization and human  
resource management**

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Vollständiger Abdruck der von der Fakultät für Wirtschaftswissenschaften der Technischen Universität München zur Erlangung des akademischen Grades eines Doktors der Wirtschaftswissenschaften (Dr. rer. pol.) genehmigten Dissertation.

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Die Dissertation wurde am 26.10.2011 bei der Technischen Universität München eingereicht und durch die Fakultät für Wirtschaftswissenschaften am 14.12.2011 angenommen.

## **Acknowledgements**

First of all, I would like to express my deepest gratitude to my scientific advisors. I am forever indebted to Prof. Dr. Dr. Holger Patzelt for his guidance, advice and most valuable comments. He has provided the best encouragement and surroundings a PhD student could think of. Moreover, I would like to thank Prof. Dr. Lars Schweizer for the helpful discussions, comments and advice, and for reviewing this book. Additionally, I want to express my deepest gratitude to Dr. Nicola Breugst. She has been a continuous source of support, scientific insights and a bright guiding light in the field of statistics. I doubt very much that my work would be as rich without the help of my scientific advisors!

Sincere thanks for the great working atmosphere, support and a lot of fun also go to my colleagues at the Max Planck Institute of Economics and the Technische Universität München, first and foremost to Nicki and Madeleine.

Finally, my deepest and most sincere gratitude belongs to my parents, Sabine and Jörg, and to my brother Jan, for their unconditional love, great patience, and continuous support!

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## List of abbreviations

|        |                                           |
|--------|-------------------------------------------|
| AIM    | Affect Infusion Model                     |
| ANOVA  | Analysis of Variance                      |
| cf.    | Confer (compare)                          |
| CFA    | Confirmatory Factor Analysis              |
| CFI    | Comparative Fit Index                     |
| CI     | Confidence Interval                       |
| e.g.   | Exempli gratia (for example)              |
| et al. | Et alii (and others)                      |
| H      | Hypothesis                                |
| HLM    | Hierarchical Linear Modeling              |
| HR     | Human Resource                            |
| i.e.   | Id est (that is)                          |
| IE     | International Entrepreneurship            |
| IEO    | International Entrepreneurial Orientation |
| INV    | International New Venture                 |
| M      | Mean                                      |
| MNE    | Multinational Enterprise                  |
| n.a.   | Not available                             |
| n.s.   | Not significant                           |
| OLS    | Ordinary Least Squares                    |
| PANAS  | Positive and Negative Affect Schedule     |
| PNFI   | Parsimony-adjusted Normed Fit Index       |
| R&D    | Research and Development                  |
| RMSEA  | Root Mean Square Error of Approximation   |
| SD     | Standard deviation                        |
| SEM    | Structural Equation Modeling              |
| SIMOL  | Social Identity Model of Leadership       |
| SME    | Small and Medium sized Enterprise         |
| SRMR   | Standardized Root Mean Residual           |
| VIF    | Variance Inflation Factor                 |
| vs.    | Versus                                    |



## **Abstract**

Product and service innovations are an integral part of our everyday life. Companies like Google, Apple or Logitech identify and exploit new ideas and business opportunities and hence generate new jobs, enhance external trade and drive global industries. Understanding central issues of venture development is of utmost importance since venture creation can only stimulate job creation, economic growth and international trade when new venture foundation is followed by venture growth. This book focuses on central aspects of entrepreneurial growth that is, young venture internationalization and human resource management. Three empirical studies are presented which address central questions in the areas of young venture internationalization and human resource management.

The first study analyzes how entrepreneurs' intentions to internationalize are influenced by factors on multiple levels. While it is known that personal networks of entrepreneurs can trigger internationalization decisions by providing information on foreign markets, however, this study shows that entrepreneurs' likelihood to internationalize is influenced by the structure and properties of the network providing that information. Moreover, since organizations and individuals use their networks differently results suggest that perceived absorptive capacity of the venture and entrepreneurs' level of generalized trust in others influence the impact of networks on the decision to internationalize. These results highlight that the influence of personal networks on the decision to internationalize is complex and that understanding this influence requires conjoint consideration of variables at the network, venture and individual level.

In the second study, an analysis of how entrepreneurs' expertise influences central venture internationalization determinants reveals that different types of expertise – that is, founding expertise and international expertise – affect venture age at internationalization differently. Moreover, an analysis of the conjoint influence of age at internationalization and

founding expertise, and of age at internationalization and international expertise on venture degree of internationalization again presents diverging effects of the different types of expertise. This study emphasizes the complex role of entrepreneurs' expertise in internationalization and supports a cognitive perspective on international entrepreneurship.

Finally, employee commitment is central to young venture growth and success. The third study of this thesis therefore offers an analysis of how entrepreneurs' displayed passion influences employee commitment and reveals that different types of passion influence commitment differently. Moreover, it emerges that the influence of entrepreneurs displayed passion on employee commitment is mediated by employees' positive affect at work and their goal clarity. This study emphasizes the complex influence of entrepreneurs' displayed passion on employee commitment and highlights the multifaceted role of entrepreneurs affects in leadership and young venture human resources management.

## **Zusammenfassung**

Produkt- und Dienstleistungsinnovationen sind ein integraler Bestandteil unseres täglichen Lebens. Unternehmen wie Google, Apple oder Logitech identifizieren und verwerten neue Ideen und Geschäftsmöglichkeiten und schaffen so Arbeitsplätze, erhöhen den Außenhandel und treiben globale Industrien an. Das Verstehen von zentralen Bereichen unternehmerischen Wachstums ist von besonderer Bedeutung, da Unternehmensgründung nur dann Arbeitsplatzschaffung, Wirtschaftswachstum und Außenhandel fördern kann, wenn die Gründung von Unternehmen auch von Wachstum gefolgt wird. Dieses Buch beschäftigt sich mit zentralen Aspekten unternehmerischen Wachstums, das heißt mit der Internationalisierung von jungen Unternehmen und deren Human Ressourcen Management. Dieses Buch enthält drei empirische Studien, welche zentrale Fragestellungen in den Bereichen Internationalisierung und Human Ressourcen Management von jungen Unternehmen bearbeiten.

Die erste Studie analysiert, wie die unternehmerische Internationalisierungsinention durch verschiedene Faktoren, auf unterschiedlichen Analyseebenen, beeinflusst wird. Während bereits bekannt ist, dass die persönlichen Netzwerke von Unternehmern, durch die Bereitstellung von Informationen über Auslandsmärkte, eine Internationalisierungsentscheidung auslösen können, zeigt diese Studie, dass die Wahrscheinlichkeit einer solchen Entscheidung durch die Struktur und die Eigenschaften des Netzwerks beeinflusst wird. Darüber hinaus wird der Einfluss eines Netzwerks auf die Entscheidung zu internationalisieren durch die wahrgenommene Informationsaufnahme und -verarbeitungsfähigkeit des Unternehmens und durch das grundlegende Vertrauen des Unternehmers in andere beeinflusst. Diese Ergebnisse der Studie machen deutlich, dass der Einfluss von persönlichen Netzwerken von Unternehmern auf die Entscheidung zu internationalisieren komplex ist und dass ein Verstehen dieses Einflusses eine gemeinsame

Betrachtung von Variablen auf Netzwerk-, Unternehmens- und Individualebene erforderlich macht.

Die zweite Studie beinhaltet eine Analyse der Wirkung von Expertenwissen von Unternehmern auf zentrale Determinanten der Unternehmensinternationalisierung und zeigt, dass unterschiedliche Arten von Expertenwissen – das heißt, Gründungsexpertise und Internationalisierungsexpertise – den Zeitpunkt der Unternehmensinternationalisierung unterschiedlich beeinflussen. Darüber hinaus wird durch eine Analyse des gemeinsamen Einflusses von Unternehmensalter bei Internationalisierung und Gründungs- sowie Internationalisierungsexpertise auf den Grad der Internationalisierung klar, dass unterschiedliche Arten von Expertenwissen auch hier unterschiedliche Einflüsse ausüben. Diese Studie unterstreicht die komplexe Rolle von Expertenwissen der Unternehmer im Rahmen der Unternehmensinternationalisierung und die Bedeutung der kognitiven Perspektive in der Forschung zur Frühinternationalisierung.

Des Weiteren ist die Mitarbeiterbindung zu Unternehmen von zentraler Bedeutung für Unternehmenswachstum und -erfolg. Die dritte Studie beinhaltet daher eine Analyse des Zusammenhangs zwischen dem Ausdrücken von Leidenschaft durch den Unternehmer und der Bindung der Mitarbeiter zum Unternehmen. Dieses Kapitel zeigt, dass unterschiedliche Arten von Leidenschaft die Mitarbeiterbindung unterschiedlich beeinflussen. Darüber hinaus ging aus der Analyse hervor, dass der Einfluss von Leidenschaft auf Mitarbeiterbindung durch positive Affekte und durch Zielklarheit der Mitarbeiter mediiert wird. Diese Studie betont den komplexen Einfluss von unternehmerischer Leidenschaft auf Mitarbeiterbindung und hebt die facettenreiche Rolle von Affekten von Unternehmern in Mitarbeiterführung und Human Ressourcen Management in jungen Unternehmen hervor.

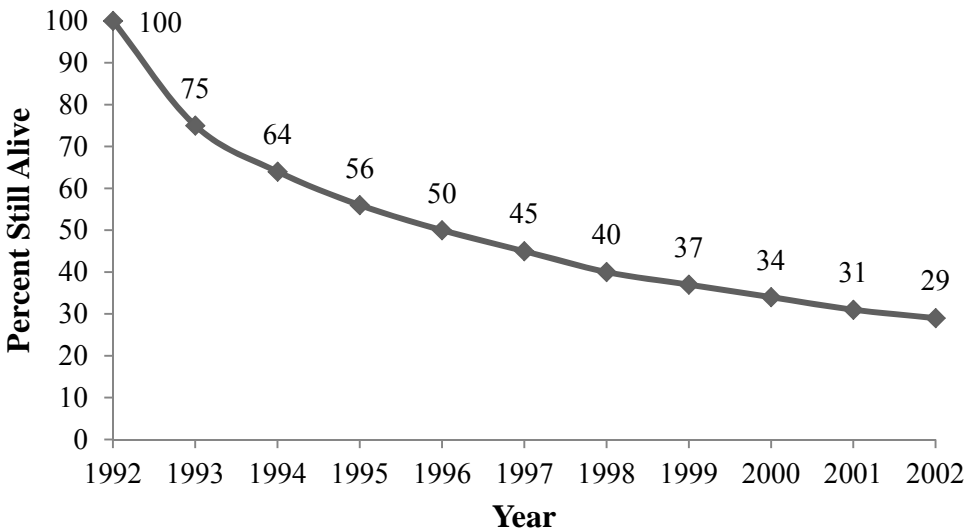
# 1 Introduction

Entrepreneurship as a field of study has rather recently received growing interest. In the post-World War II era, business and economics research focused mainly on large companies, because these companies were believed to be the driver of economic growth and prosperity due to economies of scale and scope (Audretsch & Thurik, 2001). Small and medium sized enterprises (SMEs), on the other side, were perceived to be inefficient and only marginally involved in innovation (Audretsch, 2003). Hence, “small firms and entrepreneurship were viewed as a luxury” (Audretsch, 2003, p. 6) and not as a main contributor to economic development. In the mid- 1970s and early 1980s, however, the focus on large companies, as sole guarantor of economic growth, started to change (Audretsch, 2003). Conventional wisdom at that time was that large firms are the providers of new jobs. Birch (1981), however, showed that most new jobs were created by young and small firms. This led to the emergence of growing interest in entrepreneurship and its role in economic development. Today, entrepreneurship is believed to be the engine of economic growth and prosperity (Audretsch, 2003; Holcombe, 1998). As Audretsch (2003, p. 13) states:

*“[...] a mountain of empirical evidence has been accumulated in the last two decades providing compelling links between entrepreneurship and performance. This evidence points to a positive and robust relationship between measures of entrepreneurship and economic performance. The positive relationship between entrepreneurship and performance has been found to hold not just for a single measure of performance, but rather across a broad spectrum of performance measures, such as employment creation, growth, firm survival, innovation and technological change, productivity increases, and exports.”*

However, new firm creation and entrepreneurship will not inevitably be followed by growth. Newly formed firms’ survival is everything but certain and research even suggests

high failure rates. For example, Timmons (1990) reports a venture failure rate of 40% within the first year after foundation. Within five years after venture creation 61.5% of all firms have ceased to exist in a study by Dunne, Roberts and Samuelson (1988). Moreover, after ten years venture failure rates have been found to be up to 70% (Shane, 2008), 79.6% (Dunne, et al., 1988) and even as high as 90% (Timmons, 1990). Figure 1 illustrates the exit rate of new ventures within ten years.



**Figure 1: Proportion of new businesses founded in the United States in 1992 still alive, by year.**

**Source: Shane (2008, p. 99)**

This evidence suggests that the mere creation of ventures does not trigger growth. Indeed, the nature of the relation between growth and survival is such that venture growth in early years contributes strongly to survival (Timmons & Spinelli, 2007). As a consequence, an important research stream tries to understand how entrepreneurs approach vital issues of venture growth – that is how entrepreneurs can effectively and efficiently support the growth of their ventures.

This thesis therefore aims to contribute to central issues of venture growth; that is, new venture internationalization and employee commitment to new ventures. Specifically, I will investigate the entrepreneur's role in these issues. First, I will explore entrepreneurs' intentions to internationalize based on their personal networks, the venture's absorptive capacity, and the entrepreneurs' generalized trust. Moreover, I will elaborate on the effect of entrepreneurs' expertise in explaining venture age at first international entry and venture degree of internationalization. Finally, I will concentrate on employee commitment to a new venture and how employees' perceived passion of the entrepreneur influences commitment.

This introductory part is structured as follows. In section 1.1 I will elaborate on the definition of entrepreneurship and the central role of the entrepreneur in explaining new venture creation and development. The specific role of the entrepreneur in venture growth issues will be addressed in more detail in section 1.2. There I will further elaborate on entrepreneurs' salient role in new venture internationalization and human resource management and derive the main research questions of this thesis. Finally, in section 1.3 I will provide an overview of the structure and scope of this thesis.

## **1.1 Understanding entrepreneurship – the salient role of the entrepreneur**

Entrepreneurship is an interdisciplinary and multidimensional field of research (Audretsch, 2003). Several academic disciplines have contributed to today's knowledge on entrepreneurship, like economics (Audretsch, Keilbach, & Lehmann, 2006; Baumol, 1968), sociology (Brüderl, Preisendörfer, & Ziegler, 1992; Ruef, Aldrich, & Carter, 2003), psychology (Baum, Frese, & Baron, 2006; Hisrich, Langan-Fox, & Grant, 2007) and management (Covin & Slevin, 1989; Stevenson & Jarillo, 1990). As a consequence, a generally accepted definition of entrepreneurship is lacking (Audretsch, 2003). However,

most acknowledged views of entrepreneurship involve the identification of new business opportunities and the subsequent introduction of products and services to markets (Audretsch, 2003). A widely accepted definition was provided by Shane and Venkataraman (2000, p. 218):

*“[...] we define the field of entrepreneurship as the scholarly examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited [...]. Consequently, the field involves the study of sources of opportunities; the processes of discovery, evaluation, and exploitation of opportunities; and the set of individuals who discover, evaluate, and exploit them.”*

Hence, research on entrepreneurship involves not only an understanding of business opportunity emergence, identification and exploitation, but first and foremost an understanding of how individuals perform these acts. That is, to understand opportunity recognition and enactment the person of the entrepreneur needs to be understood.

A large body of research focuses its attention on entrepreneurs and what differentiates them from non-entrepreneurs. For example, early research described entrepreneurs as particularly alert to business opportunities (Kirzner, 1997), creative (Schumpeter, 1934) and able to deal with uncertainty (F. H. Knight, 1946). Further, studies have examined the personality traits of entrepreneurs (for a meta-analysis see Rauch & Frese, 2007).

Moreover, a large body of research focuses on cognition in order to explain the entrepreneurial process. Entrepreneurial cognitions refer to “the knowledge structures that people use to make assessments, judgments, or decisions involving opportunity evaluation, venture creation, and growth” (R. K. Mitchell et al., 2002, p. 97). For example, research has examined cognitive mechanisms to understand venture formation intentions (Krueger, Reilly, & Carsrud, 2000). Moreover, cognitive scripts were found to play a role in entrepreneurs’ opportunity recognition (R. A. Baron, 2006) and in the venture creation decision (R. K. Mitchell, Smith, Seawright, & Morse, 2000). Furthermore, cognitive mechanisms and biases



of entrepreneurs' in decision making under uncertainty have been explored (R. A. Baron, 1998; Busenitz & Barney, 1997).

Affects - that is the emotions and moods of individuals - have also received attention in explaining the entrepreneurial process (R. A. Baron, 2008). For example, research has examined how positive and negative affects influence entrepreneurs' venture effort (Foo, Uy, & Baron, 2009), how emotions influence entrepreneurs' opportunity evaluations (Foo, 2011) and how grief influences entrepreneurs' learning from business failure (Shepherd, 2003). Moreover, studies have provided insights into passion and its influence on the entrepreneurial process (Cardon, 2008; Cardon, Wincent, Singh, & Drnovsek, 2009).

In sum, the large body of research on entrepreneurs' traits, cognitions and affects underlines the salient role of the person of the entrepreneur in understanding new venture creation. Therefore this thesis focuses on the person of the entrepreneur, specifically on the cognitive perspective (Chapters 2 and 3) and the affective perspective (Chapter 4).

## **1.2 The role of entrepreneurs in venture growth**

As outlined above in Shane and Venkataraman's (2000) definition, entrepreneurship is about the identification of opportunities but also about their exploitation and thus venture growth. Indeed, there are several aspects related to the growth process of a venture. For example, venture growth might involve innovation and new product creation, the establishment of strategic alliances and joint ventures to enhance innovation activities, the hiring of employees, and the introduction of products to new customer segments or new (and perhaps international) markets.

While the entrepreneur has received large interest in understanding the venture creation process, research on the person of the entrepreneur has mainly focused on the very

early phases of venture creation. For example, research has tried to explain why entrepreneurs are able to recognize opportunities (R. A. Baron, 2006), what contributes to their intentions to become entrepreneurs (Krueger, et al., 2000) and what influences their actual venture creation decisions (R. K. Mitchell, et al., 2000). Since the entrepreneur is the major decision maker in a venture, she or he will also be the most important determinant of venture development and growth after foundation. For example, research has provided evidence that entrepreneurs are central to the establishment of inter-organizational networks (Larson & Starr, 1993), to raising venture capital (Hsu, 2007), and to successful product development (Song, Song, & Parry, 2010). Therefore, beyond getting the new venture off the ground, the person of the entrepreneur is an important subject to study when trying to understand the different growth trajectories of new ventures after foundation.

### *1.2.1 Entrepreneurship and internationalization – remaining questions*

Internationalization - that is, the sale of products and services in foreign markets - is an important growth strategy of companies and has recently gained interest in entrepreneurship research. The growing interest in new venture internationalization is mainly due to the fact that established theory on firm internationalization predicts retarded and slow moves into international markets, which is at odds with young venture internationalization.

One of the most acknowledged theories on firm internationalization is the Uppsala model (Johanson & Vahlne, 1977). According to this theory, internationalization is a gradual process mainly determined by knowledge, especially experiential knowledge about foreign markets. Since young firms are lacking such knowledge internationalization will likely occur after an extended period of company development and growth in the domestic market. According to the model, firm internationalization then proceeds in gradual steps. Since knowledge about foreign markets is lacking, the first markets selected for international entry

will be similar to the home market and the entry mode used will involve only small resource investments, like export. After the firm has gained experiential knowledge in doing business in international markets, less similar foreign countries will be approached and more risky entry modes, like subsidiaries, will be selected for further internationalization. However, a growing number of young firms displaying accelerated internationalization have been identified in recent years (Organisation for Economic Co-operation and Development, 1997). Since this development is at odds with established internationalization theory, increased interest in explaining young venture internationalization has been spurred (Oviatt & McDougall, 1994). Research has identified triggers and driving forces of early internationalization which can be categorized into external and internal factors.

With regard to **external factors**, changes in market conditions account, partly, for the increased number of internationalized young ventures. For example, the trend towards specialization and hence positioning in niche markets has been found to be an important driver. A young firm might quickly move into international markets simply because the domestic market for the specialized product or service is too small (Madsen & Servais, 1997). Moreover, in some industries, especially high-technology industries, the trend towards shorter product life-cycles in combination with high research and development (R&D) expenses might push young firms to internationalize faster (Bell, 1995).

Further, the globalization of markets may account for accelerated internationalization of firms. Many industries are strongly internationalized with global sourcing and production, as well as cross-border alliances for R&D and marketing (G. A. Knight & Cavusgil, 2004; Madsen & Servais, 1997). As a consequence, the domestic clients of a young venture might be internationalized and hence trigger a followership of the young venture into foreign markets (Bell, 1995). Additionally, the globalization of markets accounts for an increased homogenization of customer preferences (G. A. Knight & Cavusgil, 2004; Madsen & Servais,

1997). This might facilitate the internationalization of young ventures since product development for and adaption to foreign markets is simplified.

Moreover, several technological developments seem to be responsible for accelerated firm internationalization. For example, developments in information and communication technologies have made it easier and cheaper for firms to access information on foreign markets (Madsen & Servais, 1997) and to identify and contact potential foreign customers and business partners. Moreover, technological developments have also caused advancements in international logistics and reductions in transportation costs (Madsen & Servais, 1997). As a consequence, barriers to internationalization are to some extent reduced, which might account for the accelerated internationalization of firms. Finally, advances in production technology led to more efficient small-scale production methods (Madsen & Servais, 1997). Hence, even highly specialized, niche products can be produced cost-effectively, which makes young firms competitive on (international) markets.

In sum, technological developments and changing market conditions have reduced costs and barriers to internationalization which could trigger early internationalization. However, Knight and Cavusgil (2004, p. 125) state that “Although these trends facilitate early internationalization, by themselves they are insufficient to explain intriguing processes at work in the firm’s internal environment”.

One of these **internal processes** that explain early internationalization is the use of organizational “hybrid” structures such as networks (Oviatt & McDougall, 1994). Usually young firms are characterized by resource poverty which should be an impediment to internationalization. Early internationalizing ventures overcome their resource scarcity by using hybrid structures to access resources not available in the firm (McDougall, Shane, & Oviatt, 1994; Oviatt & McDougall, 1994). For example, entrepreneurs primarily access their close personal networks to gather resources (McDougall, et al., 1994). By using their personal

networks entrepreneurs are able to access and use resources which they would not be able to control through ownership. As a result, accelerated internationalization is possible even under the impediment of resource scarcity.

Another central internal factor explaining early internationalization is knowledge. Knowledge essentially plays two roles in the internationalization process. First, knowledge embedded in products or services accounts for accelerated internationalization. That is, the competitive advantage of young firms in international markets is attributed to their knowledge intensive products and services (Bell, McNaughton, Young, & Crick, 2003; Oviatt & McDougall, 1994). Second, prior experience and knowledge of the entrepreneur seems to be an essential trigger of accelerated internationalization. Entrepreneurs that internationalize early tend to have international experience through studying in a foreign country or through work experience in multinational firms or in foreign countries (McDougall, Oviatt, & Shrader, 2003; Reuber & Fischer, 1997; Zucchella, Palamara, & Denicolai, 2007). While the importance of experiential knowledge acquired by the firm after internationalization is most pronounced in the traditional theory on firm internationalization processes, most attention is paid to the prior experiential knowledge of the entrepreneur in research on early internationalizing ventures.

In sum, research on internal driving forces of early internationalization suggests that entrepreneurs - with their personal networks, their knowledge and experience - are central to explaining young venture internationalization. This is in line with the substantial research interest in the person of the entrepreneur outlined in section 1.1. However, the role of the entrepreneur in venture internationalization remains underexplored in certain respects.

First, while it is known that entrepreneurs use their personal networks to acquire information about foreign markets (Sharma & Blomstermo, 2003), networks can have different properties and configurations which might influence the amount and nature of

information provided. A central question still underexplored is how different networks influence entrepreneurs' intentions to internationalize. Moreover, characteristics of the entrepreneur and the venture might influence acquisition and use of information provided by a network. Therefore, another, so far unanswered research question requiring investigation is how characteristics of the entrepreneur and the venture influence the relationship between networks and the intention to internationalize.

Second, existing research suggests that entrepreneurs' experience and knowledge influence venture internationalization. For example, studies show that early internationalization is associated with international experience of top management teams (Reuber & Fischer, 1997). However, other types of experience, like founding experience, have been largely ignored in explaining young venture internationalization. Moreover, research has mainly focused on entrepreneurs experience in explaining venture age at initial international entry. However, the effect of entrepreneurs experience on venture internationalization degree remains underexplored. This underlines a need for further investigation of the role of entrepreneurs' experience in venture internationalization in order to provide a more detailed picture of the early internationalization process.

### *1.2.2 Entrepreneurship and human resource management – remaining questions*

Human resource management is another central issue in venture development since human resources have been found to be critical to venture survival, success and growth (Aldrich & Langton, 1997; R. L. Heneman, Tansky, & Camp, 2000; Williamson, 2000). However, research on human resource (HR) management has mainly focused on medium-sized and large organizations (Williamson, 2000). With regard to the application of these findings to entrepreneurship research, Cardon and Stevens (2004, p. 295) state that “While

much of our knowledge concerning traditional HR topics (e.g., recruiting, compensation, or performance management) in large firms may also apply in small or emerging organizations, evidence suggests that new ventures are different and that management of people within them may not clearly map to management within larger, more established organizations”.

Indeed, entrepreneurial ventures are distinct from large firms since they face liabilities of newness and smallness. More concretely, these liabilities refer to a lack of legitimacy and resources which will largely determine how young ventures address human resource issues (Cardon & Stevens, 2004). For example, a lack of legitimacy accounts for problems of young ventures in finding and hiring qualified employees since applicants might not perceive young ventures as an employer of choice (Williamson, 2000). Moreover, resource scarcity associated with young firms has important implications for their human resource management practices. For example, young firms might not have formalized HR departments but more informal human resource management systems (Cardon & Stevens, 2004). Additionally, a lack of formalized HR structures and practices will also account for differences in performance management of employees since small firms might not have formal performance review and feedback processes (Cardon & Stevens, 2004). Moreover, scarcity of financial resources in young firms might have implications for HR management. For example, a lack of financial resources might lead to difficulties in recruiting skilled employees and to differences in employee compensation and training possibilities compared to large firms (Cardon & Stevens, 2004).

Hence, young ventures seem to face unique challenges in HR management due to liabilities of newness and smallness. This has spurred interest in entrepreneurship research. Although it is frequently lamented that systematic research on human resource management in small firms is limited (Cardon & Stevens, 2004; R. L. Heneman, et al., 2000; Katz, Aldrich,

Welbourne, & Williams, 2000), there are several findings that contribute to our understanding of the management of people in entrepreneurial firms.

For example, research on staffing practices has found that young firms often rely on the social networks of the entrepreneur to recruit employees (Aldrich & Langton, 1997; Barber, Wesson, Roberson, & Taylor, 1999). However, when faced with the recruitment of strangers, that is new hires that are not part of the entrepreneurs' network, young firms frequently encounter problems due to a lack of legitimacy as an employer organization (Williamson, 2000). Concerning issues of staffing, research has found that small firms are applying more sporadic and ad hoc recruiting strategies (H. G. Heneman & Berkley, 1999). With regard to attraction practices, small businesses seem to primarily use convenient, inexpensive and directly controllable sources like direct applications, personal and employee referrals, and newspaper ads (H. G. Heneman & Berkley, 1999). In investigating new hire selection in small firms, Heneman, Tansky and Camp (2000) found that entrepreneurs focused more on general fit and less on job fit. That is, entrepreneurs were more concerned with aligning applicants' beliefs and values to organizational culture and values than with matching applicants' knowledge and skills to job requirements (R. L. Heneman, et al., 2000). Moreover, research on employee compensation indicates that entrepreneurial firms may include more variable at-risk parts in their pay mix than larger firms (Cardon & Stevens, 2004). Further findings indicate that formal employee training differs between small and large firms (Banks, Bures, & Champion, 1987). For small firms the required time for participation and hence the time spent away from work were more important in selection training programs than for large firms. Moreover, the types of programs selected differed. Small firms were more limited in their choice and focused on trade associations, short college seminars and in-house personnel for employee training (Banks, et al., 1987).



In sum, research on human resource management in entrepreneurial firms provided insights on their unique challenges and their unique practices in staffing, compensation and training. What is also unique about small firms, however, is that entrepreneurs and employees are in frequent contact with each other (cf. Vecchio, 2003). Hence, it is likely that the entrepreneur has a substantial impact on employees and human resource management in small firms. However, only few studies to date have focused on the entrepreneur as the leader of his or her employees, although leadership is a major entrepreneurial task (Hmieleski & Ensley, 2007; Vecchio, 2003) and although human resources are central to venture growth, success and survival (cf. Aldrich & Langton, 1997; R. L. Heneman, et al., 2000; Williamson, 2000). More concretely, employee commitment to a venture is central to success (J. N. Baron & Hannan, 2002). However, what factors might contribute to employee commitment is underexplored in entrepreneurship research. Specifically, the impact of entrepreneurs displayed passion on employee commitment to a venture is a central, but still unanswered question.

### **1.3 Structure and scope of this thesis**

As this book focuses on different aspects relevant for venture growth, namely venture internationalization and human resource management, it consists of several empirical studies dedicated to answering remaining questions in these research areas. Concretely, this book covers research questions concerning entrepreneurs' intentions to internationalize, the effect of entrepreneurs' expertise on central determinants of the venture internationalization process, and the influence of entrepreneurs' displayed passion on employee commitment. I devote a chapter of this book to each of these research questions. Each chapter commences with an introduction and a theory part embedding the topic in the relevant research context. The

following parts outline the methodological approaches and findings. A final part discusses the results, limitations and future research opportunities. Chapter 5 of this book provides a general conclusion on the results and contributions of this book, and it suggests avenues for further research.

In the following, I will briefly present each chapter of this book by introducing the general topic and main findings. I will further illustrate the different data sets employed in each study, and the methodological approaches and statistical analyses that have been used. Moreover, as two of the chapters presented are co-authored, I will describe my individual contribution to each chapter. An overview of the chapters, their basic research questions, the samples used, as well as the methods and statistical analyses applied is presented in Table 1.

**Table 1: Overview of empirical chapters, research questions, samples, methods, and statistical analysis**

| Chapter | Title                                                                                        | Research question                                                                                                                                                                                                                          | Sample                                | Method                     | Statistical analysis                                                              |
|---------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------|-----------------------------------------------------------------------------------|
| 2       | Networks and entrepreneurs' early internationalization decisions: A multi-level perspective  | How do network characteristics influence the decision to internationalize?<br>How do organizational level and individual level characteristics moderate the relationship between networks and the decision to internationalize?            | Entrepreneurs                         | Metric conjoint experiment | Hierarchical linear modeling                                                      |
| 3       | Entrepreneurs' expertise and venture internationalization                                    | How do different types of expertise affect venture age at internationalization?<br>How do venture age at internationalization and different types of expertise independently and conjointly affect venture degree of internationalization? | Internationalized entrepreneurs       | Questionnaire              | Hierarchical linear regression                                                    |
| 4       | Perceptions of entrepreneurial passion and employees' commitment to entrepreneurial ventures | How does entrepreneurs' passion influence employees' commitment to a venture?<br>What factors mediate the relationship between entrepreneurs' displayed passion and employee commitment?                                                   | Employees of entrepreneurial ventures | Questionnaire              | Hierarchical linear regression<br>Mediation analysis with bootstrapping technique |

The following Chapter 2 provides a model of entrepreneurs' intentions to internationalize. The model proposes that intentions to internationalize are contingent on different network characteristics and on characteristics of the entrepreneur and the venture. To test this model a metric conjoint experiment was conducted with 136 entrepreneurs and analyzed with hierarchical linear modeling (HLM). Results reveal that entrepreneurs' likelihood to internationalize increases with larger networks, more heterogeneous network contacts, stronger network ties and higher communication frequency with network contacts. Moreover, entrepreneurs' level of generalized trust and perceived venture absorptive capacity moderate the relationships between network parameters and internationalization intentions. This chapter highlights that the influence of networks on new venture internationalization is complex and that an understanding of this influence requires conjoint consideration of variables at the individual, network, and venture level.

I am the first author of this chapter. My contribution to this chapter was the research idea, the design of the experiment and the data collection. Moreover, I analyzed the data and wrote the chapter. My co-author was involved in scientific discussion of the model and correcting the manuscript.

Chapter 3 focuses on entrepreneurs' expertise in explaining central determinants of venture internationalization. Specifically, it is proposed that different types of expertise influence venture internationalization differently. To test the research model primary data was collected from 84 internationalized entrepreneurs with the help of a questionnaire. Hierarchical linear regression analysis was applied for statistical investigation. Results show that entrepreneurs with international expertise are more likely to internationalize, whereas entrepreneurs with founding expertise are less likely to internationalize early. Moreover, results reveal that international and founding expertise moderate the influence of early internationalization on venture degree of internationalization. This chapter highlights that

different kinds of expertise of entrepreneurs influence venture internationalization differently and hence furthers our understanding of the role of entrepreneurial characteristics in venture internationalization behavior.

This chapter is single-authored. I had the idea for the model, collected the data and analyzed it. Moreover, I developed the storyline and wrote the chapter.

Finally, Chapter 4 focuses on explaining employee commitment to a venture. The research model proposes that entrepreneurs' displayed passion impacts employee commitment, however in different ways for different kinds of entrepreneurial passion. To test the model 124 new venture employees were surveyed. Data was analyzed using hierarchical regression analysis and mediation analysis with a bootstrapping procedure. Results show that different kinds of passion influence employee commitment differently. Moreover, it emerges that entrepreneurial passion affects employee commitment through different mechanisms. This chapter illustrates that the effect of entrepreneurs' displayed passion on employee commitment is complex and that an understanding of this complexity requires consideration of mediating factors.

I am the second author of this chapter. I contributed to the studies' design and data collection. Moreover, I was involved in statistical analysis, scientific discussion and writing the manuscript.

## **2 Networks and entrepreneurs' early internationalization decisions: A multi-level perspective<sup>1</sup>**

Drawing on the literatures on networks, absorptive capacity, and trust we develop a multi-level model toward entrepreneurs' decisions to internationalize early. We argue that international networks trigger entrepreneurs' internationalization decisions and that the influence of a network is contingent on the entrepreneurs' perceptions of the venture's absorptive capacity and their generalized trust in others. We test hypotheses using a metric conjoint experiment and data on 4352 internationalization decisions nested within 136 entrepreneurs. Our findings reveal two- and three-way interactions between network characteristics, entrepreneurs' perceptions of venture absorptive capacity, and their generalized trust in others in explaining internationalization decisions and supporting a multi-level perspective on entrepreneurial decision making.

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<sup>1</sup> This chapter is based on Domurath and Patzelt (2011).

## 2.1 Introduction

Entrepreneurs' decisions to internationalize early in a new venture's life cycle can have substantial impact on the venture's growth trajectory (Sapienza, Autio, George, & Zahra, 2006). An international new venture (INV) is "a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries" (Oviatt & McDougall, 1994, p. 49). For example, firms like Google, Logitech and Facebook grew so quickly because their business model targeted international markets right from the beginning. Research has shown that entrepreneurs' international networks – their direct relationships to contact persons and organizations in a foreign country (Coviello, 2006; Sharma & Blomstermo, 2003) – are a major driver of early internationalization (Coviello & Munro, 1997; Oviatt & McDougall, 2005). Network partners help entrepreneurs identify international opportunities, offer business advice, assist in negotiations with foreign business partners, and facilitate the establishment of international alliances and co-operations (Oviatt & McDougall, 1995; Oviatt & McDougall, 2005). Further, network contacts in foreign countries supply entrepreneurs with knowledge on markets, clients, and institutions in those countries (Sharma & Blomstermo, 2003). Therefore, international network contacts play an important role in entrepreneurs' foreign market selection and entry mode choice (e.g., Coviello & Munro, 1997).

Although existing research demonstrates the importance of networks in entrepreneurs' internationalization activities, however, the INV literature has largely neglected that properties and configurations of international networks differ, and that these differences can have a considerable effect on the decision policies and behaviors of network actors (Burt, 1992; Granovetter, 1973) – that is, some networks might trigger entrepreneurs' internationalization decisions more than others. Moreover, INV research has yet to acknowledge that there is variance in both individuals' and organizations' usage of, and

reliance on, information provided by network contacts, suggesting that the characteristics of both the entrepreneur and the venture might impact how networks influence early internationalization decisions. Indeed, in a recent review of the INV literature, Keupp and Gassmann (2009) argued that analyzing how network-level, individual-level, and firm-level characteristics influence entrepreneurs' decisions to internationalize is important to more fully understand why some young ventures internationalize early in their life cycle while others do not.

This study follows Keupp and Gassmann's call and develops a multi-level model toward entrepreneurs' decisions to internationalize early. Drawing on the McMullen and Shepherd (2006) model of entrepreneurial action, we argue that information provided by network partners can trigger early internationalization decisions by increasing entrepreneurs' knowledge about foreign countries and markets, and their motivation to enter these markets. We propose that entrepreneurs' access to information from network partners is influenced by the structure and contact attributes of, and communication frequency within, their international networks. Moreover, we argue that entrepreneurs' reliance on, and usage of, this accessible information is contingent on their perceptions of the new venture's absorptive capacity (cf. Cohen & Levinthal, 1990), and their generalized trust in others (cf. Couch & Jones, 1997). We explore two-way and three-way interactions between network characteristics, entrepreneurs' perceptions of venture absorptive capacity, and their generalized trust in others in explaining early internationalization decisions. We test our model with a metric conjoint experiment and data on 4352 internationalization decisions nested within 136 entrepreneurs. In doing so, we make the following important contributions to existing literature.

First, studies on networks of INVs have examined the origins and formation of network relationships triggering internationalization, the resources these relationships provide



to INVs, and the development of networks as INVs grow (Coviello, 2006). However, this literature has insufficiently investigated how the properties and configurations of networks influence entrepreneurs' decisions to internationalize – the first and fundamental step in the early internationalization process. Our study explores how variance in network configurations impacts entrepreneurs' decisions to internationalize and highlights the need to consider multiple characteristics of entrepreneurs' international networks to understand why some internationalize early while others are reluctant to do so.

Second and even more importantly, while existing INV studies have focused on the role of networks in the internationalization process of new ventures (Harris & Wheeler, 2005) they have yet to explore potential contingencies that might, partly, determine the impact of networks on early internationalization decisions. Our study examines how entrepreneurs' perceptions of venture absorptive capacity and their generalized trust in others moderate the relationship between network characteristics and entrepreneurs' propensity to internationalize.

Third, research in both the management and entrepreneurship literature has typically focused on one level of analysis but neglected heterogeneity at other levels and that those levels may not be independent of the level under investigation. Our model incorporates these cross-level effects and covers two-way and three-way interactions between network-level, firm-level, and individual-level characteristics in explaining entrepreneurs' early internationalization decisions. This multi-level perspective acknowledges the complexity of the new venture formation process (Hitt, Beamish, Jackson, & Mathieu, 2007).

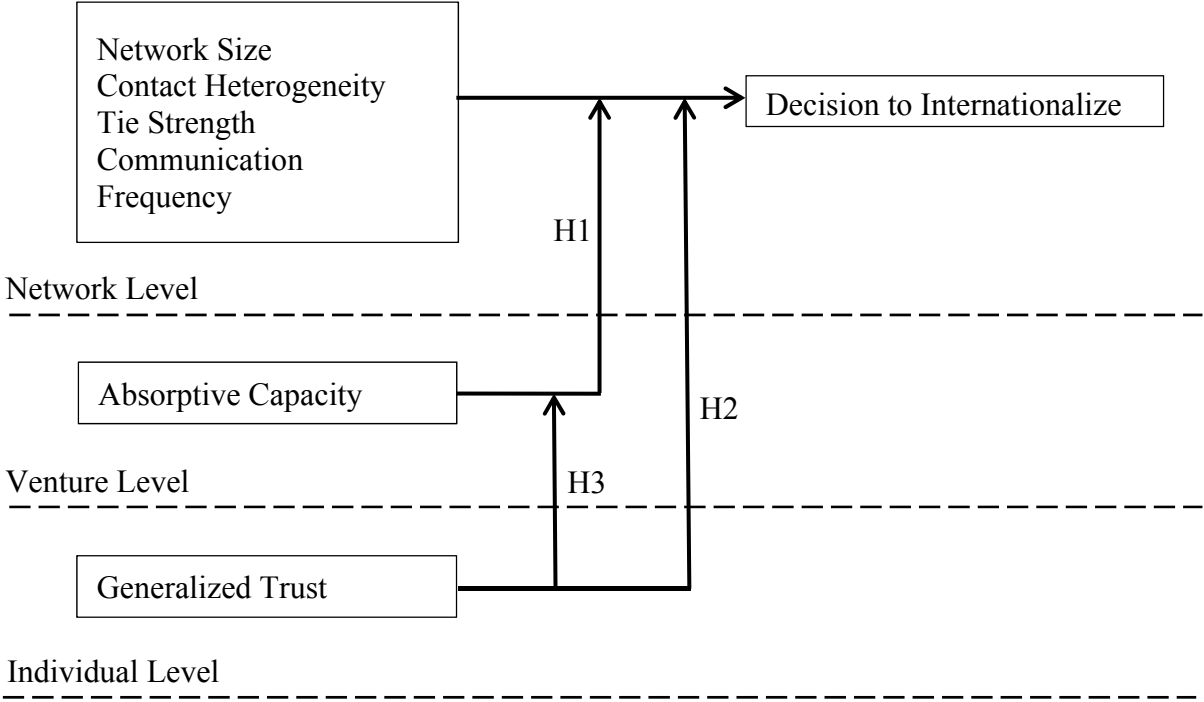
This chapter proceeds as follows. In the next section, we formulate our theory and hypotheses. We then describe our research method, sample, and analysis before presenting and discussing the results and drawing final conclusions.

## **2.2 Theoretical background and hypotheses**

Entrepreneurial action requires that entrepreneurs, first, believe that there exists an entrepreneurial opportunity for someone (third-person opportunity belief) and, second, that they determine that the opportunity is one they want to pursue (first-person opportunity belief) (consistent with McMullen & Shepherd, 2006). While the identification of an opportunity (the formation of a third-person opportunity belief) is triggered by entrepreneurs attending to changes in their environment, they will only act on that opportunity (form a first-person opportunity belief) when they are willing to bear the uncertainty they perceive to be associated with exploitation. McMullen and Shepherd (2006) propose that willingness to bear uncertainty is dependent on entrepreneurs' knowledge and motivation which trigger their perception that exploitation is both a feasible and desirable endeavor (McMullen & Shepherd, 2006).

The uncertainties surrounding opportunity exploitation in international markets – e.g., uncertainties about customer demand, market specifics and industry practices in a foreign country – are particularly relevant for entrepreneurs' internationalization decisions because failure of internationalization poses a serious threat to the survival of young ventures (Sapienza, et al., 2006). Consistent with the McMullen and Shepherd (2006) model, studies from the international management literature support the importance of knowledge about foreign markets in internationalization decisions (Johanson & Vahlne, 1977; Liesch & Knight, 1999). For example, it has been found that missing knowledge about foreign markets is a significant obstacle to internationalization because it increases managers' perceived costs and risks of doing business across national borders (Eriksson, Johanson, Majkgard, & Sharma, 1997). Following these studies, in developing our model we explore how network-level characteristics (network size, contact heterogeneity, tie strength, and communication frequency), firm-level characteristics (venture absorptive capacity), and individual-level

characteristics (entrepreneurs’ trust in others) conjointly influence the knowledge and motivation of entrepreneurs and thus their decision to exploit international opportunities early in the venture’s life. Our model is summarized in Figure 2.



**Figure 2: A model of entrepreneur’s early internationalization decisions**

An important way how entrepreneurs build up knowledge about international markets is to acquire information about these markets from others in their international networks (cf. Sharma & Blomstermo, 2003). International networks denote the social ties of an entrepreneur to contacts in foreign countries (Coviello, 2006; Sharma & Blomstermo, 2003). The amount and nature of information provided by network partners, however, depends on the properties and structure of the network (Burt, 1992; Granovetter, 1982). For example, contingent on the nature of network relationships, some networks might provide entrepreneurs with more information, and perhaps more complete and more reliable information, about foreign markets and countries than other networks. In this study, we acknowledge variance in

entrepreneurs' international networks in terms of network size, heterogeneity of network contacts, tie strength between entrepreneurs and their network partners, and communication frequency with other network actors. These properties are central in the network literature to explain heterogeneity in information individuals can acquire from network partners (Marsden, 1990; Wasserman & Faust, 1994).

First, network size reflects the number of direct contacts an individual has to other network actors (Burt, 1992, 2000) and indicates the centrality of an actor in the network – the more central the actor's position, the more direct ties to other network actors this individual has (Freeman, 1979), and the more information she or he can usually gather from network partners (Burt, 1992). Thus, in drawing on a large international network, entrepreneurs can gather extensive information about foreign markets and regulations. The larger the network, the more likely entrepreneurs will perceive that they possess all (or most) of the information relevant for foreign market entry. Moreover, when individuals receive the same piece of information from a larger number of network actors, this may enhance their perceptions of accurateness and credibility of that information (Ilgen, Fisher, & Taylor, 1979). Whereas one or two network partners may be wrong in their assessments of foreign market conditions, entrepreneurs will perceive the probability lower that a larger number of network partners supplies wrong or ambiguous information. Indeed, empirical research shows that individuals pay more attention to information received from a larger number of network partners (Weenig & Midden, 1991), and that they tend to view information received from more sources as more reliable (Hanser & Muchinsky, 1978).

Second, contact heterogeneity denotes the diversity of network contacts in terms of their demographic attributes, talents and occupations (Borgatti, Jones, & Everett, 1998; Burt, 1983). The greater the heterogeneity of network contacts the more diverse information entrepreneurs can acquire about foreign markets (Burt, 1983; Campbell, Marsden, & Hurlbert,

1986). For example, while contacts to venture capitalists can provide information about the availability of capital in a foreign target market, contacts to established firms can supply information about available distribution channels, and contacts to lawyers can provide information about country-specific legal regulations. Moreover, heterogeneous information facilitates the implementation of complex and interdependent tasks (Rodan & Galunic, 2004) associated with early internationalization such as the customization of products to foreign consumers, the search for foreign distributors, and the design of marketing programs adapted to local cultures.

Third, the strength of a network tie refers to “a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie” (Granovetter, 1973, p. 1361). The stronger entrepreneurs’ ties with network contacts in a foreign market, the more emotions, reciprocity, and intimacy this relationship comprises. Since the emotional commitment of a strong tie enhances the motivation to invest time and effort to help the other party (Reagans & McEvily, 2003), strong tie network relationships signal to the entrepreneur that the partner is willing to provide accurate and complete information about the foreign market. Hence, given the same number of ties, strong ties (friends) likely provide entrepreneurs with more (and more complete and reliable) information than weak ties (people hardly known).

Strong ties are particularly effective in transferring tacit knowledge (Hansen, 1999; Reagans & McEvily, 2003). Tacit knowledge is highly personal and context-specific and includes, for example, expertise and know-how based on experience (Lane & Lubatkin, 1998; Von Hippel, 1994). Tacit knowledge is therefore difficult to codify or articulate and can only be acquired from the knowledge beholder through face-to-face interaction, observation, and demonstration (Reagans & McEvily, 2003; Von Hippel, 1994). Tacit knowledge of international network partners on the specifics and subtle differences of doing business in a

foreign market might include how to approach negotiations or what management styles are accepted and appreciated by employees. Since transferring tacit knowledge to another person is a difficult and time consuming task the motivation to help the other person – embedded in a strong tie – is an important prerequisite for effective transfer (Reagans & McEvily, 2003).

Fourth, although communication frequency has been used as a proxy for tie strength by some authors (e.g. Granovetter, 1973), the strength of a tie develops over time and is not directly dependent on current communication with the contacts (Burt, 2005). Therefore, we distinguish between tie strength and communication frequency with network partners and investigate the latter as a separate parameter reflective of a general behavior pattern of network actors (following McDonald & Westphal, 2003). People who communicate frequently with others develop relationship-specific “languages” that lead to more effective communication and information exchange (Uzzi, 1997). Frequent communication with foreign network contacts seems particularly important for entrepreneurs since differences in culture and communication styles might interfere with the fast and effective transfer of information between both parties. That is, frequent communication with foreign contacts will ease information transmission and enable entrepreneurs to exploit the advantages of foreign networks to a greater extent. Moreover, frequent communication with foreign network contacts exposes entrepreneurs repeatedly to information about the market. Repetition of information leads to “a greater realization of the meaning, interconnections, and implications of the message arguments – that is, greater message elaboration” (Cacioppo & Petty, 1989, p. 4). Therefore, entrepreneurs will develop a greater comprehension of the specifics of the foreign market if they communicate more frequently with international network partners.

In sum, our arguments suggest that (i) network size, (ii) contact heterogeneity, (iii) strength of ties, and (iv) communication frequency within an international network are positively related to the amount, credibility, diversity, and complexity of information

entrepreneurs can acquire about foreign markets. While information is essential to building knowledge about a particular phenomenon (Nonaka, 1994), individuals do not necessarily integrate all information available into their actionable knowledge base. For example, in decision making individuals sometimes overlook and/or ignore information when it does not comply with their previously formed beliefs and perceptions (Das & Teng, 1999). Further, even if individuals do not ignore information that is proving their assumptions and beliefs wrong, they might not act according to this information (Ramanujam & Goodman, 2003). Thus, although entrepreneurs may have access to a substantial amount of credible, diverse, and complex information about foreign markets from network partners, the extent to which they integrate this information into their actionable knowledge about foreign markets and are motivated to act (i.e., internationalize) varies. We propose that entrepreneurs' perceptions of the venture's absorptive capacity and their generalized trust in other people, independently and conjointly, explain part of this variance.

### *2.2.1 The moderating role of absorptive capacity*

The absorptive capacity of a firm refers to its capability to assimilate, comprehend, and use knowledge from the external environment (Cohen & Levinthal, 1990). Therefore, absorptive capacity plays a crucial role in exploiting information provided by network partners (Witt, 2004) and promoting the application of that information to commercial ends (Cohen & Levinthal, 1990). The development of absorptive capacity is dependent on a firm's existing knowledge such that the more knowledge in a particular domain the venture already has, the higher its ability to assimilate, integrate, and use new knowledge in that domain (Cohen & Levinthal, 1990). Since new ventures vary in their knowledge resource, there is also considerable variance in their absorptive capacity (Liao, Welsch, & Stoica, 2003; Zahra & George, 2002). While the concept of absorptive capacity has mainly found application in

the specific context of technological knowledge acquisition and use, studies also show that absorptive capacity plays an important role for the acquisition, comprehension and use of market knowledge (Eriksson & Chetty, 2003). In this study, we refer to absorptive capacity as a firm's capability to assimilate, comprehend, and use (technological and market) knowledge about foreign markets and countries (consistent with Lichtenthaler, 2009). Specifically, using a decision making perspective, we focus on entrepreneurs' perceptions of a venture's absorptive capacity since perceptions rather than objective characteristics of the environment determine the decision policies of individuals (Das & Teng, 2001). Entrepreneurs' perceptions of the venture's absorptive capacity will impact their belief that they can leverage the informational benefits of large network size, high contact heterogeneity, strong network ties, and high communication frequency within the network.

First, absorptive capacity is a prerequisite to effectively analyze, judge, and integrate the substantial amounts of information provided by large networks and frequent communication with network partners. For example, several network partners may provide the entrepreneur with different, detailed market studies on the foreign market of interest. Analyzing these studies and extracting and evaluating the pieces of information relevant for internationalization of the entrepreneur's own venture might require considerable time, effort, and analytical skills. To the extent entrepreneurs perceive that the resources of the ventures' management team and employees are too limited to adequately evaluate and comprehend these market studies, they are likely to at least partly ignore the information provided and cannot fully capitalize on the informational value of a large network and frequent communication with partners.

Similarly, high levels of absorptive capacity are a prerequisite to deal with the complexity of information acquired from heterogeneous network partners. For instance, partners in a heterogeneous international network might provide information about recent



technological standards and trends in the foreign country, advantages and disadvantages of certain financial reporting and controlling practices, and sophisticated marketing strategies the venture can use to sell its product. Analyzing, understanding, and acting on these diverse pieces of information require specialized expertise in the areas of technology development, finance, and marketing. Only when entrepreneurs perceive that these competencies are present in the venture, they will attend to all pieces of information provided by their heterogeneous network contacts; otherwise they are likely to ignore or not adequately acknowledge those pieces of information that they believe cannot be adequately acted on. For example, if the venture does not employ a finance specialist and thus has little absorptive capacity in this area, the entrepreneur may decide to use the most common reporting practice in the foreign country without considering available information about the pros and cons of alternative practices.

Finally, entrepreneurs' perceptions of the venture's absorptive capacity will influence the extent to which they can acquire tacit knowledge provided by strong network ties. Since tacit knowledge cannot be articulated as clearly as explicit knowledge (Von Hippel, 1994), it is difficult for new ventures to fully assimilate and understand this information provided by strong tie network partners. For example, in order to understand, and be able to apply, negotiation styles and customer habits prevalent in a foreign culture, management team members and sales personnel might have to extensively interact with the entrepreneur's international network contacts. If venture managers and sales people do not have any knowledge about the cultural habits in that country, the venture's absorptive capacity for new knowledge in this domain is low (cf. Cohen & Levinthal, 1990), and they are likely to encounter problems in acquiring and understanding information related to foreign negotiation styles and customer behaviors. In this case, entrepreneurs might find it too costly to train managers and employees in country-specific negotiation and sales practices even if their

strong tie partners are willing to provide the necessary training and help. For example, the entrepreneur might decide to work with local partners leading negotiations and selling the product instead of capitalizing on his or her strong network ties in the foreign country. Thus,

*Hypothesis 1a: The positive relationship between foreign network size and entrepreneurs' likelihood to internationalize early is stronger when entrepreneurs perceive that their venture has high absorptive capacity than when they perceive that it has low absorptive capacity.*

*Hypothesis 1b: The positive relationship between foreign contact heterogeneity and entrepreneurs' likelihood to internationalize early is stronger when entrepreneurs perceive that their venture has high absorptive capacity than when they perceive that it has low absorptive capacity.*

*Hypothesis 1c: The positive relationship between tie strength to foreign network contacts and entrepreneurs' likelihood to internationalize early is stronger when entrepreneurs perceive that their venture has high absorptive capacity than when they perceive that it has low absorptive capacity.*

*Hypothesis 1d: The positive relationship between communication frequency with foreign network contacts and entrepreneurs' likelihood to internationalize early is stronger when entrepreneurs perceive that their venture has high absorptive capacity than when they perceive that it has low absorptive capacity.*

### *2.2.2 The moderating role of entrepreneurs' generalized trust in others*

In addition to entrepreneurs' perceptions of the organizational environment (as reflected in the venture's absorptive capacity), our model also suggests that individual characteristics of entrepreneurs can explain heterogeneity in the informational benefits of international networks. Individuals vary in their attitudes towards others (Couch & Jones, 1997), and some attitudes may be more conducive to the acquisition and usage of information provided by foreign network partners. Attitudes towards the intentions and sincerity of others likely play a central role in entrepreneurs' ability to benefit from information they can acquire

from an international network. Specifically, generalized trust in others, that is the general (not relationship-specific) tendency to think of others positively and attribute them good intentions and sincerity (Couch & Jones, 1997; Deutsch, 1958; Rotter, 1971), should influence an entrepreneurs' ability to benefit from a network providing information. Two arguments suggest that entrepreneurs with higher levels of generalized trust are more likely to profit from the informational value of networks that (i) are large, (ii) have heterogeneous actors, (iii) are (mainly) composed of strong ties, and (iv) are characterized by high communication frequency.

First, individuals with high levels of generalized trust open up to others more than those with low levels of generalized trust (Zand, 1972). That is, trusting entrepreneurs are more willing to communicate their problems and concerns associated with new venture internationalization to foreign network partners, and they are more likely to ask for specific information to address these problems. This open communication can influence the content and nature of the information entrepreneurs acquire and impact its integration into their actionable knowledge base. For example, entrepreneurs who openly communicate to a network partner what others in a large network have already told them about foreign markets can ask for specific missing pieces of information or validation of ambiguous parts of the information they already possess. Less trusting entrepreneurs, in contrast, will be hesitant to ask for the missing pieces and likely believe that multiple network partners will provide them only with redundant and still incomplete information. Similarly, high levels of generalized trust will enhance entrepreneurs' ability to deal with the complexity of diverse information provided by heterogeneous network contacts. To continue with our earlier example, if entrepreneurs are willing to openly communicate to network partners what financial resources they have available for internationalization, they might get more specific advice on what reporting practices are most recommendable in the foreign market given those resources,

instead of less specific and more complex information on all possible practices which the entrepreneur might not be able to evaluate or use due to missing expertise and/or cognitive overload. Further, if trusting entrepreneurs openly specify to strong tie network partners what particular tacit knowledge they need and what is not needed, they can minimize investments of time and effort into the difficult acquisition process, thus leveraging the benefits of strong ties. Finally, generalized trust can help entrepreneurs to exploit relationship-specific “languages” developed by frequent communication with network partners. To the extent entrepreneurs are willing to communicate their problems and information deficits to frequently contacted partners, these partners can provide the entrepreneur with the desired information in a way he or she understands it and minimize the redundancy of information provided in multiple interactions.

Second, people holding positive assumptions about the intentions and sincerity of others generally have a greater belief in the correctness of the information received (Deutsch, 1958; Rotter, 1971). That is, entrepreneurs with a high level of generalized trust will perceive the information from network partners (perhaps erroneously) as reliable and trustworthy, and they will more readily accept the recommendations and solutions others provide (cf. Zand, 1972). For example, trusting entrepreneurs who have multiple network partners (large networks) and frequently communicate with these partners will spend little time on critically judging whether the substantial amount of information received is correct and reliable. Even though this way of looking at provided information through “rose-colored glasses” might lead to misjudgment, entrepreneurs will quickly integrate that information into their actionable knowledge and thus can incorporate larger amounts of information into their judgment and decision policies. These entrepreneurs will feel well informed and are motivated to act even though their internationalization decision might be premature. Similarly, entrepreneurs with high trust levels are likely to focus their cognitive resources on dealing with the complexity of

diverse information received from heterogeneous network partners and integrate this information into actionable knowledge instead of critically checking whether the information received from these partners is correct and reliable. Thus,

*Hypothesis 2a: The positive relationship between foreign network size and entrepreneurs' likelihood to internationalize early is stronger for entrepreneurs with high levels of generalized trust than for entrepreneurs with low levels of generalized trust.*

*Hypothesis 2b: The positive relationship between foreign contact heterogeneity and entrepreneurs' likelihood to internationalize early is stronger for entrepreneurs with high levels of generalized trust than for entrepreneurs with low levels of generalized trust.*

*Hypothesis 2c: The positive relationship between tie strength to foreign network contacts and entrepreneurs' likelihood to internationalize early is stronger for entrepreneurs with high levels of generalized trust than for entrepreneurs with low levels of generalized trust.*

*Hypothesis 2d: The positive relationship between communication frequency with foreign network contacts and entrepreneurs' likelihood to internationalize early is stronger for entrepreneurs with high levels of generalized trust than for entrepreneurs with low levels of generalized trust.*

### *2.2.3 The conjoint influence of absorptive capacity and entrepreneurs' generalized trust in others*

Our arguments suggest that both, entrepreneurs' perceptions of their venture's absorptive capacity, and their generalized trust in others, influence how they process information about foreign markets provided by international network partners. While these two-way interactions between network characteristics and organizational/individual level variables are likely to explain variance in entrepreneurs' early internationalization decisions,

it appears that the effects of absorptive capacity and trust in others are not independent of each other.

Entrepreneurs with low generalized trust in others are likely to deem information provided by network partners to be potentially irrelevant, perhaps incorrect, or non-reliable. Capitalizing on this information demands substantial resources, expertise, and effort because it is difficult to evaluate. Only when entrepreneurs perceive that their venture has sufficient capabilities to assimilate, comprehend, and use this information they will pay attention to it and try to integrate it into their actionable knowledge base; otherwise they are likely to at least partly ignore or disregard it. That is, in their early internationalization decisions these low trust entrepreneurs are likely to put strong emphasis on whether the venture's absorptive capacity allows for leveraging the benefits of information provided by networks that (i) are large, (ii) have heterogeneous contacts, and are characterized by (iii) strong ties and (iv) high communication frequency. In contrast, those high in generalized trust have a disposition to think of others positively and attribute them good intentions and sincerity (Couch & Jones, 1997), suggesting that they believe in the relevance, correctness, and reliability of the information provided by international network partners. The more relevant, correct, and reliable the same piece of information from network partners is perceived, the easier it is to evaluate and use this information. Even if they perceive that the absorptive capacity of their venture is low, these high trust entrepreneurs are likely to attend to, and try to assimilate and use the information provided by the network partners because it is believed to be relevant, correct, and reliable. Therefore, in entrepreneurs' internationalization decisions the emphasis on the venture's absorptive capacity for maximizing the informational value of networks that are (i) are large, (ii) have heterogeneous actors, (iii) are (mainly) composed of strong ties, and (iv) are characterized by high communication frequency decreases with entrepreneurs' generalized trust in others. Thus,

*Hypothesis 3a: The positive relationship between foreign network size and entrepreneurs' likelihood to internationalize early is stronger when entrepreneurs perceive that their venture has high absorptive capacity than when they perceive that it has low absorptive capacity, but more so for entrepreneurs with low levels of generalized trust than for entrepreneurs with high levels of generalized trust.*

*Hypothesis 3b: The positive relationship between foreign contact heterogeneity and entrepreneurs' likelihood to internationalize early is stronger when entrepreneurs perceive that their venture has high absorptive capacity than when they perceive that it has low absorptive capacity, but more so for entrepreneurs with low levels of generalized trust than for entrepreneurs with high levels of generalized trust.*

*Hypothesis 3c: The positive relationship between tie strength to foreign network contacts and entrepreneurs' likelihood to internationalize early is stronger when entrepreneurs perceive that their venture has high absorptive capacity than when they perceive that it has low absorptive capacity, but more so for entrepreneurs with low levels of generalized trust than for entrepreneurs with high levels of generalized trust.*

*Hypothesis 3d: The positive relationship between communication frequency with foreign network contacts and entrepreneurs' likelihood to internationalize early is stronger when entrepreneurs perceive that their venture has high absorptive capacity than when they perceive that it has low absorptive capacity, but more so for entrepreneurs with low levels of generalized trust than for entrepreneurs with high levels of generalized trust.*

## **2.3 Methodology**

### *2.3.1 Sample and data collection*

Our sample consists of entrepreneurs involved in ventures located in business incubators in Germany. Start-ups located in business incubators are usually in the founding phase or an early phase of business development (Aerts, Matthyssens, & Vandenbempt, 2007; Rice, 2002) where founders have to decide whether early internationalization is a strategic option for their venture. From the German Federal Association of Innovation, Technology,

and Start-up Centers (ADT, 2009) and Regional Associations we generated a list of 188 incubators. From the incubators' websites we compiled a list of ventures and their founders.

We used three selection criteria to further specify our sample. First, we excluded subsidiaries of large firms because entrepreneurs' decisions may be influenced or dependent on the strategy of the parent company. Second, we only included high-tech service and manufacturing firms, because these firms typically have a higher potential to internationalize early than non-technology firms (Autio, Sapienza, & Almeida, 2000). Third, we also excluded firms that were no longer run by the initial founder(s). Altogether, our list contained 799 ventures.

500 entrepreneurs of our compiled list were randomly selected and contacted by telephone. We explained the purpose of our study and asked for participation. If the entrepreneurs agreed to participate, an email containing the link to the online questionnaire was sent to them. In case the questionnaire was not completed within a week, we sent another email reminding them of the importance of their participation. 136 entrepreneurs completed the questionnaire, representing a response rate of 27.2 %. Since we analyze 32 internationalization decisions nested within each of the 136 participants (see conjoint analysis below), a total of 4352 data points are available for analysis.

In a post-experiment questionnaire we collected data on the characteristics of the entrepreneurs and their ventures. The entrepreneurs in our sample were on average 43.3 years old (standard deviation 7.9), eight were female, 55.1 % had a university degree, and 34.6 % held a PhD. 44.1 % had a background in engineering, 37.5 % in natural sciences, and 22.8 % in business administration. The ventures were on average 6.7 years old (standard deviation 4.9) and employed 9.4 people (standard deviation 13.3). 94.1 % of the entrepreneurs described their products to have international market potential. 60.3 % of the ventures were already internationalized at time of our survey as indicated by their international sales, and



72.2 % of the entrepreneurs that were not internationalized planned to internationalize in the future.

### *2.3.2 Conjoint analysis and experimental design*

We used a metric conjoint experiment to collect data on entrepreneurs' decisions to internationalize early. The central assumption underlying conjoint methodology is that decisions of individuals can be dismantled into their composing parts (Green, Krieger, & Wind, 2001). In a conjoint experiment participants make assessments for a number of decision profiles. The decision profiles consist of decision attributes that represent the independent variables. The participants' assessments constitute the dependent variable.

While non-metric or rank-order conjoint techniques allow for the investigation of the relative importance of attributes in individuals' decisions, metric conjoint analysis is particularly appropriate for the investigation of interactions between the decision attributes (see e.g., Priem & Harrison, 1994). Since we propose interactions between decision variables, metric conjoint analysis is the appropriate method to use for our study. Moreover, a conjoint experiment allows us to examine participants' perceptions of decision attributes, rather than their real characteristics. This is particularly important since perceptions of the environment have been found to be more influential on individuals' decisions than the environments' objective characteristics (Das & Teng, 2001; March & Shapira, 1987).

In the conjoint experiment each decision profile consisted of four attributes that described network parameters (network size, tie strength, communication frequency, contact heterogeneity), and one attribute that described venture absorptive capacity. Each of the five attributes was described by two different predetermined levels, resulting in a total number of  $2^5 = 32$  decision profiles. To test for reliability in conjoint experiments full replication of profiles is necessary for conducting test-retest checks (Shepherd & Zacharakis, 1997). Hence,

full replication of profiles would result in 64 decision profiles. To reduce the time needed for completion of the conjoint experiment and thus to enhance the willingness of the entrepreneurs to participate, we applied an orthogonal fractional factorial design (Hahn & Shapiro, 1966; Shepherd & Zacharakis, 1999). This decreased the number of attribute combinations to 16, resulting in 32 profiles (fully replicated). The orthogonal design ensures that correlations between independent variables are zero and that problems of multicollinearity are abolished. Finally, to familiarize participants with the experimental design and the decision situation we included a ‘practice’ profile at the beginning of the experiment (Shepherd & Zacharakis, 1997). This decision profile was excluded from the statistical analysis.

We computed Pearson correlations between the original and the replicated profiles to test for reliability (internal validity). The mean correlation was 0.67, which is consistent with the results of previous studies (e.g., Shepherd, 1999, 0.69). Only 11 % of the participants did not respond reliably ( $p > 0.05$ ), a similar value as reported previously (e.g., Shepherd, 1999, 8 %). Eighty-five percent of the individual assessments were statistically significant ( $p > 0.05$ ). The mean  $R^2$  of these models was 0.75, again similar to other studies (Choi & Shepherd, 2004, 0.72; Shepherd, 1999, 0.78). Hence the entrepreneurs in our experiment had made consistent and reliable assessments of high explanatory power.

To test for order effects, we created four versions of the experiment by changing the order of the attributes within the profiles and by changing the order of the profiles within the experimental task. An ANOVA revealed no significant differences in means and variance between the four versions, suggesting that order effects of attributes and profiles have not biased our results significantly.

### 2.3.3 *Decision situation and research variables*

In the first part of the experiment, the general decision situation was described to the participants (see Appendix for general description). Entrepreneurs were told to imagine that they are the founder-manager of a 6 years old venture. This definition was used to draw the participant's attention to the young age of the venture since internationalization within the first 6 years after founding is consistent with the definition of early internationalization (Coviello & Jones, 2007). Moreover, participating entrepreneurs were told that they had recently discovered international market potential for the services and/or products their venture offers, and that they had identified a potentially suitable foreign market. To reach a decision about whether to start selling abroad or not (i.e., to internationalize), they were approaching their personal network contacts in that country for information on doing business there. The entrepreneurs' international network was described as covering all relevant personal contacts in the foreign target country. Participants should assume that their network provides information relevant for internationalization of their ventures. Additionally, participants were instructed that they were acting in their current economic environment and that the hypothetical ventures' services and products were similar to those of their real companies. They were further told to consider all other factors potentially influencing their decision, but not specified in the decision profile, as constant across all profiles. The instruction was followed by the experimental task and a post-experiment questionnaire which collected data on the demographic characteristics of the participants and their ventures.

***Dependent variable.*** Internationalization was defined as the stage in which the sale of products or services abroad is initiated (Autio, et al., 2000). Entrepreneurs were asked to assess their interest in initiating internationalization in the described hypothetical decision situation on a seven-point Likert scale anchored by the end points "internationalize definitely"

and “internationalize definitely not”. Thus, the dependent variable is an entrepreneurs’ *decision to internationalize early*.

***Independent variables.*** The decision profiles of the conjoint experiment consisted of five attributes. Following previous studies (Choi & Shepherd, 2004) each attribute was described by two levels (see Appendix for attribute description and example scenario). Four of these attributes described network parameters (*network size, heterogeneity of contacts, strength of ties, communication frequency*) and one venture *absorptive capacity*.

*Network size* refers to the number of foreign network partners and ranged from large (your network consists of many relevant contacts in the foreign market) to small (your network consists of few relevant contacts in the foreign market). *Contact heterogeneity* denotes the diversity of foreign contacts in terms of their occupation, experience and professional specialization and ranged from high (your relevant foreign contacts differ substantially in their occupation, experience and professional specialization) to low (your relevant foreign contacts differ marginally in their occupation, experience and professional specialization). *Strength of ties* describes the nature of ties to foreign network partners and ranged from strong (you mainly have strong ties to relevant foreign network partners which are based on emotions, trust and reciprocity) to weak (you mainly have weak ties to relevant foreign network partners which are only based to a limited extent on emotions, trust, and reciprocity). *Communication frequency* refers to how often the entrepreneur communicates with foreign network partners and ranged from frequently (you frequently speak to the relevant foreign network partners) to rarely (you rarely speak to the relevant foreign network partners). Finally, *absorptive capacity* describes the ventures’ ability to recognize, assimilate, and use information and ranges from excellent (your venture’s ability to recognize new, external information, assimilate it and use it is extremely well developed) to limited (your

venture's ability to recognize new, external information, assimilate it and use it is only developed to a limited extent).

Besides investigating variance in independent variables that are represented by the five decision attributes our research model also explores variance between individuals, specifically based on entrepreneurs' generalized trust in others. *Trust in others* was measured by an eight item scale taken from the Revised NEO Personality Inventory (Ostendorf & Angleitner, 2004). In this personality inventory, trust is measured as a sub-item of agreeableness, which measures attitudes and habitual behavior patterns in social relationships. Trust is defined as the belief in the sincerity and good intentions of others (Couch & Jones, 1997). The trust scale has eight items which are measured on a 7-point Likert scale anchored by the end values "I do not agree" and "I agree completely". Items include, for example, "My first reaction is to trust people" and "I tend to assume the best about people". To test for reliability of the scale in our sample, we performed a confirmatory factor analysis, which revealed a Cronbach's alpha of .788 and thus confirmed that the scale is sufficiently reliable (Hair, Black, Babin, Anderson, & Tatham, 2006). The trust scores used in the statistical analysis reported below were obtained by recoding reverse items and averaging the scores of the eight items. The variable was mean-centred before statistical analysis.

***Control variables.*** As control variable at the individual level of analysis, we used the entrepreneurs' *age* (measured in years). Furthermore, we controlled for *firm age* (measured in years) and *firm size* (measured in number of employees). All control variables were mean-centred before they were included in the statistical analysis.

#### 2.3.4 *Potential methodological limitations*

Besides its methodological advantages a metric conjoint design as used in this study also has limitations that need to be mentioned. First, using more than two levels to describe

the variables representing the decision attributes would allow for sensitivity analysis and the investigation of non-linear relationships between independent variables and the dependent variable. For example, we could have described network size by three levels like small, medium and large. This would, however, have resulted in a considerably larger number of decision profiles. This larger number and the increased amount of time needed for entrepreneurs to make their assessments would likely have reduced their willingness to participate. We thus decided to limit our design to two-level attribute description in favor of acquiring a more representative sample.

Second, in experimental research it is necessary to ensure that the variables used to investigate hypothetical decision scenarios are also considered by the participants during their real life decision making process (external validity). To ensure that this is the case, we only selected decision attributes for which the relevance for information acquisition is theoretically well justified (Burt, 2000; Campbell, et al., 1986). Moreover, we included self-report measures in the post-experiment questionnaire to further test for external validity. For each network parameter and absorptive capacity participants were asked to assess the perceived importance for the decision to internationalize early on a Likert scale ranging from 1 (not important at all) to 7 (very important). All variables display average answers above the scale mean of 3.5. The average values for participants' answers were 4.7 for network size, 3.9 for contact heterogeneity, 5.4 for tie strength, 4.5 for communication frequency, and 5.6 for absorptive capacity. These values support the importance of the network parameters and absorptive capacity for early internationalization decisions on a self-reported basis.

### *2.3.5 Statistical analysis*

Since each of the 136 entrepreneurs in our sample made 32 decisions, the total amount of 4352 data points in our analysis are not independent of each other (32 decisions are nested

in each entrepreneur). To account for the nested data structure, we used a 2-level Hierarchical Linear Modeling (HLM) approach. HLM is the appropriate method for our purpose because it accommodates autocorrelation (separates “decision level variance” from “individual-level variance”) and potential heteroskedasticity of data (Bryk & Raudenbush, 1992). Thus, HLM is the state-of-the-art method to analyze metric conjoint data (Choi & Shepherd, 2004; Haynie, Shepherd, & McMullen, 2009). In our analysis, the decisions of the entrepreneurs are the basic level (level 1). The second level of analysis (level 2) includes the individual characteristics of the entrepreneurs (i.e. trust in others) and the control variables introduced earlier.

## **2.4 Results**

Table 2 presents the descriptive statistics and correlations of the level 2 variables. Correlations for level 1 variables are not presented, since they are zero due to the orthogonal design.

Our results are presented in Table 3. For each attribute we report the standardized coefficient and the level of significance, indicated by the asterisks. The effect of level 1 variables and interactions on the dependent variable (decision to internationalize) is displayed in column 1. Columns 2 to 5 present the interactions between level 2 and level 1 variables. They indicate potential contingencies of the relationship between level 1 variables and the decision to internationalize on level 2 variables, that is trust in others and control variables. Level 1 variables account for 45.13 % and level 2 variables for 1.86 % of variance explained.

**Table 2: Means, standard deviations, and correlations of level 2 variables**

|                     | M     | SD     | (1)    | (2)      | (3)    |
|---------------------|-------|--------|--------|----------|--------|
| (1) Trust in Others | 4.775 | 0.864  | 1.000  |          |        |
| (2) Founder Age     | 43.34 | 7.888  | 0.051  | 1.000    |        |
| (3) Firm Age        | 6.60  | 4.886  | -0.079 | 0.419*** | 1.000  |
| (4) Firm Size       | 9.44  | 13.310 | -0.050 | 0.030    | 0.156† |

†  $p < .1$ ; \*  $p < .05$ ; \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 3: Hierarchical linear modeling explaining entrepreneurs' early internationalization decisions**

|                                               | Intercept | Trust in Others | Founder Age | Firm Age | Firm Size |
|-----------------------------------------------|-----------|-----------------|-------------|----------|-----------|
| Network Size                                  | 0.749***  | 0.138*          | -0.059      | 0.083    | 0.031     |
| Contact Heterogeneity                         | 0.270***  | 0.085*          | -0.079      | 0.080    | 0.040     |
| Tie Strength                                  | 1.308***  | 0.272**         | -0.15       | -0.023   | -0.021    |
| Communication Frequency                       | 0.732***  | -0.071          | -0.049      | 0.063    | 0.015     |
| Absorptive Capacity                           | 1.041***  | -0.012          | 0.041       | -0.057   | 0.030     |
| Network Size X Absorptive Capacity            | 0.130**   | 0.005           | 0.087†      | -0.020   | -0.009    |
| Contact Heterogeneity X Absorptive Capacity   | 0.081†    | 0.053           | 0.034       | -0.003   | -0.027    |
| Tie Strength X Absorptive Capacity            | 0.211***  | -0.027          | -0.028      | -0.029   | 0.045     |
| Communication Frequency X Absorptive Capacity | 0.114*    | -0.115†         | -0.049      | 0.050    | 0.048     |

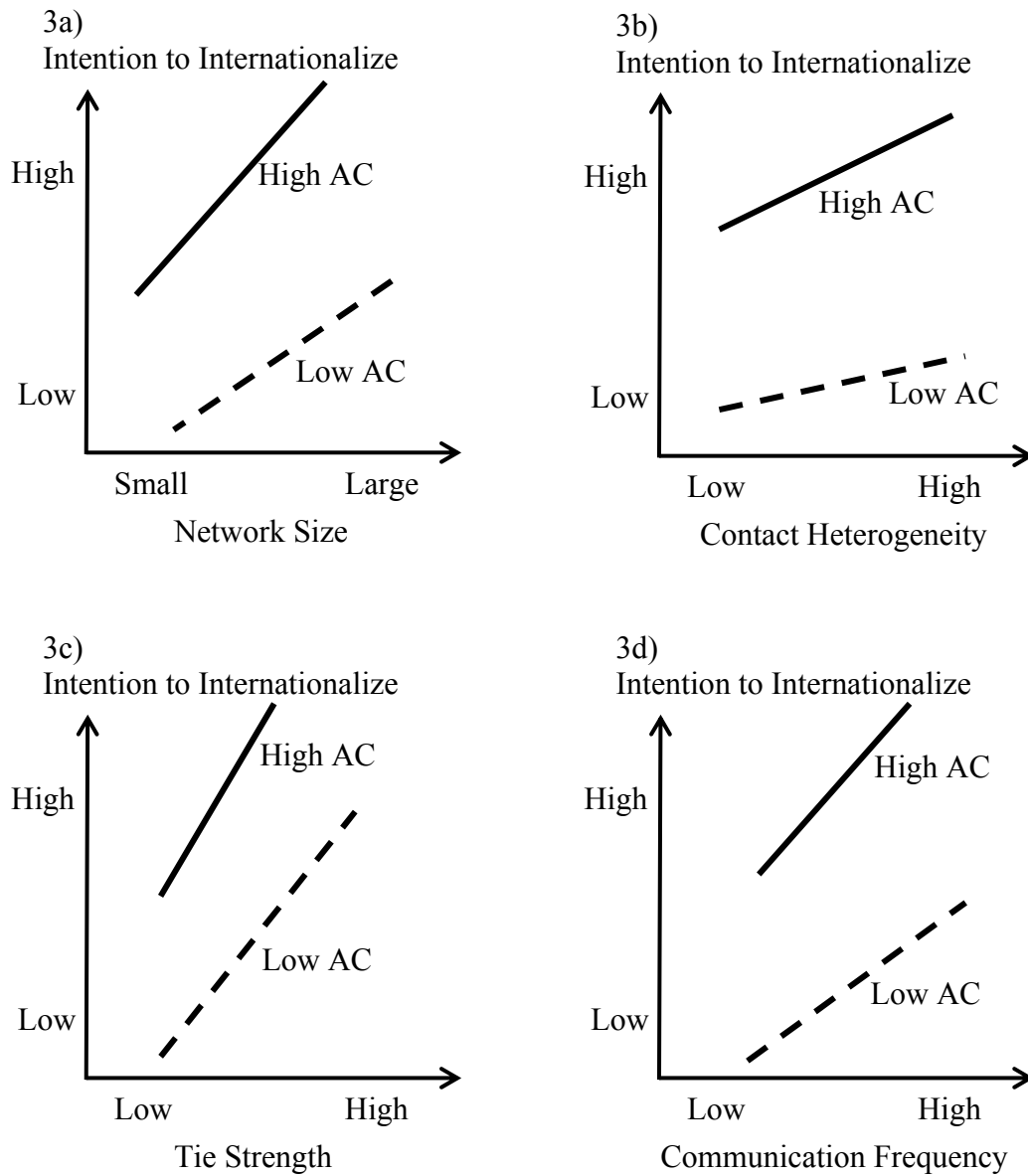
$N = 4352$  decisions nested within 136 entrepreneurs

†  $p < .1$ ; \*  $p < .05$ ; \*\*  $p < .01$ , \*\*\*  $p < .001$



As the results show, all decision cues at level 1 are significantly different from zero and have a positive direct influence on entrepreneurs' decisions to internationalize early. Specifically, an entrepreneurs' likelihood of internationalizing early increases with (i) larger networks, (ii) more heterogeneous contacts, (iii) stronger network ties, (iv) more frequent communication with network contacts, and (v) higher absorptive capacity of the venture.

Moreover, our theory predicted that the relationship between network parameters and entrepreneurs' decisions to internationalize will be stronger for ventures with higher absorptive capacity (H1a-d). Table 3 shows the results for these two-way interaction effects and reveals that three of the hypothesized interactions are significant ( $p < .05$ ), and one (absorptive capacity x contact heterogeneity) is marginally significant ( $p < .10$ ). Specifically, we find significant, positive interactions between absorptive capacity and network size, absorptive capacity and tie strength, and absorptive capacity and communication frequency. To illustrate these level 1-interactions we plot them in diagrams in which the y axis represents entrepreneurs' likelihood of early internationalization and the x axis the network parameter (Figures 3a-d). The graphs show separate lines for high and low levels of venture absorptive capacity. Figures 3a-d demonstrate that the likelihood that an entrepreneur decides to internationalize early increases with larger networks, more heterogeneous contacts, stronger ties, and more frequent communication, and that these relationships are stronger when the ventures' absorptive capacity is high. Thus, there is support for Hypotheses 1a-d.

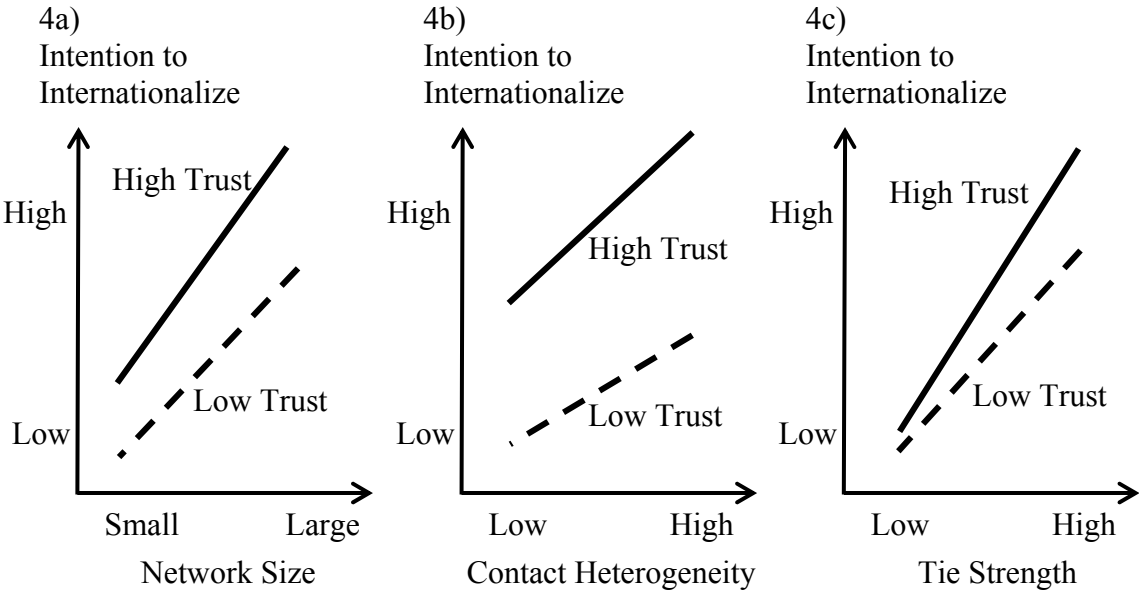


**Figure 3: Networks, venture absorptive capacity, and entrepreneur's early internationalization decisions**

We further predicted that the effect of network size, contact heterogeneity, tie strength, and communication frequency will be stronger for those entrepreneurs with high trust in others than for those with low trust in others (H2a-d). Table 3 reveals that only one of the hypothesized interactions is not significant (trust x communication frequency). This shows that there is no support for Hypothesis 2d. However, we do find significant and positive

interactions ( $p < .05$ ) between trust and network size, between trust and contact heterogeneity, and between trust and tie strength.

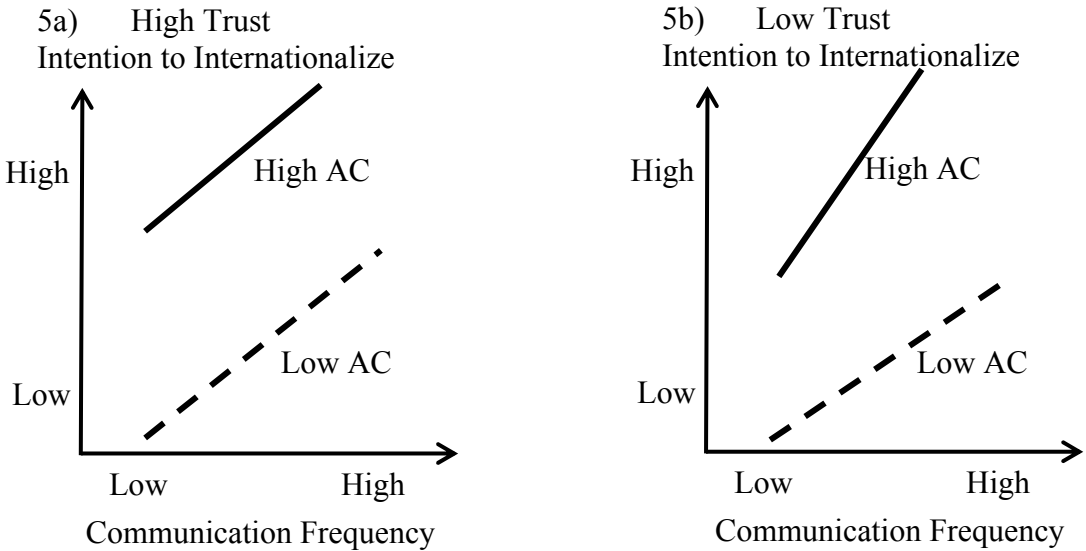
Figures 4a-c depict the nature of these interactions. Again, the y axis represents entrepreneurs' likelihood to internationalize early and the x axis the network parameter. The graphs show separate lines for high and low levels of generalized trust in others. Figures 4a-c show that the likelihood that an entrepreneur decides to internationalize early increases with larger networks, more heterogeneous contacts and stronger ties, and that these relationships are stronger when the entrepreneurs' trust in others is high. Thus, there is support for Hypothesis 2a, Hypothesis 2b and Hypothesis 2c.



**Figure 4: Networks, trust in others, and entrepreneur’s early internationalization decisions**

Finally, Table 3 displays the results for the proposed three-way interactions between network parameters, absorptive capacity, and trust. We do not find any significant three-way interaction effects between venture absorptive capacity, trust in others, and (i) network size,

(ii) contact heterogeneity, and (iii) tie strength. Thus, there is no support for Hypotheses 3a-c. However, we do find a marginally ( $p < .1$ ) significant three-way interaction between absorptive capacity, trust in others, and communication frequency. To illustrate the nature of this interaction, we split our sample by half into subsamples with high and low trust in others and then draw separate two-way interaction graphs for communication frequency and absorptive capacity. Figure 5a shows the interaction between communication frequency and absorptive capacity for entrepreneurs' with high levels of trust in others, while Figure 5b displays this interaction for entrepreneurs' with low levels of trust in others. A comparison of Figures 5a and 5b reveals that the interaction between communication frequency and absorptive capacity is stronger when entrepreneurs have low trust in others than when they have high trust in others (lines "open" more from left to right in Figure 5b than in Figure 5a). This finding provides marginal support for Hypothesis 3d.



**Figure 5: Communication frequency, venture absorptive capacity, trust in others, and entrepreneur's early internationalization decisions**

## 2.5 Discussion

The purpose of this study is to analyze the conjoint influence of network-level, individual-level, and firm-level characteristics on entrepreneurs' decisions to internationalize early. Drawing on the McMullen and Shepherd (2006) model of entrepreneurial action, we argued that information provided by network partners can trigger early internationalization decisions by increasing entrepreneurs' foreign market knowledge and their motivation to enter these markets. We proposed that entrepreneurs' access to information from network partners is influenced by the structure and contact attributes of, and communication frequency within, their international networks. Moreover, we argued that entrepreneurs' reliance on, and usage of, this accessible information is contingent on their perceptions of the new venture's absorptive capacity (Cohen & Levinthal, 1990), and their generalized trust in others (Couch & Jones, 1997). By applying a metric conjoint experiment we found support for two-way and three-way interactions between network characteristics, entrepreneurs' perceptions of venture absorptive capacity, and their generalized trust in others in explaining early internationalization decisions.

Our results extend the literature on international entrepreneurship by investigating the influence of specific network characteristics (size, contact heterogeneity, strength of ties, communication frequency) on the decision to internationalize early. So far, studies on networks of INVs have examined the origins and formation of network relationships triggering internationalization, the resources these relationships provide to INVs, and the development of networks as INVs grow (Coviello, 2006). However, this work has insufficiently investigated how the properties and configurations of networks influence entrepreneurs' decisions to internationalize. Our study complements this literature by exploring how variance in network configurations impacts entrepreneurs' decisions to internationalize and highlights the need to consider multiple characteristics of entrepreneurs'

international networks to understand why some internationalize early while others are reluctant to do so. We found that entrepreneurs' likelihood of internationalizing early increases with (i) larger networks, (ii) more heterogeneous contacts, (iii) stronger network ties and (iv) more frequent communication with network contacts.

Further, while existing INV studies have focused on the role of networks in the internationalization process of new ventures (Harris & Wheeler, 2005) they have not explored potential contingencies that might influence the impact of networks on entrepreneurs' internationalization decisions. Our study identifies two contingencies – entrepreneurs' perceptions of venture absorptive capacity and their generalized trust in others. First, the effects of the network parameters on the likelihood of early internationalization were even stronger for high venture absorptive capacity. That is, the likelihood that an entrepreneur decides to internationalize early increases with larger networks, more heterogeneous contacts, stronger ties and more frequent communication, and these relationships are stronger when the ventures' absorptive capacity is high. Moreover we found significant interactions between trust and network size, trust and contact heterogeneity, and trust and tie strength. Hence, the likelihood that an entrepreneur decides to internationalize early increases with larger networks, more heterogeneous contacts and stronger ties, and these relationships are stronger when the entrepreneurs' trust in others is high. These findings show that entrepreneurs differ in their internationalization decisions contingent on the structure and properties of the personal network, the resources of their venture, and their personal characteristics.

However, the predicted interaction between trust and communication frequency was not significant. While we assumed that frequent communication with foreign contacts will ease information transmission due to more effective communication, and hence enable entrepreneurs to exploit the informational advantages of foreign networks to a greater extent, this proposition was not confirmed by the data. A possible explanation is that frequent

communication decreases the barrier to specifically ask for information. For example, frequent communication might already ensure an open communication style with the network partner which makes the additional ability to communicate problems openly redundant for information acquisition from a network partner of frequent contact.

Our model also predicted that venture absorptive capacity and entrepreneurs' trust in others conjointly influence the effect of network parameters on the decision to internationalize early. We did not find the proposed positive three-way interaction effects between venture absorptive capacity and trust with (i) network size, (ii) contact heterogeneity, and (iii) tie strength, respectively. However, we found a significant negative interaction between communication frequency, venture absorptive capacity and entrepreneurs' trust in others. The nature of this interaction suggests that there is no significant interaction between absorptive capacity and communication frequency when trust is high (lines in Figure 5a are almost parallel), but there is a significant interaction for low trust scores (lines in Figure 5b differ in slope). That is, absorptive capacity strengthens the relationship between communication frequency and an entrepreneurs' decision to internationalize early only for entrepreneurs' with low levels of trust. This significant three-way interaction illustrates the complexity of entrepreneurs' decision policies and is consistent with other studies that identify higher-order interactions in entrepreneurial decision making (e.g., J. R. Mitchell & Shepherd, 2010).

Our finding of complex three-way interactions in entrepreneurs' decision policies also extends existing literature because our model covers more than one level of analysis and includes cross-level effects. Scholars have argued that research in the management and entrepreneurship literature has typically focused on one level of analysis but neglected heterogeneity at other levels and that those levels may not be independent of the level under investigation. Our model incorporates two-way and three-way interactions between network-level, firm-level, and individual-level characteristics in explaining entrepreneurs' early

internationalization decisions. This multi-level perspective acknowledges the complexity of the new venture formation process (Hitt, et al., 2007).

The limitations of our study give rise to implications for future research. First, our study was conducted among German entrepreneurs only. For example, entrepreneurs' usage of networks in drawing decisions might be influenced by country-specific factors, like culture or institutional factors. This limits the degree to which our results can be generalized to non-German entrepreneurs. Further research can corroborate our findings by investigating the influence of networks on early internationalization for entrepreneurs outside Germany.

Second, some of the variance in entrepreneurs' internationalization decisions might result from differences in their interpretation of the internationalization opportunity identified – variance that was not included in our model. Future research can investigate this variance by describing the internationalization opportunity in more concrete terms, like the number of competing foreign products, achievable foreign market share and potential profit ratios. Entrepreneurs could then assess the likelihood of exploitation of these opportunities based on their networks. This could extend our knowledge on the role of networks for exploiting different internationalization opportunities.

Finally, we investigated how network-level, individual-level (trust), and firm-level characteristics (absorptive capacity) influence the decision to internationalize early. Many other factors, not included in our study, are also known to have an influence. These factors include for example, the size, growth, and competition in home markets and foreign markets, as well as the products and resources of the venture. Future research can make important contributions by investigating the influence of these factors by using a similar experimental design as we did. This also allows for further investigation of contingencies and (higher-order) interaction effects between influencing factors.



To conclude, our study emphasizes that understanding entrepreneurs' decisions to internationalize requires consideration of contingency relationships between decision variables and individual factors. Specifically, we show that network size, contact heterogeneity, tie strength, and communication frequency with network partners impact entrepreneurs' decisions, however, contingent on their perceptions of the capabilities of the venture to use the information acquired from network partners (venture absorptive capacity) and their psychological characteristics (generalized trust in others). These results emphasize the complexity of early internationalization decisions and support a multi-level perspective on entrepreneurial decision making.

### **3 Entrepreneurs' expertise and venture internationalization<sup>2</sup>**

Drawing on the theory of expertise this chapter develops a model suggesting that entrepreneurs' prior experiences influence venture age and degree of internationalization. I argue that international expertise and founding expertise have different effects on venture age at internationalization. Moreover, it is proposed that age at first international entry, founding expertise, and international expertise independently and conjointly influence venture internationalization degree. I test the model using hierarchical linear regressions and data from 84 internationalized entrepreneurs. The findings reveal diverging effects of international and founding expertise on age at internationalization and significant two-way interactions between entrepreneurs' expertise and age at internationalization in explaining venture degree of internationalization.

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<sup>2</sup> This chapter is based on Domurath (2011).

### **3.1 Introduction**

Research on new venture internationalization tries to understand the occurrence and development paths of businesses “that, from inception, seek[s] to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries” (Oviatt & McDougall, 1994, p. 49). While researchers have identified several factors internal and external to the firm (for an overview see Rialp, Rialp, & Knight, 2005), the person of the entrepreneur plays a central role in understanding the new venture internationalization process. For example, entrepreneurs’ psychological characteristics and mental models have been proposed to directly influence the decision to internationalize, and whether the internationalization process is incremental or rapid (Bell, et al., 2003). Oviatt and McDougall (2005, p. 542) assign the entrepreneur the central role, because “accelerated or retarded international entrepreneurial behavior cannot be explained through some objective measure of technology and competition, but only by understanding how the opportunity, the enabling forces, and the motivating forces are interpreted, or mediated, by the entrepreneurial actor”. Hence, understanding young venture internationalization requires an understanding of how entrepreneurs view their surroundings, process information, and make decisions.

However, although existing research agrees on the salient role of entrepreneurs’ cognition in explaining venture internationalization, only few studies have investigated the link between cognitive factors and central determinants of venture internationalization. Specifically, early internationalization has been repeatedly found to be associated with international experience of entrepreneurs (McDougall, et al., 2003; Reuber & Fischer, 1997). Yet, individuals collect multiple different experiences over time which play an important role in explaining their cognition and decision making (Ericsson, 2006) suggesting that experiences other than international experience might contribute to entrepreneurs’ early internationalization decisions. Moreover, studies on entrepreneurs’ influence on the venture

internationalization process have typically focused on explaining variance in venture age at initial international entry (Reuber & Fischer, 1997), thus neglecting the entrepreneur's role in turning entry into international sales. This is surprising given that research has found that age at international entry is associated with venture internationalization degree (Autio, et al., 2000).

This chapter develops a model suggesting that entrepreneurs' previous experience explains both venture age at international entry, and the degree to which early internationalization translates into international sales. By drawing on the theory of expertise (Chi, 2006; Dane, 2010; Ericsson, 2006; Feltovich, Prietula, & Ericsson, 2006; Glaser, 1984), I propose that different kinds of experience (international and entrepreneurial experience) influence entrepreneurs' decision to internationalize. Further, I argue that age at first international entry, founding expertise, and international expertise independently and conjointly influence venture internationalization degree. I explore two-way interactions between age at internationalization and founding expertise and international expertise, respectively. I test the model with a sample of 84 internationalized entrepreneurs and their ventures in Germany. In doing so, I contribute to the literature in several important ways.

First, research aiming to explain venture age at initial foreign market entry has focused on entrepreneurs' international experience as a central determinant of internationalization, while ignoring other types of experiences. I contribute to the literature by showing that founding expertise also influences speed of internationalization, albeit in a different way. That is, I find a negative relationship between founding experience and early internationalization, suggesting that founding expertise leads to retarded venture internationalization. This finding enhances our understanding of what personal characteristics of entrepreneurs contribute to early internationalization, and illustrates the differential impact of different types of experience on this decision.

Second, while entrepreneurs' experience has been used to explain age at internationalization (McDougall, et al., 2003; Reuber & Fischer, 1997), the effect of experience on venture degree of internationalization has been largely neglected. This study addresses this issue by investigating how entrepreneurs' founding expertise and international expertise affect venture internationalization degree. Moreover, while existing studies have found that age at initial foreign market entry is negatively related to venture degree of internationalization (Autio, et al., 2000; Reuber & Fischer, 1997), they have not yet explored potential contingencies that might influence the relationship between age at and degree of internationalization – that is, when early internationalization translates into international sales. This study tries to close this gap by investigating the moderating effect of founding experience and international experience on the age at internationalization-degree of internationalization relationship.

Third, studies on the effect of entrepreneurs' experience find positive associations between founding experience and the likelihood of venture capital funding (Hsu, 2007) and venture profits (Bosma, van Praag, Thurik, & de Wit, 2004). While these studies underline the positive effects of entrepreneurs' founding experience for young ventures, the results of my study show that in the specific case of venture internationalization, founding experience can constrain growth in that it delays the first international entry and the transformation of international market entry into international sales.

This chapter proceeds as follows. In the first section, I will introduce the theory and hypotheses. Following this, I will describe the research method, sample, and analysis. Finally, results and conclusions will be presented and discussed.

## 3.2 Theoretical background and hypotheses

Psychological research has long identified the salient role of experience in explaining cognition, information processing and decision making. Experience in a specific field leads to the development of domain specific knowledge and a specific organization of this knowledge within cognitive frameworks (Chi, 2006; Dane, 2010; Glaser, 1984). Experts in a field possess more, more detailed, more accurate and more complete knowledge in a domain than novices (Chi, 2006; Dane, 2010; Honeck, Firment, & Case, 1987; Horn & Masunaga, 2006). Moreover, experts' knowledge is particularly organized, structured, integrated and interrelated (e.g. in schema, scripts, and frameworks) (Chi, 2006; Dane, 2010; Horn & Masunaga, 2006). In turn, these unique knowledge structures, which differentiate experts from novices in a field, influence information processing and decision making of experts. Having developed expertise in a specific field entails certain benefits (Chi, 2006; Dane, 2010). For example, experts have been found to display superior abilities in problem analysis and understanding as well as finding and selecting appropriate strategies for problem solving (Chi, 2006).

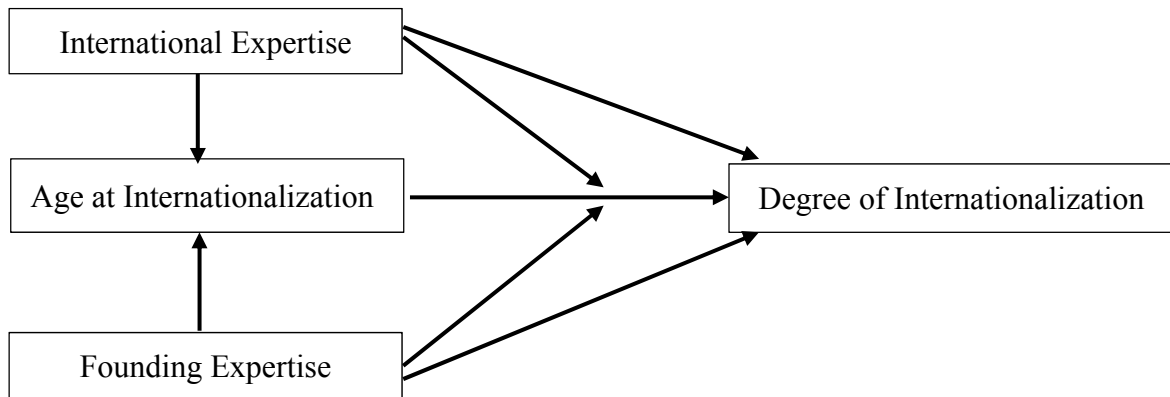
Despite the benefits of domain expertise, it can also be limiting in certain respects (Chi, 2006; Dane, 2010). For example, research suggests that experts can become inflexible in their domain. Highly domain specific expertise might lead to ineffective problem solving or retarded adaptation when task demands and circumstances change (Chi, 2006; Dane, 2010). The reason is that "There is little transfer from high-level proficiency in one domain to proficiency in other domains - even when the domains seem, intuitively, very similar" (Feltovich, et al., 2006, p. 47). Hence, having acquired expertise in one domain will help in dealing with tasks specific to this domain. However, other types of expertise, although seemingly (strongly) related to a specific domain, will not necessarily help in handling domain specific tasks, or even hinder effective task execution.

Experience and the resulting cognitive structures have increasingly been used to explain “expert” entrepreneurial decision making and behavior (R. A. Baron & Ensley, 2006; Krueger, 2007; R. K. Mitchell et al., 2007; R. K. Mitchell, et al., 2000). For example, Krueger (2007) argues that expert entrepreneurs differ significantly from novice entrepreneurs in terms of their knowledge structure acquired through experience. Moreover, experienced entrepreneurs recognize and select opportunities in different ways than novice entrepreneurs based on their founding experience and the resulting cognitive structures (R. A. Baron & Ensley, 2006). When presented with questions related to venturing, expert entrepreneurs enter specific knowledge structures and scripts that make them attend to more and more critical elements for venture creation than novices (R. K. Mitchell & Chesteen, 1995).

Specific to the context of international entrepreneurship, studies propose that international experience of entrepreneurs explains variance in venture internationalization processes (Bell, et al., 2003; Oviatt & McDougall, 2005). For example, international experience of entrepreneurs and top management teams, gained through work experience in multinational firms or work experience in foreign countries, has been associated with early internationalization (Reuber & Fischer, 1997; Zucchella, et al., 2007). Sapienza, Autio, George and Zahra (2006) proposed that managers’ international experience acquired in previous employments will enhance the probability of firm survival and growth during internationalization. Further, it has been found that international experience has an influence on perceived costs of internationalization and hence on the decision to internationalize (Eriksson, et al., 1997).

Following these studies, I argue that entrepreneurs’ expertise – based on experience – will influence the venture internationalization process. In line with research on expertise (Chi, 2006) I propose that different types of expertise influence venture internationalization differently. I propose that international expertise accelerates internationalization, whereas

founding expertise delays venture internationalization. In developing the model I further explore how these types of entrepreneurs' expertise influence venture degree of internationalization, and how they explain variance in the early internationalization-degree of internationalization relationship. The model is summarized in Figure 6.



**Figure 6: A model of degree of internationalization**

### *3.2.1 Entrepreneurs' international expertise and venture internationalization*

International experience of entrepreneurs has been operationalized in various ways including studies abroad, work abroad, and work in multinational companies (McDougall, et al., 2003; Reuber & Fischer, 1997; Zucchella, et al., 2007). In this study, international expertise refers to experience with doing business in international markets acquired through work experience in a foreign country and / or through work experience in a multinational company. Three arguments suggest that international expertise influences ventures' age at internationalization.

First, experts can impose organization and meaning to events or situations in which novices would not detect and recognize relations (R. A. Baron & Ensley, 2006; Chi, 2006; Feltovich, et al., 2006). This ability of experts stems from their highly interrelated knowledge



in the field of expertise (Chi, 2006; Feltovich, et al., 2006). These knowledge structures provide the basis for detection of relations and for supplementing information to form a coherent picture. For example, the identification of international business opportunities, as the identification of relations between seemingly unrelated trends and events in the foreign market place, can be explained with the knowledge structures of international expertise (cf. R. A. Baron, 2006; R. A. Baron & Ensley, 2006). Thus, having acquired international expertise will likely enhance entrepreneurs' ability to identify internationalization opportunities. For example, an entrepreneur who has worked in a foreign country will likely know about recent developments and trends in the foreign market which might constitute an opportunity for the new venture. Work experience in multinational companies might even trigger the ability to detect and connect developments in more than one foreign market which could lead to the recognition of global opportunities.

Moreover, experts display higher levels of situation awareness and vigilance in their domain than novices (Endsley, 2006; Yates & Tschirhart, 2006). Situation awareness and vigilance involve a permanent understanding of the environment and monitoring for signals of change (Endsley, 2006; Yates & Tschirhart, 2006). Hence, entrepreneurs with international expertise will immediately identify new trends and developments in international markets. This in turn could speed up international opportunity recognition and cause entrepreneurs to internationalize quickly to not forego the opportunity. Since vigilance and monitoring new developments and subsequent opportunity recognition need not be restricted to a single foreign market, opportunities in multiple foreign markets might be detected and exploited. As a result, a high degree of venture internationalization might be achieved by entrepreneurs with international expertise through opportunity exploitation in multiple markets.

Second, experts solve problems more effectively than novices (Chi, 2006; Feltovich, et al., 2006; Glaser, 1984). When confronted with a problem experts construct an understanding

or representation of the problem (Chi, 2006; Glaser, 1984). Due to their large and well-structured knowledge experts tend to construct a very detailed, accurate and complete understanding of the problem (Glaser, 1984), which ensures efficient and accurate generation of alternative options and selection of appropriate strategies (Chi, 2006; Feltovich, et al., 2006). For example, entrepreneurs might encounter the situation that foreign market export sales fall short of expectations. An internationally inexperienced entrepreneur might infer from this situation a problem of pricing. Hence, prices might be cut which potentially leads to improved sales numbers in the export market. In contrast, an entrepreneur with international expertise will draw on elaborated knowledge on international business and build a more coherent picture of the problem taking into account that costumers in the foreign country might expect a large amount of pre- and after-sales services. As a result courses and trainings for sales staff abroad might be initiated to enhance their skills in demonstrating features and usage of the product. Thus, international expertise might cause accelerated internationalization because problems that occur during planning and initiation of foreign market entry will be more efficiently solved, and fast and effective reactions to problems in international markets will enhance successful market penetration.

Third, experts display enhanced self-monitoring and self-reflection (Chi, 2006; Feltovich, et al., 2006). Through self-monitoring experts test their comprehension of and solution to a problem and detect potential errors in thought processes and methods. This ability of experts “prevents blind alleys, errors, and the need for extensive back-up and retraction, thus ensuring overall progress to a goal” (Feltovich, et al., 2006, p. 56). The positive effects of problem solving on venture internationalization should be further enhanced when entrepreneurs are able to monitor their understanding of, and solutions to, problems during internationalization. More importantly, entrepreneurs with international expertise will be able to avoid major mistakes and retractions due to their self-monitoring abilities. This in

turn should lead to more successful foreign market entry and penetration and hence to higher internationalization degree.

In sum, entrepreneurs' international expertise enhances international opportunity recognition, problem solving during internationalization, as well as monitoring of internationalization. Thus I propose that,

*Hypothesis 1a: Entrepreneurs with more international expertise will internationalize their ventures earlier than entrepreneurs with less international expertise.*

*Hypothesis 1b: The degree of internationalization for new ventures will be higher when entrepreneurs have more international expertise than when entrepreneurs have less international expertise.*

### *3.2.2 Entrepreneurs' founding expertise and venture internationalization*

Founding expertise emerges from considerable experience with and hence elaborated knowledge about the venture creation process. Although founding expertise involves opportunity recognition and exploitation (R. K. Mitchell, et al., 2000) – skills also relevant for internationalization (Oviatt & McDougall, 2005) – founding expertise is often specific to the national context. For example, knowledge concerning legal regulations, accounting standards and taxation will be applicable to the national context only. Hence, international and founding expertise (although seemingly similar) are not congruent and therefore ultimately distinct. Research on expertise has shown that even when domains seem similar, high levels of proficiency in one domain do not transfer to the other domains (Feltovich, et al., 2006). Thus, founding expertise will not necessarily lead to the same benefits for venture internationalization as international expertise. Indeed, it appears that expertise can even be limiting and disadvantageous under certain conditions (Dane, 2010). I propose that founding expertise might be obstructive to new venture internationalization - that is, founding expertise

might lead to retarded international entry and to smaller venture internationalization degrees. There are several reasons that support this assumption.

First, expertise is highly domain specific and will hardly transfer to other areas (Chi, 2006; Feltovich, et al., 2006). That is, in detecting internationalization opportunities founding expertise at the domestic market might be of little help. While founding expertise will involve elaborated knowledge-structures on business opportunity recognition based on previous venturing activities, these knowledge structures, however, will most likely be specific to the national context. Indeed, founding expertise in local markets might even limit the detection of international trends and events because expert entrepreneurs' display of high situation awareness and vigilance (Endsley, 2006; Yates & Tschirhart, 2006) will not cover the situation of international markets but be focused on local markets because an entrepreneur with large founding expertise might not be "used" to paying attention to information and developments outside the local context in finding business opportunities. Since individuals' attention is limited (Ocasio, 1997), focusing their awareness on local markets instead of focusing on developments in the international context limits the potential for international opportunity recognition and delays venture internationalization and – even if internationalization is initiated – growth at the international market.

Second, experts' effective problem solving has its limits (Chi, 2006; Dane, 2010). While experts are able to form complex, accurate and detailed problem representations, based on their extensive and well-structured knowledge in a domain (Chi, 2006; Glaser, 1984), the quality of a problem representation determines the quality of further thinking. However, in understanding a problem and diagnosing its origin, experts can show biases and display a "tendency to generate diagnoses about which they have more knowledge" (Chi, 2006, p. 27), thus causing errors in problem understanding and finding appropriate solutions. Entrepreneurs with large founding expertise might be subject to this "bias" in the venture

internationalization process. Returning to the example above, an entrepreneur with local founding expertise might identify the selection of distribution channels and distribution partners as the reason for export sales not meeting expectations. While this might not necessarily be wrong in the foreign market, other aspects specific to the foreign market context might then be overlooked in determining the problems origin. For example, foreign customers buying habits and preferences as well as cultural factors might not find entrance into problem conceptualization. This in turn, can lead to inaccurate definitions and solutions to problems in the international context and hence to potential slowdowns of and inefficiencies in foreign market penetration. As a consequence venture internationalization degree should be negatively affected.

Moreover, experts tend to show functional fixedness when they have been used to solve problems in a specific way (Chi, 2006; Dane, 2010). That is, when experts encounter problems that seem similar to the ones previously encountered but require different solution methods, they might be limited in generating adjusted solution approaches (Chi, 2006; Dane, 2010). Entrepreneurs with founding expertise in a national context might be subject to this functional fixedness during internationalization. For example, previously an entrepreneur might have dealt with inadequate or non-fulfillment of a supplier contract with legal actions. However, the most effective and appropriate reaction in a foreign country might be different to the home markets due to differences in generally accepted business practice and culture. For example, the importance and way of building personal relationships that protect from opportunistic behavior differs across cultures (cf. Doney, Cannon, & Mullen, 1998). Hence an entrepreneur who has been used to solve domestic problems in a specific way might be limited in generating effective solutions in the international context, diminishing effective international market penetration.

Third, adapting to circumstances and tasks that deviate from previously formed knowledge structures can be challenging for expert entrepreneurs (Chi, 2006; Dane, 2010). Knowledge structures that are the essence of expertise become relatively stable and thus potentially resistant to modifications (Dane, 2010). Hence, when entrepreneurs with founding expertise are slow in adapting and modifying the previously formed knowledge structures to the international context, inefficient problem solving might prevail over an extended period of time. This in turn might postpone effective international market penetration even further, leading to slow sales growth in international markets and hence low degrees of venture internationalization.

In sum, entrepreneurs' founding expertise at local markets appears to limit international opportunity recognition, effective problem solving during internationalization, as well as fast adaptation to emerging problems that are specific to doing business in international environments. Hence, I propose that

*Hypothesis 2a: Entrepreneurs with more founding expertise in the domestic market will internationalize their ventures later than entrepreneurs with less founding expertise in the domestic market.*

*Hypothesis 2b: The degree of internationalization for new ventures will be lower when entrepreneurs have more founding expertise in the domestic market than when entrepreneurs have less founding expertise in the domestic market.*

### *3.2.3 The moderating role of entrepreneurs' expertise*

My arguments suggest that both entrepreneurs' international and founding expertise might explain early or delayed venture internationalization and a ventures' degree of internationalization. However, research suggests that age at internationalization also influences a ventures' degree of internationalization (Autio, et al., 2000; Reuber & Fischer, 1997). Due to the absence of specific knowledge and routines developed for the domestic

market young firms will learn faster in international markets (Autio, et al., 2000) and will immediately build routines specific to international activities (Reuber & Fischer, 1997). This in turn leads to more effective international market penetration and international growth and hence to high degrees of venture internationalization. In what follows, I propose that entrepreneurs' expertise will moderate the relationship between age at, and degree of, internationalization. Moreover, I assume that different types of expertise (international and founding) will have different moderating effects.

First, international expertise should support the fast development of knowledge and routines specific to international business once the venture is internationalized. International expertise will likely account for an enhanced understanding of feedback from international markets. Due to their knowledge about doing business in international markets entrepreneurs with international expertise should find it easier to understand, interpret and act on feedback from international markets. More importantly, international expertise might also account for an understanding of the significance of feedback from foreign markets for international venture growth. Therefore, an entrepreneur with international expertise might communicate to employees more resolutely how important the acquisition and use of foreign market feedback is for venture development. An increased focus on learning about international markets within the firm will most likely lead to enhanced international knowledge acquisition which ensures effective international market penetration and hence higher degrees of internationalization.

Moreover, entrepreneurs with international expertise might not only find it easier to understand and act on feedback from international markets after entry, they might also be better able to adjust organizational routines in multiple markets because their enhanced problem solving and monitoring abilities facilitate effective routine building for doing international business. For example, entrepreneurs with international expertise might detect and understand organizational problems with gaining international market share more easily

and hence find more and more appropriate solutions. Their superior monitoring of problems and solutions during the internationalization process will further enhance effective adaptation of organizational structures and routines. Therefore, it appears that venture internationalization at an early age will lead to faster learning in international markets and to effective routine building for international activities which in turn increases venture internationalization degree (Autio, et al., 2000; Reuber & Fischer, 1997), but this effect is strengthened by international expertise of entrepreneurs.

Second, founding expertise will also affect entrepreneurs' reaction to feedback from international markets after entry and subsequent routine development for several reasons. However, since effective learning requires some related knowledge to be present (Cohen & Levinthal, 1990), founding expertise and knowledge about venturing in the home market might not facilitate acquiring knowledge related to international business activities, thus slowing down learning about international markets. Moreover, since existing knowledge and knowledge structures also guide attention to new information (Ocasio, 1997), an entrepreneur with founding expertise in the home market might pay most attention to information that previously has been most important to venture development in the local context which may not be relevant for successful international venturing (e.g., she or he pays insufficient attention to feedback from the foreign market entered). Hence, little relatedness of knowledge and a potentially biased emphasis on information related to the national context can hinder effective learning in international markets for entrepreneurs with founding expertise.

Moreover, entrepreneurs with founding expertise might also find it hard to adjust organizational routines to doing business in multiple markets. Since experts can show biases or functional fixedness in problem solution selection (Chi, 2006), entrepreneurs with founding expertise might not be able to find appropriate solutions to organizational problems in multiple international markets. That is, entrepreneurs with founding expertise might show



biases towards previous solutions and the structures and routines implemented in reaction to problems in international markets might not incorporate specific aspects necessary for effective organization of international business activities. Therefore, it appears that founding expertise of entrepreneurs will weaken the positive effect of early internationalization on degree of internationalization due to little relatedness of knowledge and hence less effective learning in international markets as well as a potential functional fixedness in developing organizational structures and routines. Thus, I propose,

*Hypothesis 3a: Entrepreneurs' international expertise will increase the positive effect of early internationalization on venture degree of internationalization.*

*Hypothesis 3b: Entrepreneurs' founding expertise will decrease the positive effect of early internationalization on venture degree of internationalization.*

### **3.3 Method**

#### *3.3.1 Data collection and sample*

To investigate the hypotheses I surveyed entrepreneurs involved in ventures located in business incubators in Germany. Start-ups located in business incubators are usually in the founding phase or an early phase of business development (Aerts, et al., 2007; Rice, 2002). I generated a list of incubators in Germany by gathering data from the German Federal Association of Innovation, Technology, and Start-up Centers (ADT, 2009) and Regional Associations. The list contained 188 incubators. From the incubators' websites I compiled a list of resident ventures. I used two selection criteria to further specify the sample. First, I excluded subsidiaries of large firms because internationalization may not be independent of the parent companies' strategy. Second, I also excluded firms that were no private businesses

or non-profit organizations, like federal consulting agencies or technology transfer offices. Altogether, the list contained 799 ventures.

500 entrepreneurs of the compiled list were randomly selected and contacted by telephone. I explained the purpose of my study and asked for participation. If the entrepreneurs agreed to participate, an email containing the link to the online questionnaire was sent to them. In case the questionnaire was not completed within a week, I sent another email reminding them of the importance of their participation. 136 entrepreneurs completed the questionnaire, representing a response rate of 27.2 %. Fifty-two of these ventures were not internationalized by the time of the survey. This reduced my final sample size to 84 international ventures.

### 3.3.2 Variables

**Dependent variables.** The dependent variables of my study are *age at internationalization* and *degree of internationalization*. Consistent with other studies (Autio, et al., 2000) internationalization was defined as whether the venture was selling products or services abroad. Hence, the question “Does your venture sell products or services to foreign countries?” was included in the questionnaire as a filter. Age at internationalization refers to the age (in years) of the venture when international sales were first initiated and was measured with the question “How old was your venture at first international sale (in years)?” Degree of internationalization refers to the percentage of revenues generated from international sales (Autio, et al., 2000). To gather this variable, the question “What is the percentage of foreign sales from total sales?” was included in the questionnaire.

**Independent variables.** To measure expertise the survey included questions on entrepreneurs experience in different fields. Since experience is *the* prerequisite for expertise to develop (Feltovich, et al., 2006), experience is a widely accepted proxy to measure expertise (cf. Goodyear, 1997; T. F. Locke & Covell, 1997). *Founding expertise* was

measured by asking the entrepreneurs for the number of ventures for which they had been involved in the founding process.

Consistent with prior studies (Reuber & Fischer, 1997) *international expertise* was computed of two variables measured in the questionnaire. Entrepreneurs were asked for how many years they had worked in a foreign country and for how many years they had worked in a multinational enterprise (MNE). The sum of the respective answers constitutes the variable international expertise.

**Control variables.** I used several control variables that might explain variance in the dependent variables. First, I control for *age of the entrepreneur* (measured in years) because age influences experience and thus potentially also age at, and revenues generated from, internationalization. Second, I control for *gender*. Since gender has been found to explain differences in entrepreneurial behavior (cf. Scherer, Brodzinski, & Wiebe, 1990; Zhao, Seibert, & Hills, 2005), it might also affect internationalization behavior. Third, I control for the entrepreneurs' *international entrepreneurial orientation* (IEO). Entrepreneurs that display high levels of IEO will most likely internationalize earlier than entrepreneurs that only display moderate levels (G. A. Knight & Cavusgil, 2004). The IEO scale was taken from Knight and Cavusgil (2004) and has five items which were measured with a 7-point Likert scale anchored by the end values "I do not agree" and "I agree completely". For example, items of the scale include "Management continuously communicates its mission to succeed in international markets to firm employees" and "Management develops human and other resources for achieving our goals in international markets". The Cronbach's alpha for this measure was .880, indicating high reliability (Hair, et al., 2006). Moreover, I control for *firm age* (measured in years) and *firm size* (measured in number of employees) because older and larger ventures will be more likely to display higher internationalization degrees (cf. Bloodgood, Sapienza, & Almeida, 1996; Zahra, 2003). Finally, I controlled for the venture's

*industry*. Entrepreneurs were asked to name the industry their venture was operating in. All answers were coded into dummy variables with the labels of engineering, pharmaceuticals, IT, and chemistry. I included these industry dummies since some industries are known to show higher numbers of early internationalized firms than others (cf. Bloodgood, et al., 1996; Zahra, 2003).

### **3.4 Results**

Table 4 shows descriptive statistics (means and standard deviations) and correlations for the variables included in the study. Most bi-variate correlations are modest. However, some correlations are relatively strong (e.g., between IEO and degree of internationalization). To test for potential problems of multi-collinearity I calculated variance inflation factors (VIFs). All values were below 10, which is the acceptable threshold for multivariate analysis (Hair, et al., 2006). Hence, multi-collinearity is not a problem in the data set.

**Table 4: Means, standard deviations, and correlations between focal variables**

|                                    | M     | SD    | (1)     | (2)    | (3)    | (4)    | (5)   | (6)   | (7)     | (8)    | (9)   | (10)  | (11)   | (12)  |
|------------------------------------|-------|-------|---------|--------|--------|--------|-------|-------|---------|--------|-------|-------|--------|-------|
| (1) Degree of Internationalization | 33.25 | 27.44 | 1       |        |        |        |       |       |         |        |       |       |        |       |
| (2) Age at Internationalization    | 1.68  | 1.98  | -.262*  | 1      |        |        |       |       |         |        |       |       |        |       |
| (3) Founder Age                    | 44.15 | 7.27  | .163    | .154   | 1      |        |       |       |         |        |       |       |        |       |
| (4) Gender (male)                  | 95.2% | n.a.  | -.035   | .077   | -.042  | 1      |       |       |         |        |       |       |        |       |
| (5) Firm Age                       | 7.52  | 5.14  | .064    | .487** | .344** | .045   | 1     |       |         |        |       |       |        |       |
| (6) Firm Size                      | 10.64 | 14.24 | .160    | .044   | -.103  | .046   | .064  | 1     |         |        |       |       |        |       |
| (7) Engineering                    | 42.9% | n.a.  | .168    | .019   | .105   | .194   | -.023 | -.084 | 1       |        |       |       |        |       |
| (8) Pharmaceuticals                | 10.7% | n.a.  | .114    | -.159  | .072   | -.103  | -.058 | .022  | -.300** | 1      |       |       |        |       |
| (9) IT                             | 32.1% | n.a.  | -.340** | .100   | -.269* | .034   | .034  | .169  | -.596** | -.238* | 1     |       |        |       |
| (10) Chemistry                     | 3.6%  | n.a.  | .036    | .031   | .058   | -.258* | -.032 | -.050 | -.167   | -.067  | -.132 | 1     |        |       |
| (11) IEO                           | 5.04  | 1.39  | .471**  | -.206  | .178   | .119   | -.178 | .058  | .119    | .229*  | -.207 | -.052 | 1      |       |
| (12) Founding Expertise            | 2.04  | 2.03  | -.095   | .453** | .055   | -.051  | .192  | .098  | .009    | -.025  | .000  | .124  | -.075  | 1     |
| (13) International Expertise       | 11.55 | 8.97  | .271*   | -.148  | .426** | .095   | .093  | -.140 | .009    | .182   | -.185 | -.055 | .332** | -.060 |

†  $p < .1$ ; \*  $p < .05$ ; \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 5 shows the results for the hierarchical linear regression analysis with age at internationalization as the dependent variable. For each variable I report the coefficient, the standard error in parentheses and the level of significance, indicated by the asterisks. I calculated 2 models. In model 1 I only entered the control variables founder age, gender, firm age, firm size, engineering, pharmaceuticals, IT, chemistry and IEO. This model is statistically significant ( $p < .01$ ) and explains 27.8 % of variance in age at internationalization. In the next step, I added the independent variables founding expertise and international expertise (Model 2,  $p < .001$ ). This model shows a significant increase in variance explained ( $R^2 = .428$ ,  $\Delta R^2 = .15$ ,  $p < .001$ ) as compared to Model 1. With respect to the hypotheses, I find that there is a direct, negative influence of international expertise (coefficient =  $-.039$ ) on age at internationalization. Since this relationship is only marginally significant ( $p < .1$ ), it provides only weak support for Hypothesis 1a. Moreover, the results show that founding expertise has a significant, positive influence (coefficient =  $.354$ ,  $p < .001$ ) on age at internationalization. This provides support to Hypothesis 2a.

**Table 5: Hierarchical linear regression analysis explaining age at internationalization**

|                                 | Model 1         | Model 2         |
|---------------------------------|-----------------|-----------------|
| Constant                        | -.379 (1.740)   | -1.615 (1.625)  |
| <b><i>Control variables</i></b> |                 |                 |
| Founder Age                     | .013 (.031)     | .030 (.030)     |
| Gender                          | .602 (.975)     | .902 (.886)     |
| Firm Age                        | .171 (.043) *** | .146 (.039) *** |
| Firm Size                       | .002 (.014)     | -.006 (.013)    |
| Engineering                     | .493 (.678)     | .194 (.617)     |
| Pharmaceuticals                 | -.153 (.862)    | -.253 (.779)    |
| IT                              | .627 (.713)     | .411 (.647)     |
| Chemistry                       | .988 (1.206)    | .224 (1.103)    |
| IEO                             | -.168 (.155)    | -.080 (.145)    |
| <b><i>Direct effects</i></b>    |                 |                 |
| International Expertise         |                 | -.039 (.023) †  |
| Founding Expertise              |                 | .354 (.090) *** |
| <b><i>Model</i></b>             |                 |                 |
| R-squared                       | .278            | .428            |
| Change in R-squared             |                 | .150***         |

*N* = 84 internationalized entrepreneurs

†  $p < .1$ ; \*  $p < .05$ ; \*\*  $p < .01$ , \*\*\*  $p < .001$

Standard errors in parentheses

The results for the hierarchical linear regression analysis explaining degree of internationalization are displayed in Table 6. In the first model ( $p < .001$ ) only the control variables were entered ( $R^2 = .354$ ). Model 2 ( $p < .001$ ) further includes the independent variables age at internationalization, founding expertise, and international expertise. This model shows a significant increase in variance explained compared to the base line model ( $R^2 = .423$ ,  $\Delta R^2 = .069$ ,  $p < .05$ ). Model 2 shows that none of the hypothesized relationships is significant. The proposed relationships between founding expertise and degree of internationalization, and

between international expertise and degree of internationalization, are not significant according to this main effects-only model. Hence, from this model, there is no support for Hypotheses 1b and 2b. However, age at internationalization has a significant, negative influence on degree of internationalization (coefficient = -3.800,  $p < .05$ ), supporting previous research (Reuber & Fischer, 1997).

The picture changes, however, in the third model. In Model 3 ( $p < .001$ ) the interaction terms between age at internationalization and founding expertise and international expertise, respectively, were entered into the regression. This led to a significant increase in variance explained compared to Model 2 ( $R^2 = .507$ ,  $\Delta R^2 = .084$ ,  $p < .01$ ). Interestingly, as the results show, inclusion of the interaction terms led to a change in significance of the direct effects. Age at internationalization is not significant anymore; however, the expertise variables show significant influences (international expertise: coefficient = 1.175,  $p < .05$ ; founding expertise: coefficient = -5.257,  $p < .05$ ) on the degree of internationalization. The results for the two-way interactions reveal that one interaction (international expertise and age at internationalization) is significant (coefficient = -.511,  $p < .05$ ) and the other (founding expertise and age at internationalization) is marginally significant (coefficient = .608,  $p < .1$ ).



**Table 6: Hierarchical linear regression analysis explaining degree of internationalization**

|                                                          | Model 1           | Model 2           | Model 3            |
|----------------------------------------------------------|-------------------|-------------------|--------------------|
| Constant                                                 | 6.979 (22.860)    | 10.521 (22.987)   | 15.933 (21.798)    |
| <b><i>Control variables</i></b>                          |                   |                   |                    |
| Founder Age                                              | -.160 (.408)      | -.230 (.422)      | -.311 (.400)       |
| Gender                                                   | -11.517 (12.807)  | -10.479 (12.533)  | -13.143 (11.813)   |
| Firm Age                                                 | .833 (.560)       | 1.486 (.599) *    | 1.474 (.563) *     |
| Firm Size                                                | .349 (.186) †     | .380 (.182) *     | .391 (.171) *      |
| Engineering                                              | -7.253 (8.902)    | -4.449 (8.675)    | -3.317 (8.151)     |
| Pharmaceuticals                                          | -11.630 (11.326)  | -12.353 (10.948)  | -13.814 (10.297)   |
| IT                                                       | -23.477 (9.366) * | -20.357 (9.108) * | -23.362 (8.588) ** |
| Chemistry                                                | -4.513 (15.847)   | .632 (15.496)     | 4.910 (14.621)     |
| IEO                                                      | 9.207 (2.041) *** | 8.113 (2.044) *** | 8.242 (1.945) ***  |
| <b><i>Direct effects</i></b>                             |                   |                   |                    |
| Age at Internationalization                              |                   | -3.800 (1.655) *  | -.257 (2.847)      |
| International Expertise                                  |                   | .277 (.335)       | 1.175 (.459) *     |
| Founding Expertise                                       |                   | -.149 (1.392)     | -5.257 (2.243) *   |
| <b><i>Interaction effects</i></b>                        |                   |                   |                    |
| International Expertise X<br>Age at Internationalization |                   |                   | -.511 (.208) *     |
| Founding Expertise X<br>Age at Internationalization      |                   |                   | .608 (.311) †      |
| <b><i>Model</i></b>                                      |                   |                   |                    |
| R-squared                                                | .354              | .423              | .507               |
| Change in R-squared                                      |                   | .069*             | .084**             |

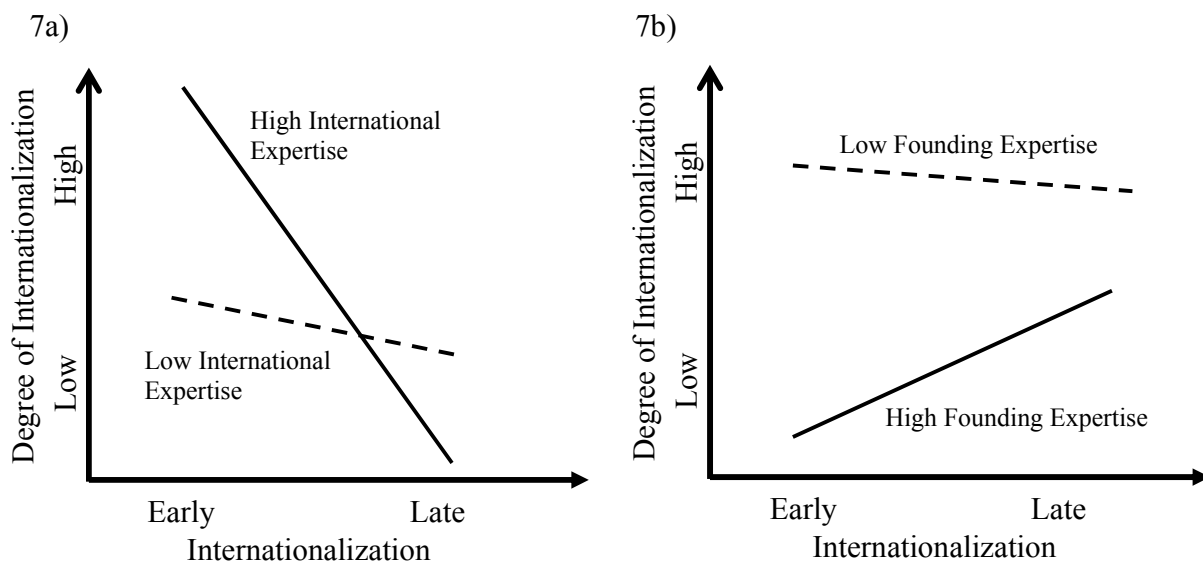
*N* = 84 internationalized entrepreneurs

† *p* < .1; \* *p* < .05; \*\* *p* < .01, \*\*\* *p* < .001

Standard errors in parentheses

To illustrate the nature of these interactions I plot them in diagrams in which the y axis represents the degree of internationalization and the x axis the age at internationalization. The graphs show separate lines for high and low levels of founding expertise and high and low levels of international expertise, respectively. Figure 7a shows that there is a positive relationship between early internationalization and venture's degree of internationalization, but this

relationship is stronger when entrepreneurs have high international expertise than when they have low international expertise. Thus, there is support for Hypothesis 3a. However, for firms that internationalize later in their life cycle the effect of international expertise on degree of internationalization is the opposite, as indicated by the overlap of the graphs. That is, degree of internationalization is higher for entrepreneurs with low international expertise than for entrepreneurs with high international expertise when venture internationalization occurs at a later age. Figure 7b shows that there is only a very small relation between age at internationalization and degree of internationalization for entrepreneurs with low founding expertise. However, for entrepreneurs with high founding expertise there is a clear positive relationship between age at internationalization and degree of internationalization. Figure 7b reveals that degree of internationalization is higher for entrepreneurs with low founding expertise than for entrepreneurs with high founding expertise and that is pattern is evident for both early and late internationalization, although it is less pronounced for later internationalization. This provides support for Hypothesis 3b.



**Figure 7: Entrepreneurs' expertise, venture age at internationalization and venture degree of internationalization**

### 3.5 Discussion

The purpose of this study was to analyze the effect of different types of entrepreneurs' expertise on central determinants of venture internationalization that is, venture age at initial foreign market entry and venture degree of internationalization. Drawing on the theory of expertise (Chi, 2006; Dane, 2010; Ericsson, 2006; Feltovich, et al., 2006; Glaser, 1984), I argued that based on the benefits and drawbacks of expertise, different kinds of entrepreneurial experience will influence venture internationalization differently. Specifically, the research model proposed that international expertise will lead to early internationalization and high internationalization degrees, while founding expertise will account for delayed venture internationalization and low degrees of internationalization. Moreover, I argued that the positive

effect of early internationalization on venture degree of internationalization will be contingent on entrepreneurs' international expertise and founding expertise. By applying hierarchical linear regression analyses I found support for the accelerating influence of international expertise and the delaying effect of founding expertise on venture internationalization. Moreover, the results provide support for the moderating effects of international and founding expertise on the relationship between age at international entry and venture degree of internationalization.

The results contribute to the literature on international entrepreneurship by investigating the role of expertise on age at initial foreign market entry. So far, studies on venture internationalization age have found that entrepreneurial teams of international new ventures are distinct from entrepreneurial teams of domestic new ventures in that they have significantly more international experience (McDougall, et al., 2003). Other studies have also found that international experience of top management teams is associated with early internationalization (Reuber & Fischer, 1997). However, research has largely ignored other types of expertise and their potential influence on speed of internationalization. This study furthers our understanding of early internationalization by examining the role of international expertise and founding expertise on venture age at initial foreign market entry. I find that international expertise accelerates and founding expertise delays venture internationalization in terms of age at initial entry. This highlights the need to consider different types of entrepreneurs' experience to understand the phenomenon of early internationalization and why some entrepreneurs internationalize early while others do not.

Moreover, the model predicted that venture degree of internationalization is affected by entrepreneurs' international expertise and founding expertise, and by the conjoint influence of age at internationalization and international and founding expertise, respectively. While the direct effects of founding and international expertise were not significant, they had significant

moderating effects on the relationship between age at and degree of internationalization. This indicates that the relationship between entrepreneurs' expertise, age at and degree of internationalization is more complex than a main effects-only model. This study's results support previous findings on the relationship between age at and degree of internationalization (Autio, et al., 2000), however, these prior studies have not explored potential contingencies of this relationship. This study examines two contingencies: entrepreneurs' international expertise and founding expertise.

First, international expertise moderates the relationship between age at internationalization and degree of internationalization. That is, higher international expertise strengthens the positive effect of early internationalization on venture degree of internationalization. Moreover, for later venture internationalization, lower international expertise leads to higher venture internationalization degrees than higher international expertise (as indicated in Figure 7a). This finding requires further elaboration. In line with previous research (Autio, et al., 2000; Reuber & Fischer, 1997) I argued that early internationalizing ventures will have higher degrees of internationalization because young firms will learn faster in international markets and will immediately build routines specific to international activities due to the absence of specific knowledge and routines developed for the domestic market. Hence, firms that internationalize later will have developed routines and knowledge specific to the home market and in this case, according to my findings, lower international expertise is conducive to degree of internationalization. A possible explanation is that entrepreneurs with international expertise might be unaware of the hurdles ventures face in international learning and routine building when they have operated on the domestic market only. Entrepreneurs with international expertise know about doing business in international markets and its distinctiveness and might not be able to put themselves in the position of employees who do not have this knowledge and are used to

domestic business operations only. As a result, an entrepreneur with international expertise might think that venture internationalization “runs by itself” and hence miss to deliberately prepare employees and organizational structure for the challenges of international business. This in turn can lead to less efficient or even unsuccessful international market penetration and thus to lower internationalization degrees.

On the other side entrepreneurs with less or no international expertise should be more aware about the challenges venture internationalization poses to established organizational structure and employees because they themselves lack knowledge and experience about doing business in international markets. Being more conscious about the challenges of internationalization entrepreneurs with less or no international expertise might engage in more deliberate venture preparation for internationalization, i.e. trainings for employees and organizational learning as well as restructuring and specific routine building. As a result, international market penetration might be more efficient leading to higher degrees of venture internationalization.

The second contingency of the relationship between age at and degree of internationalization examined in this study is entrepreneurs’ founding expertise. Results show that lower founding expertise strengthens the positive effect of early internationalization on venture degree of internationalization whereas higher founding expertise weakens this effect. Moreover, also for later internationalization I find that lower founding expertise contributes more to venture degree of internationalization than higher founding expertise; this effect, however, is less pronounced than for early internationalization. These findings show that the effect of venture age at internationalization on degree of internationalization is contingent on entrepreneurs’ expertise and hence more complex than previously thought. This contributes to our understanding of young venture internationalization and to the literature on international entrepreneurship.

Finally, this study contributes to the literature by investigating the influence of founding expertise in the context of venture internationalization. Founding experience has been found to be positively related to the likelihood of venture capital funding (Hsu, 2007) and venture profit (Bosma, et al., 2004). My study shows that in the specific case of venture internationalization, founding experience can constrain growth in that it delays the first international entry and the transformation of international market entry into international sales growth. This contributes to our knowledge on the role of founding experience in venture development and growth.

The limitations of this study provide implications for future research. First, extensive experience is a prerequisite for the development of expertise (Ericsson, 2006) and hence a widely used proxy for the measurement of expertise (cf. Goodyear, 1997; T. F. Locke & Covell, 1997). However, literature on expertise and experts proposes that expertise is not merely gained by experience, reaching a level of outstanding expertise requires deliberate practice (Ericsson, 2006; Feltovich, et al., 2006). Moreover experts are defined as constantly displaying superior performance for representative tasks of their domain of expertise (Feltovich, et al., 2006). However, in other more relative definitions “experts are defined as relative to novices on a continuum” (Chi, 2006, p. 23). This study’s operationalization of founding expertise (number of ventures (co)founded), and international expertise (years worked in a multinational company and in a foreign country) are certainly suitable to discriminate between experts and novices in the respective domains. However, it is uncertain if the study’s sample only contains true experts according to the more rigorous definitions outlined above. It is unclear if these entrepreneurs are consistently outstanding performers or if they have actually acquired this level of performance through deliberate practice. This, however, raises the question of how to measure superior performance on representative tasks in entrepreneurship and internationalization and how to measure deliberate practice in founding and internationalization activities. Thus defining and

measuring expertise in entrepreneurship is an important avenue for future entrepreneurship research.

Second, the operationalization of internationalization degree with a single item has received criticism (Sullivan, 1994). Thus, this study is also subject to this critique. Further research could measure internationalization degree with multiple items, like diversity of international markets served, diversity of entry modes used and level of integration of the activities performed in multiple countries. This could contribute to our understanding of how expertise affects internationalization degree in different respects.

Finally, in entrepreneurship research cognition has long been recognized to be central in explaining opportunity recognition and venture creation (R. A. Baron, 1998, 2004; Busenitz & Lau, 1996; Krueger, 2007; R. K. Mitchell, et al., 2007; R. K. Mitchell, et al., 2000). In international entrepreneurship research, however, the study of entrepreneurial cognition has been largely neglected. This study provides only a very first step in examining the role of cognition in international entrepreneurship more closely. It is of utmost importance to the field that future research creates more in depth knowledge of the cognitive processes that play a role in internationalization and their consequences for young venture internationalization progress. For example, future studies could make use of research in entrepreneurship and psychology to enhance our understanding of international opportunity recognition and exploitation.

To conclude, this study examined the effect of different types of entrepreneurs' expertise on central determinants of venture internationalization. Specifically, I show that international expertise accelerates and that founding expertise delays first moves into international markets. Moreover, I show that the positive effect of early internationalization on venture degree of internationalization is contingent on entrepreneurs' international expertise and founding



expertise. These results emphasize the complex role of entrepreneurs and their experience in internationalization and support a cognitive perspective on international entrepreneurship.

## **4 Perceptions of entrepreneurial passion and employees' commitment to entrepreneurial ventures<sup>3</sup>**

Drawing on theories of emotional contagion and goal setting, we propose two mechanisms as to how employees' perceptions of entrepreneurial passion influence their commitment to entrepreneurial ventures. Testing these mechanisms with data from a survey of 124 employees, we find that employees' perceptions of their supervisors' passion for inventing, founding, and developing differentially impact commitment. While perceptions of entrepreneurs' passion for inventing and developing enhance commitment, passion for founding reduces it. Employees' experiences of positive affect at work and their goal clarity mediate these effects. Our results have implications for the literature on entrepreneurial passion and leadership in entrepreneurial firms.

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<sup>3</sup> This chapter is based on Breugst, Domurath, Patzelt and Klaukien (forthcoming).

## 4.1 Introduction

Entrepreneurial passion refers to “consciously accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur” (Cardon, Wincent, et al., 2009, p. 517). Experiencing passion is typical of many successful entrepreneurs; it is the “fire of desire” that drives their daily efforts (Cardon, Wincent, et al., 2009, p. 515) and motivates them to persist in the face of obstacles (Chen, Yao, & Kotha, 2009). However, we still know relatively little about how an entrepreneur’s employees are affected by their perceptions of their supervisor’s entrepreneurial passion. As employee commitment is crucial for the success of entrepreneurial firms (J. N. Baron & Hannan, 2002), understanding how employees’ perceptions of entrepreneurial passion can influence their commitment to new ventures is an important topic for entrepreneurship research.

Since entrepreneurs and employees are in frequent and direct contact with each other in most small ventures, it is likely that entrepreneurs substantially impact employee motivation and behavior (Ensley, Hmieleski, & Pearce, 2006). However, generating and preserving employee commitment in entrepreneurial ventures is challenging since missing organizational legitimacy, the lack of financial resources for paying high salaries, and the uncertainty about the venture’s future development path often motivate employees to look for career options outside the venture (Cardon, 2003; Cardon & Stevens, 2004).

Therefore, in this study, we investigate how employees’ perceptions of entrepreneurial passion influence their commitment to entrepreneurial ventures. That is, consistent with previous research (e.g., Brundin, Patzelt, & Shepherd, 2008; Newcombe & Ashkanasy, 2002), we view entrepreneurs’ displays of passion from the employees’ perspective and focus on the employees’

perceptions of it. We draw on theories of emotional contagion (Epstude & Mussweiler, 2009; Hatfield, Cacioppo, & Rapson, 1994; Platow et al., 2005) and goal setting (Colbert & Witt, 2009; E. A. Locke & Latham, 1990; E. A. Locke, Smith, Erez, Chah, & Schaffer, 1994) and combine them with a model of entrepreneurial passion (Cardon, Wincent, et al., 2009) to propose two possible mechanisms as to how perceived entrepreneurial passion impacts employee commitment. Using survey data from 124 venture employees closely working with entrepreneurs, we find that employees' positive affect at work and the clarity of their work goals mediate the relationship between perceived entrepreneurial passion and commitment but in a different manner for different types of entrepreneurial passion. These findings inform existing literature in three important ways.

First, our study addresses Cardon's (2008) call for research on the impact of entrepreneurial passion on new venture employees. The existing literature on entrepreneurial passion has mostly focused on the entrepreneur (Cardon, Wincent, et al., 2009) and how his or her passion influences venture success (Baum & Locke, 2004) and investor decisions (Chen, et al., 2009), but only few studies have proposed that entrepreneurial passion can also impact new venture employees (Cardon, 2008). Our study is unique in that it explores this relationship empirically and acknowledges that different types of entrepreneurial passion exist (Cardon, Wincent, et al., 2009).

Second, our study is unique in proposing and empirically testing two possible non-exclusive mechanisms (mediating relationships) as to how the perception of the three types of entrepreneurial passion impacts employee commitment. We find that perceived passion can influence employees' positive affect at work and their goal clarity, which, in turn, trigger commitment. Importantly, these mechanisms explain why perceived passion for inventing and developing positively impact employee commitment, whereas perceived passion for founding has

a negative effect. Our data also suggest that the affective path is more dominant than the cognitive path (goal clarity). This supports Cardon's (2008) claim that entrepreneurial passion (and employees' perception of passion) is mainly affective in nature.

Finally, our results inform the leadership literature by showing that although leaders might display the 'same' affect, its influence on followers can differ depending on the context. Existing studies (either implicitly or explicitly) suggest that leaders' displays of positive affect is generally contagious and evokes positive affective experiences in employees at work, which, in turn, results in positive outcomes, such as organizational citizenship behavior (S. K. Johnson, 2008) or performance (George, 1995). For entrepreneurial passion, however, it appears that this argument does not apply uniformly. Specifically, our data suggest that employees' perceptions of entrepreneurs' passion for founding new ventures—the 'heart' of entrepreneurial activity—can signal that the entrepreneur might leave the current venture once it is established to found the next one, thus diminishing employee commitment to that venture. Focusing on how entrepreneurial passion influences employees also extends the literature on entrepreneurial leadership, which has focused on entrepreneurs' leadership styles (Ensley, et al., 2006; Hmieleski & Ensley, 2007) but rarely on their affective displays (Brundin, et al., 2008).

## **4.2 Theoretical background and hypotheses**

Cardon et al. (2009) distinguish three different types of entrepreneurial passion. Passion for *inventing* reflects entrepreneurs' passion for activities related to identifying, inventing, and exploring new opportunities; passion for *founding* reflects entrepreneurs' passion for activities involved in establishing a venture for commercializing and exploiting opportunities; and passion

for *developing* reflects their passion for activities related to nurturing, growing, and expanding the venture after its founding.

When engaging in activities for which they are passionate, entrepreneurs “show strong and positive emotions toward their projects” (Chen, et al., 2009, p. 203). This strong affect can be perceived by others through the passionate entrepreneur’s animated facial expression, energetic body movements, and rich body language (Chen, et al., 2009).<sup>4</sup> Although entrepreneurs’ engagement in activities for which they are passionate will arouse their positive affect (Cardon, Wincent, et al., 2009), “entrepreneurs who feel passion for their venture may also experience shorter-term emotions that vary in intensity and valence. For example, the loss of a client may yield a negative short-term emotion such as frustration, even when the entrepreneur still holds positive feelings for the venture and its future potential” (Cardon, 2008, p. 78). Hence, even if the activities for which entrepreneurs are passionate may currently be difficult or painful and, therefore, arouse short-term negative affect, passionate entrepreneurs are likely to display overall positive affect at work because “[p]assion ensures that the entrepreneur persists in the face of difficulties and keeps enthusiasm high during the pursuit” (Cardon, Zietsma, Saporito, Matherne, & Davis, 2005, p. 37).

We draw on two theoretical approaches to investigate how perceived entrepreneurial passion influences employees of entrepreneurial ventures.<sup>5</sup> First, the theory of emotional contagion (Epstude & Mussweiler, 2009; Hatfield, et al., 1994; Platow, et al., 2005) explains how an entrepreneur’s display of positive affect can trigger employees’ concordant or discordant

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<sup>4</sup>Employees may also work and interact with more than one entrepreneur when the venture is run by an entrepreneurial team. In our theory and empirical design, we refer to the entrepreneur who the focal employee interacts with most and works with closest. We expect this entrepreneur to have more impact on the employee and to explain a larger part of variance in the employee’s behavior than other entrepreneurs who are in less frequent and more distant contact with the employee (Vecchio, 2003).

<sup>5</sup>These two theoretical explanations are consistent with the Social Identity Model of Leadership (SIMOL; van Knippenberg & Hogg, 2003), which postulates that leaders who share more attitudes, goals, or values with their employees will be better able to influence employees than those who share fewer attitudes, goals, or values.

affective reactions depending on social comparison processes. Second, goal setting theory (Colbert & Witt, 2009; E. A. Locke & Latham, 1990; E. A. Locke, et al., 1994) suggests that perceptions of entrepreneurial passion can enhance employees' goal clarity; however, this impact of entrepreneurial passion depends on the extent to which employees and supervisors share goals and values (Haslam & Platow, 2001; Klein & House, 1995). Thus, we suggest two ways for how perceived entrepreneurial passion can influence employee commitment via employees' positive affect and their goal clarity. In turn, the resulting positive affect and goal clarity will influence the employees' affective commitment (Thoresen, Kaplan, Barsky, Warren, & de Chermont, 2003; Tubre & Collins, 2000) and, thus, represent possible mechanisms (mediators) as to how perceived entrepreneurial passion impacts employee commitment to entrepreneurial ventures.

It is important to emphasize that the experience of the three types of entrepreneurial passion is likely to be correlated (Cardon, Wincent, et al., 2009); thus, employees' perceptions of these passion types are likely to be correlated as well.<sup>6</sup> Our theory does not exclude this potential correlation; however, our theory postulates that the three passion types have a differential impact on employees' affective experiences and attitudes. In the following sections, we will present the reasoning for these differential impacts. The underlying research model is depicted in Figure 8.

#### *4.2.1 Perceived entrepreneurial passion and employees' positive affect at work*

According to the theory of emotional contagion, affect can be transferred in social interactions because individuals have the innate tendency to mimic another person's facial expressions. As a response to physiological feedback from muscles involved in this mimicking,

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<sup>6</sup>However, these correlations are unlikely to equal 1. For example, some entrepreneurs may be passionate for founding only, while others may be passionate for both founding and developing. Whereas the first may go on and found another venture soon after founding the first, the latter may found a second venture—if at all—only after the first one has grown to a certain size. Our model covers both possibilities.

people tend to experience the exposed affect themselves (see Hatfield, et al., 1994 for an overview). For example, when one observes others in his or her environment cheering and laughing, he or she is likely to experience positive affect as well. Importantly, however, this concordant affective transfer (i.e., transfer of the same or a similar affective experience) does not occur to the same extent under all circumstances; sometimes, there are even discordant reactions where displays of affect induce a different affective experience in others (Heider, 1958). For example, when one experiences malicious joy, he or she feels happy when others appear to suffer.

The type of reaction triggered when someone observes someone else's affect depends on social comparison processes (Epstude & Mussweiler, 2009; Platow, et al., 2005). When the sender of affect is perceived to be close to or in a similar situation as ('in the same boat') oneself, concordant affective reactions are triggered (Platow, et al., 2005; Sullins, 1991). Heider's (1958) balance theory explains this concordant reaction by proposing that people feel a strong drive to be equal with members of their group—namely, people who they perceive to be close to them and with whom they share goals and values. However, when people perceive the sender of affect to have different goals and values or not to be in the same group, they want to differentiate themselves from that person and are more likely to react with discordant affect (Epstude & Mussweiler, 2009; Heider, 1958) or no affective contagion at all (Platow, et al., 2005). We suggest that depending on the type of passion that employees perceive their supervisors to have, the display of positive affect connected to entrepreneurial passion (Cardon, 2008; Chen, et al., 2009) can trigger concordant or discordant affective reactions.

First, entrepreneurs who are passionate about inventing show positive affect while identifying and exploring new opportunities and developing new products and services. In young ventures where marketable products still have to be developed and inventing is the venture's key



activity, employees are often actively involved in the invention process (Katz, et al., 2000). Indeed, research has found that many highly skilled inventors tend to select themselves as employees into small firms (Zenger, 1994). This involvement allows them to understand this type of entrepreneur's perspective, decisions, and actions—that is, to 'put themselves in the shoes' of an entrepreneur who is passionate about inventing. These employees will vicariously experience the entrepreneur's affect through a concordant affective reaction (Epstude & Mussweiler, 2009; Platow, et al., 2005). Further, since developing new products and services is essential for the venture's future performance, employees working with these passionate entrepreneurs will perceive that it is highly important for the entrepreneurs to make the venture successful in the long run—an attitude that employees are likely to share given their interest in job and income security (Monsen, Patzelt, & Saxton, 2010). Finally, in young ventures, employees often indirectly or directly participate in the success of innovation efforts (e.g., through stock options, profit sharing, and other performance-based incentives, Cardon & Stevens, 2004), which aligns their goals with the entrepreneur's passionate inventing activities. Thus, an entrepreneur who is passionate about inventing is likely to share perspectives, attitudes, and goals with (the majority of) his or her employees, which will trigger the employees' concordant affective reaction—that is, positive affect—when they perceive higher levels of entrepreneurial passion for inventing (Epstude & Mussweiler, 2009; Platow, et al., 2005).

Second, entrepreneurs who are passionate for founding display positive affect during activities related to the creation of a new firm, such as raising capital, finding the right location, and expanding the founding team. These entrepreneurial activities are different from employees' activities in entrepreneurial ventures and usually do not involve them (Katz, et al., 2000). Thus, employees are likely to have a limited understanding of the entrepreneur's decisions and actions related to these activities (e.g., why the entrepreneur spends so much time talking to potential

investors instead of developing the venture's internal operations). Due to this limited understanding, it is likely more difficult for employees to 'put themselves into the entrepreneur's shoes,' which will limit their concordant affective reactions to the entrepreneur's displayed affect (Platow, et al., 2005). Further, employees may interpret entrepreneurs' passion for such activities in such a way that they believe once the current venture is sufficiently established (e.g., the seed capital is raised, the right location is found, the founding team is expanded), the entrepreneur will be motivated to engage in these activities again and will move on to create the next firm instead of making the current venture successful in the long run. Therefore, there appears to be a conflict between the entrepreneurs' and employees' goals and attitudes regarding the current venture's future development in this particular context. This is also likely to reduce concordant affective transfer (Platow, et al., 2005) or even lead to a discordant affective reaction (e.g., employees worry about their future when they believe that the entrepreneur will leave the firm after the start-up phase), thus resulting in employees experiencing less positive affect at work.

Third, entrepreneurs experiencing passion for developing their current venture display positive affect when engaging in activities like finding new customers, developing new markets, and optimizing organizational processes—activities that are essential for making the company successful in the long run. Employees are likely to understand the importance of these activities because—like the entrepreneur—they have a vital interest in making the company successful in the long run. This will better enable them to take the entrepreneur's perspective. Further, developing the venture often offers career opportunities for employees. For example, research found that experienced employees often choose to work for entrepreneurial firms because they value the superior career opportunities related to the growth potential of small firms (Leung, 2003). Hence, the entrepreneur's interest in growing the firm is likely to be shared by the employees. Employees' perception of higher levels of passion for developing will thus indicate to

them that they are ‘in the same boat’ with the entrepreneur. This feeling and the effect of their common goals can be further enhanced when incentive systems allow employees to participate in the venture’s future success (see above), thus intensifying the concordant transfer of positive affect (Platow, et al., 2005; Sullins, 1991). Therefore, we postulate the following:

*Hypothesis 1a: Perceived entrepreneurial passion for inventing will be positively related to employees’ positive affect at work.*

*Hypothesis 1b: Perceived entrepreneurial passion for founding will be negatively related to employees’ positive affect at work.*

*Hypothesis 1c: Perceived entrepreneurial passion for developing will be positively related to employees’ positive affect at work.*

#### *4.2.2 Perceived entrepreneurial passion and employees’ goal clarity*

Passion can facilitate the communication of entrepreneurs’ visions for their venture (Baum & Locke, 2004). Moreover, “when a particular identity is activated (say, *inventor*), we expect that the experience of passion mobilizes an entrepreneur’s self-regulation processes that are directed toward effectiveness in the pursuit of the corresponding entrepreneurial goal (here, *opportunity recognition*)” (Cardon, Wincent, et al., 2009, p. 518, emphasis in the original). These activated self-regulation processes “coordinate entrepreneurs’ cognitions and behaviors” and “aid in motivating coherent and coordinated goal pursuit” (Cardon, Wincent, et al., 2009, p. 518). Therefore, perceptions of entrepreneurial passion are likely to demonstrate to employees that entrepreneurs pursue their goals in a coherent and coordinated way. They are likely to observe the entrepreneur’s goal-oriented efforts that will illustrate the entrepreneur’s priorities to them.<sup>7</sup>

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<sup>7</sup>We acknowledge that some entrepreneurs may also be passionate and act haphazardly at the same time. However, according to Cardon, Wincent, et al., (2009), on average, passion facilitates coherent and coordinated action.

According to goal setting theory (E. A. Locke & Latham, 1990) supervisors' communication and clarification of goals helps employees better understand their tasks and the expectations with which they are confronted (Colbert & Witt, 2009). Therefore, perceptions of entrepreneurial passion can influence employees' goal clarity at work—that is, “the extent to which the outcome goals and objectives of the job are clearly stated and well defined” (Sawyer, 1992, p. 134). However, the effect of supervisors' communication of goals and visions to employees depends on the extent to which values and goals are shared by them (Haslam & Platow, 2001). When values and orientations differ, employees are likely to be “flame-resistant” (Klein & House, 1995, p. 189) to communication related to the entrepreneur's passion. Thus, it appears that perceptions of different types of entrepreneurial passion (reflecting different entrepreneurial goals and visions) impact employees' goal clarity differently.

First, entrepreneurs who are passionate for *inventing* attach high levels of importance to the identification and pursuit of new opportunities (Cardon, Wincent, et al., 2009). Through their actions, these entrepreneurs either directly or indirectly communicate to employees that inventing new products and services is crucial for them and their venture to achieve desired outcomes. This communication helps the employees understand that creativity and innovation are important goals whereas, for example, the development of routines to boost efficiency is a less important goal of their work activities. Indeed, employees in entrepreneurial ventures often appreciate the lack of routines and the innovative climate in these firms (Cardon & Tolchinsky, 2006) and will thus be particularly receptive to the visions communicated by entrepreneurs passionate about inventing. Being receptive to these visions and perhaps turning them into their own visions helps employees clarify what is expected from them (Klein & House, 1995) at the work place.

In contrast, perceived entrepreneurial passion for *founding* new ventures likely decreases employees' goal clarity. The nature of the tasks associated with founding a venture is quite

different from the tasks of new venture employees (Katz, et al., 2000). Thus, it is likely difficult for them to take the entrepreneur's perspective and understand his or her decisions and actions or the value of the activities he or she pursues (Edwards & Cable, 2009). Indeed, employees' perceptions of passion for founding may be interpreted as the entrepreneur's motivation to leave the venture and found the next one once the current venture is sufficiently established. For example, when an entrepreneur who is passionate about founding spends a substantial amount of time negotiating with investors, employees may perceive that he or she is already trying to acquire capital for the next venture and that he or she is investing less time, money, and effort into developing the current venture or is even considering leaving. In these situations, it is rather unclear to employees how important the current venture is to the entrepreneur and whether his or her primary goal is to make the venture successful or move on. Employees may perceive that there are multiple and incompatible goals (i.e., supporting the current firm vs. starting a new venture), leading to potential goal conflict (E. A. Locke, et al., 1994) and diminished goal clarity.

Finally, when passionate for *developing*, "an entrepreneur's goal pursuit is likely to be regulated for venture growth" (Cardon, Wincent, et al., 2009, p. 522). Thus, such entrepreneurs demonstrate a strong interest in their current venture and that developing this venture is a priority goal for them. For example, they might communicate a vision of a strongly growing and dynamic firm that will soon be the biggest supplier worldwide of the product offered. Development-related activities are likely to closely involve employees (Katz, et al., 2000) and are also likely to be consistent with their goals, as they offer the possibility for a successful career in the growing venture (see above, Leung, 2003). This alignment will enable the employees to put themselves in the entrepreneur's shoes and help them better understand the entrepreneur's decisions (Edwards & Cable, 2009). In turn, employees will more likely adopt the goals and visions communicated

by the entrepreneur (Haslam & Platow, 2001), thereby helping them clarify expectations and goals at work.<sup>8</sup> Therefore, we postulate the following:

*Hypothesis 2a: Perceived entrepreneurial passion for inventing will be positively related to employees' goal clarity.*

*Hypothesis 2b: Perceived entrepreneurial passion for founding will be negatively related to employees' goal clarity.*

*Hypothesis 2c: Perceived entrepreneurial passion for developing will be positively related to employees' goal clarity.*

#### *4.2.3 Indirect effects of entrepreneurial passion on employees' affective commitment*

The effects of perceived entrepreneurial passion on employees' positive affect at work and on the clarity of their work goals can impact employee commitment to the venture. That is, positive affect and goal clarity are likely to mediate the effect of perceived entrepreneurial passion on employees' affective commitment. Affective commitment is an attachment-based orientation toward one's organization (Meyer & Allen, 1991) and denotes "the relative strength of an individual's identification with and involvement in a particular organization" (Mowday, Steers, & Porter, 1979, p. 226). Studies on the individual-level antecedents of affective commitment found that, for example, an internal locus of control, high self-efficacy, and organizational tenure trigger commitment. Organizational-level factors influencing commitment include organizational support, organizational justice, and transformational leadership (see the meta-analysis by Meyer, Stanley, Herscovitch, & Topolnytsky, 2002).

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<sup>8</sup>We acknowledge that some entrepreneurs might explicitly define goals with their employees, while others might not speak about the employees' goals. Thus, even if an entrepreneur is passionate for founding, he or she may or may not clarify the employees' goals with them, and even if an entrepreneur is passionate for inventing/developing, he or she may never explicitly clarify goals. However, the increase in employees' goal clarity due to their perceptions of the entrepreneur's passion for inventing/developing and the decrease due to perceived passion for founding is rather independent from explicitly set goals (Kirkpatrick & Locke, 1996).

The affect infusion model (AIM, Forgas & George, 2001) suggests that positive affect has a direct influence on employees' work-related attitudes because it infuses their cognitive processes (Thoresen, et al., 2003). Positive affect at work signals to employees that everything is going well, that the current situation is not threatening, and that their environment is safe. Thus, employees experiencing positive affect can fully focus on the demands of the current work task and build up resources for current or upcoming challenges (Fredrickson, 2001), which they can proactively approach even if they require extra effort (Foo, et al., 2009). A meta-analysis of studies on affect and work attitudes (Thoresen, et al., 2003) supports the positive relationship between employees' experiences of positive affect at work and their affective commitment.

Second, while clear and unambiguous goals trigger employees' satisfaction (Sawyer, 1992) and work performance (Tubre & Collins, 2000), conflicting goals and unclear priorities reduce their motivation to pursue these goals (E. A. Locke, et al., 1994). Unclear work goals lose their importance for employees and reduce employees' commitment to their firm because they cannot link their effort to rewards (Tubre & Collins, 2000). In particular, in new ventures lacking established routines, clear goals and reward contingencies are crucial for attracting employees (Ensley, et al., 2006). To the extent that employees' goal clarity at work is enhanced—for example, through their perceptions of passion for inventing and developing—they become more committed to these goals and, subsequently, the venture (Maier & Brunstein, 2001). Therefore, we postulate:

*Hypothesis 3a: Perceived entrepreneurial passion for inventing will have a positive indirect effect on employees' affective commitment via positive affect at work.*

*Hypothesis 3b: Perceived entrepreneurial passion for founding will have a negative indirect effect on employees' affective commitment via positive affect at work.*

*Hypothesis 3c: Perceived entrepreneurial passion for developing will have a positive indirect effect on employees' affective commitment via positive affect at work.*

*Hypothesis 4a: Perceived entrepreneurial passion for inventing will have a positive indirect effect on employees' affective commitment via goal clarity.*

*Hypothesis 4b: Perceived entrepreneurial passion for founding will have a negative indirect effect on employees' affective commitment via goal clarity.*

*Hypothesis 4c: Perceived entrepreneurial passion for developing will have a positive indirect effect on employees' affective commitment via goal clarity.*

## **4.3 Methodology**

### *4.3.1 Data collection and sample*

Our sample frame includes employees in German ventures who report that they work closely together with the founder of their firm. In order to find these employees, we first identified 47 business incubators from the German Federal Association of Innovation, Technology, and Start-up Centers (ADT, 2010) and regional associations. Focusing on incubator ventures is advantageous because they are usually in an early development phase (Rice, 2002) and are thus likely to be small and heavily influenced by the initial founder(s). From the incubators' websites we compiled a list of the ventures located in the incubators. We excluded subsidiaries of large firms because these are most likely to be led by a salaried manager. All together our list contained 664 ventures.

For the second step, we trained two research assistants who contacted all firms by telephone, explained the purpose of our study, and asked for at least one employee who works closely together with the venture's founder to participate in the study. Of the 664 firms, we were able to contact 516 firms; the others either did not exist anymore (15) or were unavailable by



telephone (133). Further investigation revealed that most of the unavailable firms had also ceased to exist. Some (89) firms did not have any employees and were thus excluded. An additional 34 firms had to be excluded because the employees were unable to complete the questionnaire (e.g., because of insufficient knowledge of the German language). Employees from 241 firms out of the remaining 393 agreed to participate (61.3%). We sent e-mail invitations to these employees, which summarized the study's purpose and provided them with a link to our online survey (see below). If employees did not participate within ten days, we sent another e-mail that reminded them of the importance of their participation and again provided them with a link to the survey. We received responses from 124 employees from 102 ventures,<sup>9</sup> representing a 19.8% response rate in terms of firms contacted. When we compared the assessments of early (first 31 respondents of the 124) and late respondents (last 31), there were no significant differences in any of the study variables ( $p > .10$ ), indicating that non-response bias was unlikely to be a problem in our data set.

On average, the employees were 37.13 years old (standard deviation 10.42 years), and 50.8 % of them were female. In addition, 56 % had a university degree, 16 % had a high school degree, and 25 % finished vocational education. They had 11.44 years of average working experience (standard deviation 9.92 years) and had worked an average 5.18 years (standard deviation 5.14) for their current employer. Furthermore, 89 % were in daily contact with the entrepreneur, 8 % had weekly contact with him or her, and only 3 % had less frequent contact with him or her. In total, 36 % of the participants had vocational or university training in the field of business, 23 % in the field of engineering, 15 % in technology-oriented fields, 12 % in sciences, and 8 % in humanities, while 6 % of the respondents chose the 'others' category. The

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<sup>9</sup>As some participants worked for the same venture, we have a partly nested data structure. However, since the pattern of results did not change when we used only one employee per firm, we report the findings for the whole sample below.

employees' ventures were on average 9.52 years old (standard deviation 5.95) and had 11.94 employees (standard deviation 16.64). The respondents' ventures operated in the following industries: engineering (31 %); IT or software development (24 %); biotechnology, chemistry, or medicine (14 %); business consulting (4 %); and others (27 %).

#### 4.3.2 Measures

**Affective commitment.** The dependent variable of our study is employees' *affective commitment* and was measured with a nine-item scale (Mowday, Porter, & Steers, 1982) that captures affective attitudes towards the venture as a whole. An example item is "I really care about the fate of this organization." A seven-point Likert scale with the anchors "I do not agree at all" and "I completely agree" was used to record employees' commitment. The Cronbach's alpha of the scale was .92, indicating high reliability (Hair, et al., 2006).

**Perceptions of entrepreneurial passion.** To assess employees' *perceptions of the entrepreneurs' passion*, we adapted a scale on entrepreneurs' self-reported passion (Cardon, Stevens, & Gregoire, 2009) to reflect the employees' perspective. Table 7 displays the item wording. Perceptions of entrepreneurial passion were measured on seven-point Likert scales with the anchors "I do not agree at all" and "I completely agree." Each scale consists of five items, and the Cronbach's alphas were .82, .83, and .83 for passion for inventing, founding, and developing, respectively. These results indicate high reliability (Hair, et al., 2006). Since our scale is an adaptation of the scale published by Cardon et al. (2009), we used confirmatory factor analysis (CFA) to confirm the distinctiveness of the three types of perceived entrepreneurial passion. We compared a three-factor model where the three latent variables for the passion types were allowed to correlate with a one-factor model where all 15 items loaded on one latent variable. The results

indicated that the three-factor model ( $\chi^2(82) = 159.96, p < .001$ ; CFI = .92; RMSEA = .09 (90% CI: .067 - .108); SRMR = .05; PNFI = .67)<sup>10</sup> fit the data better than the one-factor model ( $\chi^2(85) = 276.88, p < .001$ ; CFI = .81; RMSEA = .14 (90% CI: .12 - .15); SRMR = .09; PNFI = .61). This indicates that the three types of entrepreneurial passion can be discriminated by employees.

**Positive affect at work.** We measured employees' *positive affect* at work with a short version of the positive affect scale from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). It consists of five items ("enthusiastic," "inspired," "attentive," "proud," and "interested") and has recently been used in entrepreneurship research (Foo, et al., 2009). The PANAS can be applied in different settings (Watson, et al., 1988) and was framed as one's "mood generally experienced at work" (cf. Lee & Allen, 2002). Positive affect was assessed on a five-point Likert scale with the anchors "not at all" and "always." The Cronbach's alpha was .84, indicating high reliability.

**Goal clarity.** To assess the extent to which employees are clear about their goals and responsibilities at work, we used a five-item scale by Sawyer (1992). Employees had to rate items like their "duties and responsibilities" or "the expected results of [their] work" on seven-point Likert scales ranging from "very unclear" to "very clear." The Cronbach's alpha of *goal clarity* was .94, indicating high reliability.

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<sup>10</sup> We acknowledge that the RMSEA is above the suggested cut-off of .6. However, it has been emphasized that the RMSEA is often too large in smaller samples (Hair, et al., 2006). Further, the other fit indices are acceptable and the comparison of the three- and the one-factor model demonstrates the superiority of the three-factor model despite the high value of the RMSEA.

**Table 7: Items of the perceived entrepreneurial passion scale (based on Cardon et al., 2009)**

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Perceived Passion for Inventing

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The entrepreneur seems to be excited to figure out new ways to solve unmet market needs that can be commercialized.

The entrepreneur seems to enjoy searching for new ideas for products/services to offer.

The entrepreneur seems to feel energized when s/he is developing product prototypes.

The entrepreneur seems to be motivated to figure out how to make existing products/services better.

The entrepreneur really seems to be excited to scan the environment for new opportunities.

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Perceived Passion for Founding

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The entrepreneur really seems to be excited to establish a new company.

The entrepreneur seems to be energized by owning his/her own company.

The entrepreneur seems to love creating a new firm.

The entrepreneur seems to be excited to create something out of nothing.

The entrepreneur seems to enjoy nurturing a new business through its emerging success.

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Perceived Passion for Developing

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The entrepreneur seems to be motivated by trying to convince others to invest in his/her business.

The entrepreneur really seems to like finding the right people to market his/her product/service to.

The entrepreneur seems to be excited by assembling the right people to work for the business.

The entrepreneur really seems to enjoy commercializing new products/services.

The entrepreneur seems to be motivated by pushing his/her employees and him/herself to make the company better.

**Control variables.** To control for age or gender effects – both correlate with individuals' commitment (Meyer, et al., 2002) – we recorded the participants' *age* and *gender* (coded as 0 for males and 1 for females). Furthermore, we controlled for the time that the participant worked together with the entrepreneur because over time, the entrepreneur's influence on the focal employee may change. This variable was labeled *time with entrepreneur* and was dummy coded in the following manner: 0 denotes that the employee and entrepreneur worked together for up to three years, and 1 denotes that they worked together for more than three years. Further, we distinguish respondents who were more likely to perform research and development tasks from respondents who were less likely to perform such tasks because passion for inventing could be particularly influential on employees in the research and development field. As a proxy for job content, we used the participants' educational background. To keep the number of variables to a manageable size and to form categories with similar sizes, we used a dichotomous variable to capture the respondents' field of education. We differentiated between respondents with education in the fields of science, technology, or engineering (coded as 1) and respondents with education in the fields of business, social sciences, or humanities (coded as 0). This variable was labeled *S&T education* (science and technology education). Finally, we also controlled for two venture characteristics. Because the importance of types of entrepreneurial passion could depend on the stage of venture development (Cardon, Wincent, et al., 2009), we included *venture age* as a control variable. Further, we controlled for the number of employees because employees' perceptions of their supervisor depend on the team size (Goldberg, Riordan, & Zhang, 2008). This variable was labeled *number employees*.

### 4.3.3 Measurement model and common method variance

Before testing our hypotheses, we ran CFAs to check the distinctiveness of the measures and to assess the impact of common method bias. First, we specified one model in which all indicators loaded on their respective latent constructs. Despite a significant  $\chi^2$ -test, the fit indices indicated an acceptable model fit,  $\chi^2 (505) = 773.41$ ;  $p < .001$ ; CFI = .91; RMSEA = .07 (90% CI: 0.056 - 0.075); SRMR = .07; PNFI = .70. All indicators loaded significantly ( $p < .001$ ) on their respective constructs (loadings ranged from .31 to .92)<sup>11</sup>. To see whether the indicators could be subsumed under one general construct, we specified another model in which all indicators loaded on one latent variable. The fit indices showed that the model fit was poor,  $\chi^2 (520) = 1441.36$ ;  $p < .001$ ; CFI = .69; RMSEA = .12 (90% CI: .113 - .127); SRMR = .11; PNFI = 0.55. Even if this indicates that there does not seem to be one strong underlying component that explains the variance in our data, we wanted to check whether common method variance had an additional influence. This is a legitimate concern when all of the variables were recorded with the help of a questionnaire, as in our case (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Thus, we specified a third model in which all indicators were allowed to load on their respective factor. Additionally, we included a latent variable that was allowed to influence all indicators and represents the common method extracted from all items (cf. Podsakoff, et al., 2003). The fit indices indicated that this model was slightly better than the model without the common method variable,  $\chi^2 (471) = 656.90$ ;  $p < .001$ ; CFI = .94; RMSEA = .06 (90% CI: 0.046 - 0.067); SRMR = .06; PNFI = .68. However, the PNFI, which takes into account a model's parsimony and hence helps compare models (Hair, et al., 2006), was

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<sup>11</sup> We acknowledge that the cutoff for acceptable loadings has been postulated to be at least .50 (Hair, et al., 2006). Therefore, as a robustness check we eliminated the three indicators with suboptimal factor loadings (one in each passion subscale) and reran our analyses. The overall pattern of results was consistent with our results; however, the indirect effect of perceived passion for inventing on commitment via positive affect (Hypothesis 3a) was not significant on a conventional level (indirect effect = .09,  $p = .12$ ).

higher for the model without the common method factor, indicating a better model fit. Further, the variance that the common method factor extracted was only 0.01 and was not significant ( $p > .20$ ). This indicates that common method variance was not a major concern in our study.

## 4.4 Results

Table 8 shows the means, standard deviations, and correlations of all of the variables. The perceived entrepreneurial passion variables are significantly correlated with affective commitment. The mediating variables—positive affect and goal clarity—are also significantly and positively correlated with affective commitment.<sup>12</sup>

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<sup>12</sup>As correlations among the passion variables are relatively high, we checked for potential multicollinearity problems by calculating variance inflation factors (VIF) for all of the models. The highest VIF was 2.55 (for perceived passion for developing), which is clearly below the critical value of 10 (Hair, et al., 2006) and indicates that multicollinearity was unlikely to be a concern in our study.

**Table 8: Means, standard deviations, reliabilities, and correlations**

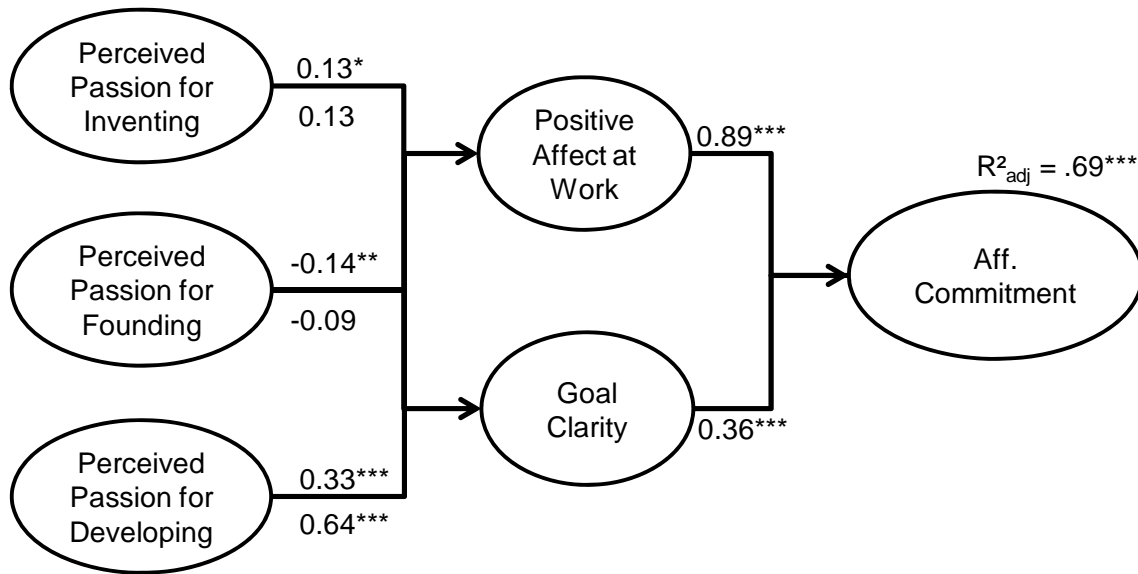
|                                      | M     | SD    | (1)    | (2)    | (3)    | (4)    | (5)    | (6)   | (7)   | (8)     | (9)   | (10) | (11)  |
|--------------------------------------|-------|-------|--------|--------|--------|--------|--------|-------|-------|---------|-------|------|-------|
| (1) Affective Commitment             | 4.84  | 1.35  | (.92)  |        |        |        |        |       |       |         |       |      |       |
| (2) Perceived Passion for Inventing  | 4.97  | 1.28  | .39*** | (.82)  |        |        |        |       |       |         |       |      |       |
| (3) Perceived Passion for Founding   | 4.58  | 1.30  | .28**  | .48*** | (.83)  |        |        |       |       |         |       |      |       |
| (4) Perceived Passion for Developing | 4.94  | 1.25  | .58*** | .46*** | .59*** | (.83)  |        |       |       |         |       |      |       |
| (5) Positive Affect at Work          | 3.78  | .68   | .75*** | .37*** | .22*   | .52*** | (.84)  |       |       |         |       |      |       |
| (6) Goal Clarity                     | 5.56  | 1.41  | .74*** | .35*** | .31*** | .60*** | .63*** | (.94) |       |         |       |      |       |
| (7) Age                              | 37.13 | 10.41 | .17    | .02    | .04    | .17    | .12    | .18*  | (-)   |         |       |      |       |
| (8) Gender                           | 0.51  | .50   | .15    | .05    | .12    | .26**  | .15    | .20*  | .24** | (-)     |       |      |       |
| (9) Time with Entrepreneur           | 0.48  | .50   | .06    | -.08   | -.04   | -.01   | .02    | .01   | .35** | -.02    | (-)   |      |       |
| (10) S&T Education                   | 0.51  | .50   | .04    | .03    | -.07   | -.05   | -.01   | .03   | .02   | -.52*** | .05   | (-)  |       |
| (11) Venture Age                     | 9.52  | 5.95  | .03    | -.15   | -.19*  | -.04   | .03    | .02   | .23** | -.03    | .26** | .08  | (-)   |
| (12) Number Employees                | 11.94 | 16.64 | -.08   | -.12   | -.13   | .03    | .00    | -.04  | .04   | -.05    | .01   | .04  | .39** |

$N = 124$  employees, \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

If applicable, reliabilities (Cronbach's alphas) are shown in the diagonal axis.



To test our hypotheses we used a macro developed by Preacher and Hayes (2008) that allows us to test our whole model, including the multiple mediators at once, and relies on bootstrapping to test the indirect effects of perceived entrepreneurial passion on commitment. This procedure does not rely on the assumption of normality for the indirect effects and can be used for rather small sample sizes (Preacher & Hayes, 2008). For example, studies using this procedure have had sample sizes of 60 (Cole, Walter, & Bruch, 2008), 124 (R. E. Johnson & Lord, 2010), and 91 (study 4 by Sullivan, Landau, & Rothschild, 2010), which is consistent with our study. We ran three analyses for each type of perceived entrepreneurial passion with the other types as covariates. Further, we entered our control variables—age, gender, time with entrepreneur, S&T education, venture age, and number of employees—as covariates but did not find any significant effects ( $p > .20$ ). Table 9 and Figure 8 display the results for the direct effects of perceived entrepreneurial passion on employees' positive affect and goal clarity. Consistent with Hypotheses 1a, 1b, and 1c, all types of perceived entrepreneurial passion show a significant positive (passion for inventing,  $b = 0.13$ ,  $p < .05$ , and developing,  $b = 0.33$ ,  $p < .001$ ) or negative (passion for founding,  $b = -0.14$ ,  $p < .05$ ) relationship with employees' positive affect at work. Contrary to Hypotheses 2a and 2b, perceived passion for inventing ( $b = 0.13$ ,  $ns$ ) and perceived passion for founding ( $b = -0.09$ ,  $ns$ ) did not have a significant influence on goal clarity. However, we found support for Hypothesis 2c, suggesting a positive relationship between perceived passion for developing and goal clarity ( $b = 0.64$ ,  $p < .001$ ).



**Figure 8: Research model and results**

$N = 124$  employees, \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Results are based on the Preacher and Hayes macro (2008)

Control variables: age, gender, time with entrepreneur, S&T education, venture age, and number employees

**Table 9: Prediction of mediating variables**

|                                  | Prediction of Positive Affect at Work              |                | Prediction of Goal Clarity                         |                |
|----------------------------------|----------------------------------------------------|----------------|----------------------------------------------------|----------------|
|                                  | Coefficient                                        | Standard Error | Coefficient                                        | Standard Error |
| Constant                         | 2.15                                               | 0.33           | 1.55                                               | 0.63           |
| Age                              | -0.00                                              | 0.01           | 0.01                                               | 0.01           |
| Gender                           | 0.04                                               | 0.14           | 0.24                                               | 0.26           |
| Time with Entrepreneur           | 0.06                                               | 0.12           | -0.04                                              | 0.23           |
| S&T Education                    | 0.06                                               | 0.13           | 0.27                                               | 0.25           |
| Venture Age                      | 0.01                                               | 0.01           | 0.01                                               | 0.02           |
| Number Employees                 | -0.00                                              | 0.00           | -0.00                                              | 0.01           |
| Perceived Passion for Inventing  | 0.13*                                              | 0.05           | 0.13                                               | 0.10           |
| Perceived Passion for Founding   | -0.14*                                             | 0.06           | -0.09                                              | 0.10           |
| Perceived Passion for Developing | 0.33***                                            | 0.06           | 0.64***                                            | 0.11           |
|                                  | $R^2_{adj} = .28$ ; $F(9,114) = 6.40$ , $p < .001$ |                | $R^2_{adj} = .39$ ; $F(9,114) = 8.04$ , $p < .001$ |                |

$N = 124$  employees, \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

We tested the significance of the indirect effects with a bias-corrected bootstrapping procedure with 10,000 bootstrap samples (Preacher & Hayes, 2008). Table 10 displays the indirect effects, their standard errors, and the 95% bias-corrected confidence intervals. First, the indirect effect of perceived passion for inventing on commitment via positive affect was positive and significant (indirect effect = 0.12, 95% CI = .00<sup>13</sup> - .25), whereas the indirect effect via goal clarity was not significant (indirect effect = 0.05, 95% CI = -.03 - .17). These findings support Hypothesis 3a but not Hypothesis 4a. Second, for perceived passion for founding, the indirect effect on commitment via positive affect was negative and significant (indirect effect = -0.13, 95% CI = -.27 - -.03), but the indirect effect via goal clarity was also not significant (indirect effect = -0.03, 95% CI = -.13 - .05). This supports Hypothesis 3b but not 4b. Third, the indirect effects of perceived passion for developing on commitment via positive affect and goal clarity were both positive and significant (indirect effect = 0.29, 95% CI = .16 - .46 and indirect effect = 0.23, 95% CI = .10 - .41, respectively). This provides support for Hypotheses 3c and 4c. Finally, both positive affect and goal clarity showed a positive and significant relationship with participants' affective commitment ( $b = 0.89$ ,  $p < .001$  and  $b = 0.36$ ,  $p < .001$ , respectively). The model is significant,  $R^2_{adj} = .69$ ,  $F(11,112) = 26.37$ ,  $p < .001$ .<sup>14</sup>

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<sup>13</sup>The lower limit of the confidence interval was 0.0037. Thus, 0 was not included in the confidence interval.

<sup>14</sup>To test the robustness of our results, we also ran a Structural Equation Model (SEM). Although our sample size is below the typical recommendations for SEM studies, we found similar patterns. The model fit was within accepted thresholds ( $\chi^2(574) = 889.84$ ;  $p < .001$ ; CFI = .90; RMSEA = .07 (90% CI: .058 - .075); SRMR = .08). However, because of the small sample size, these results have to be taken with care. Thus, we decided to report in detail only results from the Preacher and Hayes (2008) procedure, which is more accurate for small sample sizes.

**Table 10: Indirect effects of perceived entrepreneurial passion (via positive affect at work and goal clarity) on affective commitment**

|                                  | Bootstrap – Indirect Effect | SE  | Lower Limit 95% CI | Upper Limit 95% CI |
|----------------------------------|-----------------------------|-----|--------------------|--------------------|
| Inventor Passion → PA → AC       | .12*                        | .06 | .00                | .25                |
| Inventor Passion → Goal Cl → AC  | .05                         | .05 | -.03               | .17                |
| Founder Passion → PA → AC        | -.13*                       | .06 | -.27               | -.03               |
| Founder Passion → Goal Cl → AC   | -.03                        | .05 | -.13               | .05                |
| Developer Passion → PA → AC      | .29**                       | .07 | .16                | .46                |
| Developer Passion → Goal Cl → AC | .23**                       | .08 | .10                | .41                |

*N* = 124 employees, \*  $p < .05$ , \*\*  $p < .01$

CI = Confidence Interval; PA = Positive Affect at Work; Goal Cl = Goal Clarity; AC = Affective Commitment

$R^2_{adj} = .69$ ,  $F(11,112) = 26.37$ ,  $p < .001$

Confidence intervals are bias-corrected based on 10,000 bootstrap samples

Control variables: age, gender, time with entrepreneur, S&T education, venture age, and number employees

Finally, there is the possibility that the effects depend on the stage of the venture. For example, when a venture is still in its infancy and products are still in early development stages, the entrepreneur's inventor passion might be most salient. As the venture matures and enters into a period of expansion and growth, goals and visions related to growth could be communicated more clearly and be more relevant for the employees. To test whether our results depend on venture development stage, as a post-hoc analysis, we ran a model with interactions between venture age and all of the independent variables. All significant relationships in our original model (without interactions) were also significant in the interactions model with the exception of the indirect effect of passion for inventing on affective commitment via the participants' positive affect at work, which became marginally significant (indirect effect = .10,  $p < .10$ ). Further, all but one of the six possible interactions were not significant, suggesting that the impact of perceived entrepreneurial passion does not substantially depend on venture stage.<sup>15</sup>

<sup>15</sup>There is a significant negative interaction between venture stage and passion for developing in explaining employees' positive affect at work ( $b = -0.03$ ,  $p < .01$ ), indicating that this type of passion is more influential on employees of younger ventures than of older ventures. We discuss this finding in the future research section.

## 4.5 Discussion

Building on theories of emotional contagion (Epstude & Mussweiler, 2009; Hatfield, et al., 1994; Platow, et al., 2005) and goal setting (Colbert & Witt, 2009; E. A. Locke & Latham, 1990; E. A. Locke, et al., 1994), we proposed that perceptions of the entrepreneurs' passion for inventing, founding, and developing a venture can have different impacts on employees' positive affect at work and their goal clarity, thereby affecting their commitment to entrepreneurial ventures. Our data show that, first, perceived passion for *inventing* has a positive influence on employees' positive affect at work and, in turn, employees' affective commitment. Second, perceived passion for *founding* has a negative influence on employees' positive affect and an indirect influence on their affective commitment. Third, perceived passion for *developing* has a positive effect on the employees' positive affect and goal clarity and thus has an indirect positive effect on their commitment.

Interestingly, the analysis of indirect effects suggests that employees' positive affect at work is a more important mediator for the perceived passion-commitment relationship than goal clarity (which mediates only the effect of passion for developing). One reason for this finding might be that passion is mainly affective in nature (Cardon, Wincent, et al., 2009), which also likely accounts for its displays and employees' perceptions of these displays. Hence, perceptions of entrepreneurial passion will be more closely connected to employees' affect (via affective transfer) than to more rational and cognitive interpretations of passionate displays that influence goal clarity. However, perceived passion for developing has a consistent positive relationship with goal clarity, which emphasizes that the communication of goals and visions by passionate entrepreneurs can also influence employees' motivation and commitment.

Further, the coefficients for the relationships between perceived passion for developing and the employees' positive affect, as well as their goal clarity, are more than

twice as large as the coefficients for the relationships between perceived passion for inventing/founding and the mediating variables. This indicates that employees are likely to be more receptive to the entrepreneur's passion for developing than to his or her passion for inventing and founding. Perhaps employees also perceive entrepreneurs' passion for developing to be more enduring than the other types of passion because passion for developing relates to both the near and the more distant future of the venture. Future research can investigate this interesting finding and its explanations in more detail.

Existing research emphasizes that passion leads entrepreneurs to invest higher levels of energy and effort into new ventures and that entrepreneurial passion contributes to new venture success (Baum & Locke, 2004). However, this literature has neglected the importance of employees in new venture performance and the potential impact of (perceptions of) entrepreneurial passion on employees' motivation and behavior. Following Cardon's (2008) call for research on the impact of entrepreneurial passion on new venture employees, we explore this issue by focusing on how employees' perceptions of entrepreneurial passion influence their affect at work, goal clarity, and affective commitment. Supported by theories of emotional contagion and goal setting, we identified different effects for the three types of entrepreneurial passion. For passion for developing (and to a lesser extent, passion for inventing), we found that there might be a rather "indirect" path as to how entrepreneurial passion contributes to new venture success—specifically via triggering employee commitment—because employee commitment is crucial for organizational success (J. N. Baron & Hannan, 2002; Steyrer, Schiffinger, & Lang, 2008). Importantly, for passion for founding, this indirect effect might be negative. Thus, we would like to encourage future research on this issue. For example, in a mediation model, researchers could simultaneously investigate the 'direct' impact of entrepreneurial passion on new venture success and the

'indirect' path of perceived entrepreneurial passion via employee commitment in order to compare how much variance in entrepreneurial venture performance each path explains.

While research has shown that expressed affect can lead to affective reactions in the target person's surroundings (Epstude & Mussweiler, 2009), this issue has rarely been discussed in the entrepreneurship literature. This lack of discussion is surprising given that entrepreneurship is a highly emotional process (R. A. Baron, 2008), suggesting that entrepreneurs display a variety of different affects to employees. Importantly, our results indicate that it is not simply the positive affect accompanying entrepreneurial passion that spills over from entrepreneur to employee but that this process is contingent upon the goals and attitudes that are linked to the type of passion employees perceive. This finding is consistent with research showing that emotional contagion depends on social comparison processes and that concordant affective reactions depend on the ability to take the sender's perspective and on shared goals between the receiver and sender of affect (Epstude & Mussweiler, 2009; Heider, 1958).

Although leadership is a major entrepreneurial task (Hmieleski & Ensley, 2007; Vecchio, 2003), this aspect has rarely been investigated in the entrepreneurship literature so far. The few studies on the topic have typically focused on the relationship between leadership styles and organizational performance (Ensley, et al., 2006; Hmieleski & Ensley, 2007), but they have typically not investigated how leading entrepreneurs' affective displays impact employees' motivation and behavior. As an exception, Brundin et al. (2008) used an experimental design to explore the relationship between entrepreneurs' affective displays and employees' motivation to engage in entrepreneurial action. Extending this work, we show that the different types of entrepreneurial passion differentially explain employees' positive affect at work, their goal clarity, and thus their affective commitment. This important role of entrepreneurs' passionate displays is consistent with the literature on emotional leadership,

which suggests that leaders' affect can significantly impact their employees' behavior (S. K. Johnson, 2008; Lewis, 2000).

Finally, our study is subject to limitations that offer opportunities for future research. First, we relied on employees' subjective perceptions of entrepreneurs' passion and did not use more objective criteria (e.g., video recordings). Although employees' perceptions—rather than objective characteristics—influence their behavior (Newcombe & Ashkanasy, 2002), future research could assess how self-reported passion from the entrepreneur's perspective and third-person ratings of the entrepreneur's passionate displays translate into perceived passion from the employees' perspective.

Second, we postulated that perceived passion will influence employees' affect at work in addition to their goal clarity, which will, in turn, influence their affective commitment. However, it is also possible that employees who are highly committed to their organization will perceive the entrepreneur to be passionate for developing the venture but that less committed employees will perceive the entrepreneur as being passionate for founding a new firm. Thus, we cannot be sure of the causality implied by our model even if our theory supports it. Future research could longitudinally investigate these relationships and follow employees from their start in a new venture over a longer period of time.

Third, we only focus on two potential mediators in the perceived entrepreneurial passion–employee commitment relationship. However, other mediators might also play a role, and there might be mediators in the relationship between perceived passion and positive affect or goal clarity that could also be relevant. First, perceptions of passion could also trigger feelings of supervisory support and higher levels of self-efficacy in employees because passionate entrepreneurs believe (and convey this belief) that their goals can be achieved (Baum & Locke, 2004; Chen, et al., 2009). In turn, perceptions of support and self-efficacy are related to higher levels of commitment (Meyer, et al., 2002). Second, there could be



mediators in the relationships that we postulate—that is, in the relationship between perceived passion and employees’ positive affect or between perceived passion and goal clarity. For example, employees’ perceptions of passion could result in perceptions of entrepreneurs’ positive affect or in perceptions of more intensively communicated visions. These perceptions could, in turn, influence employees’ positive affect and their goal clarity.

Finally, as the types of entrepreneurial passion relate to different phases of the entrepreneurial process (Cardon, Wincent, et al., 2009), their relevance for employees could depend on the stage of the venture. Even if our results were not substantially affected by an interaction between passion type and venture age and all but one interaction in our post-hoc analysis were insignificant (see above), future research could investigate this effect. For example, perhaps the life cycle of a venture’s product is a better proxy for venture stage than venture age as was used in this study.

In conclusion, our study finds that employees’ perceptions of entrepreneurial passion impact their commitment to ventures via influencing their affect at work and their goal clarity but that these results vary for different types of passion. While passion for inventing and developing are conducive to employee commitment, passion for founding is detrimental. It appears that perceptions of entrepreneurial passion mainly impact employees via the affective path and less so via the cognitive path (goal clarity). We hope that these findings inspire further research on entrepreneurs’ affective displays and leadership and how they impact new venture employees.

## **5 Summary and avenues for future research**

This book focuses on central issues in entrepreneurial growth, that is, new venture internationalization and human resource management. Specifically, the entrepreneurs' role in these growth aspects is of main interest in this book. The three chapters investigate different research questions concerning the entrepreneurs' role in internationalization and human resource management that remained largely unexplored so far. These research questions involve entrepreneurs' decisions to internationalize and multi-level factors contributing to this decision; entrepreneurs' expertise in explaining central determinants of venture internationalization; and entrepreneurs' affect in explaining employee commitment to a venture. I employed an experimental design and questionnaire surveys to gather original data from German entrepreneurs and employees of entrepreneurial firms. The remainder of this summary part is structured as follows. First, in section 5.1 I will briefly summarize the findings and contributions of the three chapters of this book. In section 5.2 I will delineate avenues for future research based on the findings of the presented empirical studies and remaining questions in the entrepreneurial growth literature.

### **5.1 Empirical findings and contributions**

Chapters 2, 3, and 4 constitute the empirical studies presented in this book. First, Chapter 2 presents a multi-level model towards entrepreneurs' intentions to internationalize. Studies on new venture internationalization have identified a number of factors that can facilitate or trigger early internationalization (Rialp, et al., 2005). A central factor repeatedly identified as crucial to young venture internationalization is the personal network of entrepreneurs (Coviello & Munro, 1997; Oviatt & McDougall, 2005). The network contacts influence venture internationalization by providing different resources to the entrepreneurs

(Oviatt & McDougall, 2005). Most important for entrepreneurs' intentions to internationalize is that network partners provide information on foreign markets (Sharma & Blomstermo, 2003). However, while previous research has identified entrepreneurs' networks providing information as a central factor explaining early internationalization (e.g., Coviello & Munro, 1995, 1997; Oviatt & McDougall, 2005), it has largely been neglected that networks can differ in their characteristics and that these differences might affect information provision. Chapter 2 acknowledges variance in entrepreneurs' networks in terms of network size, contact heterogeneity, tie strength and communication frequency. Results show that entrepreneurs' likelihood to internationalize early increases with larger networks, more heterogeneous network contacts, stronger ties to network partners and more frequent communication with network contacts. Moreover, it has been proposed that individuals and organizations usage and reliance on networks providing information differs. That is, some organizations and individuals will capitalize more on a network providing information. Results indicate that perceived venture absorptive capacity (venture level) and generalized trust in others (entrepreneurial level) moderate the relationships between network characteristics and the decision to internationalize. Specifically the results show that the relation between network parameters and the decision to internationalize is strengthened when venture absorptive capacity is perceived to be high and when entrepreneurs' level of generalized trust in others is high.

While it is known that personal networks of entrepreneurs can trigger internationalization decisions, this study contributes to the literature in exploring how variance in network configurations impacts entrepreneurs' decisions to internationalize. Even more importantly, our study explores potential contingencies that might, partly, determine the impact of networks on early internationalization decisions. This study makes a contribution in investigating how entrepreneurs' perceptions of venture absorptive capacity and their

generalized trust in others moderate the relationships between network characteristics and entrepreneurs' propensity to internationalize. Finally, the results contribute to our understanding of the role of networks in early internationalization in showing that the influence of networks is complex and that understanding this influence requires conjoint consideration of network-level, organizational-level and individual-level characteristics.

In Chapter 3 I introduce a model linking entrepreneurs' expertise, venture age at international entry, and a venture's degree of internationalization. Studies on young venture internationalization have repeatedly proposed that the entrepreneur, specifically the entrepreneurs' information processing and decision making capabilities, are central to explaining early internationalization (Bell, et al., 2003; Oviatt & McDougall, 2005). However, only few studies have tried to examine individual level characteristics of the entrepreneur. Most frequently, entrepreneurs' international experience has been used to explain differences in venture internationalization behavior (McDougall, et al., 2003; Reuber & Fischer, 1997). Other types of experience, however, have been largely ignored. Chapter 2 extends existing knowledge by investigating the influence of international and founding expertise on venture age at internationalization. Results show that international expertise is associated with early venture internationalization, while founding expertise is associated with internationalization at a later age. Moreover, in examining the influence of international and founding expertise on venture degree of internationalization Chapter 2 provides new insights. While international expertise and founding expertise do not have direct effects on venture degree of internationalization, they have moderating effects on the relationship between age at internationalization and degree of internationalization. High international expertise strengthens the positive effect of early internationalization on the venture's degree of internationalization, while high founding expertise weakens this effect.

These results contribute to our knowledge on venture internationalization in examining what personal characteristics of entrepreneurs contribute to early internationalization, and illustrate the differential impact of different types of experience on the internationalization decision. Moreover, this study addresses the effect of expertise on venture degree of internationalization and the moderating effect of founding expertise and international expertise on the age at internationalization-degree of internationalization relationship. The findings contribute to the literature in showing that the effect of entrepreneurs' international and founding expertise on internationalization is more complex than a main effects-only model would suggest, and that understanding venture degree of internationalization requires conjoint consideration of entrepreneurs' expertise and venture age at internationalization.

Finally, Chapter 4 provides insights into human resource management issues in small ventures. Human resources are critical to growth and success of young ventures (Aldrich & Langton, 1997; R. L. Heneman, et al., 2000; Williamson, 2000). Especially, employee commitment to a venture is central to success (J. N. Baron & Hannan, 2002). However, what factors might contribute to employee commitment is underexplored in entrepreneurship research. Since in small ventures entrepreneurs and employees are usually in frequent contact (cf. Vecchio, 2003), the entrepreneur might have a considerable influence on employee commitment. Chapter 4 presents a model towards employee commitment to entrepreneurial ventures. Specifically, the impact of employees' perceived passion of the entrepreneur on their commitment to the venture is investigated. Results show that different kinds of entrepreneurial passion influence employees' commitment differently. That is, perceptions of entrepreneurs' passion for inventing and developing enhance commitment while perceived passion for founding has the opposite effect. The model reveals that the effect of perceived entrepreneurial passion on employee commitment is mediated by employees' experiences of positive affect at work and their goal clarity. Moreover, it appears that perceptions of

entrepreneurial passion mainly impact employees via the affective path and less so via the cognitive path (goal clarity).

While existing literature on entrepreneurial passion has mainly focused on the entrepreneur (Cardon, Wincent, et al., 2009), this study explores the impact of entrepreneurial passion on new venture employees while acknowledging the different types of entrepreneurial passion (Cardon, Wincent, et al., 2009). Moreover, the study contributes to the literature by proposing and empirically testing mediating relationships and in showing the affective path is more dominant than the cognitive path (goal clarity). Furthermore, this study contributes to the leadership literature in showing that although leaders might display the ‘same’ affect, its influence on followers can differ depending on the context. The results reveal that different kinds of entrepreneurial passion have different effects on employee commitment. Finally, this study emphasizes the complex influence of entrepreneurs’ displayed passion on employee commitment and highlights the multifaceted role of entrepreneurs affects in leadership and young venture human resources management.

## **5.2 Avenues for future research**

In the introduction I highlighted the importance of entrepreneurship for economic growth. By identifying and exploiting opportunities entrepreneurs create growth in different respects like export growth and employment growth (Audretsch, 2003). Explaining how entrepreneurs recognize and enact opportunities to create growth has received large interest in entrepreneurship research and led to a substantial body of literature on entrepreneurial cognition and decision making. For example, research has provided some answers as to how entrepreneurs’ cognitive scripts influence opportunity recognition (R. A. Baron, 2006) and venture creation decisions (R. K. Mitchell, et al., 2000). Moreover, cognitive mechanisms

influencing entrepreneurial intentions (Krueger, et al., 2000) as well as biases in decision making under uncertainty (R. A. Baron, 1998; Busenitz & Barney, 1997) have been explored. Furthermore, the role of affects in the entrepreneurial process has received attention (R. A. Baron, 2008). Studies have examined the role of affect in entrepreneurs' venture effort (Foo, et al., 2009) and opportunity evaluation (Foo, 2011) as well as the role of passion in the entrepreneurial process (Cardon, 2008; Cardon, Wincent, et al., 2009). Hence, a large body of literature examines entrepreneurs' cognitions and affects which emphasizes the salient role of the entrepreneur in understanding new venture creation.

However, the role of the entrepreneur in certain growth related aspects of the entrepreneurial process has yet to be explored. Specifically, the role of entrepreneurs in young venture internationalization and human resource management has been insufficiently investigated. This book provides some answers to the remaining questions. Each chapter also presents its own suggestions for future research in the respective areas of research. However, there are further implications for future research which might help addressing some remaining research gaps. I will conclude this book by outlining avenues for further research on entrepreneurship and growth.

First, while research on entrepreneurial cognition and decision making has created many insights on opportunity recognition and venture creation decisions, in certain growth related aspects the entrepreneur remains to be a black box. For example, in international entrepreneurship research questions concerning the entrepreneurs' influence on strategies and progress of young venture internationalization remain unanswered. For instance, how entrepreneurial cognition and decision making influence foreign market selection and entry mode choice has not been studied so far. Moreover, venture internationalization is not limited to the sale of products and services abroad. Other parts of the value chain, like R&D, sourcing and production, can also be internationalized. These internationalization strategies have not

received much attention in international entrepreneurship research. Hence, existing research has mainly focused on one particular type of international entrepreneurs, that is, the entrepreneur aiming to generate foreign sales. However, entrepreneurs might also focus on R&D, sourcing or production in their international activities.

Second, as ventures grow they most likely undergo changes to their organizational structure. However, entrepreneurship research has created little insights on how entrepreneurs encounter challenges of organizational change during venture growth. For example, successful venture internationalization necessitates effective routines and organizational structures especially when several foreign markets are served with services or products, and when several value chain activities are performed in foreign countries. How entrepreneurs build organizational structures to integrate value chain activities across multiple foreign markets, to differentiate products and services to effectively serve target customers in multiple countries, to ensure learning and innovation across multiple markets – hence how entrepreneurs build a multinational or even global organization – is a remaining gap in international entrepreneurship research.

Third, these questions further involve unexplored issues of human resource management. For example, an entrepreneur seeking venture internationalization might experience problems in finding and attracting employees who have skills and knowledge necessary for international business. How can a venture find and attract these employees? Moreover, doing business in multiple foreign markets might also involve having employees in widespread foreign markets and with diverging cultural values and imprints. This causes challenges for the entrepreneur with regard to culturally appropriate leadership styles as well as coordinating international teams working on joint projects across countries. How entrepreneurs handle these problems of international human resource management presents an important avenue for future research.



Fourth, while this book focused on central aspects of young venture growth, relations to venture performance could not be drawn. However, investigating the relationship between certain growth strategies and young venture performance is an important avenue for future research. For example, research on international entrepreneurship has underexplored the relationship between the diversity of international markets served, the diversity of entry modes used, and venture performance. Moreover, the relationship between the number of value chain activities internationalized and venture performance has received little interest in research. Furthermore, human resource management strategies and venture performance have been insufficiently linked. For example, we know little about how entrepreneurs design employee recruitment strategies, employee training possibilities, and compensation plans, and how these strategies influence performance measures. Hence, exploring the relationship between strategies which are associated with venture growth and actual venture performance is central to further our knowledge on entrepreneurship.

Finally, as venture growth occurs over time entrepreneurship research could create further insightful results by taking a dynamic perspective and following venture development over an extended period of time. Longitudinal data will provide additional knowledge on the research gaps outlined above. For example, how ventures undergo changes and adaptations in organizational structures might be most insightful when studied on a long-term basis. Moreover, the relationship between venture strategies and performance will also be most enlightening when explored over time as strategy implementation might show its impact only after some time. Hence, gathering longitudinal data is a vital path to understand central aspects of entrepreneurship and growth.

In conclusion, despite the contributions of existing research and this book's empirical studies, the discussion above suggests that there are many questions on entrepreneurial growth that remain to be answered. Taking into account entrepreneurial decision making,

cognition and affects has been shown to be of utmost importance to understand venture creation and growth, as demonstrated in this book. However, the role of the entrepreneur in certain venture growth aspects has not been fully researched yet. Many avenues for future research lie ahead which can provide important insights and fill research gaps that are restraining scholars from gaining a more complete picture of entrepreneurial growth.

## Appendix

Description of general decision situation, attribute description, and example scenario of study in Chapter 2

### ANLEITUNG

Als Entscheidungsträger einer jungen Firma werden Sie gebeten, eine Anzahl **hypothetischer Situationen** zu beurteilen und einzuschätzen, mit welcher Wahrscheinlichkeit Sie in der jeweiligen Situation internationalisieren würden. Als Internationalisierung wird dabei der Absatz eines Produktes/mehrerer Produkte oder Dienstleistungen in einem Auslandsmarkt verstanden.

#### Beschreibung der hypothetischen Szenarien

Gehen Sie bitte, vor dem Hintergrund Ihrer bisherigen unternehmerischen Erfahrung, davon aus, dass Sie der Gründer und Entscheidungsträger eines jungen (**bis zu 6 Jahre alten**) Unternehmens sind. Kürzlich haben Sie erkannt, dass Ihre Produkte/Dienstleistungen internationales Absatzpotential haben und einen potentiellen Auslandsmarkt identifiziert.

Um eine Entscheidung zu treffen, ob Sie konkrete Schritte zur Internationalisierung in diesen Markt einleiten sollen (z.B. Suche nach Vertriebspartnern), nutzen Sie Ihr Kontaktnetzwerk zur **Gewinnung von Informationen über den Auslandsmarkt**. Als Kontaktnetzwerk werden alle ihre Kontakte zu **relevanten Personen im Auslandsmarkt** verstanden. Im Folgenden werden die Eigenschaften Ihres Kontaktnetzwerkes und die Fähigkeit zur Informationsaufnahme und -nutzung innerhalb Ihrer Firma anhand von fünf Parametern beschrieben, die auf der nächsten Seite definiert sind. Jeder Parameter wird durch zwei Ausprägungen beschrieben.

#### Ihre Aufgabe

Bitte beurteilen Sie jedes Szenario indem Sie die Nummer ankreuzen, die Ihrer Einschätzung am nächsten kommt. Auf der nachfolgenden Beispielskala ist die 2 angekreuzt, um zu zeigen, dass Sie wahrscheinlich nicht internationalisieren werden, aber Sie die Möglichkeit nicht komplett ausgeschlossen haben.

|                                                         |   |                                     |   |   |   |   |   |                                                 |
|---------------------------------------------------------|---|-------------------------------------|---|---|---|---|---|-------------------------------------------------|
| <b>NEIN,</b><br>definitiv nicht<br>internationalisieren | 1 | <input checked="" type="checkbox"/> | 3 | 4 | 5 | 6 | 7 | <b>JA,</b><br>definitiv<br>internationalisieren |
|---------------------------------------------------------|---|-------------------------------------|---|---|---|---|---|-------------------------------------------------|

Bitte treffen Sie Ihre Einschätzungen bestmöglich basierend auf den zur Verfügung stehenden Information und nehmen Sie an, dass alle anderen potentiellen Entscheidungsparameter und Umwelteinflüsse für alle hypothetischen Szenarien konstant sind. Bitte nehmen Sie an, dass Sie im heutigen wirtschaftlichen Umfeld in Deutschland handeln und die Produkte und Dienstleistungen des Unternehmens den Produkten und Dienstleistungen ihres eigenen Unternehmens ähnlich sind.

Nach den Szenariobeurteilungen werden Sie gebeten, einige zusätzliche Fragen zu beantworten. Ihre Antworten werden uns helfen, Ihre Beurteilungen besser zu verstehen und werden vertraulich behandelt.

## BESCHREIBUNG DER PARAMETER

| Parameter                                              | Ausprägung      | Beschreibung                                                                                                                                                           |
|--------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Netzwerkgröße</b>                                   | <b>Groß</b>     | Ihr Kontaktnetzwerk besteht aus <i>vielen</i> relevanten Personen im Auslandsmarkt.                                                                                    |
|                                                        | <b>Klein</b>    | Ihr Kontaktnetzwerk besteht aus <i>wenigen</i> relevanten Personen im Auslandsmarkt.                                                                                   |
| <b>Heterogenität der Kontakte</b>                      | <b>Hoch</b>     | Ihre relevanten Kontakte im Auslandsmarkt unterscheiden sich <i>wesentlich</i> hinsichtlich ihrer beruflichen Qualifikationen, Tätigkeitsfelder und Erfahrungen.       |
|                                                        | <b>Gering</b>   | Ihre relevanten Kontakte im Auslandsmarkt unterscheiden sich nur <i>wenig</i> hinsichtlich ihrer beruflichen Qualifikationen, Tätigkeitsfelder und Erfahrungen.        |
| <b>Bindungsstärke</b>                                  | <b>Stark</b>    | Zu Ihren relevanten Kontakten im Auslandsmarkt bestehen vorwiegend <i>starke Bindungen</i> . Diese basieren in hohem Maße auf Vertrauen, Gefühlen und Gegenseitigkeit. |
|                                                        | <b>Schwach</b>  | Zu Ihren relevanten Kontakten im Auslandsmarkt bestehen vorwiegend <i>schwache Bindungen</i> . Diese basieren kaum auf Vertrauen, Gefühlen und Gegenseitigkeit.        |
| <b>Kommunikation</b>                                   | <b>Häufig</b>   | Sie sprechen <i>häufig</i> mit Ihren relevanten Kontakten im Auslandsmarkt.                                                                                            |
|                                                        | <b>Selten</b>   | Sie sprechen nur <i>selten</i> mit Ihren relevanten Kontakten im Auslandsmarkt.                                                                                        |
| <b>Fähigkeit zur Informationsaufnahme und -nutzung</b> | <b>Sehr gut</b> | Die Fähigkeit den Wert neuer, externer Informationen zu erkennen, diese aufzunehmen und zu nutzen ist bei Ihrem Unternehmen <i>sehr gut</i> ausgeprägt.                |
|                                                        | <b>Begrenzt</b> | Die Fähigkeit den Wert neuer, externer Informationen zu erkennen, diese aufzunehmen und zu nutzen ist bei Ihrem Unternehmen nur <i>begrenzt</i> ausgeprägt.            |

Bitte betrachten Sie jede der folgenden Beschreibungen als eigenständige Situation unabhängig von allen anderen. Bitte blättern Sie **nicht** zu bereits beurteilten Situationen zurück.

**Situation 1: dxo**

|                                                    |                 |                                                                                                                                                        |
|----------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Netzwerkgröße                                   | <b>Groß</b>     | <b>Viele</b> Kontakte zu relevanten Personen im Auslandsmarkt.                                                                                         |
| 2. Heterogenität der Kontakte                      | <b>Gering</b>   | Relevante Kontakte im Auslandsmarkt unterscheiden sich nur <b>wenig</b> bezüglich ihrer beruflichen Qualifikationen, Tätigkeitsfelder und Erfahrungen. |
| 3. Bindungsstärke                                  | <b>Stark</b>    | Bindungen zu relevanten Kontakten im Auslandsmarkt basieren in <b>hohem Maße</b> auf Vertrauen, Gefühlen und Gegenseitigkeit.                          |
| 4. Kommunikation                                   | <b>Selten</b>   | <b>Seltene</b> Kommunikation mit relevanten Kontakten im Auslandsmarkt.                                                                                |
| 5. Fähigkeit zur Informationsaufnahme und -nutzung | <b>Sehr gut</b> | Fähigkeit des Unternehmens den Wert neuer, externer Informationen zu erkennen, diese aufzunehmen und zu nutzen ist <b>sehr gut</b> ausgeprägt.         |

**Beurteilung**

Basierend auf obiger Beschreibung der Situation, wie schätzen Sie Ihr Interesse ein, konkrete Schritte zur Internationalisierung einzuleiten?

Bitte kreuzen Sie Ihre Antwort auf nachfolgender Skala an.

|                                                         |   |   |   |   |   |   |   |                                                 |
|---------------------------------------------------------|---|---|---|---|---|---|---|-------------------------------------------------|
| <b>NEIN,</b><br>definitiv nicht<br>internationalisieren | 1 | 2 | 3 | 4 | 5 | 6 | 7 | <b>JA,</b><br>definitiv<br>internationalisieren |
|---------------------------------------------------------|---|---|---|---|---|---|---|-------------------------------------------------|

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## Eidesstattliche Erklärung

Ich erkläre an Eides statt, dass ich die der Fakultät für Wirtschaftswissenschaften der Technischen Universität München zur Promotionsprüfung vorgelegte Arbeit mit dem Titel:

Growth of entrepreneurial ventures –

Issues in venture internationalization and human resource management

am Lehrstuhl für Betriebswirtschaftslehre – Entrepreneurship unter der Anleitung und Betreuung durch Prof. Dr. Dr. Patzelt ohne sonstige Hilfe erstellt und bei der Abfassung nur die gemäß § 6 Abs. 5 angegebenen Hilfsmittel benutzt habe.

- Ich habe die Dissertation in dieser oder ähnlicher Form in keinem anderen Prüfungsverfahren als Prüfungsleistung vorgelegt.
- Die vollständige Dissertation wurde nicht veröffentlicht.
- Ich habe den angestrebten Doktorgrad noch nicht erworben und bin nicht in einem früheren Promotionsverfahren für den angestrebten Doktorgrad endgültig gescheitert.
- Die Promotionsordnung der Technischen Universität München ist mir bekannt.

München, den 26. Oktober 2011

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Anne Domurath