



Faculty of Economics and Business Administration

Department of Accounting and Corporate Finance

THE PRE- AND POST-INVESTMENT RELATIONSHIP BETWEEN ANGEL INVESTORS AND ENTREPRENEURS: THE SCOPE AND IMPACT OF INFORMATION PROBLEMS AND CONFLICTS

VERONIEK COLLEWAERT

**Supervisor: Prof. dr. ir. SOPHIE MANIGART
Co-supervisor: Prof. dr. BART CLARYSSE**

Submitted to the Faculty of Economics and Business Administration at Ghent University in the
Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Applied Economics

May 2009

Funded by the Fund for Scientific Research – Flanders (Fonds voor Wetenschappelijk Onderzoek),
Brussels, Belgium

PhD Series – Ghent University, May 2009
Faculty of Economics and Business Administration
<http://www.feb.ugent.be>
© 2009, Veroniek Collewaert

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the author.

DOCTORAL JURY

Prof. dr. M. De Clercq (Ghent University, Dean)

Prof. dr. P. Van Kenhove (Ghent University, Academic Secretary)

Prof. dr. ir. S. Manigart (Ghent University and Vlerick Leuven Gent Management School, supervisor)

Prof. dr. B. Clarysse (Ghent University and Imperial College, UK, co-supervisor)

Prof. dr. I. De Beelde (Ghent University)

Prof. dr. P. Hinds (Stanford University, USA)

Prof. dr. A. Parhankangas (New Jersey Institute of Technology, USA)

Prof. dr. J. Sohl (University of New Hampshire, USA)

ACKNOWLEDGEMENTS

The acknowledgement section of my Ph.D. dissertation...I always imagined that writing this part would be the ultimate and final reward of 4 years of Ph.D. adventure. Now the time has come to do so, I am fulfilled with a feeling of joy, relief and excitement about what the future might bring. Before embarking on an entirely new adventure though, I would like to thank the people who have helped me reach the end of this one, directly or indirectly, consciously or unconsciously, willingly or unwillingly.

First of all, I would like to thank prof. Sophie Manigart, my supervisor. Sophie, thank you for giving me the opportunity to become a part of our little corporate finance ‘gang’, for letting me explore and chase my own particular (and not always so finance-related) research interests, for being open-minded when I tried to convince you that conflicts in the financial world matter, for being the devil’s advocate, for stimulating me to go abroad and for having created an environment where having your own ideas is seen as an asset instead of a threat.

Secondly, I would also like to thank the other members of my examination committee, prof. Bart Clarysse, prof. Ignace De Beelde, prof. Pamela Hinds, prof. Annaleena Parhankangas and prof. Jeffrey Sohl. Bart, thank you for having taken me out of my little finance cocoon and showing me that there is so much more to learn and explore besides contracts and financial ratios. Ignace, being our department head, thank you for having created such a stimulating environment and for providing a listening ear when needed. Pam, thank you for letting me take your class at Stanford (although the classes were invigorating, I can’t help but also still think of that – to use a truly Californian word - awesome brunch at the Faculty Club), for making me better understand the world of teams and groups (which I now know are not necessarily the same ☺) and for having taken the time to provide me with feedback and helpful and extremely valuable suggestions. Annaleena, I am deeply indebted to you for having contributed so much in shaping my

research. From the very start, when doing something on conflicts between investors and entrepreneurs was still a vague idea, you were there to bring an alternative lens and provide structure in the chaos. That week in Helsinki provided me with the breath of fresh air I needed to continue my search for the new angle in conflict research. Finally, Jeff, without you I probably would never have heard about angel investing in the first place. I still remember reading my very first article about informal venture capitalists and thinking to myself “what’s the difference?”. Your papers made me intrigued in this world where a lot of researchers fear to tread, but still so much remains to be done. I feel honored to have been able to benefit from your expertise.

I would like to thank my colleagues and friends, two categories which have come to overlap over the years. I need to start by thanking two people in particular, one who would probably rather have read his/her name somewhere in between twelve others and one who will be happy to see that I did not forget about him/her (I’ll leave it up to you to guess who’s who ☺). Dear Elisabeth and Tom, we started out as office mates and ended up as best friends...who could have guessed! Tom (aka Little Bart or Statler), over the years I’ve learned so many things about you, including but not limited to your sense of geographical orientation, your trip planning/booking skills, your alcohol limit, your love for everything that is British, but also your heart of gold, compassion, intelligence and wisdom. Elisabeth, we’re so much alike, yet so different, which is exactly what makes us the good friends that we are. At times, both our mouths could be classified as weapons of mass destruction, yet only we know the real, caring person underneath (or at least that’s what we tell other people ☺). Although we have plenty of inspiration already for that soap opera of ours, I’m also convinced that there will be plenty more to come! I truly feel honored to have both of you in my life, so really, thank you both for being there! I would also like to thank all my other (former and current) colleagues for the shared laughter and advice (in order of appearance ☺): CB, Sofie, Wouter, Dries, Nick, Katleen, Miguel, Christophe, Lotte, Sofie, Hannes, David, Andy, Arnout, Bivas and Pieterjan.

I would also like to thank everyone who contributed to making my stay at Stanford the incredible experience it turned out to be. Thanks to Prof. Foster for allowing me to spend a year at one of the most amazing institutions of the world and to prof. Barnett and prof. Peterson for taking me under their wings. Although invaluable in many ways, it wouldn't have been the same without those few very special friends I made along the way. Thank you Arne, Ludwig, Carsten, Jenny, Nora, Geerte, Claes, Dawn, Olaf, Nuno, Marc, Georg, Binia, Dominique and Nicholas for making this a truly legendary, awesome experience! Special thanks to Arne and Carsten, my two princes, for having made me a second Californian home at your castle (and sharing mojitos with me at Nola's ☺), to Ludwig, "de ruwe bolster" ☺, for always providing relief for my sarcastic side and to Jenny, for being my female partner in crime: you'll always have a special place in my heart!

Further I also want to thank all my friends who have been there for me over the years. There really are only two words that can perfectly describe what you are undoubtedly all thinking: AT LAST! ☺ Thank you all for having listened to my ideas and problems, for making me relax when I was stressed and for having supported me throughout this journey. Thank you (in order of appearance) Karla, Karolien, Maxim, Sandy, Wouter, Matthieu, Nathalie, Alexandra, Kristof, Jeroen, Kathleen, Julie and Veerle.

Finally, I would also like to thank my parents for their support and belief in me. Mama, you've been the always-present emotional force behind me. The "mommy cards" and surprise boxes last year warmed my heart over and over again. Papa, it is your drive and ambition that have brought me to the place I'm at today. Thank you both for always having been there for me.

Veroniek Collewaert

May, 2009

Table of Contents

Chapter 1: Introduction

1.1	Setting the landscape: Angel financing.....	1
1.2	State of the angel financing literature.....	2
1.3	Pre-investment problems between angel investors and entrepreneurs.....	3
1.4	Post-investment problems between angel investors and entrepreneurs.....	5
1.5	Overview of dissertation papers.....	8
1.5.1	Assessment of government funding of Business Angel Networks in Flanders.....	8
1.5.2	Conflict between angel investors and entrepreneurs: Perception, reality and impact on innovation.....	11
1.5.3	Angel investors and entrepreneurs: Do they live happily ever after?.....	13
1.6	References.....	16
Chapter 2: An assessment of Government Funding of Business Angel Networks in Flanders.....		23
2.1	Introduction.....	24
2.2	Government intervention in the informal risk capital market.....	25
2.3	Regional approach to informal risk capital: Business Angel Networks.....	27
2.4	How to evaluate government programmes?.....	30
2.5	Method.....	31
2.5.1	Research Method.....	31
2.5.2	Sample description.....	34
2.6	Results.....	35
2.6.1	Market failure: Financing and information problems.....	35
2.6.2	Market failure: Value creation.....	38
2.6.3	Contribution to economic development.....	39
2.6.4	Indirect effects.....	41

2.7 Discussion.....	43
2.8 References.....	46
Chapter 3: Conflict between angel investors and entrepreneurs: Perception, reality and impact on innovation.....	51
3.1 Introduction.....	52
3.2 Angel investors and entrepreneurs as a team.....	55
3.3 Theory and hypotheses.....	56
3.3.1 Perceived conflict and innovation.....	56
3.3.2 Actual conflict and innovation.....	58
3.4 Method.....	61
3.4.1 Data collection.....	61
3.4.2 Measures.....	63
3.4.3 Scale validation and data aggregation.....	65
3.5 Results.....	65
3.5.1 Sample description.....	65
3.5.2 Main analyses.....	66
3.5.3 Robustness checks.....	70
3.6 Discussion.....	72
3.7 Limitations, future research and implications.....	75
3.8 References.....	77
3.9 Appendix A.....	84
Chapter 4: Angel investors and entrepreneurs: Do they live happily ever after?.....	85
4.1 Introduction.....	86
4.2 Angel investors and entrepreneurs as a team.....	89
4.3 Theory and hypotheses.....	90
4.3.1 Differences between angel investors and entrepreneurs in intent to remain.....	90

4.3.2	Perceived conflict and intent to remain.....	91
4.3.3	Actual conflict and intent to remain.....	93
4.4.	Method.....	95
4.4.1	Data collection.....	95
4.4.2	Dependent and independent variable measures.....	97
4.4.3	Control variable measures.....	99
4.5	Results.....	100
4.6	Discussion.....	105
4.7	Limitations, future research and implications.....	108
4.8	References.....	110
4.9	Appendices.....	117
Chapter 5:	Conclusion.....	119
5.1	Main findings.....	119
5.2	Academic contributions.....	123
5.3	Practical implications.....	127
5.4	Limitations and avenues for future research.....	129
5.5	References.....	136
Summary in Dutch (Nederlandstalige samenvatting).....		141

List of Tables

Table 2.1: Test of the market failure argument.....	36
Table 2.2: Evaluation of the contribution to economic development.....	39
Table 3.1: Descriptive statistics and correlations.....	66
Table 3.2: PLS path analysis results for intangible assets ratio.....	67
Table 4.1: Descriptive statistics and correlations.....	100
Table 4.2: Hierarchical Linear Modeling results – fixed effects with robust standard errors.....	102
Table 4.3: Descriptives for Belgian and Californian teams in the sample.....	117

List of Figures

Figure 3.1: Conceptual model.....	54
Figure 3.2: Innovation as a function of task conflict and actual conflict.....	69
Figure 3.3: Innovation as a function of relationship conflict and actual conflict.....	70
Figure 3.4: Innovation as a function of process conflict and actual conflict.....	70
Figure 4.1: Conceptual model study 3.....	89

CHAPTER 1

Introduction

The goal of this dissertation is to provide an insight into the scope and impact of potential pre- and post-investment problems between angel investors and entrepreneurs. In this introductory chapter I will first describe the angel financing market, to then provide an overview of the literature in terms of its current status and gaps. Hereafter I will also provide a broad overview of the topics covered by the three papers in this dissertation to then end with a summary of these same papers.

1.1 Setting the landscape: Angel financing

Google, Amazon.com, Skype, Twitter, the Body Shop and Starbucks...all famous examples of companies that received financing from so-called angel investors or business angels. These investors are individuals who invest some of their own wealth in unlisted companies in exchange for shares and who have no family or friend connection to the entrepreneur (Mason, 2006). The importance of angel investors as a financing source for entrepreneurial companies cannot be underestimated. Small and/or young, high-growth companies generally face substantial difficulties in raising financing from more traditional sources such as banks and public capital markets due to a lack of track record, profit generation and tangible assets, all of which result in high uncertainty for potential investors (Berger and Udell, 1998; Da Rin et al., 2006). After having depleted their own resources, as well as those of family and friends, entrepreneurs need to turn to external sources of private financing, i.e. angel investors or venture capitalists (Berger and Udell, 1998; Denis, 2004; Ueda, 2004). As venture capitalists have started to shift their attention towards larger and older investments, it has become increasingly difficult to obtain those crucially needed funds for young companies or ventures that only need small amounts of financing (European Commission, 2003; Mason and Harrison, 2003). As such, there is a huge gap for angel investors to fill up between, on the one

hand, whatever maximum amount entrepreneurs can secure from their family and friends and, on the other hand, the minimum amount venture capitalists are willing to invest. In the USA, for instance, this gap is estimated to range between \$ US 100 000 and \$ US 5.0 million (Freear et al., 2002; Sohl, 2003). To further highlight the importance of angel financing, consider the following numbers: allegedly 258 200 U.S. angel investors invested \$ US 26.0 billion in 57 120 companies in 2007, compared to venture capitalists investing \$ US 29.4 billion in 3 813 companies (Sohl, 2007; PWC et al., 2007). Moreover, about 39% of all US angel investments were made at the seed and start-up stages of a company, while this is merely 11% of all US venture capital investments in 2007 (Sohl, 2007; PWC et al., 2007). Angel investors thus clearly represent the largest source of seed and start-up capital for entrepreneurial companies. In Europe, relatively few data on angel investments are available. Mason (2006) estimates that 20 000 to 40 000 UK angels yearly invest £ 0.5 billion to £ 1.0 billion in 3 000 to 6 000 companies, backing eight times more start-ups than venture capitalists. According to more recent estimates, Europe as a whole should count about 75 000 business angels, investing around 3.0 billion EUR yearly (EBAN, 2008).

1.2 State of the angel financing literature

Despite the importance of angel investors in the financing process of small and young companies, angel financing is still a relatively underresearched area and the research that does exist has not yet quite outgrown its “Cinderella status” (Mason, 2006, p. 3) due to a plethora of studies ungrounded in theory. What we do know about angel investors is generally limited to descriptive facts and figures. For instance, a typical angel investor is a middle-aged man, has managerial and/or entrepreneurial experience and invests in entrepreneurial companies for a variety of reasons, among which financial returns, personal satisfaction, opportunities to influence the development of a new venture and job creation (Prowse, 1998; Mason, 2006). This also makes them rather patient investors with a general anticipated time-to-exit between 5 and 7 years, with roughly half of those exits resulting in a loss or break-even and about one

quarter resulting in a rate of return of 50% or more (Freear et al., 2002; Mason and Harrison, 2002a). Post-investment, angel investors can take on many roles in their portfolio companies with varying degrees of active participation (Prowse, 1998).

What is lacking from this literature overview though is a clear insight into the relationship and interaction between angel investors and entrepreneurs. More specifically, it has been widely documented that entrepreneurs and angel investors are often confronted with pre- and post-investment problems. Pre-investment, both parties face substantial information problems (Sohl, 1999). Post-investment, cooperation between external investors and entrepreneurs is crucial to the portfolio company's success (Cable and Shane, 1997; Wijnbenga and van Witteloostuijn, 2006). Despite this, previous research has indicated that this relationship is rather prone to conflict instead and, as such, cooperation is far from self-evident (Higashide and Birley, 2002; Parhankangas and Landström, 2006; Yitshaki, 2008). Therefore, the goal of this dissertation is to provide an insight into the scope and impact of these pre- and post-investment issues between angel investors and entrepreneurs. Whereas the first paper of this dissertation is focused on the pre-investment relationship, the second and third papers focus on the post-investment relationship. Next, in the overview of the topics covered in all three papers, the relevant literature will be discussed further.

1.3 Pre-investment problems between angel investors and entrepreneurs

In the entrepreneurial finance literature it is often argued that entrepreneurial companies suffer from information asymmetries due to a lack of track record, profit generation and collateralisable assets (Berger and Udell, 1998; Da Rin et al., 2006). This impedes them from reliably conveying their value to potential investors, resulting in financing difficulties. Further, the angel financing market as a whole is also frequently hypothesized to suffer from a lack of transparency, resulting in angel investors and entrepreneurs having considerable difficulties in finding each other. Entrepreneurs are not always fully informed about the array of possible financing sources and their characteristics (Van Auken, 2001).

Furthermore, even if they understand angel financing, they are not always able to locate angel investors, as these often do not want to make their investment intentions public. In the same vein, angel investors often have trouble in locating valuable investment opportunities (Mason and Harrison, 2002b). Together, these difficulties afflicting the angel financing market constitute pre-investment information problems and are often considered as a source of market failure. In order to help reduce these information and resulting financing problems of entrepreneurial companies, many measures have been implemented such as the creation of business angel networks, tax incentives, improved legislation, education of angel investors and entrepreneurs or co-investment schemes. One could argue that of these measures the creation of business angel networks is the most vital one as all other measures cannot work effectively without first reducing search problems, which is exactly what business angel networks aim to do (Mason, 2006). More specifically, these networks were created to enhance the transparency of the angel financing market by providing a communication channel between entrepreneurs and angel investors without giving up the anonymity of the latter (Harrison and Mason, 1996). Although much has been written about the sense and nonsense of the existence of a market failure in the angel financing market, conclusive evidence concerning its existence is lacking (Maula and Murray, 2003; Jääskeläinen et al., 2006). Therefore, the central research question of the first study is *to what extent do information problems between angel investors and entrepreneurs exist and to what extent are they resolved by the creation of business angel networks?* Focusing on these two issues then also allows us to address a third issue. Based on the assumptions of a market failure and entrepreneurial companies being important contributors to economic development, governments from all over the world have started to implement measures to stimulate the risk capital market. One of these measures is the public support and subsidization of business angel networks. Europe, for instance, counted 231 business angel networks in 2005, of which 68% were publicly funded (EBAN, 2005a;b). However, there is a lack of insight into the effectiveness and efficiency of these policies and theoretical arguments for government intervention can be made both ways. Based on the first two issues addressed in this paper, the third research question of the first study is thus: *is government intervention through the public support of business angel networks warranted?*

1.4 Post-investment problems between angel investors and entrepreneurs

In addition to pre-investment information problems, angel investors and entrepreneurs are also confronted with post-investment problems. More particularly, based on conflict theory, several elements of the relationship between entrepreneurs and angel investors would make it especially susceptible to conflict. Generally, scarce resources, interdependent relations, personal differences, goal incompatibilities, interference to reach these goals and inefficient communication have been put forward as potential causes of conflict (Kochan et al., 1976; Bartos and Wehr, 2002; Wilmot and Hocker, 2005). All of these, although to different extents, are present in the angel investor – entrepreneur relationship. For example, angel investors and entrepreneurs are dependent on each other in fulfilling their roles within the portfolio company. As their degree of interdependency grows, however, so will their need to communicate and interact, which in turn will increase the potential for conflict (Brewer and Miller, 1996; Jehn and Bendersky, 2003). Empirical research on the relationship between venture capitalists and entrepreneurs, which is similar to the relationship between angel investors and entrepreneurs in terms of conflict antecedents, has confirmed its conflict-prone nature (Higashide and Birley, 2002; Parhankangas and Landström, 2006; Yitshaki, 2008). Despite this, research into the “dark side” of the relationship between external investors and entrepreneurs has been lacking (Parhankangas and Landström, 2006, p. 775). Furthermore, drawing on intragroup conflict literature, conflicts between these parties could have a substantial impact on both performance and morale-related outcomes (Jehn and Bendersky, 2003; De Dreu and Beersma, 2005). Hence, the main research question addressed in the second and third paper is *how do conflicts between angel investors and entrepreneurs impact both the performance of their portfolio companies and the attitudes of all individual parties involved?*

Within these two papers, angel investors and entrepreneurs will be considered as teams, defined as (two or more) interdependent individuals who work together to reach important, mutual goals (De Dreu et al., 1999; Kozlowski and Ilgen, 2006). Regardless of their overarching goal of value creation, it must be

acknowledged though that angel investors and entrepreneurs could have different subgoals. Hence, the distinction between angel investors and entrepreneurs forms a natural divide between these two parties, making conflict between them, *strictu senso*, intersubgroup conflict (Bezrukova and Jehn, 2008). Conflict studies so far have focused on conflict within teams, but neglected to recognize that teams can consist of subgroups (Bezrukova and Jehn, 2008). Taking the conflict debate to this other level will alter some of conflict's effects, allowing to shed some new light on its impact.

Further, the focus is specifically on conflict's impact on the portfolio company's innovation and the individual's intentions to remain (invested) in the company. The particular outcomes selected in this research hence mirror two out of the three dimensions of team effectiveness (Hackman, 1987; Cohen and Bailey, 1990): (1) performance effectiveness in terms of quantity and quality of output, (2) team member attitudes and (3) behavioural outcomes. While innovation is a measure of performance effectiveness, intentions to remain in the company are a measure of team member attitudes. As such, these two outcomes are complementary in that together they provide us with a good overview of how conflicts between angel investors and entrepreneurs affect their combined effectiveness. Furthermore, both outcomes have received scant attention in the conflict literature, as opposed to, for instance, performance and satisfaction (Jehn and Bendersky, 2003). They also offer the benefit of combining a team-/company-level outcome with an individual one, allowing us to study conflict's impact across multiple levels. Finally, both innovation and intention to remain are of vital importance to entrepreneurial companies. First, as these ventures generally operate in a highly dynamic and volatile environment, consistently producing high levels of innovation is of the utmost importance to their performance, growth and success (Cho and Pucik, 2005). Second, intentions to remain or leave have been shown to be important predictors of actual turnover or exit (O'Reilly et al., 1991; Westerman and Cyr, 2004). As the exit of both (or either) the entrepreneur and angel investor could have dramatic consequences for the company involved, gaining an insight into what factors influence their intentions and motivations to voluntarily remain with or leave their businesses is crucial.

In addition to how conflicts between angel investors and entrepreneurs affect individual- and organizational-level outcomes, the second and third paper of this dissertation also tackle a second issue. Regardless of the specific conflict definition used, over time conflict researchers have almost exclusively focused on the perception, experience or awareness of incompatibilities (e.g. Thomas, 1992; Jehn, 1995; Tjosvold, 1998). However, as early conflict theorists noted, perceived incompatibilities do not necessarily reflect actual ones, nor will actual incompatibilities necessarily be perceived as such (Pondy, 1967; Deutsch, 1973). While perceived incompatibilities could be thought of as overt conflict, actual ones could be thought of as actual conflict (Pondy, 1967; Schmidt and Kochan, 1972). Although these can vary independently, conflict studies have emphasized the former and ignored the latter. In order to address this gap in the conflict literature, an additional research question posed in the second and third paper is hence *how do perceived and actual incompatibilities between angel investors and entrepreneurs impact innovation and intentions to remain?* The relationship between angel investors and entrepreneurs provides a very powerful setting to analyze the additional effects of actual conflicts as actual incompatibilities, i.e. goal incompatibilities, are prevalent (Sapienza and Gupta, 1994; Cable and Shane, 1997).

In conclusion, the overall contribution of this dissertation is its insight into the problems angel investors and entrepreneurs have to deal with and the impact these problems have. As such, this dissertation adds to several streams in the academic literature. The first paper contributes to the academic evaluation and entrepreneurship literature by looking into whether or not the existence of a failure in the angel financing market is a myth and thus whether or not there really are ‘pre-investment problems’. Furthermore, it contributes to the angel financing literature by assessing to what extent business angel networks provide a solution to this problem and hence should be supported by governments. The second and third paper add to the conflict literature by broadening the definition of conflict to incorporate both a perceptual and actual component. The second paper further expands the conflict literature by taking the conflict-innovation debate to the intersubgroup level and by better identifying under what conditions conflict will positively or negatively impact innovation. It also contributes to the entrepreneurship literature by showing how

perceived conflicts between angel investors and entrepreneurs impact the portfolio company's innovation and how this effect can be altered by their actual conflicts. The third paper also contributes to the entrepreneurship literature by providing a better insight into what determines investors' and entrepreneurs' intentions to remain with their businesses and exactly how detrimental conflicts can be. Finally, it also extends the conflict literature by shedding more light on how perceived conflict impacts intentions to remain.

1.5 Overview of dissertation papers

1.5.1 Assessment of government funding of Business Angel Networks in Flanders

Principal topic

Over the past decade, governments from all over the world have launched initiatives to stimulate risk capital markets (European Commission, 2003; Maula et al., 2007). Government intervention in the angel financing market is based on a market failure argument, caused by research and development (R&D) externalities and information problems (European Commission, 2003; Murray, 2007). R&D externalities refer to the value of R&D investments not being fully internalized, leading investors to provide less financing than socially optimal (Lerner, 1999; Cumming, 2007; Murray, 2007). Second, entrepreneurial companies often suffer from high levels of informational opaqueness due to their lack of track record, profit generation and collateralizable assets (Berger and Udell, 1998; Da Rin et al., 2006). Arm's length lenders hence constrain credit towards these companies, forcing them to rely on either angel financing or venture capital (Berger and Udell, 1998; Da Rin et al., 2006). However, venture capitalists have started to shift their focus toward larger and older investments (European Commission, 2003; Mason and Harrison, 2003) and their investments tend to be geographically concentrated and focused on a few industries (Lerner, 2002; Carlson and Chakrabarti, 2007; Christensen, 2007). Therefore, angel financing might be especially important for small and young ventures, particularly in regions where venture capital is lacking

(Mason and Harrison, 1995). Furthermore, the angel financing market also suffers from a lack of transparency, impeding entrepreneurs and angel investors finding each other easily. Increasingly, governments take a regional approach to reducing this perceived angel financing market failure (European Commission, 2006). One such regional measure aimed at facilitating early-stage funding is the public funding and support of business angel networks, aimed at matching entrepreneurs and angel investors. As conclusive evidence concerning the existence of a market failure does not exist (Maula and Murray, 2003; Jääskeläinen et al., 2006) and there is a lack of insight into the effectiveness and efficiency of policies targeted towards angel investors, this paper analyses whether or not the public support of business angel networks is regional government money well spent. To do so, we evaluate whether the programme is based on the right assumptions and has achieved its goals. The existence of a market failure is evaluated by assessing whether or not angel-backed companies do indeed face financing constraints (prior to the actual angel investment), whether investors and entrepreneurs experience search problems and whether these companies are value-creating or thus worth saving. The latter condition must also hold as otherwise angel investors and entrepreneurs experiencing information problems would merely be the result of efficient resource allocation and hence not really represent a problem. Whether or not this government programme has reached its goals is evaluated by studying the beneficiary companies' contribution to economic development and by evaluating whether or not business angel networks help to reduce the above-mentioned problems.

Method

For this study the cooperation was obtained from the four only business angel networks operating in Flanders (a region in Belgium) from 1999 to 2004. Together these networks represent 140 angel investors and 58 deals, in which 54 business angels invested. First, in-depth interviews were conducted with business angels who had invested through such a network and the entrepreneurs of companies who had received financing through those same networks (34 and 28 interviews respectively). Second, pre- and post-investment financial account data were compared between a sample of 84 angel-backed companies

(divided into a subsample of 34 companies that received financing through a business angel network and another subsample of 50 companies that received angel financing through another channel) and a matched benchmark group of non-angel-backed companies (matched on age, industry and size).

Findings

This study provides strong support for the existence of information problems in the angel financing market, resulting in financing constraints. However, although these problems do plague entrepreneurial companies, we cannot label this as a market failure quite yet as angel-backed companies are value-destroying in the short term. However, a J-curve trend in the value creation measures is noticeable, what might point to these companies just needing more time to deploy their capital in the most effective way (Lerner, 1999). Further, clear evidence is found for business angel networks reducing the information and financing problems of entrepreneurial companies. These networks finance particularly young companies with high financial risk in high-technology industries, which are exactly those companies most prone to information asymmetries and financial constraints. Moreover, both entrepreneurs and angel investors state that they would not have known each other without those networks. Finally, these companies also contribute to economic development and growth through value-added and job creation and generate significant positive indirect effects. In conclusion, the fact that this programme has successfully reached its goals, created many positive indirect effects and that the companies supported through this programme hold value-creating potential lead to the conclusion that public support for business angel networks is justified. However, in order to make this tentative conclusion more robust, a longer-term evaluation of the value created by companies that received financing through such a network is indispensable.

1.5.2 Conflict between angel investors and entrepreneurs: Perception, reality and its impact on innovation

Principal topic

Intragroup conflict has often been mentioned as one of the key processes affecting team and organizational innovation (De Dreu, 2006; West and Sacramento, 2006). However, there has been a lot of debate as to whether or not conflict is beneficial to innovation. This paper aims to shed new light on this relationship by taking this debate to the intersubgroup level. More specifically, I argue that angel investors and entrepreneurs in conflict could be thought of as warring factions within a team (Bezrukova and Jehn, 2008). In cases of task-related disagreements, their interaction may hence become more of a competitive game or combat with each faction trying to reach their own subgoals (Eisenhardt and Bourgeois, 1988; Amason, 1996; Brewer and Miller, 1996; LaBianca et al., 1998), rather than investors and entrepreneurs being different individuals contributing different ideas about the task at hand. This will increase distrust, use of politics, cognitive barriers and will block information sharing and cognitive processing (Eisenhardt and Bourgeois, 1988; Baba et al., 2004; Bezrukova and Jehn, 2008). As such a truly open and creative debate between angel investors and entrepreneurs will become less likely (Barkema and Shvyrkov, 2007), which should result in lower levels of organizational innovation. The same negative effect on innovation is hypothesized for two other types of conflict between angel investors and entrepreneurs, i.e. relationship and process conflicts, mainly due to associated negative emotions, absorption of time, energy and cognitive capacity necessary for creative thinking (Jehn, 1995; Pelled, 1996; Hinds and Bailey, 2003; Matsuo, 2006). In addition, it is also hypothesized that actual conflicts between angel investors and entrepreneurs, defined as actual goal incompatibilities between these two parties, will alter the above-mentioned perceived conflict's effects, regardless the type. More specifically, it is argued that based on the negative side-effects of actual conflicts (Deutsch, 1973; Fisher, 1998), the negative emotions, frustrations, competitive tactics and disabled information sharing process associated with perceived conflicts, regardless the type, will be intensified in teams where actual incompatibilities between angel

investors and entrepreneurs are high. Arguments from the entrepreneurial finance literature would point in the same direction. Namely, higher goal incompatibility between investors and entrepreneurs will increase the frequency of communication between them while reducing the quality of the information exchanged (Sapienza and Gupta, 1994; De Clercq and Sapienza, 2006). This will make conflicts more salient and simultaneously obstruct the information-sharing process between investors and entrepreneurs, hence both strengthening perceived conflict's negative effect on innovation, regardless the type.

Method

Hypotheses were tested based on a dataset of Belgian angel-backed companies. Out of 107 (potentially) eligible companies, 28 participated. Data were collected via two instruments: (1) all independent and moderating variables were gathered through questionnaires and (2) information on the dependent variable was gathered through the companies' financial accounts. Responses were sought from all entrepreneurial team members and angel investors who had a seat on the Board of Directors. The teams averaged 3 members and represented 75 individual responses (of which 35 angel investors and 40 entrepreneurs). Scales were validated using confirmatory factor analysis and intraclass correlation coefficients and within-group agreement indices were calculated to justify aggregation of the data to the team level. Hypotheses were tested using partial least squares analysis with bootstrapping.

Findings

The findings reveal a significant, negative effect of perceived task and relationship conflicts between angel investors and entrepreneurs on the portfolio company's innovation, but they do not confirm a main effect for process conflict. This supports the view that in cases of task-related disagreements, conflicting subgroups could be seen as warring factions engaging in competitive tactics and politics, leading to distrust and hampered cognitive processing. While the support for relationship conflict's negative effect is in line with previous research, the results for process conflict were somewhat surprising. An alternative explanation for this lack of support could be the specifics of the research setting. More specifically,

process conflicts between angel investors and entrepreneurs refer to disagreements regarding role definitions, ownership distribution, voting rights etc. These are precisely the topics that will probably already have been discussed prior to the investment. As such, it might be that there are not many process conflicts between angel investors and entrepreneurs overall. Low average levels of process conflict and little variation in the data corroborate this argument. Finally, the results also show that low levels of actual conflicts between conflicting parties can reduce perceived conflict's negative effects, regardless of whether these conflicts are related to the task at hand, personal frustration or resource allocation and task responsibilities issues. These results thus support the view that actual conflicts should be considered equally important as perceived conflicts in that the former can substantially alter the latter's effects.

1.5.3 Angel investors and entrepreneurs: Do they live happily ever after?

Principal topic

Despite the importance of exit to both entrepreneurs and investors, little is known about what factors influence their intentions and motivations to voluntarily remain with or leave their businesses (Wincent et al., 2008; DeTienne, 2008). With regard to external investors, previous exit studies have focused on investor preferences with regard to how (e.g. IPO, acquisition, trade sale) and when to exit, determinants of these exit preferences and the role of contracts in the exit decision (see, for instance, Mason and Harrison, 2002a; Cumming and MacIntosh, 2003; Hellmann, 2006). None of them have looked into their intentions to exit though, nor approached this decision from a socio-psychological point of view. With regard to entrepreneurial exit, only recently have researchers begun to look into this crucial aspect of the entrepreneurial life cycle (DeTienne and Cardon, 2007; DeTienne, 2008; Wincent et al., 2008). Furthermore, intentions to remain or leave have been shown to be important predictors of actual turnover or exit (O'Reilly et al., 1991; Westerman and Cyr, 2004), making this an outcome of vital importance to the entrepreneurship literature. Therefore, building on and extending conflict theory, this paper studies the impact of perceived and actual conflicts between angel investors and entrepreneurs on their intentions to

remain (invested) in the company. More specifically, perceived task and relationship conflicts are hypothesized to negatively impact both parties' intentions to remain due to feelings of anger, stress, anxiety, animosity and discomfort resulting in dissatisfaction (Jehn, 1995; Amason, 1996; Jehn et al., 1997). Extending conflict theory, it is also hypothesized that actual conflicts, as actual goal incompatibilities, between angel investors and entrepreneurs will reduce both parties' intentions to remain due to a decrease in cooperation and increase in competitive tactics and less positive attitudes towards the partner, making problem solving more difficult (Deutsch, 1973; Fisher, 1998; Tjosvold, 1998; Si and Bruton, 2005). Finally, in order to test one of the key assumptions in entrepreneurial finance literature, it is also hypothesized that entrepreneurs will want to outstay their angel investors.

Method

Data for this study were gathered in two locations, namely Continental Europe (Belgium) and California (USA). Out of 107 (potentially) eligible Belgian companies, 28 participated and out of 805 (potentially) eligible Californian companies, 26 participated. Data were collected through questionnaires, which were distributed to all entrepreneurial team members and angel investors who had a seat on the Board of Directors or were actively involved in strategic decision making. As the number of teams was rather small in both locations separately it was deemed desirable to combine them into one larger sample. Multigroup confirmatory factor analysis provided support for combining the Belgian and Californian samples into one larger sample, consisting of 54 teams and 137 individuals, of which 72 entrepreneurs and 65 angel investors. Intraclass correlation coefficients and within-group agreement indices were calculated to justify aggregation of the data to the team level. Hypotheses were tested using hierarchical linear modelling, appropriate for multilevel models (Raudenbusch and Bryk, 2002).

Findings

The findings of this study support the view that actual conflicts, through increased competition between conflicting parties and a lack of problem-solving, result in lower intentions to remain. As such, it should

be considered equally important as perceived conflicts in that both have a significant, separate and unique impact on team members' morale. The results further provide support for perceived task conflict's negative effect on intent to remain, due to associated feelings of stress, tension and discomfort, but not so for perceived relationship conflict. When the same model was run for individual-level satisfaction, the opposite results (i.e. a significant, negative effect for perceived relationship conflict and an insignificant effect for perceived task conflict) were found. In combination with actual conflict's negative main effect, this could point to deciding whether or not to stay in the team or company is more of a business decision for entrepreneurs and angel investors than an emotional one (which it is for more traditional teams). The findings further revealed a significant positive effect for perceived performance, which would seem to substantiate viewing intention to remain as more business- than emotion-driven. This effect was much stronger though for angel investors than entrepreneurs. Finally, this study also confirmed the assumption implicit to many entrepreneurial finance papers that, all else constant, entrepreneurs do indeed want to remain with their companies longer than their respective angel investors.

1.6 References

- Amason, A.C., 1996. Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal* 39(1), 123-148.
- Baba, M.L., Gluesing, J., Ratner, H., Wagner, K.H., 2004. The contexts of knowing: natural history of a globally distributed team. *Journal of Organizational Behavior* 25(5), 547-587.
- Barkema, H.G., Shvyrkov, O., 2007. Does top management team diversity promote or hamper foreign expansion? *Strategic Management Journal* 28(7), 663-680.
- Bartos, O.J., P. Wehr, 2002. *Using conflict theory*. Cambridge University Press, Cambridge.
- Berger, A., Udell, G., 1998. The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking and Finance* 22(6-8), 613-673.
- Bezrukova, K., Jehn, K., 2008. Examining ethnic faultlines in groups: A multimethod study of demographic alignment, leadership profiles, coalition formation, intersubgroup conflict and group outcomes. Working Paper, Rutgers University.
- Brewer, M.B., Miller, N., 1996. *Intergroup relations*. Brooks Cole Publishing Company, Pacific Grove, CA.
- Cable, D., Shane, S., 1997. A prisoner's dilemma to entrepreneur-venture capitalist relationships. *Academy of Management Review* 22(1), 142-176.
- Carlson, C., Chakrabarti, P., 2007. Venture capital investment in secondary cities: issues and opportunities for impact. Public and Community Affairs Discussion Papers 07-3, Federal Reserve Bank of Boston.
- Cho, C., V. Pucik, 2005. Relationship between innovativeness, quality, growth, profitability, and market value. *Strategic Management Journal* 26(6), 555-575.
- Christensen, J., 2007. The development of geographical specialization of venture capital. *European Planning Studies* 15(6), 817-833.
- Cohen, S.G., Bailey, D.E., 1990. What makes teams work: Group effectiveness research from the shop floor to the executive suite. *Journal of Management* 23(3), 239-290.
- Cumming, D., 2007. Government policy towards entrepreneurial finance: Innovation investment funds. *Journal of Business Venturing* 22, 193-235.

- Cumming, D.J., MacIntosh, J.G., 2003. A cross-country comparison of full and partial venture capital exits. *Journal of Banking and Finance* 27(3), 511-548.
- Da Rin, M., Nicodano, G., Sembenelli, A., 2006. Public policy and the creation of active venture capital markets. *Journal of Public Economics* 90(8-9), 1699-1723.
- De Clercq, D., Sapienza, H.J., 2006. Effects of relational capital and commitment on venture capitalists' perception of portfolio company performance. *Journal of Business Venturing* 21, 326-347.
- De Dreu, C.K., 2006. When too little or too much hurts: Evidence for a curvilinear relationship between task conflict and innovation in teams. *Journal of Management* 32(1), 83-107.
- De Dreu, C.K., Beersma, B., 2005. Conflict in organizations: Beyond effectiveness and performance. *European Journal of Work and Organizational Psychology* 14(2), 105-117.
- De Dreu, C. K., Harinck, F., Van Vianen, A., 1999. Conflict and performance in groups and organizations. In: Cooper, C., Robertson, I. (Eds.) *International Review of Industrial and Organizational Psychology*. Wiley, Chichester, pp. 369-414.
- Denis, D.J., 2004. Entrepreneurial finance: An overview of the issues and evidence. *Journal of Corporate Finance* 10(2), 301-326.
- DeTienne, D., 2008. Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development. *Journal of Business Venturing*, In Press.
- DeTienne, D., Cardon, M., 2007. Entrepreneurial exit strategies: The case for intention. Working Paper.
- Deutsch, M., 1973. *The resolution of conflict*. Yale University Press, New Haven.
- EBAN (European Business Angel Network), 2008. *Statistics Compendium*. EBAN, Brussels.
- EBAN (European Business Angel Network), 2005a. *European directory of business angel networks in Europe*. EBAN, Brussels.
- EBAN (European Business Angel Network), 2005b. *Statistics Compendium*. EBAN, Brussels.
- Eisenhardt, K.M., Bourgeois, L.J.III, 1988. Politics of strategic decision making in high-velocity environments: Toward a midrange theory. *Academy of Management Journal* 31(4), 737-770.
- European Commission, 2006. *The PAXIS Manual for innovation policy makers and practitioners*. EC, Brussels.
- European Commission, 2003. *Benchmarking business angels*. EC, Brussels.

- Fisher, R., 1998. Questioning the scope and relevance of the cooperative and competitive goal approach to conflict. *Applied Psychology – An International Review* 47(3), 314-317.
- Freear, J., Sohl, J.E., Wetzel W., 2002. Angles on angels: financing technology-based ventures – a historical perspective. *Venture Capital* 4(4), 275-287.
- Hackman, J.R., 1987. The design of work teams. In: Lorsch, J.W. (Ed.) *Handbook of Organizational behavior*. Prentice-Hall, Englewood Cliffs, pp. 315-342.
- Harrison, R., Mason, C., 1996. *Informal venture capital: Evaluating the impact of Business Introduction Services*. Woodhead-Faulkner Ltd., Hertfordshire.
- Hellmann, T., 2006. IPOs, acquisitions, and the use of convertible securities in venture capital. *Journal of Financial Economics* 81(3), 649-679.
- Higashide, H., Birley, S., 2002. The consequences of conflict between the venture capitalist and the entrepreneurial team in the United Kingdom from the perspective of the venture capitalist. *Journal of Business Venturing* 17(1), 59-81.
- Hinds, P. J., Bailey, D.E., 2003. Out of sight, out of sync: Understanding conflict in distributed teams. *Organization Science* 14(6), 615-632.
- Jääskeläinen, M., Maula, M., Murray, G., 2006. Performance of incentive structures in publicly and privately funded hybrid venture capital funds. Paper presented at the International ProACT Conference 2006, Tampere, Finland.
- Jehn, K.A., Bendersky, C., 2003. Intragroup conflict in organizations: A contingency perspective on the conflict-outcome relationship. *Research in Organizational Behavior* 25, 187-242.
- Jehn, K.A., Chadwick, C., Thatcher, S., 1997. To agree or not to agree: The effects of value congruence, individual demographic dissimilarity and conflict on workgroup outcomes. *International Journal of Conflict Management* 8(4), 287-305.
- Jehn, K.A., 1995. A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly* 40(2), 256-82.
- Kochan, T.A., Cummings, L.L., Huber, G.B., 1976. Operationalizing the concepts of goals and goal incompatibilities in organizational behavior research. *Human Relations* 29(6), 527-544.
- Kozlowski, S., Ilgen, D., 2006. Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest* 7(3), 77-124.

- LaBianca, G., Brass, D.J., Gray, B., 1998. Social networks and perceptions of intergroup conflict: The role of negative relationships and third parties. *Academy of Management Journal* 41(1), 55-67.
- Lerner, J., 2002. When bureaucrats meet entrepreneurs: The design of effective 'public venture capital' programmes. *The Economic Journal* 112(477), F73-F84.
- Lerner, J., 1999. The government as Venture Capitalist: The long-run impact of the SBIR program. *The Journal of Business* 72(3), 285-318.
- Mason, C., 2006. Informal sources of venture finance. In: Parker, S. (Ed.) *The life cycle of entrepreneurial ventures*. Springer, New York, pp. 259-299.
- Mason, C., Harrison, R., 2003. Closing the regional equity gap? A critique of the Department of Trade and Industry's Regional Venture Capital Funds initiative. *Regional Studies* 37(8), 855-868.
- Mason, C., Harrison, R., 2002a. Is it worth it? The rates of return from informal venture capital investments. *Journal of Business Venturing* 17(3), 211-236.
- Mason, C., Harrison, R., 2002b. Barriers to investment in the informal venture capital sector. *Entrepreneurship and Regional Development* 14(3), 271-287.
- Mason, C., Harrison, R., 1995. Closing the regional equity gap: The role of informal venture capital. *Small Business Economics* 7(2), 153-172.
- Matsuo, M., 2006. Customer orientation, conflict, and innovativeness in Japanese sales departments. *Journal of Business Research* 59(2), 242-250.
- Maula, M., Murray, G., Jääskeläinen, M., 2007. Public financing of young innovative companies in Finland (Publications 3/2007). Ministry of Trade and Industry, Helsinki.
- Maula, M., Murray, G., 2003. Finnish Industry Investment Ltd: An International Evaluation (Publications 1/2003). Ministry of Trade and Industry, Helsinki.
- Murray, G., 2007. Venture capital and government policy. In Landström, H. (Ed.) *Handbook of Research on Venture Capital*. Edward Elgar Publishing, Cheltenham (UK), pp. 113-151.
- O'Reilly, C.A. III, Chatman, J., Caldwell, D., 1991. People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal* 34(3), 487-516.
- Parhankangas, A., Landström, H., 2006. How venture capitalists respond to unmet expectations: The role of social environment. *Journal of Business Venturing* 21(6), 773-801.

- Pelled, L.H., 1996. Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science* 7(6), 615-631.
- Pondy, L.R., 1967. Organizational conflict: Concepts and models. *Administrative Science Quarterly* 12(2), 296-320.
- PricewaterhouseCoopers / Thomson Venture Economics / National Venture Capital Association, 2007. MoneyTree™ Survey.
- Prowse, S., 1998. Angel investors and the market for angel investments. *Journal of Banking and Finance* 22, 785-792.
- Raudenbusch, S.W., Bryk, A.S., 2002. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Sage Publications, Thousand Oaks, CA.
- Sapienza, H.J., Gupta, A.K., 1994. Impact of agency risks and task uncertainty on venture capitalists – CEO interaction. *Academy of Management Journal* 37(6), 1618-1632.
- Schmidt, S.M., Kochan, T.A., 1972. Conflict: toward conceptual clarity. *Administrative Science Quarterly* 17(3), 359-370.
- Si, S., Bruton, G., 2005. Knowledge acquisition, cost savings, and strategic positioning: effects on Sino-American IJV performance. *Journal of Business Research* 58(11), 1465-1473.
- Sohl, J.E., 2007. The angel investor market in 2007: Mixed signs of growth. Center for Venture Research, Whittemore School of Business & Economics.
- Sohl, J.E., 2003. The U.S. angel and venture capital market: Recent trends and developments. *The Journal of Private Equity* 6(2), 7-17.
- Thomas, K., 1992. Conflict and conflict management: Reflections and update. *Journal of Organizational Behaviour* 13, 265-274.
- Tjosvold, D., 1998. Conflict over the study of conflict: The challenge to make it cooperative. *Applied Psychology: An International Review* 47(3), 336-342.
- Ueda, M., 2004. Banks versus venture capital: project evaluation, screening and expropriation. *The Journal of Finance* 59(2), 601-621.
- Van Auken, H., 2001. Financing small technology-based companies: The relationship between familiarity with capital and ability to price and negotiate investment. *Journal of Small Business Management* 39(3), 240-258.

West, M.A., Sacramento, C.A., 2006. Flourishing in teams: Developing creativity and innovation. In Henry, J. (Ed.) *Creative Management and Development*. Sage Publications, London, pp. 25-43.

Westerman, J.W., Cyr, L.A., 2004. An integrative analysis of person-organization fit theories. *International Journal of Selection and Assessment* 12(3), 252-261.

Wijbenga, F., van Witteloostuijn, A., 2006. The entrepreneur and the venture capitalist as a team: A game-theoretic and upper echelon theory of cooperation and defection. In: Butler, J., Lockett, A., Ucbasaran, D. (Eds.), *Venture Capital and the Changing World of Entrepreneurship*. Information Age Publishing, Greenwich, CT, pp. 91-114.

Wilmot, W.W., Hocker, J.L., 2005. *Interpersonal conflict*. McGraw-Hill, Blacklick.

Wincent, J., Örtqvist, D., Drnovsek, M., 2008. The entrepreneur's role stressors and proclivity for a venture withdrawal. *Scandinavian Journal of Management* 24, 232-246.

Yitshaki, R., 2008. Venture capitalist-entrepreneur conflicts – An exploratory study of determinants and possible resolutions. *International Journal of Conflict Management* 19(3), 262-292.

CHAPTER 2

An Assessment of Government Funding of Business Angel Networks in Flanders*

Veroniek Collewaert ^a, Sophie Manigart ^{a,b}, Rudy Aernoudt ^c

^a Ghent University, Department of Accounting and Corporate Finance

^b Vlerick Leuven Gent Management School, Competence Centre Accounting and Finance

^c EHSAL, University College Ghent and Nancy University

Abstract

We evaluate whether government intervention through the subsidization of business angel networks (BANs) enhances regional economic growth in Flanders, Belgium. We show that, firstly, BANs reduce the information and financing problems entrepreneurial companies face. Secondly, these companies contribute to economic development and growth. Thirdly, there are positive indicators of future potential, such as an upward evolution in value creation and ability to raise follow-on financing. Finally, the programme has many positive indirect effects. This leads us to tentatively conclude that public BAN support is warranted. However, to make this conclusion more robust requires a longer-term evaluation.

*Accepted for publication in *Regional Studies* (forthcoming). This paper has benefited from presentations at the 2006 Babson College Entrepreneurship Research Conference (Bloomington, IN) and the 2006 RENT Conference (Brussels, BE). We acknowledge financial support from the Fund for Scientific Research – Flanders (FWO-Vlaanderen). The authors would also like to thank the “Research Center Entrepreneurship and Innovation of the Flemish Community” and Lotte Goossens for assistance in the data collection.

2.1 Introduction

Over the past decade, governments from all over the world have launched initiatives to stimulate risk capital markets (European Commission, 2003b; Maula et al., 2007). Risk capital refers to external equity financing of entrepreneurial companies and encompasses both formal venture capital and informal risk capital, also known as (business) angel financing (European Commission, 2001). Formal venture capital is provided by institutional, professional investors, while angel financing is provided by private investors with no family or friend connections to their investees (Harrison and Mason, 1999; EVCA, 2002). Sohl (2005) estimates that 227 000 angel investors in the USA invested \$23.1 billion in 49 500 companies in 2005, compared to venture capital investors investing \$21.7 billion in only 2 939 companies (PricewaterhouseCoopers et al., 2006). There is a relative scarcity of statistics on European angel investments. Mason (2006) estimates that 20 000 to 40 000 U.K. angels invest £0.5 billion to £1.0 billion in 3 000 to 6 000 companies yearly, backing eight times more start-ups than venture capitalists.

While a small number of growth-oriented start-ups contribute disproportionately to innovation, economic growth and job creation (e.g. Wong et al., 2005; Fritsch and Falck, 2007), policy-makers believe that there is a market failure in that many entrepreneurial companies are prevented from exploiting growth opportunities due to a lack of risk capital (Mason and Harrison, 2003; Carlson and Chakrabarti, 2007). Hence they have established support programmes to stimulate risk capital financing and thereby foster economic growth (Cumming, 2007). This perceived failure in risk capital markets is addressed either by directly increasing the supply of risk capital or by increasing expected returns to investors through decreasing taxation, improving exit markets, or reducing barriers to entrepreneurship (Da Rin et al., 2006).

Risk capital has been shown to have a strong regional dimension, with risk capital investors often specializing in investing in a geographically concentrated region (Carlson and Chakrabarti, 2007; Christensen, 2007). Whereas the European Commission argues that venture capital activity needs to be

regionally clustered in order to create necessary levels of specialization within high-technology clusters, the OECD and some EU member states have argued for a more even regional distribution (Martin et al., 2002). Following the latter view, government policies throughout Europe and the USA have often focused on ensuring an adequate regional supply of risk capital (e.g. Venkataraman, 2004; Christensen, 2007).

Various studies have assessed the impact of public policies aimed at stimulating formal venture capital markets (e.g. Lerner, 1999; 2002; Ayayi, 2004; Da Rin et al., 2006; Cumming, 2007). There is, however, a lack of insight into the effectiveness and efficiency of policies targeted towards angel investors, such as tax reliefs, support of business angel networks (BANs) or business angel co-investment funds (Maula et al., 2007). The current paper evaluates one type of government intervention programme to stimulate informal risk capital: the support of BANs. It focuses on one Belgian region, Flanders, as this allows an in-depth assessment. It assesses whether the programme is warranted by evaluating whether it is based on the right assumptions and has achieved its goals.

We proceed by providing theoretical rationales for government intervention in the informal risk capital market and describe how and why the Flemish government has supported BANs. Thereafter, we discuss the research method used to evaluate the programme. In the results section, we evaluate its direct effects and briefly discuss its indirect effects.

2.2 Government intervention in the informal risk capital market

Government intervention in the informal risk capital market is based on a market failure argument, caused by R&D externalities and information problems (European Commission, 2003b; Murray, 2007). R&D externalities refer to the fact that the value of R&D investments is not fully internalized, as they generate benefits for parties outside the company (Lerner, 1999). While investors would like to appropriate all returns generated by high-potential companies given their high perceived risks (Da Rin et al., 2006;

Murray, 2007), R&D externalities prevent this, leading investors to provide less financing than would be socially optimal (Cumming, 2007; Murray, 2007). Small firms might be especially prone to this due to “their lesser market power and inability to finance the aggressive defence of intellectual ownership infringements” (Murray, 2007, p. 14).

A second source of market failure is the high level of information asymmetry in small and young companies, which is caused by a lack of track record and profit generation and results in high uncertainty for investors. Hence, these companies are constrained from access to public capital markets and bank financing (Da Rin et al., 2006). Moreover, R&D investments do not create collateralisable assets. As financing of low-collateral companies requires monitoring (Holmstrom and Tirole, 1997), arm’s-length lenders constrain credit towards these companies (Da Rin et al., 2006). Therefore, they have to rely on angel investors or venture capitalists as they monitor their investments more actively (Berger and Udell, 1998).

Venture capitalists and angel investors mitigate information problems, which may result in adverse selection and moral hazard risks, through extensive due diligence pre-investment, writing extensive contracts at investment and monitoring post-investment (Berger and Udell, 1998). However, due to scale economies in these costly processes and in order to reduce risk further, venture capitalists have shifted their focus toward larger and older investments (European Commission, 2003a; Mason and Harrison, 2003). Furthermore, venture capital investments tend to be geographically concentrated and focused on a few industries (Lerner, 2002; Carlson and Chakrabarti, 2007; Christensen, 2007). Hence, it is argued that small and young ventures, especially those active in regions or industries with little venture capital, have difficulties in raising sufficient capital even if they have great value-creating potential. Therefore they resort to angel funding, which therefore may be particularly important in regions where venture capital is lacking (Mason and Harrison, 1995).

Another information problem is the lack of transparency in the informal risk capital market. Entrepreneurs are not always fully informed about the array of possible financing sources and their characteristics (Van Auken, 2001). Even if they understand angel financing, they are not always able to locate angel investors, as these often do not want to make their investment intentions public. In the same vein, angel investors have trouble in locating valuable investment opportunities (Mason and Harrison, 2002). These problems led to the creation of BANs, which provide an information channel between entrepreneurs and angel investors without giving up the privacy of the latter (Harrison and Mason, 1996b).

Conclusive evidence concerning the existence of a market failure is lacking (Maula and Murray, 2003; Jääskeläinen et al., 2006), as the lack of risk capital may be due more to the poor quality of the demand than to the unavailability of capital (Mason and Harrison, 2002; 2003). Venkataraman (2004) argues that risk capital is a necessary, but non-sufficient condition for fostering regional growth-oriented entrepreneurship. Intangible regional assets, such as access to novel ideas, role models or region-specific opportunities, are equally important. Merely injecting risk capital in a region may thus lead to promoting low-quality entrepreneurship (Venkataraman, 2004). The lack of financing *per se* is not enough to constitute a market failure; the financing constraint has to regard value-creating companies.

2.3 Regional approach to informal risk capital: Business Angel Networks

Increasingly, governments take a regional approach to reduce the perceived risk capital market failure (European Commission, 2006): policy is implemented at the lowest level possible, on the condition that it is still efficient (Sunley et al., 2005). In addition to addressing specific regional market conditions, regional risk capital programmes are also warranted as geographic proximity is important in the early-stage investor-investee relationship (Sunley et al., 2005; Carlson and Chakrabarti, 2007). For an investment to take place, face-to-face contact between investor and investee is required to reduce information asymmetries and create trust (EBAN, 1998; Aernoudt, 1999). Proximity further facilitates

active coaching and advising, allowing companies to benefit more from the investor's network and effort (Mason and Harrison, 1995; Sunley et al., 2005).

One regional measure aimed at facilitating early-stage funding is the public funding and support of BANs. Based on an evaluation of the potential of establishing regional BANs in Europe and the positive results of a pioneer programme in the U.K., the Commission stimulated, facilitated and financed the establishment of BANs in the late 1990s (EBAN, 1998; Harrison and Mason, 1999). Other measures that stimulate the informal risk capital market, such as tax incentives, improved legislation, education of angel investors and entrepreneurs or co-investment schemes, cannot work effectively without first reducing search problems (Mason, 2006).

Europe counted 231 BANs in 2005, of which 68% were publicly funded (EBAN, 2005a;b). It was initially assumed that public subsidies were needed to launch BANs, but that these could become self-supporting after five years thanks to revenues from membership fees, success fees or sponsoring (Harrison and Mason, 1996a; Van Rompuy, 1999). This assumption is, however, not confirmed (Harrison and Mason, 1996a). Governments are now confronted with the question whether subsidies have to cease as initially foreseen - which would result in most BANs closing down - or whether long-lasting structural subsidies are justified to maintain the BANs. A critical evaluation of BAN support is hence timely. The success of BANs has been both widely endorsed and strongly contended, but there is no agreement on their effectiveness (Harrison and Mason, 1996a;b; Mason and Harrison, 2002). Harrison and Mason (1996a;b) provided the only BAN evaluation study to our knowledge and so represents our only benchmark. In order to advance their work and make a thorough evaluation of the cost-effectiveness of public BAN support, we concentrate on one region in Belgium, Flanders, from 1999 to 2004.

The first Belgian BAN, Vlerick BAN, was subsidised by the Flemish government in 1999. Three other BANs were subsequently founded and subsidized. Together, they were the only BANs operating in

Flanders until 2004 (after which they all merged) and all operated in the same way, through investor forums. These forums are events where entrepreneurs can pitch their ideas face-to-face to BAN members and discuss them in more depth with potentially interested angel investors (European Commission, 2003a). The Flemish government, following the European Commission's rationales, considered the BANs as a way to reduce the financing problems entrepreneurial companies face by reducing information problems (Van Rompuy, 1999). The financing of the networks was considered as one way to promote entrepreneurship and innovation in Flanders (Van Rompuy, 1999).

Together, these four BANs represented 140 angel investors¹ and 58 deals in 55 companies, in which 54 angel investors invested between 1999 and 2004. The total amount of subsidies granted to the four BANs between 1999 and 2004 was € 856 741, representing 50% of their operating costs. The subsidy per deal was € 14 800 or 21% lower than the € 18 900 per deal for the UK Department of Trade and Industry's (DTI) informal investment demonstration projects (Harrison and Mason, 1996b).

Evaluating public funding of BANs within one region has advantages. The four BANs all operate within the same economic, legislative and fiscal environment, increasing the internal validity of the evaluation. The external validity of the study is nevertheless warranted based on following arguments. First, Belgian socio-economic indicators as income distribution, employment rate, social security fees and trade balance are similar to indicators in other European countries such as Germany, the Netherlands, France, Austria, Spain and Italy (Stroobandt et al., 2005). Second, the Flemish BANs are similar to BANs in comparable European countries. A Flemish BAN closed, on average, 4.5 deals in 2003, compared to 0.2, 4.7 and six deals per BAN in Italy, the Netherlands and Spain, respectively. A Flemish BAN counted, on average, 35 angel members compared with 26 members in Germany, 35 in Italy and 45 in Spain (EBAN, 2005a). The informal risk capital market is less mature in Continental Europe than in the USA and UK (EBAN, 2005a). For example, the UK counted 34 BANs in 2004, a number similar to the USA, with an average of

¹ This might be overestimated as we could only exclude double-counting for BAs that made BAN investments.

five deals per BAN (EBAN, 2005b). Third, the fiscal treatment of angel investments is comparable with that in other countries, except that capital gains realised by private individuals are not taxed. Finally, Flanders is a region with five million inhabitants and thus fits into the criteria suggested for establishing a BAN (EBAN, 1998). Hence, its evaluation can present relevant conclusions for other European regions.

2.4 How to evaluate government programmes?

According to Lerner and colleagues, the “starting point for any evaluation of a government programme is the goals it was designed to achieve” (Lerner et al., 2005, p. 140), which is what most evaluation studies do (e.g. Boyns et al., 2005; Maula and Murray, 2003; Ayayi, 2004; Lerner et al., 2005; Cumming, 2007). Through BAN subsidies, the Flemish government’s goal was to stimulate regional entrepreneurship, innovation and job creation by reducing the perceived information and financing problems (*sub-goals*) entrepreneurial companies face (Van Rompuy, 1999). The BANs’ mission was to create a market where entrepreneurs looking for finance and angel investors looking for investments could find each other. In addition, one needs to assess the assumptions the initiative and its objectives are based upon (Maula and Murray, 2003). The assumption the Flemish government and the European Commission made when subsidising BANs was that there was a market failure, namely that some value-creating entrepreneurial companies suffered from financing problems. Finally, in order to assess the full impact of a government programme, one needs to go beyond its direct effects (Harrison and Mason, 1996b; Lerner, 1999). Positive indirect effects of the BAN subsidies may include the enhancement of overall awareness for angel financing or entrepreneurs’ and investors’ education.

Therefore, in order to evaluate government funding of BANs, following questions need to be answered:

1. Is there a failure in the informal risk capital market?
 - a. Did the companies financed through BANs suffer from information problems and resulting financing constraints?

- b. Were these companies value-creating?
2. Do BANs reduce the financing problems of entrepreneurial companies?
3. Do these companies contribute to regional economic development?
4. What are the indirect effects of the BAN subsidies?

2.5 Method

2.5.1 Research method

Researchers have generally used either one of two approaches to study the foregoing questions. Some relied on qualitative data by gathering general information on the government measures taken and/or by interviewing beneficiaries or experts (e.g. Murray, 1998; Dossani and Kenney, 2002; Maula and Murray, 2003). Others compared the performance of beneficiaries with that of comparable non-beneficiaries using a quantitative approach (e.g. Lerner, 1999; Ayayi, 2004; Cumming, 2007). A contribution of our study is that we combine both approaches, leading to a richer understanding and rigorous analysis of the research questions.

First interviews were solicited from the beneficiaries, being all 55 entrepreneurs and 54 angel investors who were involved in a deal through one of the four Flemish BANs. This resulted in 28 interviews with entrepreneurs (including three of which managed failed companies) and 34 interviews with angel investors. The interviews give insight into how market participants, i.e. entrepreneurs and investors, perceive market failure in terms of information and financing problems and in the contribution of BANs in reducing this failure.

As interviews provide subjective views, they were complemented with hard data, namely the financial accounts of all companies that received angel financing through one of the BANs (BAN-backed

companies). We compare their pre-investment debt capacity with that of a matched benchmark group of non-angel-backed companies. In order for a market failure to exist, BAN-backed companies should have depleted their debt capacity before angel investment. If not, they should be able to access traditional debt financing sources. A firm has depleted its debt capacity if its financial risk, measured as the ratio of the book value of debt to total assets, is high or if it does not have the capacity to service the fixed interest and principal repayments attached to debt, measured by its internally generated cash flows (Lemmon and Zender, 2004). Profitability measures such as return on assets, pre-tax profit and operational profit were added as further indicators of a firm's risk (e.g. Altman, 1968).

A second pre-investment comparison relates to companies that did not resort to a BAN but nevertheless received angel financing. This is relevant as it might be argued that, in an efficient risk capital market, entrepreneurs with value-creating projects should be able to raise angel financing even without a BAN. First, having a poor personal network might be an indication of the inability of the entrepreneur to network with third parties that are relevant for conducting business, hence increasing the odds that the entrepreneur will not be able to develop the venture satisfactorily. Second, parties within an entrepreneur's network face lower information asymmetries as they are able to better assess potential agency problems. Failure to find a personally known investor might be an indication of excessive agency risk. Hence, entrepreneurs with a high ability and low agency risk should be able to find an angel investor without a BAN. If the above reasoning holds, we expect BAN-backed companies to be more risky than companies that found angel financing through another channel. If, however, the risk of both groups is the same, then this is additional evidence of market inefficiencies.

Further, in order for a market failure to exist, companies facing financing constraints should have value-creating projects. In order to assess how "effectively and profitably" (Murray, 2007, p. 8) the BAN-backed companies employ their financing, their return on assets (ROA) is measured from the year of angel participation up to four years thereafter. Ideally, the ROA should be compared with the companies'

funding cost to assess value creation. As it is difficult to estimate the funding cost of unquoted companies, the ROA of BAN-backed companies is compared to both that of non-angel-backed companies and companies that found angel financing through another channel. Hence, it is assumed that these companies have a comparable funding cost. Additionally, the same analyses are conducted on value added - a proxy for sales – (rescaled by total assets) as a robustness check. Value-added is the difference between operating income and the value of inputs.

In order to assess whether BAN-backed companies contribute to economic development, we studied the absolute amount and growth in employment and value-added (Lerner, 1999; EVCA, 2002) as well as the federal taxes paid by the BAN-backed companies (EVCA, 2002). Growth is calculated as the average yearly growth from the year of angel investment to the last available year (Heirman and Clarysse, 2005). This growth measure has limitations as it assumes a linear growth process. Furthermore, a longer-term growth measure would be more desirable (Lerner, 1999), but unfortunately data that would enable this analysis are not available.

The population of BAN-backed companies is identified through the deal list of the four Flemish BANs. The sample of companies that received angel financing through another channel is based on two sources: (i) the interviews with the angel investors who have invested through a BAN and were asked to identify all their investments, (ii) a database with the financing sources of 221 Flemish high-technology start-ups (Heirman and Clarysse, 2005). After removing overlaps between data sources and companies that could not be further identified, 44 BAN-backed companies were retained and 66 angel-backed companies that found an angel investor through another channel. Further, companies that received angel financing before 1992 and after August 2003 were also removed. The final samples consist of 34 BAN-backed companies and 50 angel-backed companies that received angel financing through another channel.

In order to assess the marginal impact of a government programme, a sample of similar companies that did not benefit from this programme was needed (Lerner et al., 2005). Hence, the BAN-backed companies are matched with non-angel-backed companies on age, industry and size (Lerner, 1999; Puri and Zarutskie, 2007). Age is measured in the year before angel participation or the year of angel participation if the angel investor participated at start-up. Second, the BAN-backed companies are matched on industry based on the NACE-BEL codes (comparable with 3-digit SIC codes). Third, we match on size, proxied by total assets.

2.5.2 Sample description

The 34 interviewed angel investors², representing 36 out of the 55 BAN-backed companies, have invested € 11.7 million through a BAN or € 324 489 per company. Extrapolating this amount to all BAN-backed companies, we estimate that angel investors invested € 17.8 million through BANs, or € 20.83 per euro of government money spent. Furthermore, the 34 angel investors have invested an additional € 22.8 million³ in companies found through another channel or € 519 055 per company. Angel investors' attitudes, investment behaviour and demographic characteristics are consistent with those of angel investors in other countries (e.g. Mason, 2006), further supporting the external validity of our study.

The 28 BAN-backed companies, whose entrepreneurs were interviewed, have the following characteristics. The angel investor participated within the first two years after incorporation in 15 out of the 28 companies. Each company has, on average, received € 236 571 from BAN investors. If extrapolated, this would amount to € 13.0 million invested through a BAN or € 15.19 per euro of

² As for representativeness tests, age and assets of the different subsamples of BAN-backed companies are not significantly different from the population of 55 BAN-backed companies. As we have no data on the 20 angel investors that did not participate in the study, we do not know whether the interviewed angel investors are representative for the angel investors that have invested through one of the BANs.

³ These amounts are lower limits since not all angel investors were willing to provide this information.

government money spent on the BANs⁴. The Flemish BAN investors invested € 2.6 million per year, which is twice the amount invested by the British angel investors under the DTI initiative in the early 1990s, € 1.4 million per year (Harrison and Mason, 1996b).

The companies in the quantitative sample closely match the profile of the companies represented in the qualitative sample in terms of industry and age at angel participation. Further, the BAN-backed companies' profiles fit well into the traditional view on market failure. Young and/or small high-growth oriented and/or high-technology companies are the most likely victims of a market failure, due to R&D externalities, informational opaqueness and low levels of collateral (e.g. Berger and Udell, 1998; Da Rin et al., 2006; Cumming, 2007; Murray, 2007). A total of 56% of the companies in the sample received angel financing under the age of two; 71% received it under the age of five. Furthermore, the majority of our sample (71%) comprises small enterprises with 10 or fewer employees. Finally, more than half of our sample is active in technological activities, ranging from the production of natural resources to ICT and R&D services, to high-technology manufacturing. Five companies have failed since the angel investment. Taken together, the BAN-backed companies are in the target group of high-growth oriented companies with likely market failure problems (Cumming, 2007).

2.6 Results

2.6.1 Market failure: Financing and information problems

The qualitative and quantitative analyses suggest that financing and information problems exist in the informal risk capital market. More particularly, the pre-investment debt capacity of BAN-backed companies is significantly lower compared with non-angel-backed companies (Table 2.1, Panel A). As

⁴ This differs from the €20.83 mentioned before since there is no perfect overlap between the interviewed BAs' investments and the interviewed companies.

much as 96% of their assets are financed with debt, compared with 82% for the non-angel-backed sample (although the difference is not statistically significant). Their lower cash flows and profit ratios suggest that their financial risk is higher and therefore the probability of raising financing from traditional sources is lower. The qualitative interviews provide further evidence for the financing constraints. When asked why they opted for angel financing, 18 entrepreneurs stated that there were no other options. Conversely, merely five out of 28 entrepreneurs referred to expected angel involvement and value-added as a motive for looking for angel financing. Although 17 entrepreneurs stated that they had another investor in prospect at the time of angel investment - either banks or family and friends - they always admitted that both options were less suitable compared to angel money. They were either reluctant to mix personal and business life or the stringent conditions that go along with bank financing were not optimal for the company. Quantitative and qualitative results hence support the existence of financing constraints for entrepreneurial companies: these companies could probably not have found (the total amount of) financing through other sources.

Table 2.1: Test of the market failure argument

Variable (in 000 EUR)	BAN-backed compared to:			(1) Non-angel-backed companies			(2) Angel-backed through another channel		
	Mean	s.d.	N	Mean	s.d.	N	Mean	s.d.	N
PANEL A: Pre-investment comparisons									
Return on assets (ROA) %	-33.22	46.55	21	1.05***	24.72	24	-15.26**	85.25	21
Pre-tax profit	-214.81	569.63	21	-3.83*	164.78	24	-36.41	96.98	22
Operational profit	-181.10	567.15	21	8.13**	166.92	24	-25.09	103.59	22
Cash flow	-96.52	445.21	21	35.68**	175.69	22	-3.36	97.57	22
Total debt/total assets (%)	0.96	0.60	21	0.82	0.34	24	0.81	0.56	22
PANEL B: Analysis of post-investment value creation									
ROA – Year 0	-38.53	51.34	26	11.76***	19.87	29	-23.23	39.21	26
ROA – Year 2	-38.53	72.12	28	12.34***	19.11	32	-32.71	69.85	45
ROA – Year 3	-42.38	134.23	23	11.09**	21.73	26	-26.36	50.63	43
ROA – Year 4	6.97	95.85	14	5.44	10.31	19	-27.32	72.15	40

*p < 0.10; **p < 0.05; ***p < 0.01

(1) For the comparisons between BAN-backed and non-angel-backed companies, we used Wilcoxon rank tests

(2) For the comparisons between BAN-backed and the other angel-backed companies, we used Mann-Whitney tests

We further find support for information problems in the informal risk capital market. There are no differences between the financial risk of BAN-backed companies and companies that found angel investors through another channel, neither pre-investment (Table 2.1, Panel A) nor post-investment (not shown in Table 2.1). This indicates that the risk of companies turning to BANs for financing is not higher than that of other angel-backed companies⁵. In other words, BANs do *not* systematically attract the most risky companies unable to find financing through other channels. The only difference between the BAN-backed companies and the companies that found angel investors through another channel is that the former experienced information problems in locating an angel investor. Twenty of the interviewed entrepreneurs stated they approached a BAN as this was the only known way for them to get in contact with angel investors. Conversely, only five entrepreneurs were confident that they would have found angel financing if the BANs had not existed.

Likewise, the angel investors stated that they would not have known the companies without the BANs in 82% of the deals, confirming information problems. If the BANs had not existed, the angel investors would thus not have been able to invest € 14.2 million. In other words, each euro of government subsidies has generated € 16.63 of angel money, which otherwise would not have been invested *in these companies*. As it is possible that the angel investors would have invested in other companies, the € 14.2 million invested through the BANs probably overestimates the marginal impact of the BANs. However, 74% of the angel investors stated that they still had funds left for additional investments. Taken together, qualitative and quantitative results consistently support the existence of information problems, both for angel investors and for entrepreneurs, and the positive role of BANs in reducing these problems. This study provides strong support for the assumption that the informal risk capital market is plagued by information problems leading to financing constraints.

⁵ In addition, these samples are not only comparable in terms of their average financial risk, but also in terms of their risk variability (variances in financial risk measures, pre- and post-investment, are not significantly different (p=0.49) between the two samples).

2.6.2 Market failure: Value creation

The next step is to investigate whether BAN-backed companies create value. If not, a failure to raise funds outside BANs is merely the outcome of efficient resource allocation. Funding should not be channelled to non-value-creating companies.

The results do not confirm the value-creating argument in the short term. BAN-backed companies create significantly less value than similar non-angel-backed companies and even destroy value up to three years after angel investment (Table 2.1, Panel B): the mean ROA of BAN-backed companies is negative, while non-angel-backed companies have positive ROAs. However, the difference between the two samples becomes less significant over the years to disappear in year 4 as the ROA of BAN-backed companies improves. The robustness check confirms these results.⁶ The results indicate a J-curve effect: BAN-backed companies do not invest in a cost-effective manner in the short term, but this could be due to large up-front investments resulting in delayed returns⁷.

Further, negative ROAs, low value-added and an upward trend in both are also present in the sample of companies that are backed by angel investors, found outside a BAN. This again indicates that there are few differences between the two groups of angel-backed companies.

In conclusion, although financing and information problems do plague entrepreneurial companies, this cannot be labelled a market failure yet as the angel-backed companies are value destroying in the short term. However, we do notice a J-curve trend in the measures of value creation, what might point to the fact that these companies need more time to deploy their capital in the most effective way (Lerner, 1999).

The short-term analyses may therefore underestimate the long-term value creation potential. For now, we

⁶ BAN-backed companies have significantly lower value-added ratios compared to non-BA-backed companies until year 2, but the difference is not significant thereafter.

⁷ We thank an anonymous referee for this comment.

advise caution in using the market failure argument as grounds for defending government programmes in the informal risk capital market but also point to the long-term potential of these companies. A longer time period is needed to see whether the positive evolution continues.

2.6.3 Contribution to economic development

The ultimate goal of the Flemish government was to stimulate regional economic growth and development (Van Rompuy, 1999). Important indicators hereof are job creation, taxes and value adding (Lerner, 1999; European Commission, 2001).

Table 2.2: Evaluation of the contribution to economic development

Variable (in 000 EUR)	BAN-backed compared to:			(1) Non-angel-backed companies			(2) Angel-backed through another channel		
	Mean	s.d.	N	Mean	s.d.	N	Mean	s.d.	N
Taxes									
Year 0	3.82	7.51	11	22.09**	65.51	22	20.00	31.89	12
Year 2	0.63	5.80	8	21.28**	41.46	25	12.42	24.14	19
Year 3	9.67	25.24	12	17.36	24.03	25	28.83**	49.35	18
Average yearly growth									
Value-added	73.78	144.41	30	-3.55**	146.54	33	148.00	415.24	46
Employees (FTE)	0.52	1.57	21	-0.18**	1.82	16	2.74	8.60	44

*p < 0.10; **p < 0.05; ***p < 0.01

(1) For the comparisons between BAN-backed and non-angel-backed companies, we used Wilcoxon rank tests

(2) For the comparisons between BAN-backed and the other angel-backed companies, we used Mann-Whitney tests

The BAN-backed companies together added € 45.2 million in value from the year of angel participation onwards, or, € 73.2 million if extrapolated to all 55 BAN-backed companies. Each euro of government subsidies spent on the Flemish BANs generated an estimated € 85.39 in value added. The value added

grows on average with € 73 782 per year in BAN-backed companies, which is significantly more than in non-angel-backed companies. BAN-backed companies hence perform better than comparable non-angel-backed companies.

The BAN-backed companies in the sample paid € 547 000 in taxes in a five-year period starting from the year of the angel participation. Extrapolated, all BAN-backed companies paid € 884 852 in taxes. Hence it is estimated that each euro of government money spent on the BANs generated a direct return of € 1.03 in taxes. Following their J-curve type evolution, the BAN-backed companies initially pay significantly fewer taxes than the non-angel-backed companies, but this difference disappears after three years when the taxes paid by BAN-backed companies increase dramatically (Table 2.2). It is further remarkable that they pay significantly less tax in year 3 than companies that received angel financing through another channel.

Finally, job creation is assessed using several measures. Employee growth is significantly higher in BAN-backed companies than in non-angel-backed companies and comparable with that in companies that received angel financing through another channel. If extrapolated, all BAN-backed companies together employ 495 people, representing 102 net jobs created (187 jobs created minus 85 jobs destroyed) from the year of angel participation until the last available year. Each BAN-backed company has created 1.85 jobs on average over the observation period (corresponding to an average yearly growth of 0.52 FTE), representing a subsidy of € 8 399 per job created. As there is a high probability that BAN-backed companies would not have existed without the BANs due to financing constraints, the most positive view is to consider all current 495 jobs as being additional. The subsidy per job created or retained is then € 1 731. This compares with an estimated subsidy per job of € 1 515 under the DTI initiative in the UK, € 4 000 under the European business incubators initiative and € 3 100 under the Structural Fund initiative in Belgium (Harrison and Mason, 1996b; European Commission, 2002).

The Flemish government thus succeeds in stimulating economic development and growth through the subsidization of BANs. BAN-backed companies generally contribute as much as companies that found angel financing without a BAN and significantly more than non-angel-backed companies in terms of value-added and job creation, although they do initially pay less taxes.

2.6.4 Indirect effects

An exhaustive evaluation of a government initiative needs to go beyond its direct effects (Harrison and Mason, 1996b; Lerner, 1999). In addition to matching entrepreneurs and investors, BANs may provide other benefits, such as raising the awareness and legitimacy of angel financing, coaching and educating investors and entrepreneurs (which for the latter also entails feedback from potential investors) and enabling entrepreneurs to raise further financing thanks to angel financing, both at the time of the initial investment and later (Harrison and Mason, 1996a;b; Lumme et al., 1998). Although hard to quantify, each of these impacts is briefly discussed.

Due to the anonymity preference of angel investors and the fact that entrepreneurs often have incomplete knowledge of financing sources (Van Auken, 2001; Paul et al., 2003), raising the awareness of potential market participants is an important task of BANs. Interviewed entrepreneurs and angel investors agree that BANs have conducted a considerable awareness campaign on the existence and merits of angel financing. Furthermore, both parties considered this task to be important.

Additionally, BANs can coach entrepreneurs on writing a business plan or presenting themselves to potential investors. If angel investors are not the most appropriate funding source, BANs can refer entrepreneurs to other, more suitable investors. The feedback provided by the angel investors themselves may also be important. Even if entrepreneurs do not find an investor, they might strengthen their opportunity based on feedback received from the angel investors to which they talked. Education and

training is a related task. BANs often provide specialized courses to investors and entrepreneurs on issues as negotiation, taxation or valuation. Based on the interviews, we found that entrepreneurs praise the BANs for their education and coaching. Although angel investors consider the BANs to perform rather well in educating entrepreneurs, they suggest more emphasis on educating angel investors although they do not consider this to be a critical task.

A final indirect effect is the fact that angel funding might enable entrepreneurs to raise additional financing, both at the time of angel financing and thereafter (Harrison and Mason, 1996b). Cumming (2007) interprets the ability of companies to raise follow-on funding even as an indirect indication of entrepreneurial success, especially if they have not come to full fruition. Ten BAN-backed companies raised on average € 243 518 from angel investors not connected to a BAN and € 233 313 from other sources at the time of the angel investment. More particularly, four raised money from a bank, four from the government (subsidies), one from 3Fs (family, friends and fools), one from venture capitalists and one from other companies. In comparison, companies benefiting from the DTI initiative raised € 298 516 at the time of angel funding (Harrison and Mason, 1996b). While Flemish BAN-backed companies raised somewhat less than their UK colleagues, this confirms the satisfactory performance of the Flemish companies.

Further, 61% of the entrepreneurs state that the angel financing had a positive impact on follow-on financing. Fourteen companies were able to raise follow-on bank financing, two venture capital financing and four raised financing through other channels such as government subsidies. On average, they raised another € 365 000 following angel financing. According to Harrison and Mason (1996b), one quarter of the companies should be able to attract at least 50% of the original amount as follow-on financing. The Flemish BAN-backed companies performed well as one quarter of the BAN-backed companies were able to raise 168% of the original amount. This yields further positive evidence of potential future value

creation (Cumming, 2007). These results suggest that the Flemish BANs, in addition to their direct effects, also generate important positive indirect effects.

2.7 Discussion

Designing a successful programme that addresses failures in the risk capital market without crowding out the private sector is not easy. International evidence shows that countries such as Israel, Australia and the USA have implemented successful programmes supporting the venture capital market (Cumming, 2007). The goal of the present study is to evaluate whether one type of government intervention in the informal risk capital market, namely the subsidization of BANs, is warranted. We first assessed whether the subsidies have reached their goals of reducing the financing problems of value-creating entrepreneurial companies and, by doing so, stimulating economic development and growth. Second, we assessed whether this intervention was based on correct assumptions. Government intervention in the risk capital market is usually based on the perception of a market failure. Therefore, we evaluated whether there is a failure in the angel market, i.e. whether there are value-creating companies that face financing problems caused by information problems or R&D spillovers. We further assessed some indirect effects.

Based on quantitative and qualitative data, we find clear evidence of BANs reducing information and financing problems of entrepreneurial companies. BANs finance particularly young companies with high financial risk in high-technology industries. These companies are most prone to information asymmetries and financial constraints. Moreover, entrepreneurs and angel investors state that they would not have known each other without BANs. The programme is additive: it increases the supply of funds to entrepreneurial companies, rather than crowding out the private sector. Further, these companies do contribute to economic development and growth. In this sense, the Flemish government programme is a success as its goals are reached. At this point in time it is hard to assess whether the supported companies create value in the long-term. In the short-term, they seem to destroy value, but there is an upward trend in

value adding and profitability in the last years of the analysis, what might point to these companies just needing more time to deploy their resources in the most effective way. The fact that most companies are able to raise significant amounts of follow-on funding is a further indication of future potential. The Flemish BAN programme produced positive indirect effects and compares well to the UK's DTI initiative, our only benchmark (Harrison and Mason, 1996b). In conclusion, the fact that this programme has successfully reached its goals, created many positive indirect effects and that the companies supported through this programme hold value-creating potential, lead us to conclude that public BAN support is justified. However, in order to make this tentative conclusion more robust, a longer-term evaluation of BAN-backed companies' value creation is indispensable.

Our study has several contributions. First, we contribute to the academic evaluation literature, as there is a scarcity of government programmes' evaluations. We contribute methodologically by combining quantitative and qualitative data. Second, our study dispels the popular view that BANs attract the worst-quality deals. Companies that seek funding through BANs are not riskier, nor do they grow less or have lower returns post-investment compared with companies that seek funding from angel investors through another channel. Finally, it confirms the BANs' role in reducing information and financing problems in the informal risk capital market.

Our study has a number of limitations. First, we mainly focused on the subsidies' direct effects. As the externalities of the subsidies are hard to quantify, the impact of the government subsidies might be underestimated. Second, some positive outcomes, such as total angel money invested due to the existence of a BAN, might be overestimated. Third, one could argue that publicly funded BANs should be compared with non-publicly funded ones. As the ultimate goal of BAN subsidies is to reduce information and financing problems of entrepreneurial companies, we consider it more relevant to study the ultimate beneficiaries of the measure. Moreover, none of the Flemish BANs would have existed without the

subsidies: these were instrumental in setting up and running the BANs. There were (and still are) no Belgian BANs operating without subsidies (EBAN, 2005a).

We propose some suggestions for further research. As most BAN investments are young, we were only able to assess their post-investment performance up to four years. In order to assess the value creation of BAN-backed companies, longer-term analyses are essential. Another interesting avenue for further research is to compare companies that had financing alternatives before the angel investment with those without. In order to understand better the impact of direct BAN subsidies, it is interesting to compare this approach with other approaches used to stimulate angel investments, e.g. tax reliefs or co-investment schemes. Given the relatively young nature of the latter programmes, we leave this as an avenue for future research.

2.8 References

- Aernoudt, R., 1999. European policy towards venture capital: Myth or reality? *Venture Capital* 1, 47-57.
- Altman, E., 1968. Financial ratios, discriminant analysis, and the prediction of corporate bankruptcy. *Journal of Finance* 23, 589-609.
- Ayayi, A., 2004. Public policy and venture capital: The Canadian labor-sponsored venture capital funds. *Journal of Small Business Management* 42, 335-345.
- Berger, A., Udell, G., 1998. The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking and Finance* 22, 613-673.
- Boyns, N., Cox, M., Spires, R., Hughes, A., 2005. Research into the Enterprise Investment Scheme and Venture Capital Trusts. PACEC, Cambridge/London.
- Carlson, C., Chakrabarti, P., 2007. Venture capital investment in secondary cities: issues and opportunities for impact. Public and Community Affairs Discussion Papers 07-3, Federal Reserve Bank of Boston.
- Christensen, J., 2007. The development of geographical specialization of venture capital. *European Planning Studies* 15, 817-833.
- Cumming, D., 2007. Government policy towards entrepreneurial finance: Innovation investment funds. *Journal of Business Venturing* 22, 193-235.
- Da Rin, M., Nicodano, G., Sembenelli, A., 2006. Public policy and the creation of active venture capital markets. *Journal of Public Economics* 90, 1699-1723.
- Dossani, R., Kenney, M., 2002. Creating an environment for venture capital in India. *World Development* 30, 227-253.
- EBAN (European Business Angel Network), 1998. Dissemination report on the potential for business angel investments and networks in Europe. EBAN/EURADA, Torquay.
- EBAN (European Business Angel Network), 2005a. European directory of business angel networks in Europe. EBAN, Brussels.
- EBAN (European Business Angel Network), 2005b. Statistics Compendium. EBAN, Brussels.
- European Commission, 2001. State aid and risk capital. Official Journal of the European Communities C 235, 3-11.
- European Commission, 2002. Benchmarking of Business Incubators. EC, Brussels.

- European Commission, 2003a. Benchmarking business angels. EC, Brussels.
- European Commission, 2003b. Access to finance of small and medium-sized enterprises. EC, Brussels.
- European Commission, 2006. The PAXIS Manual for innovation policy makers and practitioners. EC, Brussels.
- EVCA (European Venture Capital Association), 2002. Survey of the economic and social impact of venture capital in Europe. EVCA, Zaventem.
- Fritsch, M., Falck, O., 2007. New business formation by industry over space and time: A multidimensional analysis. *Regional Studies* 41, 157-172.
- Harrison, R., Mason, C., 1996a. Informal venture capital: Evaluating the impact of Business Introduction Services. Woodhead-Faulkner Ltd., Hertfordshire.
- Harrison, R., Mason, C., 1996b. Developing the informal venture capital market: A review of the Department of Trade and Industry's informal investment demonstration projects. *Regional Studies* 30, 765-771.
- Harrison, R., Mason, C., 1999. Editorial: An overview of informal venture capital research. *Venture Capital* 1, 95-100.
- Heirman, A., Clarysse, B., 2005. The imprinting effect of initial resources and market strategy on the early growth path of start-ups. Working Paper 2005/310, Ghent University, Gent.
- Holmstrom, B., Tirole, J., 1997. Financial intermediation, loanable funds, and the real sector. *Quarterly Journal of Economics* 112, 663-691.
- Jääskeläinen, M., Maula, M., Murray, G., 2006. Performance of incentive structures in publicly and privately funded hybrid venture capital funds. Paper presented at the International ProACT Conference 2006, Tampere, Finland.
- Lemmon, M., Zender, J., 2004. Debt capacity and tests of capital structure theories. Working paper, University of Colorado and University of Washington.
- Lerner, J., 1999. The government as Venture Capitalist: The long-run impact of the SBIR program. *The Journal of Business* 72, 285-318.
- Lerner, J., 2002. When bureaucrats meet entrepreneurs: The design of effective 'public venture capital' programmes. *The Economic Journal* 112, F73-F84.
- Lerner, J., Moore, D., Shepherd, S., 2005. A study of New Zealand's venture capital market and implications for public policy. LECG, Auckland/Wellington.

- Lumme, A., Mason, C., Suomi, M., 1998. Informal venture capital: Investors, investments and policy issues in Finland. Kluwer Academic Publishers, Dordrecht.
- Martin, R., Sunley, P., Turner, D., 2002. Taking risks in regions: the geographical anatomy of Europe's emerging venture capital market. *Journal of Economic Geography* 2, 121-150.
- Mason, C., Harrison, R., 1995. Closing the regional equity gap: The role of informal venture capital. *Small Business Economics* 7, 153 - 172.
- Mason, C., Harrison, R., 2002. Barriers to investment in the informal venture capital sector. *Entrepreneurship and Regional Development* 14, 271-287.
- Mason, C., Harrison, R., 2003. Closing the regional equity gap? A critique of the Department of Trade and Industry's Regional Venture Capital Funds initiative. *Regional Studies* 37, 855-868.
- Mason, C., 2006. Informal sources of venture finance. In: Parker, S. (Ed) *The life cycle of entrepreneurial ventures*. Springer, New York, pp. 259-299.
- Maula, M., Murray, G., 2003. Finnish Industry Investment Ltd: An International Evaluation (Publications 1/2003). Ministry of Trade and Industry, Helsinki.
- Maula, M., Murray, G., Jääskeläinen, M., 2007. Public financing of young innovative companies in Finland (Publications 3/2007). Ministry of Trade and Industry, Helsinki.
- Murray, G., 1998. A policy response to regional disparities in the supply of risk capital to new technology-based firms in the European Union: The European Seed Capital Fund Scheme. *Regional Studies* 32, 405-419.
- Murray, G., 2007. Venture capital and government policy. In: Landström, H. (Ed.). *Handbook of Research on Venture Capital*. Edward Elgar Publishing, Cheltenham (UK), pp. 113-151.
- Paul, S., Whittam, G., Johnston, J., 2003. The operation of the informal venture capital market in Scotland. *Venture Capital* 5, 313-335.
- PricewaterhouseCoopers / Thomson Venture Economics / National Venture Capital Association, 2006. MoneyTree™ Survey.
- Puri, M., Zarutskie, R., 2007. On the Lifecycle Dynamics of Venture-Capital- and Non-Venture-Capital-Financed Firms. Working Paper Duke University.
- Sohl, J., 2005. The angel investor market in 2005. Center for Venture Research, Durham.

Stroobandt, F., Lievens, J., Waeye, H., 2005. Cultuurparticipatie in het Europa van de 15. Vlaanderen 'Best in Class'?. In: Lievens, J., Waeye, H. (Eds.) Cultuurparticipatie in breedbeeld. Uitgeverij De Boeck, Antwerpen, pp. 233-264.

Sunley, P., Klagge, B., Berndt, C., Martin, R., 2005. Venture capital programmes in the UK and Germany: In what sense regional policies? *Regional Studies* 39, 255-273.

Van Auken, H., 2001. Financing small technology-based companies: The relationship between familiarity with capital and ability to price and negotiate investment. *Journal of Small Business Management* 39, 240-258.

Van Rompuy, E., 1999. Steun voor Business Angels Netwerken. Press release Flemish Government 18/5/1999.

Venkataraman, S., 2004. Regional transformation through technological entrepreneurship, *Journal of Business Venturing* 19, 153-167.

Wong, P.X., Ho, Y.P., Autio, E., 2005. Entrepreneurship, innovation and economic growth: Evidence from GEM data. *Small Business Economics* 24, 335-350.

CHAPTER 3

Conflict between Angel Investors and Entrepreneurs: Perception, reality and impact on innovation*

Veroniek Collewaert

Ghent University, Department of Accounting and Corporate Finance

Abstract

Intragroup conflict has often been mentioned as one of the key processes affecting team and organizational innovation. However, there has been a lot of debate as to whether or not conflict is beneficial to innovation. This paper aims to shed new light on this relationship by taking the debate to the intersubgroup level and studying the impact of intersubgroup task, relationship and process conflicts on innovation. Furthermore, this study extends the conflict contingency framework, according to which the effects of these three types of conflict on innovation vary depending on moderating influences. Going back to early conflict theory, a distinction is made between perceived and actual incompatibilities or perceived and actual conflict respectively. This paper aims to show that both are equally important in that the latter can alter the former's effects. Using teams consisting of entrepreneurs and angel investors, the empirical results reveal that perceived task and relationship conflict, but not process conflict, negatively impact a company's innovation output. However, perceived conflict's negative effect can be reduced by low levels of actual conflicts between angel investors and entrepreneurs.

* This paper is accepted for publication in the Best Paper Proceedings of the 2009 Academy of Management Meeting (Chicago, IL). A more extensive version of this paper is accepted for publication in 2008 Frontiers of Entrepreneurship Research (Babson College) and benefited from presentation at the 2008 Babson College Entrepreneurship Research Conference (Chapel Hill, NC). I acknowledge financial support from the Fund for Scientific Research – Flanders (FWO-Vlaanderen) and would like to thank Bart Clarysse, Pamela Hinds, Karen Jehn, Sophie Manigart and Annaleena Parhankangas for their feedback on earlier drafts of this paper.

3.1 Introduction

Being a source of competitive advantage, innovation has usually been positively related to a company's performance, growth and success (Damanpour, 1991; Cho and Pucik, 2005). Innovation is defined as "the intentional introduction and application within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, group, organization or wider society" (West and Farr, 1990, p. 9). As such it captures the team's or organization's capacity to deal with change (West and Sacramento, 2006). Despite the vast amount of literature on innovation's antecedents and moderators (Damanpour, 1991; Anderson et al., 2004), much remains to be learned about the processes whereby teams and companies become innovative (De Dreu, 2006, p. 83-84). One of those key processes is conflict between team members (De Dreu, 2006; West and Sacramento, 2006). Whether conflicts are beneficial or detrimental to a team's or organization's innovation has been the subject of much debate. Some scholars argue that intragroup disagreements increase information sharing, critical evaluation and assessment of alternatives, diverse opinions and perspectives, which should lead to more creativity and innovation (Baron, 1984; Nemeth, 1995; De Dreu and West, 2001). Others, however, argue that conflicts consume cognitive resources and produce stress and tension, blocking information handling and processing, both of which reduce the capacity for creative thinking and hence impede innovation (Walton, 1969; Pelled, 1996; Jehn and Bendersky, 2003).

This paper aims to shed more light on the conflict-innovation relationship in two ways. First, most of the current literature has focused on conflict between team members, i.e. intragroup conflict (Bezrukova and Jehn, 2008). United by a superordinate goal, team members are dependent on each other and work together to reach that particular goal (Kozlowski and Ilgen, 2006). Many teams however consist of subgroups striving for their own specific sub-goals, which is an aspect of teams that has generally been overlooked until recently (Li and Hambrick, 2005; Bezrukova and Jehn, 2008). This paper aims to address this gap in the conflict literature by looking into intersubgroup conflict's impact on innovation and, as

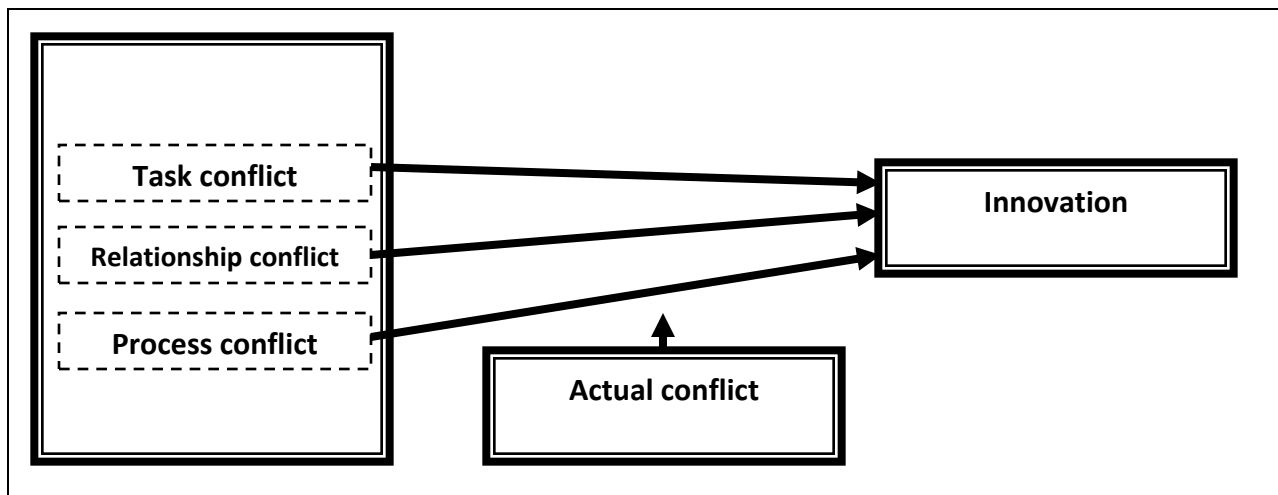
such, shed new light on the conflict-innovation relationship. Second, in response to many inconclusive empirical results concerning conflict's impact, conflict researchers have proposed a contingency perspective (De Dreu and Weingart, 2003a; Jehn and Bendersky, 2003). According to this approach, conflict's impact on innovation should vary depending on two elements: (i) the type of conflict and (ii) moderating influences (De Dreu and Weingart, 2003a; Jehn and Bendersky, 2003). Building on this line of research, this paper seeks to better identify the conditions under which conflict is beneficial or detrimental to innovation. In order to do so, a distinction is made between actual and perceived incompatibilities or perceived and actual conflict. According to the early conflict theorists, perceived and actual incompatibilities can vary independently (Deutsch, 1973; Thomas, 1976). Despite this, conflict studies over the years have come to focus on the former and ignored the latter. This study aims to contribute to conflict theory by showing that perceived and actual incompatibilities are equally important when studying conflict and thus both should be taken into account. More specifically, this paper analyses the impact of different types of perceived intersubgroup conflict on innovation, considering the moderating role of actual conflict.

To examine conflict's impact on organizational innovation, I conduct my study in the context of angel-financed entrepreneurial companies. Operating in a highly dynamic and volatile environment, innovation is of the utmost importance to these companies. Due to R&D externalities, informational opaqueness and low levels of collateral, they are constrained from access to bank financing and public capital markets (Berger and Udell, 1998; Lerner, 1998). As such, angel investors are generally considered the primary early-stage financing source for entrepreneurial companies. Further, using the angel investor-entrepreneur relationship as a research context offers the benefit of providing a real-life setting in which to study the impact of actual incompatibilities. More specifically, this study focuses on a particular form of actual conflict prevalent in this relationship, i.e. actual goal incompatibilities (Sapienza and Gupta, 1994; Cable and Shane, 1997). As for venture capitalists, a cooperative working relationship between angel investors and entrepreneurs is of crucial importance to the portfolio company's success (Cable and Shane, 1997;

Wijbenga and van Witteloostuijn, 2006). Previous research has indicated though that the post-investment relationship between external investors and entrepreneurs is prone to conflict instead and, as such, cooperation is far from self-evident (Higashide and Birley, 2002; Parhankangas and Landström, 2006; Yitshaki, 2008). Notwithstanding the importance of cooperation between external investors and entrepreneurs, research into the “dark side” of their relationship is still lacking (Parhankangas and Landström, 2006, p. 775). As such this study contributes to the entrepreneurial finance literature by broadening our understanding of how the internal dynamics between external investors and entrepreneurs impact their portfolio company’s level of innovation.

The paper will proceed as follows: firstly, the arguments underlying conceptualizing angel investors and entrepreneurs as teams will be discussed. Thereafter hypotheses will be developed regarding the impact of perceived conflicts between angel investors and entrepreneurs on the portfolio company’s innovation as well as the moderating effect of actual conflicts between these parties (see figure 3.1 for a conceptual model). Finally, I will describe the method, present the findings and discuss these results, the contributions and limitations.

Figure 3.1: Conceptual model



3.2 Angel investors and entrepreneurs as a team

In an average angel-backed company, angel investors and entrepreneurs are dependent on each other in that they make a deal to exchange the angel investor's human, social and financial capital for the opportunity or potential to make financial gains (Prowse, 1998; Yitshaki, 2008). In order for the portfolio company to survive and grow, the entrepreneurs need the angel investor's capital, although the degree to which can differ from company to company (Freear et al., 1994; Berger and Udell, 1998). Similarly, the angel investors, whose degree of active participation in a portfolio company can also vary, need the entrepreneurs to run and manage the company in a way that will maximize their financial gain (Mason, 2006). In other words, both parties have their own particular role to play, but both roles are vitally and equally important to the company's final success and growth. Being interdependent individuals who work together to reach important, mutual goals, angel investors and entrepreneurs thus fulfil the definition of a team (De Dreu et al., 1999; Kozlowski and Ilgen, 2006). However, regardless of their mutual overarching goal of value creation, angel investors and entrepreneurs could have different sub-goals. For instance, entrepreneurs could see their company as a life-long commitment, whereas investors could only want to maximize their short-term returns (DeTienne, 2008; Yitshaki, 2008). This, in turn, will lead to potentially divergent views between investors and entrepreneurs as to what the best way to run the company or to allocate resources is (Cable and Shane, 1997). As such, the distinction between angel investors and entrepreneurs forms a natural divide between these two parties. Therefore, in what follows, conflict between angel investors and entrepreneurs refers to intersubgroup conflict (Bezrukova and Jehn, 2008).

3.3 Theory and hypotheses

3.3.1 *Perceived Conflict and Innovation*

According to the most recent literature on intragroup conflict, conflict is defined as “*perceived* incompatibilities or discrepant views among the parties involved” (Jehn and Bendersky, 2003, p. 189). A distinction is made between three different types of conflict, namely task, relationship and process conflicts (Jehn, 1995; Jehn and Bendersky, 2003).

In this study, *task conflicts* are perceived disagreements or differences in opinion between angel investors and entrepreneurs about the task performed (based on Jehn and Mannix, 2001; Bezrukova and Jehn, 2008). For instance, being key strategic decision agents, angel investors and entrepreneurs can *perceive* to disagree on what tasks to be carried out or what short-term and long-term objectives to set for the company (e.g. what products to develop, what markets to enter and what growth strategy to pursue). Task conflicts are generally considered to play a crucial role in the innovation process (De Dreu, 2006; Song et al., 2006), hence making it the most relevant type of conflict to study in relation to this outcome. Intragroup task conflict and its impact on innovation have been the subject of much debate, with some scholars suggesting a positive effect (see, for instance, Gebert et al., 2006; Matsuo, 2006), others a negative effect (e.g. Lovelace et al., 2001) and others a curvilinear effect (De Dreu, 2006; Kratzer et al., 2006).

I argue that angel investors and entrepreneurs having task-related disagreements could be thought of as warring factions within a team (Bezrukova and Jehn, 2008). Rather than investors and entrepreneurs being different individuals contributing different ideas about the task at hand, their interaction will have a higher chance of turning into a competitive game with each faction trying to reach their own sub-goals (Eisenhardt and Bourgeois, 1988; Amason, 1996; Brewer and Miller, 1996; LaBianca et al., 1998). This in

turn will increase the level of distrust, use of politics and cognitive barriers between the team members (Eisenhardt and Bourgeois, 1988; Baba et al., 2004; Bezrukova and Jehn, 2008). Consequently, information sharing between angel investors and entrepreneurs will be blocked and both parties' cognitive ability to process new or complex information will decrease. A truly open and creative debate between these subgroups will thus become less likely (Barkema and Shvyrkov, 2007), which should make it more difficult for both parties to come up with innovative solutions and will redirect their attention away from maximizing the innovative potential of the company and its products to the disagreement at hand (Walton, 1969; Lovelace et al., 2001). In other words, task conflicts between angel investors and entrepreneurs should thus be associated with lower levels of organizational innovation.

The second most frequently studied type of conflict, *relationship conflict*, is defined as “an awareness of interpersonal incompatibilities” between angel investors and entrepreneurs (based on Jehn and Mannix 2001, p. 238; Bezrukova and Jehn, 2008). Compared to task-related disagreements, relationship conflicts have been the subject of much less debate as research has consistently produced negative results (see, for instance, Amason, 1996; Jehn, 1997; De Dreu and Van Vianen, 2001; Jehn and Mannix, 2001; Bayazit and Mannix, 2003; De Dreu and Weingart, 2003b). Following this traditional view, I expect underlying tensions, personal frictions or anger between angel investors and entrepreneurs to increase feelings of cynicism, avoidance and anxiety, interfere with their ability to handle new or complex information, to decrease cooperation and to absorb time and energy necessary for creativity (Jehn, 1995; Amason, 1996; Pelled 1996, Jehn, 1997; Matsuo, 2006). Relationship conflicts between angel investors and entrepreneurs are thus likely to hamper innovation.

Thirdly, *process conflicts* are defined as an awareness of controversies between angel investors and entrepreneurs about aspects of *how* task accomplishment will proceed (based on Jehn and Mannix 2001, p. 239; Bezrukova and Jehn, 2008). Process-related disagreements between angel investors and entrepreneurs could include what roles the investor should take in the company (should (s)he act as a

sounding board, take on a seat in the board of directors or take on a part-time or full-time job in the company), how the decision power should be distributed between investors and entrepreneurs, how financial and human resources should be allocated and which control and monitoring mechanisms should be introduced in the company. The few studies that have looked into this type of conflict, have generally suggested it to have a negative effect (see, for instance, Jehn, 1997; Jehn and Mannix, 2001; Hinds and Bailey, 2003; Thatcher, Jehn, & Zanutto, 2003; Passos and Caetano, 2005), including on innovation (Matsuo, 2006). As with the other two types of conflict, I argue process conflicts between angel investors and entrepreneurs to detract from the portfolio company's level of innovation due to the negative emotions (frustration, confusion) it produces (Hinds and Bailey, 2003; Greer and Jehn, 2007), redirection of attention and cognitive capacity away from the task (Hinds and Bailey, 2003; Matsuo, 2006) and an increased probability of transforming into the other two types of conflict (Greer, Jehn, & Mannix, 2008). In conclusion, the hypotheses for the effects of perceived conflicts between angel investors and entrepreneurs on the portfolio company's innovation are thus:

H1a: Higher levels of perceived task conflicts between angel investors and entrepreneurs will reduce the company's innovation level.

H1b: Higher levels of perceived relationship conflicts between angel investors and entrepreneurs will reduce the company's innovation level.

H1c: Higher levels of perceived process conflicts between angel investors and entrepreneurs will reduce the company's innovation level.

3.3.2 Actual Conflict and Innovation

As can be deduced from the discussion above, the definition of intragroup conflict and hence intersubgroup conflict has converged on a conceptualization where the emphasis is on the *perception, experience or awareness* of incompatibilities or frustrations (e.g. Thomas, 1992; Jehn, 1995; Janssen et

al., 1999; Jehn and Bendersky, 2003). As the early conflict theorists noticed though, there is more to conflict than just perception. More specifically, they emphasized that perceived incompatibilities do not necessarily reflect actual incompatibilities, nor will actual incompatibilities necessarily be perceived as such (Deutsch, 1973; Thomas, 1976; Fisher, 1998). While perceived incompatibilities could be thought of as overt conflict, actual incompatibilities could be thought of as latent or actual conflict (Pondy, 1967; Schmidt and Kochan, 1972). In this paper, I argue that perceived conflicts between angel investors and entrepreneurs have a much stronger negative effect in the presence of actual conflicts than without actual conflicts. More specifically, I focus on a particular type of actual conflict prevalent in the angel investor-entrepreneur relationship, i.e. actual goal incompatibilities. Based on agency theory, the existence of incompatible goals between external investors and entrepreneurs is likely (Sapienza and Gupta, 1994; Cable and Shane, 1997). For example the entrepreneur might conceive the company as a lifestyle company versus the investor conceiving it as a short-term, high-growth investment. As such this setting provides us with a natural real-life setting to study the impact of actual incompatibilities, as opposed to much of the organizational behaviour literature where these incompatibilities need to be manipulated through experiments (see, for instance, Mannes, 2008).

Distinguishing this approach from the cooperative and competitive goal approach to conflict (e.g. Tjosvold, 1998; Chen et al., 2005; Yi-Feng et al., 2008) is again that the latter completely revolves around perception. More specifically, based on Deutsch (1973), these researchers state that when team members *perceive* their goals to be cooperatively or positively dependent on each other, conflicts can have constructive effects on team effectiveness through increased mutual trust, positive attitudes towards other team members and open-minded debate (Deutsch, 1973; Tjosvold, 1998). Perceptions of competitively or negatively linked goals on the other hand will lead to the opposite. In this paper, however, the focus is on actual incompatible or competitive goals, not the perception thereof.

As actual conflicts are associated with less cooperative behaviour and less problem-solving (Deutsch, 1973; Fisher, 1998), the negative emotions, frustrations, competitive tactics and disabled information sharing process associated with perceived conflicts, regardless the type, should be intensified in teams where actual goal incompatibilities between angel investors and entrepreneurs are high. Arguments from the entrepreneurial finance literature would point in the same direction. Research in the venture capital area has namely shown that higher goal incompatibility between investors and entrepreneurs will increase the frequency of interaction between these parties as to reduce the risk of opportunistic behavior (Sapienza and Gupta, 1994). Frequent communication should ensure that both parties are exercising enough effort to perform their respective tasks as well as avoiding any dishonest or fraudulent behaviour (Parhankangas and Landström, 2006). However, although meant as a solution, contact theory suggests that increased interaction and communication can have an adverse effect in that it may also heighten the salience of any present conflicts, regardless of whether these discussions relate to the task performed, the process towards task accomplishment or personality clashes (Brewer and Miller, 1996; Jehn and Bendersky, 2003). As conflicts become more salient, conflicting parties become more aware of their existence, which will exacerbate their negative effects (Jehn and Bendersky, 2003). Further, venture capital research also showed that incongruent goals not only increase the frequency of interaction between investors and entrepreneurs, but simultaneously reduce the quality of the information and knowledge exchanged during that interaction (De Clercq and Sapienza, 2006). When angel investors and entrepreneurs start to withhold crucial information, they obstruct the information-sharing process, both in terms of width and breadth. This is however the condition sine qua non for task conflicts to have a beneficial effect on creativity and decision-making (Amason, 1996; De Dreu, 2006). As such, highly incompatible goals and the resulting disabled information-sharing process will only serve to further strengthen task conflict's negative main effect on the portfolio company's innovation. Hence, I hypothesize the following:

H2a: The negative effects of task conflicts between angel investors and entrepreneurs on the portfolio company's innovation will be stronger in companies where actual conflicts between angel investors and entrepreneurs are higher (rather than lower).

H2b: The negative effects of relationship conflicts between angel investors and entrepreneurs on the portfolio company's innovation will be stronger in companies where actual conflicts between angel investors and entrepreneurs are higher (rather than lower).

H2c: The negative effects of process conflicts between angel investors and entrepreneurs on the portfolio company's innovation will be stronger in companies where actual conflicts between angel investors and entrepreneurs are higher (rather than lower).

3.4 Method

3.4.1 Data Collection

The hypotheses are tested based on a dataset of Belgian angel-backed companies. In order to reduce sample selection bias and obtain the most representative sample possible, 20 different Belgian data sources were used to identify angel-backed companies, including a random directory of start-ups, deal lists of angel networks, GEM data⁸, directories of high-technology companies⁹, media articles, incubators and snowballing. This way a list of 305 potential angel-backed companies was constructed, who were contacted by phone during the summer of 2007 in order to identify whether or not they fulfilled the conditions of the research. These conditions were (1) at least one angel investor needed to be a member of the Board of Directors, this to ensure a minimum threshold of active participation in strategic decision-making in their portfolio company and (2) the company had to have received angel financing between January 2003 and August 2006. The latter condition was imposed in order to avoid the exit period. This

⁸ During the data collection process for the Global Entrepreneurship Monitor in Belgium, an additional question was asked to respondents as to whether or not they had made investments that were not family- or friend-related.

⁹ For more details on this dataset see Heirman and Clarysse (2005).

was deemed important as conflict's effects can change as teams are approaching the end of their relationship (Jehn and Mannix, 2001). Further, it is also general practice in venture capital research to avoid recall and survival bias (Higashide and Birley, 2002; De Clercq and Sapienza, 2006). This resulted in 107 (potentially) eligible companies of which 49 agreed to participate and 58 that either did not want to participate (18) or I was unable to contact (40).

Data were collected via two instruments: (1) all independent and moderating variables were gathered through questionnaires and (2) information on the dependent variable was gathered through the companies' financial accounts (see below). Prior to sending out the questionnaires, pilot tests were conducted to ensure the adequacy of the measures in this untraditional setting (one with an expert in the field, three with angel investors and four with entrepreneurs). Pilot tests averaged little more than over one hour. Based on the results slight modifications were made to the non-financial items included in the actual conflict scale to better fit the angel setting. Considering the team approach adopted in this paper, responses were sought from all entrepreneurial team members and angel investors who had a seat on the Board of Directors. An entrepreneurial team is defined as those individuals who, at the time of the study, each had an equity stake and were actively involved or played a key role in strategic decision making (Ucbasaran et al., 2003; Forbes et al., 2006). Angel investors are defined as external individual investors who invest some of their own wealth in unlisted companies in exchange for shares and who have no family or friend connection to the entrepreneurs (Mason, 2006). When parties agreed to participate, questionnaires were e-mailed either directly to the team members concerned or, in some cases, through the CEO when angel investors preferred to remain anonymous. When necessary, follow-up phone calls were performed. On the first page of the questionnaire, it was clearly stated who should be considered to belong to the angel investors or the entrepreneurial team. Individuals were then asked to fill in the questionnaire referring to these two definitions. Using a team member response rate criterion of 50% (as in Ensley et al., 2002; Mooney et al., 2007) and the condition that at least one response was needed from the angel investor side and one from the entrepreneurs' side, I obtained a final sample of 28 teams. Although small,

this sample size is not unusual in team research (e.g. Wageman, 2001; Raver and Gelfand, 2005; De Dreu 2006). The teams averaged 3 members (s.d. = 0.92, range = 2–5) and represented 75 individual responses (of which 35 angel investors and 40 entrepreneurs). Analyses revealed no substantial differences between early and late respondents regarding the primary variables of interest, suggesting that the risk of non-response bias is limited (Armstrong and Overton, 1977).

3.4.2 Measures

Innovation was measured as the ratio of the amount of intangible assets to total assets in 2007, using the companies' financial accounts. As this section mainly contains R&D expenses, patents and licenses, it is generally considered a good proxy of a company's innovative activity (Francis and Smith, 1998; Bounfour, 2005).

The three types of perceived conflict were all measured using three items (see Appendix A for exact wording of the items). *Task* and *relationship conflict* were measured using the revised version by Pearson et al. (2002) of Jehn's intragroup conflict scale (Jehn, 1995), adapted to the intersubgroup level. On a scale from 1 (= none) to 5 (= a great deal), respondents were asked to rate how many disagreements concerning task-related issues and how much personal friction and tension there had been between the angel investors and the entrepreneurs. *Process conflict* was measured using the scale from Jehn and Mannix (2001), also adapted to the intersubgroup level. Using the same Likert-type scale as for the other two types of conflict, respondents were asked to rate the amount of disagreements between the angel investors and entrepreneurs regarding resource allocation and task responsibilities. All Cronbach's alpha values indicated good reliability (0.94, 0.97 and 0.88 respectively).¹⁰

¹⁰ Individual item reliability was also checked, with item loadings exceeding a 0.7 threshold considered reliable (Hulland, 1999). This condition holds for all items except for one process conflict item, i.e. the resource allocation item (a result similar to the Jehn and Mannix, 2001). As this particular loading does not drop below 0.5 and the scale

Actual conflict was measured as the degree of goal incongruence based on Sapienza and Gupta (1994). First, respondents were asked to allocate 200 points across 11 objectives (6 financial and 5 non-financial criteria) and this according to their individual perception of each of these criteria's importance to the achievement of the short-term financial goals of Venture X. Second, they were asked how much emphasis should be given to financial and non-financial goals respectively (percentage). For each criterion a weighted score was then calculated. Illustration: new product development (NPD) is a non-financial criterion. Assume the respondent allocated 20 out of 100 non-financial points to this criterion and, in general, thinks that non-financial goals should be given 80% emphasis, then the weighted score for NPD would equal 20×0.80 . Sapienza and Gupta (1994) then proceed by calculating the absolute differences between the weighted scores of the venture capitalist and the CEO and then summing these differences across criteria. As, in this study, the focus is on the degree of goal incongruence between angel investors and entrepreneurs, one step was added. First, the average of the weighted scores per criterion was calculated for the two subgroups (i.e. angel investors and the entrepreneurs) separately. Only then I proceed in the same way as Sapienza and Gupta (1994), i.e. taking the absolute differences of the average weighted scores of the angel investors and entrepreneurs within the same company and summing them across criteria.

Based on previous conflict-innovation studies, I controlled for team size and industry (Lovelace et al., 2001; De Dreu, 2006). *Team size* was a sum of the number of entrepreneurs and angel investors on the Board of Directors. *Industry* was operationalised as a dummy variable, taking the value of 1 if the company belonged to the services industry and 0 otherwise. Following venture capital literature, I also controlled for *investment stage*. This was measured as a dummy variable, taking the value 1 when the first angel investment of interest was a seed or start-up investment and 0 otherwise.

was previously validated I keep it in the model. As a robustness check, process conflict analyses were rerun without this item, but this did not alter the results.

3.4.3 Scale Validation and Data Aggregation

First, a confirmatory factor analysis was conducted to assess the validity of the conflict scales. This yielded a model that fitted the data adequately ($\chi^2 (24) = 52.31$, $\chi^2/df = 2.18$, CFI = 0.95, TLI = 0.93, SRMR = 0.06). Item loadings were as proposed and significant, which provides sufficient evidence for discriminant validity. Second, data needed to be aggregated to the team level as intersubgroup conflict is in fact a specific type of intragroup conflict. In other words, while the unit of analysis is the intersubgroup level, this statistically translates to aggregation to the team level. In order to check whether aggregation to this level was appropriate, the intraclass correlation coefficient (ICC) and within-group agreement index was calculated (James et al., 1984; Lindell et al., 1999; Klein and Kozlowski, 2000). For all three conflict constructs, the ICC is significant ($p < 0.01$) and the median $R_{wg(J)}$ values exceed the 0.7 threshold (0.94 for both task and relationship conflict and 0.95 for process conflict), which justifies aggregation. Median $R_{wg(J)}$ values were also calculated based on a triangular and moderately skewed distribution instead of the generally used uniform null distribution to account for potential response biases (LeBreton and Senter, 2008). These values also all exceed the 0.7 threshold, thus confirming adequate within-group agreement for aggregation.

3.5 Results

3.5.1 Sample description

On average, the companies included in this sample are five years old, have ten employees, received their angel financing three years ago and have three angel investors who currently own 36% of the shares. Eight companies received seed financing, another 8 start-up financing and 12 investments were later-stage investments. These companies are mainly active in the services industry, among which fifteen operating in the ICT industry and another five in research and development. The average angel investor is 48 years old,

has 12 years of entrepreneurial experience and has founded four companies. The average entrepreneur is 41 years old, has 6 years of entrepreneurial experience and has founded 2 companies.

Table 3.1: Descriptive statistics and correlations (N = 28)

Variable	Mean	s.d.	1	2	3	4	5	6
1. Team size	3.46	0.92	-					
2. Task conflict	2.31	0.79	.03	-				
3. Relationship conflict	1.84	0.92	-.09	.82**	-			
4. Process conflict	1.68	0.59	-.08	.76**	.79**	-		
5. Actual conflict	66.23	22.32	-.21	-.10	-.06	.14	-	
6. Innovation	0.23	0.24	-.18	-.32†	-.33†	-.15	.13	-

† < .10; * p < .05; ** p < .01

Table 3.1 provides an overview of the means¹¹, standard deviations and zero-order correlations between the variables included in the model. The portfolio company's innovation and both task and relationship conflicts between angel investors and entrepreneurs are marginally significant, negatively correlated. Although also negative and thus in the predicted direction, the correlation between process conflicts and innovation is insignificant. Noteworthy are the very high and significant correlation coefficients between all three conflict constructs, as in tradition with previous conflict studies (see, for instance, Peterson and Behfar, 2003; Parayitam and Dooley, 2007). In order to reduce the risk of multicollinearity and taking into account the rather small sample size, separate models for each of the three conflict types were run.

3.5.2 Main Analyses

All hypotheses were tested using partial least squares (PLS) path analysis with bootstrapping, which is a type of variance-based structural equation modelling (Chin et al., 2003), using SmartPLS software (Ringle

¹¹ The mean value for actual conflict is 66.23 (st.dev. 22.32). As a point of comparison, the average degree of goal incongruence between venture capitalists and CEOs in the study by Sapienza and Gupta (1994) was substantially higher, i.e. 93.92 (st.dev. 31.61).

et al., 2005). This technique, developed by Wold (1974), is well-fit for testing structural models with small sample sizes and situations where distributional assumptions might not hold (e.g. Milberg et al., 2000; Weingart et al., 2008). As the proposed measurement model was adequate – assessed through the individual item reliability, convergent validity and discriminant validity – the second step could be executed, i.e. testing and interpreting the relevant path coefficients (Hulland, 1999). The results of these analyses with standardized coefficients are shown in Table 3.2.

Table 3.2: PLS path analysis results for intangible assets ratio (N = 28)

	Control model	H1a	H1b	H1c	H2a	H2b	H2c
Control variables							
Team size	-0.28	-0.27	-0.30	-0.32	-0.48*	-0.36	-0.33
Early stage	0.32†	0.36*	0.32†	0.38†	0.39*	0.26	0.44*
Services industry	0.02	-0.07	0.00	0.01	0.05	0.05	-0.05
Predictor variables							
Task conflict		-0.41*			-0.36*		
Relationship conflict			-0.34*			-0.29†	
Process conflict				-0.29			-0.29
Actual conflict					-0.10	-0.28	0.04
Task conflict x Actual conflict					-0.56**		
Relationship conflict x Actual conflict						-0.57**	
Process conflict x Actual conflict							-0.48**
R ²	0.13	0.29	0.25	0.21	0.56	0.48	0.43
Effect size		0.23	0.16	0.10	0.61	0.44	0.39

† < .10; * p < .05; ** p < .01; *** p < .001 (one-tailed tests for hypothesized effects)

First, a restricted model holding only the control variables was run. This control model shows that early-stage companies with smaller teams from service industries are the more innovative ones. Of the control variables, however, only investment stage has a significant positive effect throughout most models. Together these control variables explain 13% of the variance in innovation across the companies in the sample.

In order to test hypotheses 1a, 1b and 1c the three perceived conflict constructs were then added separately. The results show that perceived task conflicts between angel investors and entrepreneurs have

a significant, negative impact on the portfolio company's innovation ($p \leq .05$). Although R^2 has the same meaning as it has in traditional analysis techniques (which here equals 0.29), model fit cannot be evaluated in the same way. One measure suggested is to calculate the effect size, f^2 , of including the "new" variable(s). This is calculated as $(R^2 \text{ full model} - R^2 \text{ restricted model}) / (1 - R^2 \text{ full model})$. Values of 0.02, 0.15 and 0.35 can be viewed as benchmark values for, respectively, small, medium and large effects (Cohen, 1988). Adding task conflict to the control model has an effect size of 0.23. In other words, task-related disagreements between angel investors and entrepreneurs have a medium negative effect on the portfolio company's innovation. Taken together, this thus provides strong support for hypothesis 1a.

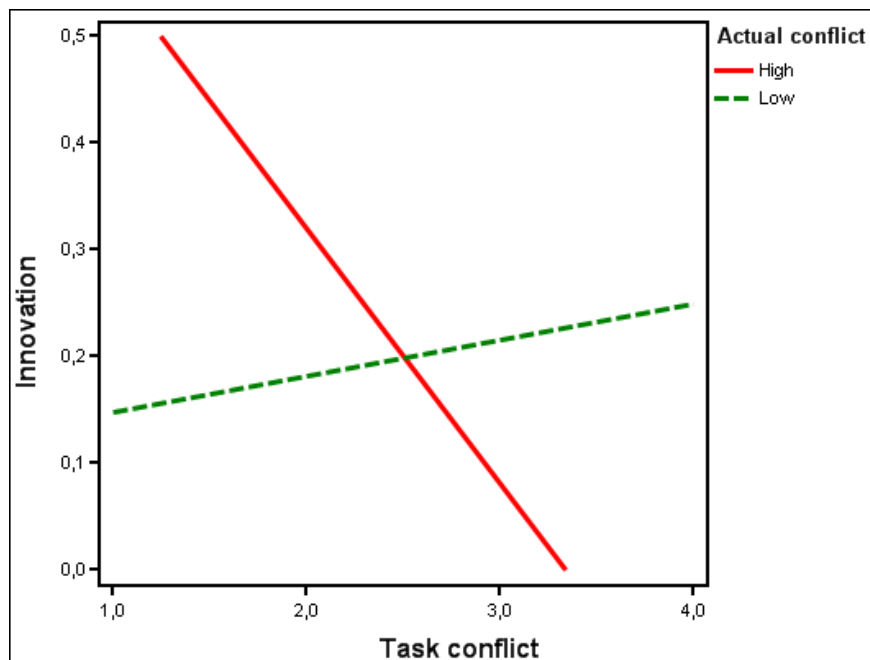
Similarly, relationship conflicts between angel investors and entrepreneurs also negatively impact the portfolio company's innovation ($p \leq .05$), supporting hypothesis 1b. This type of conflict has a somewhat smaller impact on the company's innovation compared to task-related disagreements between angel investors and entrepreneurs, indicated by both the lower R^2 (equalling 0.25 for the relationship conflict model) and the lower medium effect size (0.16). Although process conflict's sign is in the predicted negative direction, it does not significantly impact the company's innovation. Hypothesis 1c is thus not supported.

Next, the moderating impact of actual conflicts between conflicting parties is tested. To do so, separate models were run for the three types of conflict. All three models immediately include both the main and interaction effects as the research interest is not in actual conflict's main effect, but in its moderating effect. Hence assessing the hypotheses through hierarchical regression analysis, entering the main effects in step 1 and the interaction terms in step 2 would suffer from misspecification bias (e.g. Echambadi et al., 2006)¹². When adding the interaction term for perceived task conflict and actual conflict, the results show that task conflict's negative main effect remains robust. Furthermore, the interaction term is also

¹² However, as also recommended by Echambadi et al. (2006), the respective main effects are controlled for in the moderated models.

significant ($p \leq .01$). Calculating the effect size confirms the importance of including actual conflict as a moderator, considering its inclusion has a large effect on explaining the portfolio company's innovation ($f^2 = 0.61$). The interaction effect was plotted based on Aiken and West (1991) for high (1 standard deviation above the mean) and low (1 standard deviation below the mean) levels of actual conflict.

Figure 3.2: Innovation as a function of task conflict and actual conflict



As shown in Figure 3.2, the results were as expected in that task conflict's negative effect on innovation is significantly exacerbated when actual conflicts between angel investors and entrepreneurs are high. Low actual conflicts on the other hand, do provide the constructive environment necessary for task-related discussions to have a positive impact. Taken together, this thus provides strong support for hypothesis 2a.

Results for relationship and process conflicts between angel investors and entrepreneurs are comparable. The results from the main effects model remain the same, i.e. significant and negative for relationship

conflicts and insignificant for process conflict, and in both cases the interaction effect of actual conflict is confirmed. Figures 3.3 and 3.4 serve to further clarify these interaction effects.

Figure 3.3: Innovation as a function of relationship conflict and actual conflict

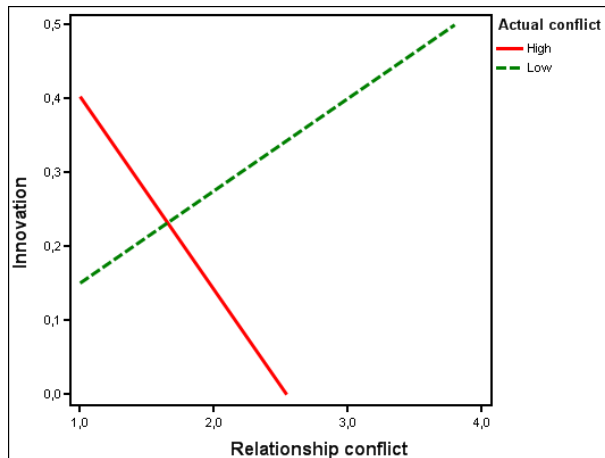
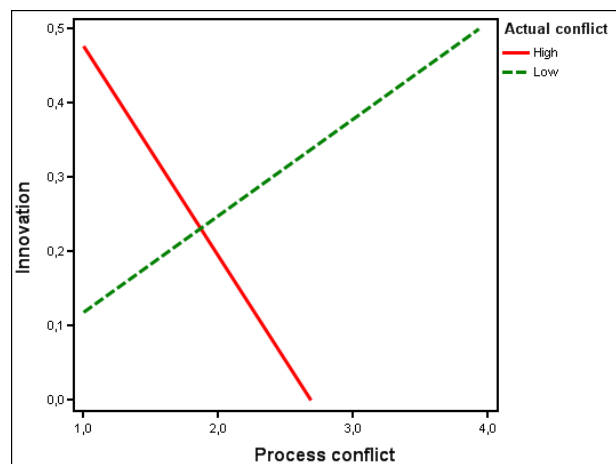


Figure 3.4: Innovation as a function of process conflict and actual conflict



Both graphs show that when goals between angel investors and entrepreneurs are highly aligned or actual conflicts are low, both types of conflict's now have a positive impact on the portfolio company's innovation. The opposite holds for when goals are highly diverged. Taken together, these results thus provide strong support for both hypotheses 2b and 2c. When comparing all three figures, it is noteworthy that, under conditions of high levels of actual conflicts between angel investors and entrepreneurs, all three types of conflicts have a similar negative effect on innovation. Under conditions of low actual conflicts though, task conflicts, surprisingly, have the weakest positive effect of the three conflict types.

3.5.3 Robustness Checks

Considering the rather small sample size it was deemed appropriate to conduct several robustness checks. First, one year after the first round of data collection, i.e. in May 2008, all 28 companies were contacted again to collect new data on their innovativeness (based on the perception of both entrepreneurs and angel

investors following Lovelace et al., 2001).¹³ The correlation between the two innovation measures, i.e. the intangible assets ratio and the innovativeness scale, was 0.44 ($p < .05$), which provides additional support for their validity. PLS path analyses results for the new innovativeness measure revealed the same significant interaction effects of actual conflict as well as the significant negative main effect for task conflict. Relationship conflict's main effect was not confirmed, which would indicate that this type of conflict is a less important antecedent of innovation compared to task conflict. Considering the longitudinal nature of the data, this further addresses the potential problem with the cross-sectional nature of the previous analyses and thus provides more support for the proposed causal inferences.

Second, all models were rerun using standard OLS regressions instead of PLS path analysis. In all models, the results from the hypothesized effects were generally the same, but those retrieved from PLS were more conservative. Third, in this paper teams were defined as containing two or more individuals (Salas et al., 1992; DeShon et al., 2004; Kozlowski and Ilgen, 2006). However, some scholars argue that dyads have different dynamics than teams made up of three or more members (see, for instance, Levine and Moreland, 1990; Pelled, 1996). Combined with team size rarely having a significant impact in all models, all analyses were rerun including a dyad dummy (taking the value of 1 if there was only 1 angel investor and 1 entrepreneur and 0 otherwise). Again the results remained robust. Fourth, one might also argue that angel investors and entrepreneurs differ in many more aspects than just goal incongruencies. Therefore, following the same procedure as used for calculating the goal incompatibility measure, differences between angel investors and entrepreneurs within the same team were calculated in terms of their age, education level, number of education years, number of years entrepreneurial experience, number of years managerial experience, tenure in the company, growth aspirations and percentage ownership in the company (one for each difference variable separately). None of these difference variables were correlated

¹³ Complete responses were received for all 28 companies (equaling 76 respondents). Innovativeness was measured using a 4-item scale, asking respondents to rate the current performance of the company, compared to its competitors, on a 7-point Likert scale. The items referred to the company's adaptability to changes, the innovativeness of its product/service, the number of innovations or new ideas introduced and its overall technical performance (Cronbach's alpha: 0.80). Correlation with the same scale measured in 2007 was 0.89 ($p < .001$).

with the degree of goal incongruence between angel investors and entrepreneurs. As such, other differences between angel investors and entrepreneurs within a team do not drive the results of this study and thus cannot provide an alternative explanation.¹⁴

3.6 Discussion

Previous research has suggested conflict to be one of the key processes influencing team and organizational innovation (Lovelace et al., 2001; Chen et al., 2005; De Dreu, 2006). The goal of this paper was to study perceived conflict's impact on innovation from a contingency point of view, by testing the moderating impact of actual conflicts. In order to do so I used teams of entrepreneurs and angel investors as (1) innovation is of crucial importance to the entrepreneurial companies they belong to, (2) cooperation is assumed to be key to the success of their partnership and (3) these teams provide a natural real-life example of what actual conflicts could entail, i.e. actual goal incompatibilities between angel investors and entrepreneurs. The findings reveal a significant, negative effect of perceived task and relationship conflicts between angel investors and entrepreneurs on the portfolio company's innovation, but they do not for process conflict. Furthermore, confirming the use of a contingency perspective when studying conflict, the results also show that low levels of actual conflicts between conflicting parties can reduce conflict's negative effects, regardless of whether these conflicts are related to the task at hand, personal frustration or resource allocation and task responsibilities issues. As such this paper has several contributions.

First, this study contributes to the conflict literature by shedding more light on how conflict impacts innovation. Whether task conflicts are beneficial or detrimental to a team's or company's innovation has been the subject of much debate (see, for instance, Lovelace et al., 2001; De Dreu, 2006; Matsuo, 2006,

¹⁴ The highest correlation was 0.21 ($p = 0.30$) between degree of goal incongruence and difference in education level of angel investors and entrepreneurs.

who all propose a different effect for task conflict). Taking this discussion from the intragroup to the intersubgroup level, subgroups being angel investors and entrepreneurs, allows bringing a novel perspective to this debate. More specifically, the negative results support the view that in cases of task-related disagreements, conflicting subgroups could be seen as warring factions engaging in competitive tactics and politics, leading to distrust and hampered cognitive processing. This could point to a potential shortcoming of previous intragroup conflict studies and provide a potential explanation for the mixed results in conflict-innovation studies. More particularly, most conflict studies have focused on conflict within teams, teams being two or more individuals united by a superordinate goal (Kozlowski and Ilgen, 2006). What researchers have generally neglected is that having superordinate goals does not preclude the existence of subgoals and hence subgroups. Consistent with literature on demographic faultlines, these subgroups can have a substantial impact on the overarching teams' effectiveness (see, for instance, Li and Hambrick, 2005; Bezrukova and Jehn, 2008). Hence, when studying intragroup conflict, researchers might want to take into account the potentiality of existing subgroups within these teams as this could alter conflict's effects. Further, the results also provide support for relationship conflict's negative effect on innovation, due to negative emotions and limited cognitive processing ability, but not so for process conflict. Comparing the task and relationship conflict's models also confirms the prominent view in past conflict research that task conflict is the most relevant type of conflict to study in the innovation process (e.g. Song et al., 2006). Although relationship conflict's negative effect is in line with what has previously been found, some caution in interpreting these results is advised. There has been a surge in research showing that task conflicts can lead to relationship conflicts through misattributions and wrong interpretations, hence suggesting a mediating effect of relationship conflict on team performance outcomes instead of a main effect (e.g. Simons and Peterson, 2000; Mooney et al., 2007). Considering task conflict's overwhelming impact on innovation and it being very highly correlated to relationship conflict, this possibility cannot be ruled out in this study. In other words, the use of competitive tactics and politics in task conflicts between angel investors and entrepreneurs could trigger relationship conflicts between these two parties, hence explaining the latter's negative effect on innovation (i.e. as a mediator of

task conflict's negative effect). Unfortunately, due to the small sample size, I was unable to test this potential mediation effect. The lack of support for process conflict's negative main effect on innovation may be specific to the research setting. Namely, due to adverse selection and moral hazard risks, angel investors and entrepreneurs conduct severe pre-investment discussions concerning the specifics of their partnership, i.e. company valuation, ownership distribution, voting rights, resource allocation, role definitions etc. Hence many of the topics that could potentially lead to process conflicts could already have been discussed prior to or at the time of investment, hence resulting in lower levels of and less variation in process conflict compared to more traditional teams. Descriptive statistics (see Table 3.1, mean and standard deviation) in this study would seem to corroborate this alternative explanation.

Second, this study also contributes to the conflict literature by extending the conflict contingency framework to include a new moderator, i.e. actual conflicts between conflicting parties. Regardless of the approach taken, conflict studies over the past 20 years have been united by their common focus on perceptions or awareness (Thomas, 1992; Jehn, 1995; Pelled, 1996; Tjosvold, 1998; Chen et al., 2005; Mooney et al., 2007). Perceived incompatibilities however do not necessarily reflect actual ones, nor are actual incompatibilities necessarily perceived as such. This paper responds to this neglect of actual incompatibilities or actual conflict, as it was labelled by early conflict theorists (such as Deutsch, 1973; Thomas, 1976). The results in this paper support the view that actual conflicts should be considered equally important as perceived conflicts in that the former can substantially alter the latter's effects. Specifically, the results are consistent with the argument that actual conflicts will exacerbate the negative emotions, frustrations, competitive tactics and disabled information-sharing process associated with perceived conflicts. In other words, low levels of actual conflicts could provide the positive and psychologically safe environment team members need to vent their opinions in an open debate, resulting in more creative decisions. Although results are equally strong for all three types of conflict, the plots would seem to suggest that low levels of actual conflict would be most beneficial for relationship and process conflict. This would be in line with task conflict's key role in the innovation process. Namely, as

task conflict's negative main effect on innovation is the strongest of all three, it could also be the hardest one to turn around.

3.7 Limitations, Future Research and Implications

This study is not without its limitations. First, it was conducted based on a rather small sample ($n=28$). Although sample sizes of this magnitude are not unusual in team research and the partial least squares technique is apt to deal with small sample sizes, it still makes the results less stable and furthermore precludes the possibility of testing a more elaborate contingency framework. In addition to testing the simultaneous influence of several moderators at once, a larger sample size would also allow us to test some of the mediating mechanisms described in this paper. Second, I used a rather non-traditional team relationship as the research setting. Although well-fit to the goal of this study, i.e. intersubgroup conflict and the role of actual incompatibilities, it would be interesting to see whether the results would also hold in other more traditional teams with subgroups. Extending this line of thought, future research might also want to look into intersubgroup conflict's effects on other outcomes than innovation. Third, all data were collected from Belgian angel-backed companies, which might limit the generalizability of the findings. This might be particularly true for the UK and US as the angel financing market in those countries is highly developed. However, the Belgian setting is quite similar to other continental European countries where results are thus more likely to hold. Finally, as the focus of this paper is on intersubgroup conflict, intrasubgroup dynamics or dynamics within the subgroups of angel investors and entrepreneurs are not taken into account. One might argue that intrasubgroup conflicts could prohibit angel investors and entrepreneurs to form coalitions within their factions, could reduce their intrasubgroup cohesion and reduce intersubgroup biases. It could thus lessen the negative effects of their intersubgroup conflicts. Although this effect cannot be formally contradicted, our data indicate that angel investors and entrepreneurs face less conflict within their subgroups than between their subgroups. Hence, the effect of these intrasubgroup dynamics on the results of this study should be limited.

Considering the substantial impact actual conflicts have in this study, future research on this particular topic is warranted. For instance, one could look into potential main effects of actual conflicts, other forms of actual conflict than the one studied here (i.e. actual goal incompatibilities) and when and how actual conflicts are activated. Finally, confirming the view that cooperation is of crucial importance to the success of the partnership between angel investors and entrepreneurs, raises the question whether these results would also hold for that other important category of external investors, i.e. venture capitalists.

Finally, this paper also has several practical implications. First, this paper suggests that both angel investors and entrepreneurs should pay careful attention to any conflicts that might arise between them as these, regardless the topic, can substantially (and negatively) impact their company's innovation. As lower level of innovation are generally associated with lower levels of performance (Matsuo, 2006; Cho and Pucik, 2005), conflicts should thus not be neglected or ignored. This is not to say that conflict between angel investors and entrepreneurs can never be constructive, quite the contrary. Thorough due diligence pre-investment, contracting and post-investment monitoring have generally been appraised as these processes reduce adverse selection and moral hazard risks in the relationship between external investors and entrepreneurs. Given the importance of goal congruence in creating a constructive team environment, pre-investment due diligence becomes even more important in order to ensure careful goal alignment between these two parties. Having highly aligned goals from the very start will substantially increase the chances of a cooperative and harmonious relationship between these two parties.

3.8 References

Aiken, L.S., S.G. West. 1991. *Multiple Regression: Testing and Interpreting Interactions*. Sage, Newbury Park (CA).

Amason, A.C. 1996. Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal* 39(1), 123-148.

Anderson, N., C.K.W. De Dreu, B.A. Nijstad. 2004. The routinization of innovation research: a constructively critical review of the state-of-the-science. *Journal of Organizational Behavior* 25, 147-173.

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

Baba, M.L., Gluesing, J., Ratner, H., Wagner, K.H., 2004. The contexts of knowing: natural history of a globally distributed team. *Journal of Organizational Behavior* 25(5), 547-587.

Barkema, H.G., Shvyrkov, O., 2007. Does top management team diversity promote or hamper foreign expansion? *Strategic Management Journal* 28(7), 663-680.

Baron, R. 1984. Reducing organizational conflict: An incompatible response approach. *Journal of Applied Psychology* 69(2), 272-279.

Bayazit, M., E.A. Mannix. 2003. Should I stay or should I go? Predicting team members' intent to remain in the team. *Small Group Research* 34(3) 290-321.

Berger, A.N., G.F. Udell. 1998. The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking and Finance* 22(6-8) 613-673.

Bezrukova, K., Jehn, K., 2008. Examining ethnic faultlines in groups: A multimethod study of demographic alignment, leadership profiles, coalition formation, intersubgroup conflict and group outcomes. Working Paper, Rutgers University.

Brewer, M.B., Miller, N., 1996. *Intergroup relations*. Brooks Cole Publishing Company, Pacific Grove, CA.

Bounfour, A. 2005. Special issue on innovation and intangible assets. *R&D Management* 35(2), 107-110.

Cable, D.M., S. Shane. 1997. A prisoner's dilemma to entrepreneur-venture capitalist relationships. *Academy of Management Review* 22(1), 142-176.

- Chen, G., C. Liu, D. Tjosvold. 2005. Conflict management for effective top management teams and innovation in China. *Journal of Management Studies* 42(2), 277-300.
- Chin, W.W., B.L. Marcolin, P.R. Newsted. 2003. A partial least squares latent variable modelling approach for measuring interaction effects: Results from a Monte Carlo simulation study and voice mail emotion/adoption study. *Information Systems Research* 14(2), 189-217.
- Cho, C., V. Pucik. 2005. Relationship between innovativeness, quality, growth, profitability, and market value. *Strategic Management Journal* 26(6), 555-575.
- Cohen, J. 1988. *Statistical power analysis for the behavioral sciences*. Lawrence Erlbaum, Hillsdale, NJ.
- Damanpour, F. 2001. Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal* 34(3), 555-590.
- De Clercq, D., H.J. Sapienza. 2006. Effects of relational capital and commitment on venture capitalists' perception of portfolio company performance. *Journal of Business Venturing* 21(3), 326-347.
- De Dreu, C.K. 2006. When too little or too much hurts: Evidence for a curvilinear relationship between task conflict and innovation in teams. *Journal of Management* 32(1), 83-107.
- De Dreu, C. K., F. Harinck, A.E. Van Vianen. 1999. Conflict and performance in groups and organizations. C.L. Cooper, I.T. Robertson, eds., *International Review of Industrial and Organizational Psychology*. Wiley, Chichester, 369-414.
- De Dreu, C.K., A.E. Van Vianen. 2001. Responses to relationship conflict and team effectiveness. *Journal of Organizational Behavior* 22, 309-328.
- De Dreu, C.K., M. West. 2001. Minority dissent and team innovation: The importance of participation in decision making. *Journal of Applied Psychology* 86(6), 1191-1201.
- De Dreu, C.K., L.R. Weingart. 2003a. A contingency theory of task conflict and performance in groups and organizational teams. M.A. West, D. Tjosvold, K.G. Smith, eds., *International Handbook of Organizational Teamwork and Cooperative Working*. Wiley, Chichester, 151- 166.
- De Dreu, C.K., L.R. Weingart. 2003b. Task versus relationship conflict, team performance and team member satisfaction: A meta-analysis. *Journal of Applied Psychology* 88(4), 741-49.
- DeShon, R.P., Kozlowski, S.W., Schmidt, A.M., Milner, K.A., Wiechmann, D. 2004. A multiple-goal, multilevel model of feedback effects on the regulation of individual and team performance. *Journal of Applied Psychology* 89, 1035-1056.

- DeTienne, D., 2008. Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development. *Journal of Business Venturing*, In Press.
- Deutsch, M. 1969. Conflicts – productive and destructive. *Journal of Social Issues* 25(1), 7-41.
- Echamabadi, R., B. Campbell, R. Agarwal. 2006. Encouraging best practice in quantitative management research: An incomplete list of opportunities. *Journal of Management Studies* 43(8), 1801-1820.
- Eisenhardt, K.M., Bourgeois, L.J.III, 1988. Politics of strategic decision making in high-velocity environments: Toward a midrange theory. *Academy of Management Journal* 31(4), 737-770.
- Ensley, M. D., A.W. Pearson, A.C. Amason. 2002. Understanding the dynamics of new venture top management teams - Cohesion, conflict, and new venture performance. *Journal of Business Venturing* 17(4), 365-386.
- Fisher, R., 1998. Questioning the scope and relevance of the cooperative and competitive goal approach to conflict. *Applied Psychology – An International Review* 47(3), 314-317.
- Forbes, D., P.S. Borchert, M.E. Zellmer-Bruhn, H.J. Sapienza. 2006. Entrepreneurial team formation: An exploration of new member addition. *Entrepreneurship Theory and Practice* 30(2), 225-248.
- Francis, J., Smith, A. 1998. Agency costs and innovation: Some empirical evidence. *Journal of Accounting and Economics* 19, 383-409.
- Freear, J., Sohl, J.E., Wetzel, W., 1994. Angels and non-angels: are there differences. *Journal of Business Venturing* 9(2), 109-123.
- Gebert, D., S. Boerner, E. Kearney. 2006. Cross-functionality and innovation in new product development teams: A dilemmatic structure and its consequences for the management of diversity. *European Journal of Work and Organizational Psychology* 15(4), 431-458
- Greer, L. L. & Jehn, K. A. (2007). The pivotal role of emotion in intragroup process conflict. In E. Mannix, M. Neale, & C. Anderson (eds.), *Research on Managing Groups and Teams*, vol. 10, pp. 23-45.
- Greer, L.L., Jehn, K.A., & Mannix, E.A. (2008). Conflict transformation: An exploration of the inter-relationships between task, relationship, and process conflict. *Small Group Research*, 39, 278-302.
- Heirman, A., Clarysse, B., 2005. The imprinting effect of initial resources and market strategy on the early growth path of start-ups. Working Paper 2005/310, Ghent University, Gent.
- Higashide, H., S. Birley. 2002. The consequences of conflict between the venture capitalist and the entrepreneurial team in the United Kingdom from the perspective of the venture capitalist. *Journal of Business Venturing* 17(1), 59-81.

- Hinds, P. J., & Bailey, D. E. (2003). Out of sigh, out of sync: Understanding conflict in distributed teams. *Organization Science*, 14, 615–632.
- Hulland, J. 1999. Use of Partial Least Squares (PLS) in strategic management research: a review of four recent studies. *Strategic Management Journal* 20(2), 195-204.
- James, L.R., R.G. Demaree, G. Wolf. 1984. Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology* 69(1) 85-98.
- Janssen, O., Van De Vliert, E., Veenstra, C., 1999. How task and person conflict shape the role of positive interdependence in management teams. *Journal of Management* 25(2), 117-142.
- Jehn, K.A. 1995. A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly* 40(2), 256-82.
- Jehn, K.A. 1997. A qualitative analysis of conflict types and dimensions in organizational groups. *Administrative Science Quarterly* 42(3), 530-57.
- Jehn, K.A., C. Bendersky. 2003. Intragroup conflict in organizations: A contingency perspective on the conflict-outcome relationship. *Research in Organizational Behavior* 25, 187-242.
- Jehn, K.A., E.A. Mannix. 2001. The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. *Academy of Management Journal* 44(2), 238-51.
- Klein, K.J., S.W. Kozlowski. 2000. From micro to meso: critical steps in conceptualizing and conducting multilevel research. *Organizational Research Methods* 3(3), 211-236.
- Kozlowski, S., Ilgen, D., 2006. Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest* 7(3), 77-124.
- Kratzer, J., Leenders, R., van Engelen, J. 2006. Team polarity and creative performance in innovation teams. *Creativity and Innovation Management* 15(1), 96-104.
- LaBianca, G., Brass, D.J., Gray, B., 1998. Social networks and perceptions of intergroup conflict: The role of negative relationships and third parties. *Academy of Management Journal* 41(1), 55-67.
- LeBreton, J., Senter, J., 2008. Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods* 11(4), 815-852.
- Lerner, J. 1998. “Angel” financing and public policy: An overview. *Journal of Banking and Finance* 22, 773-783.
- Levine, J.M., R.L. Moreland. 1998. Small groups. D.T. Gilbert, S.T. Fiske, G. Lindzey, eds., *The Handbook of Social Psychology*. McGraw-Hill, New York, 415-469.

- Li, J. & Hambrick, D. C. (2005). Factional groups: A new vantage on demographic faultlines, conflict, and disintegration in work teams. *Academy of Management Journal*, 48, 794-813.
- Lindell, M.K., C.J. Brandt, D.J. Whitney. 1999. A revised index of interrater agreement for multi-item ratings of a single target. *Applied Psychology Measurement* 23(2) 127-135.
- Lovelace, K., D.L. Shapiro, L.R. Weingart. 2001. Maximizing cross-functional new product teams' innovativeness and constraint adherence: A conflict communications perspective. *Academy of Management Journal* 44(4), 779-793.
- Mannes, A.E., 2008. The conflict over conflict. *Academy of Management 2008 Best Paper Proceedings, Conflict Management Division*. Anaheim, CA.
- Mason, C.M. 2006. Informal sources of venture finance. S. Parker, ed., *The life cycle of entrepreneurial ventures*. Springer, New York, 259-299.
- Matsuo, M. 2006. Customer orientation, conflict, and innovativeness in Japanese sales departments. *Journal of Business Research* 59(2), 242-50.
- Milberg, S.J., H.J. Smith, S.J. Burke. 2000. Information privacy: Corporate management and national regulation. *Organization Science* 11(1), 35-57.
- Mooney, A.C., Holahan, P.J., Amason, A.C., 2007. Don't take it personally: Exploring cognitive conflict as a mediator of affective conflict. *Journal of Management Studies* 44(5), 733-758.
- Nemeth, C. 1995. Dissent as driving cognition, attitudes, and judgments. *Social Cognition* 13(3), 273-291.
- Parayitam, S., R.S. Dooley. 2007. The relationship between conflict and decision outcomes: Moderating effects of cognitive- and affect-based trust in strategic decision-making teams. *International Journal of Conflict Management* 18(1), 42-73.
- Parhankangas, A., H. Landström. 2006. How venture capitalists respond to unmet expectations: The role of social environment. *Journal of Business Venturing* 21(6), 773-801.
- Passos, A. M. & Caetano, A. (2005). Exploring the effects of intragroup conflict and past performance feedback on team effectiveness. *Journal of Managerial Psychology*, 20, 231-244.
- Pearson, A.W., M.D. Ensley, A.C. Amason. 2002. An assessment and refinement of Jehn's Intragroup Conflict scale. *International Journal of Conflict Management* 13(2) 110-126.
- Pelled, L.H. 1996. Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science* 7(6), 615-31.

- Peterson, R.S., K.J. Behfar. 2003. The dynamic relationship between performance feedback, trust, and conflict in groups: A longitudinal study. *Organizational Behavior and Human Decision Processes* 92(1-2), 102-112.
- Pondy, L.R. 1967. Organizational conflict: concepts and models. *Administrative Science Quarterly* 12(2), 296-320.
- Prowse, S. 1998. Angel investors and the market for angel investments. *Journal of Banking and Finance* 22, 785-792.
- Raver, J.L., M.J. Gelfand. 2005. Beyond the individual victim: Linking sexual harassment, team processes, and team performance. *Academy of Management Journal* 48(3) 387-400.
- Ringle, C.M., S. Wende, S., A. Will. 2005. SmartPLS 2.0. University of Hamburg, Hamburg.
- Salas, E., Dickinson, T.L., Converse, S.A., & Tannenbaum, S.I. 1992. Toward an understanding of team performance and training. In Swezey, R.W., Salas, E. (Eds.) *Teams: Their training and performance*. Ablex, Norwood (NJ), 3-29.
- Sapienza, H.J., A.K. Gupta. 1994. Impact of agency risks and task uncertainty on venture capitalists – CEO interaction. *Academy of Management Journal* 37(6) 1618-1632.
- Schmidt, S.M., T.A. Kochan. 1972. Conflict: toward conceptual clarity. *Administrative Science Quarterly* 17(3), 359-370.
- Simons, T.L., Peterson, R.S. 2000. Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust. *Journal of Applied Psychology* 85(1), 102-111.
- Song, M., B. Dyer, J.R. Thieme. 2006. Conflict management and innovation performance: An integrated contingency perspective. *Journal of Academy of Marketing Science* 34(3), 341-356.
- Thatcher, S. M. B., Jehn, K. A., & Zanutto, E. (2003). Cracks in diversity research- the effects of diversity faultlines on conflict and performance. *Group Decision and Negotiation*, 12, 217-241.
- Thomas, K., 1976. Conflict and conflict management. In: Dunnette, J. (Ed.) *Handbook of Industrial and Organizational Psychology*. Rand McNally, Chicago, 889-935.
- Thomas, K., 1992. Conflict and conflict management: Reflections and update. *Journal of Organizational Behaviour* 13, 265-274.
- Tjosvold, D., 1998. Conflict over the study of conflict: The challenge to make it cooperative. *Applied Psychology: An International Review* 47(3), 336-342.

- Ucbasaran, D., A. Lockett, M. Wright, P. Westhead. 2003. Entrepreneurial founder teams: factors associated with member entry and exit. *Entrepreneurship Theory and Practice* 28(2) 107-127.
- Wageman, R. 2001. How leaders foster self-managing team effectiveness: Design choices versus hands-on coaching. *Organization Science* 12(5), 559-577.
- Walton, R.E. 1969. *Interpersonal Peacemaking: Confrontations and Third Party Consultation*. Addison-Wesley, Reading.
- Weingart, L., G. Todorova, M. Cronin. 2008. Representational gaps, team integration, and team creativity. G. Solomon, ed. *Academy of Management Best Papers Proceedings*
- West, M.A., Sacramento, C.A., 2006. Flourishing in teams: Developing creativity and innovation. In Henry, J. (Ed.) *Creative Management and Development*. Sage Publications, London, pp. 25-43.
- West, M., J.L. Farr. 1990. Innovation at work. In: West, M., J.L. Farr (Eds.) *Innovation and creativity at work*. Wiley, Chichester (UK), pp. 3-13.
- Wijbenga, F., van Witteloostuijn, A., (2006). The entrepreneur and the venture capitalist as a team: A game-theoretic and upper echelon theory of cooperation and defection. In: Butler, J., Lockett, A., Ucbasaran, D. (Eds.), *Venture Capital and the Changing World of Entrepreneurship*. Information Age Publishing, Greenwich, CT, pp. 91-114.
- Wold, H. 1974. Causal flows with latent variables: partings of the ways in the light of NIPALS modeling. *European Economic Review* 5 (1) 67-86.
- Yi-Feng, N., Tjosvold, D., Peiguan, W., 2008. Effects of relationship values and goal interdependence on Guanxi between foreign managers and Chinese employees. *Journal of Applied Social Psychology* 38 (10), 2440-2468.
- Yitshaki, R., 2008. Venture capitalist-entrepreneur conflicts – An exploratory study of determinants and possible resolutions. *International Journal of Conflict Management* 19(3), 262-292.

3.9 Appendix A: Items for task, process and relationship conflict

1.Task conflict

- a. How many disagreements over different ideas have there been between the entrepreneurial team and the angel investor(s)?
- b. How many differences about the content of decisions have the angel investor(s) and the entrepreneurial team had to work through?
- c. How many differences of opinion have there been between the angel investor(s) and the entrepreneurial team?

2. Process conflict

- a. How often have there been disagreements between the angel investor(s) and the entrepreneurial team about who should do what?
- b. How much conflict has there been between the angel investor(s) and the entrepreneurial team about task responsibilities?
- c. How often have the angel investor(s) and the entrepreneurial team disagreed about resource allocation?

3. Relationship conflict

- a. How much tension has there been between the angel investor(s) and the entrepreneurial team during decisions?
- b. How much personal friction has there been between the angel investor(s) and the entrepreneurial team during decisions?
- c. How much anger has there been between the angel investor(s) and the entrepreneurial team?

CHAPTER 4

Angel investors and entrepreneurs: do they live happily ever after?*

Veroniek Collewaert

Ghent University, Department of Accounting and Corporate Finance

Abstract

Despite the importance of exit to both entrepreneurs and investors, little to nothing is known about what factors drive their intentions to voluntarily remain with their businesses. Adopting a socio-psychological perspective, this paper is among the first to shed new light on this crucial phase of the entrepreneur-investor relationship by examining the impact of conflicts between angel investors and entrepreneurs on their intentions to remain. Furthermore, this study extends conflict theory by hypothesizing that both perceived and actual incompatibilities have a unique and significant role to play in the conflict process and hence both should be incorporated in a conflict definition. Adopting a multilevel approach and using data gathered in two locations, Belgium and California, the findings reveal a significant negative impact on intentions to remain of both perceived and actual task conflicts, but not so for relationship conflicts. Finally, the better angel investors and entrepreneurs perceive their ventures to be performing, the longer they want to stay. This effect is stronger though for angel investors than entrepreneurs, whom want to remain longer with their companies anyway.

* This paper is accepted for publication in the Best Paper Proceedings of the 2009 Academy of Management Meeting (Chicago, IL) and accepted for presentation at the 2009 Babson College Entrepreneurship Research Conference (Boston, MA). I acknowledge financial support from the Fund for Scientific Research – Flanders (FWO-Vlaanderen) and the Vlerick Leuven Gent Management School as well as research support from the Stanford Graduate School of Business in the form of a visiting fellowship. I would also like to thank Sophie Manigart, Bart Clarysse and Annaleena Parhankangas for their feedback on earlier drafts of this paper.

4.1 Introduction

Despite the importance of exit for both investors and entrepreneurs, little is known as to what factors influence their intentions and motivations to voluntarily remain with or leave their businesses (Wincent et al., 2008; DeTienne, 2008). With regard to external investors, previous exit studies have focused on investor preferences in terms of how (e.g. IPO, acquisition, trade sale) and when to exit, determinants of these exit preferences and the role of contracts in the exit decision (see, for instance, Amit et al., 1998; Mason and Harrison, 2002; Cumming and MacIntosh, 2003; Smith, 2005; Hellmann, 2006). None of them have looked into intentions to exit though, nor approached this decision from a socio-psychological point of view. Entrepreneurial exit has received even less attention in the entrepreneurship literature. Only recently have some researchers acknowledged the importance of this phase in the entrepreneurial life cycle, not only to the entrepreneur, but also the firm, industry and economy at large (DeTienne and Cardon, 2007; DeTienne, 2008; Wincent et al., 2008). Furthermore, intentions to remain or leave have been shown to be important predictors of actual turnover or exit (O'Reilly et al., 1991; Westerman and Cyr, 2004; Leroy et al., 2007), making this an outcome of vital importance. This paper hence aims to contribute to the entrepreneurship literature by providing a deeper insight into some of the factors potentially influencing investors' and entrepreneurs' intentions to remain with their ventures.

In order to so, this paper will adopt a conflict theory lens on the post-investment relationship between angel investors and entrepreneurs. Over the past decade, researchers, practitioners and policy-makers have increasingly come to recognize the importance of angel investors as the primary early-stage financing source for entrepreneurial companies, among which renowned examples such as Google, Amazon.com and Twitter. Sohl (2005) estimated that 227 000 US angel investors invested \$ 23.1 billion in 49 500 companies in 2005, compared to venture capitalists investing only \$ 21.7 billion in 2 939 companies (PWC et al., 2006). For both venture capitalists and angel investors, a cooperative working relationship with the entrepreneurs of their respective portfolio companies is of crucial importance to the latter's

success (Cable and Shane, 1997; Wijnbenga and van Witteloostuijn, 2006). Unfortunately though, previous research has indicated that this particular relationship is rather prone to conflict instead and, as such, cooperation is far from self-evident (Higashide and Birley, 2002; Parhankangas and Landström, 2006; Yitshaki, 2008). Despite this, there is still a lack of studies looking into the “dark side” of the relationship between external investors and entrepreneurs (Parhankangas and Landström, 2006, p. 775). Given conflict’s omnipresence in the angel investor-entrepreneur relationship, there is an increasing need to understand how conflicts between these two parties affect their relationship.

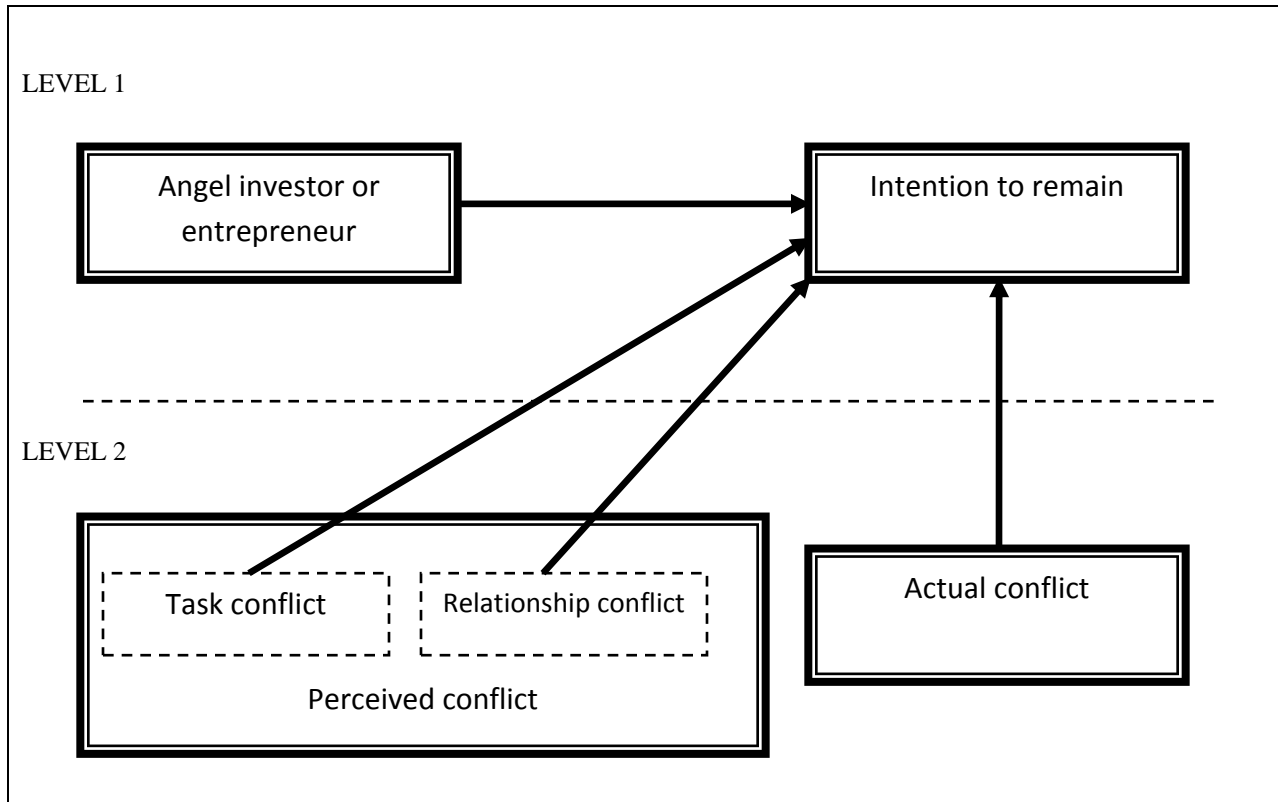
In this study, I will focus on how conflicts between angel investors and entrepreneurs impact their intent to remain (invested) in the company. More specifically, building on conflict theory, I contend that *perceived* task and relationship conflicts between angel investors and entrepreneurs will negatively impact their intention to stay with the company. Further, I also theorize that, in addition to perceived conflicts, *actual* conflicts between angel investors and entrepreneurs will negatively impact both parties’ turnover intentions. As such, this paper adds to conflict theory by joining in on the debate on how to define conflict (Tjosvold, 2007; Mannes, 2008). Over the past decade conflict researchers have generally conceptualized and measured conflict as perceived task-related or interpersonal incompatibilities (Jehn, 1995; Jehn et al., 1997; Jehn and Mannix, 2001; De Dreu and Weingart, 2003). With this paper I propose to broaden this definition of conflict to also incorporate actual incompatibilities or conflicts, which is how conflict was initially thought of by the very early conflict theorists (Pondy, 1967; Deutsch, 1973). This is more than merely a measurement issue as both aspects of conflict, i.e. perceived and actual incompatibilities, can vary independently and thus should not be considered equivalent. Theorizing conflict to consist of both a perceptual and an actual component could provide an alternative lens on why conflict studies over the years have produced so many mixed findings (e.g. Jehn and Bendersky, 2003; De Dreu and Weingart, 2003; De Dreu, 2006) and can reunite researchers debating on whether conflict in teams and organizations should be stimulated or avoided all together (Tjosvold, 2007; De Dreu, 2008). Furthermore, by focusing on intentions to remain, this paper also addresses the call of several conflict researchers to pay more

attention to softer, morale-related outcomes instead of harder, performance-related outcomes (Jehn and Bendersky, 2003; De Dreu and Beersma, 2005).

Finally, in addition to theoretical contributions to the conflict and entrepreneurship literature, this study also has a methodological contribution. Theory underlying conflicts between team members is mostly focused on the group level (Jehn and Bendersky, 2003; Bezrukova and Jehn, 2008). When linking this to inherent individual-level outcomes such as satisfaction, intent to remain and well-being, conflict researchers up to now have generally adopted either one of two approaches: (1) they aggregate the individual-level data to the group level and hence analyse the relation between, for instance, conflict and group satisfaction (e.g. DeChurch and Marks, 2001; Homan et al., 2007) or (2) they disaggregate group-level conflict data and hence analyse the relation between conflict as perceived by the individual team member and their individual-level satisfaction (e.g. Jehn et al., 1999; Duffy et al., 2000; Guerra et al., 2005). By adopting a multi-level perspective to explaining individual-level variation in intent to remain (invested) in the company based on group-level conflict, this paper hence addresses this gap in the conflict literature, which so far has largely neglected the inherent multi-level nature of intragroup conflict (De Dreu and Gelfand, 2007; Korsgaard et al., 2008). Further, it also adds to the entrepreneurship literature by addressing the call for more multilevel research (Davidsson and Wiklund, 2001; Ireland et al., 2005).

The paper will proceed as follows: first, hypotheses will be developed regarding the impact of perceived and actual conflicts between angel investors and entrepreneurs on their intentions to remain (see figure 4.1 for the conceptual model). Then I will describe the method, present the findings and discuss the results, contributions and limitations.

Figure 4.1: Conceptual model



^aLevel 1 refers to the individual level, level 2 to the team level (i.e. angel investors and entrepreneurs together).

4.2 Angel investors and entrepreneurs as a team

In an average angel-backed company, angel investors and entrepreneurs are dependent on each other in that they make a deal to exchange the angel investor's human, social and financial capital for the opportunity or potential to make financial gains (Prowse, 1998; Yitshaki, 2008). In order for the portfolio company to survive and grow, the entrepreneurs need the angel investor's capital, although the degree to which can differ from company to company (Freear et al., 1994; Berger and Udell, 1998). Similarly, the angel investors, whose degree of active participation in a portfolio company can also vary, need the entrepreneurs to run and manage the company in a way that will maximize their financial gain (Mason, 2006). In other words, both parties have their own particular role to play, but both roles are vitally and

equally important to the company's final success and growth. Being interdependent individuals who work together to reach important, mutual goals, angel investors and entrepreneurs are thus teams (De Dreu et al., 1999; Kozlowski and Ilgen, 2006). Although united by the overarching goal of value creation, angel investors and entrepreneurs could have different sub-goals. For instance, entrepreneurs could see their company as a life-long commitment, whereas investors could only want to maximize their short-term returns (DeTienne, 2008; Yitshaki, 2008). This, in turn, will lead to potentially rather divergent views between investors and entrepreneurs as to what the best way to run the company or to allocate resources is (Cable and Shane, 1997). As such, the distinction between angel investors and entrepreneurs forms a natural divide between these two parties. Therefore, when referring to conflict between angel investors and entrepreneurs, one is in fact, *strictu sensu*, talking about intersubgroup conflict instead of intragroup conflict (Bezrukova and Jehn, 2008). In what follows, whenever necessary, this distinction is made explicit.

4.3 Theory and hypotheses

4.3.1 Differences between angel investors and entrepreneurs in intent to remain

Before delving into the conflict literature, potential differences between angel investors and entrepreneurs in terms of their intention to remain are investigated. Angel investors, like venture capitalists, are generally assumed to want to exit from their portfolio companies at the same time or earlier than the respective entrepreneurs, this as exit represents their main harvesting opportunity (see, for instance, Berger and Udell, 1998; Black and Gilson, 1998; Mason and Harrison, 2002; Schwienbacher, 2008). Research has shown that angel investors, on average, prefer to exit their portfolio companies between 4 to 7 years after the initial investment (Mason and Harrison, 2002; Freear et al., 2002). Similar research on (voluntary) entrepreneurial exits is scarce (DeTienne, 2008), which, in fact, means that there is no real benchmark to compare the investor numbers on preferred time-to-exit to. In other words, although

entrepreneurs wanting to outstay their investors represents one of the key assumptions in many entrepreneurial finance papers, no research to date has actually explicitly tested this assumption. Furthermore, counterarguments to this assumption could be made as well. For instance, angel investors, often having been entrepreneurs themselves, are known to be rather patient investors compared to venture capitalists with some not necessarily wanting to exit *at all* (Mason, 2006). Entrepreneurship literature has also often showed that there is no such thing as “the entrepreneur”. The various types of entrepreneurs (e.g. life-style, serial, habitual) could all differ in terms of how long they would like to remain in control of their company (e.g. Stewart et al., 1999; Westhead et al., 2005). Adopting the conservative point of view from the entrepreneurial finance literature, I however hypothesize that:

H1: Entrepreneurs will have a higher intent to remain with their company than their angel investors.

4.3.2 Perceived conflict and intent to remain

According to the most recent literature on intragroup conflict, conflict is defined as “*perceived* incompatibilities or discrepant views among the parties involved” (Jehn and Bendersky, 2003, p. 189). Following this view, the impact of two particular types of conflict between angel investors and entrepreneurs is studied, namely relationship conflicts and task conflicts (Jehn, 1995; De Dreu and Weingart, 2003).

Relationship conflicts are defined as “an awareness of interpersonal incompatibilities” between angel investors and entrepreneurs (based on Jehn and Mannix, 2001, p. 238; Bezrukova and Jehn, 2008). This type of conflict is generally seen as dysfunctional, regardless of the outcome studied (De Dreu and Weingart, 2003; Jehn and Bendersky, 2003). For instance, focused on the relationship between venture capitalists and entrepreneurs, Higashide and Birley (2002) showed that relationship conflicts (as perceived by the venture capitalist) negatively affected the perceived performance of their portfolio companies. With

regard to more emotional-laden outcomes, relationship conflict's personal nature may cause feelings of anger, stress, anxiety, avoidance, suspicion, cynicism and animosity on both the angel investors' and entrepreneurs' side (Jehn, 1995; Amason, 1996; Pelled, 1996; Jehn and Bendersky, 2003; Bayazit and Mannix, 2003). Further, a substantive amount of literature has shown that individuals do not generally enjoy the experience of personal attacks, criticisms and the along-going bad feelings. As such, relationship conflicts between angel investors and entrepreneurs will lead to a general feeling of dissatisfaction and thus decrease their intention to remain with the company (Jehn, 1995; Jehn et al., 1999; Jehn and Bendersky, 2003; Medina et al., 2005). Or, put differently:

H2: Higher levels of relationship conflicts between angel investors and entrepreneurs will decrease their intent to remain (invested) in the company.

Task conflicts are defined as perceived disagreements or differences in opinion between angel investors and entrepreneurs (within the same company) about the task performed (based on Jehn and Mannix, 2001; Bezrukova and Jehn, 2008). For instance, being key strategic decision agents, angel investors and entrepreneurs can perceive to disagree on what short-term and long-term objectives to set for the company (e.g. what products to develop, what markets to enter and what growth strategy to pursue). While relationship conflicts have consistently produced negative results, the effects of task-related disagreements have been the subject of a lot more debate in the conflict literature (De Dreu and Weingart, 2003). The controversy concerning task conflict though revolves around its impact on performance-related outcomes and not morale-related outcomes (Jehn and Bendersky, 2003; De Dreu, 2006). In other words, regardless of how positive task-related disagreements between angel investors and entrepreneurs might be in terms of their impact on the team/company performance or decision quality/ innovativeness (for instance, Jehn, 1995; Higashide and Birley, 2002; Matsuo, 2006), similar to relationship conflict they will also produce feelings of frustration, discomfort and tension (Ross, 1989; Jehn, 1995; Amason and Schweiger, 1997;

Jehn et al., 1997). Hence, perceived task-related disagreements between angel investors and entrepreneurs will also make both parties less satisfied and less inclined to stay in their conflictual partnership. Thus:

H3: Higher levels of task conflicts between angel investors and entrepreneurs will decrease their intent to remain (invested) in the company.

4.3.3 Actual conflict and intent to remain

As can be deduced from the discussion above, over the years, the definition of intragroup conflict has converged on a conceptualization where the emphasis is on the *perception, experience or awareness* of incompatibilities or frustrations, regardless of whether these relate to objectives, needs or desires (e.g. Thomas, 1992; Jehn, 1995; Janssen et al., 1999; Jehn and Bendersky, 2003; Medina et al., 2005). What this literature has come to neglect though is that *perceived* incompatibilities do not necessarily reflect *actual* incompatibilities, nor will actual incompatibilities necessarily be perceived as such (Deutsch, 1973; Thomas, 1976; Fisher, 1998). While perceived incompatibilities could be thought of as overt conflict, actual incompatibilities could be thought of as latent or actual conflict (Pondy, 1967; Schmidt and Kochan, 1972). As opposed to the traditional conflict literature that has emphasized the former and ignored the latter, I propose that a definition of conflict should incorporate both components in that both can have a unique and significant impact on team effectiveness.

As opposed to much organizational behavior literature that is experimental in nature (e.g. Mannes, 2008), the relationship between angel investors and entrepreneurs provides us with an excellent real-life setting of what these actual incompatibilities could include, namely goal incompatibilities¹⁵. Based on agency

¹⁵ Distinguishing this approach from the cooperative and competitive goal approach adopted by Tjosvold and his colleagues, is the fact that they define cooperative and competitive goals as the perception thereof. In other words, when team members perceive their goals to be positively or cooperatively linked, conflicts can be constructive to team effectiveness through increased mutual trust, positive attitudes towards other team members and open-minded

theory, the existence of incompatible goals between external investors and entrepreneurs is likely (Sapienza and Gupta, 1994; Cable and Shane, 1997). For example, the entrepreneur might conceive the company as a lifestyle company versus the investor conceiving it as a short-term, high-growth investment. Both parties might try to conceal these actual objectives though, consciously or unconsciously, resulting in each of these parties operating under their own particular hidden agenda. If this were to be the case, the existence of actual goal incompatibilities between angel investors and entrepreneurs is not necessarily perceived as such. As perception and reality can vary independently from each other, perceived goal incompatibilities will also not necessarily reflect actual ones.

I argue that, in addition to perceived conflicts, actual conflicts can also have an impact on team effectiveness. Previous research on goal incongruence between exchange partners for instance has associated this phenomenon with less cooperation, less positive feelings towards the partner (in this case, the investor or entrepreneur) and lower quality of information exchanged (Sapienza and Gupta, 1994; Si and Bruton, 2005; De Clercq and Sapienza, 2006). Furthermore, actual goal incompatibilities between angel investors and entrepreneurs will increase the likelihood of competitive tactics and will make problem-solving more difficult (Deutsch, 1973; Fisher, 1998; Tjosvold, 1998). In other words, when angel investors and entrepreneurs truly and substantially differ in terms of the objectives they want to achieve, it will be a lot harder for them to find a compromise and forge a cooperative relationship. The hypothesis is:

H4: Higher levels of actual conflicts between angel investors and entrepreneurs will decrease their intent to remain (invested) in the company.

debate (Deutsch, 1973; Tjosvold, 1998). Perceptions of competitively or negatively linked goals on the other hand will lead to the opposite.

4.4 Method

4.4.1 Data collection

Data for this study were gathered in two locations, namely Continental Europe (Belgium) and USA (California). For the Belgian sample, 20 different data sources were used including a random directory of start-ups, deal lists of BA networks, GEM data¹⁶, directories of high-technology companies¹⁷, media articles, incubators and snowballing. This way a list of 305 Belgian potential angel-backed companies was constructed, who were telephoned during the summer of 2007 in order to identify whether or not they fulfilled the conditions of the research. These conditions were (1) at least one angel investor needed to be a member of the Board of Directors or actively involved in strategic decision-making in their portfolio company and (2) the company had to have received angel financing between January 2003 and August 2006. The latter condition was imposed in order to avoid the exit period. This was deemed important as conflict's effects can change as teams are approaching the end of their relationship (Jehn and Mannix, 2001). Further, it is also general practice in venture capital research to avoid recall and survival bias (Higashide and Birley, 2002; De Clercq and Sapienza, 2006). This resulted in 107 (potentially) eligible companies of which 49 agreed to participate and 58 that either did not want to participate (18) or I was unable to contact (40). For the Californian sample, the data sources included Zephyr, VentureXpert, Growththink and the members' or participants' lists from the Angel Capital Association, C21 BioVentures and the California Clean Tech Open competition. This resulted in a list of 1265 Californian potential angel-backed companies. Through e-mails and the use of a YouTube video in which the research project and the above-mentioned conditions were explained, this was reduced to 805 (potentially) eligible companies. Of these 805 companies 43 agreed to participate and 762 either did not want to participate (28) or I was unable to contact (734).

¹⁶ During the data collection process for the Global Entrepreneurship Monitor in Belgium, an additional question was asked to respondents as to whether or not they had made investments that were not family- or friend-related.

¹⁷ For more details on this dataset see Heirman and Clarysse (2005).

Responses were sought from all entrepreneurial team members and angel investors who had a seat on the Board of Directors or were actively involved in the company. The entrepreneurial team was defined as those individuals who, at the time of the study, had an equity stake and were actively involved or played a key role in strategic decision making (Ucbasaran et al., 2003; Forbes et al., 2006). The definition used for angel investors was external individual investors who invest some of their own wealth in unlisted companies in exchange for shares and who have no family or friend connection to the entrepreneurs (Mason, 2006). When parties agreed to participate, questionnaires were e-mailed either directly to the team members concerned or, in some cases, through the CEO when angel investors preferred to remain anonymous. When necessary, follow-up phone calls were performed. On the first page of the questionnaire, it was clearly stated who should be considered to belong to the angel investors or the entrepreneurial team. Individuals were then asked to fill in the questionnaire referring to these two definitions. Using a team member response rate criterion of 50% (e.g. Ensley et al., 2002; Mooney et al., 2007) and the condition that at least one response was needed from the angel investor side and one from the entrepreneurs' side, a final sample was obtained of 28 Belgian teams (representing 75 individual responses) and 26 Californian teams (representing 62 individual responses)¹⁸. Analyses revealed no substantial differences between early and late respondents regarding the primary variables of interest, indicating that non-response bias should be limited (Armstrong and Overton, 1977).

Hypotheses were tested using hierarchical linear modelling (Raudenbusch and Bryk, 2002). As the number of higher-level units (i.e. teams) was rather small in both locations separately it was deemed desirable to combine them into one larger sample. In order to do so a multigroup confirmatory factor analysis was run to check for measurement invariance (Steenkamp and Baumgartner, 1998; Cheung and Rensvold, 2002). The goodness-of-fit indices suggested by Hu and Bentler (1998) were all above the minimum values (CFI= 0.96, TLI=0.95, SRMR=0.06). As such, this provided support for combining the

¹⁸ See appendix 1 for some descriptive statistics on both samples.

Belgian and Californian samples into one larger sample, consisting of 54 teams and 137 individuals, of which 72 entrepreneurs and 65 angel investors.

Since most of the variables used in the analyses were gathered through the same questionnaire, concerns around common method variance might arise. Several aspects were taken into account in designing the questionnaire as to reduce the risk of this potential bias, e.g. reverse scoring of items, use of variation in wording of items, use of different scaling anchors for the key variables and guaranteeing absolute anonymity to respondents (Lindell and Whitney, 2001; Podsakoff et al., 2003). Further, all variables were measured using scales which had been previously validated and shown to have good psychometric properties (see below). In addition to the design of this study, the Harman's single factor test also suggests common method bias may be limited (Podsakoff and Organ, 1986). Namely, the exploratory factor analysis resulted in a 3-factor solution, with the first factor accounting for only 34% of the total variance (and 31% and 13% for the second and third factor respectively). Finally, in order to account for potential negative affectivity bias the hypothesized models were rerun based on the Belgian sample¹⁹ while controlling for negative affect (Watson et al., 1988; Spector, 2006). This, however, did not change the results. Taken together, this suggests that the risk of common method bias is limited.

4.4.2 Dependent and independent variable measures

Intent to remain was measured at the individual level using two items based on O'Reilly et al. (1991) and Brigham et al. (2007). The questions were "How long do you intend to remain with Venture X?" and "If you have your own way, will you be working for this organization three years from now?". Both questions were slightly adapted for the angel investors (for the first item "remain *invested* in" was added and "working for this organization" in the second item was changed into "still be a shareholder"). The two

¹⁹ The scale for negative affect was only included in the questionnaire sent to the Belgian companies due to space restrictions in the U.S. questionnaire.

items were measured on a 7-point scale ranging from less than 1 year to more than 5 years for the first item and from definitely yes to definitely no for the second item. The second item was reverse scored such that higher scores indicated a higher intent to remain. For the final score the two items were averaged. The mean value across all respondents was 5.35 (st.dev. 1.50), indicating a negative skew (for further details see section on robustness checks). The Cronbach's alpha value was satisfactory (0.74).

Both perceived conflict variables, *task conflict* and *relationship conflict*, were measured using three items for each. I used the revised version by Pearson et al. (2002) of Jehn's intragroup conflict scale (Jehn, 1995), adapted to the intersubgroup level (Bezrukova and Jehn, 2008). On a scale from 1 (= none) to 5 (= a great deal), respondents were asked to rate how many disagreements concerning task-related issues and how much personal friction and tension there had been between the angel investors and the entrepreneurs (see appendix 2 for specific items used). The mean value for task conflict was 2.24 (st.dev. 0.72) and 1.80 (st.dev. 0.89) for relationship conflict. Both Cronbach's alpha values indicated excellent reliability (0.92 and 0.93 respectively). In order to check whether aggregation to the team level was appropriate, the intraclass correlation coefficient (ICC) and within-group agreement index were calculated (James et al., 1984; Klein and Kozlowski, 2000). Both ICCs are significant ($p < 0.001$) and the median $R_{wg(J)}$ values for both constructs exceed the 0.7 threshold (0.94 for both task and relationship conflict), which thus justifies aggregation.²⁰

Actual conflict was measured as the degree of goal incongruence based on Sapienza and Gupta (1994). First, respondents were asked to allocate 200 points across 11 objectives (6 financial and 5 non-financial criteria) and this according to their individual perception of each of these criteria's importance to the achievement of the short-term financial goals of Venture X. Second, they were asked how much emphasis should be given to financial and non-financial goals respectively (percentage). For each criterion a

²⁰ Median $R_{wg(J)}$ values were also calculated based on a triangular and moderately skewed distribution instead of the generally used uniform null distribution (LeBreton and Senter, 2008). These values also all exceeded the 0.7 threshold, thus confirming adequate within-group agreement for aggregation.

weighted score was then calculated. Illustration: new product development (NPD) is a non-financial criterion. Assume the respondent allocated 20 out of 100 non-financial points to this criterion and, in general, thinks that non-financial goals should be given 80% emphasis, then the weighted score for NPD would equal 20×0.80 . Sapienza and Gupta (1994) then proceed by calculating the absolute differences between the weighted scores of the venture capitalist and the CEO and then summing these differences across criteria. As, in this study, the focus is on the degree of goal incongruence between angel investors and entrepreneurs, one step was added. First, the average of the weighted scores per criterion was calculated for the two subgroups (i.e. angel investors and the entrepreneurs) separately. Only then I proceed in the same way as Sapienza and Gupta (1994), i.e. taking the absolute differences of the average weighted scores of the angel investors and entrepreneurs within the same company and summing them across criteria. The mean value was 76.57 (st.dev. 26.29). As a point of comparison, the average degree of goal incongruence between VCs and CEOs in the study by Sapienza and Gupta (1994) was somewhat higher, i.e. 93.92 (st.dev. 31.61).

Finally, in order to test hypothesis 1, a dummy variable was created representing whether the individuals were angel investors (value 0) or entrepreneurs (value 1).

4.4.3 Control variable measures

Based on relevant turnover literature, controls were added for *age* and *tenure* of the respondent at the time of data collection (Jehn, 1995; Bayazit and Mannix, 2003; Giebels and Janssen, 2005). Tenure was deemed especially relevant as this could also be seen as a measure for time since investment for the angel investors. Finally, *perceived performance* (range 1-5) was also controlled for based on the measure used in several venture capital studies (Sapienza and Gupta, 1994; Higashide and Birley, 2002). This variable has often been suggested to positively influence the nature of the relationship between external investors and entrepreneurs as well as the former's intention to keep on investing in the company (e.g. De Clercq and

Sapienza, 2006). However, from a return point of view, it could also be argued that investors - from a certain level of high performance onwards - might want to exit the company and hence perceived performance could negatively affect their intentions to remain. Therefore, a curvilinear effect is also tested. Finally, as this effect might differ for angel investors compared to entrepreneurs, an interaction effect between perceived performance and the angel investor/entrepreneur dummy is also added. All control variables were measured at the individual level.

4.5 Results

Table 4.1 provides an overview of the means, standard deviations and correlations between the individual-level and team-level variables. I find significant, negative correlations between intent to remain and all conflict constructs, both perceived and actual, which provides some preliminary evidence in support of the hypotheses. Further, in tradition with previous conflict studies (see, for instance, Peterson and Behfar, 2003; Parayitam and Dooley, 2007), the correlation between task and relationship conflict is very high (.85) and significant. Variance inflation factors suggest though that the threat of multicollinearity is limited (VIF of 3.4 for both perceived conflict constructs). Finally, correlations between both perceived conflict constructs and actual conflict are trivial, corroborating that these are indeed distinct concepts.

Table 4.1: Descriptive statistics and correlations^a

Variables	Mean	s.d.	1	2	3	4	5	6
1. Age	46.58	10.09	-					
2. Tenure	2.98	2.06	.52**	-				
3. Perceived Performance	3.07	0.77	.08	-.04	-			
4. Task conflict	2.24	0.72	-.10	-.10	-.21*	-		
5. Relationship conflict	1.80	0.89	-.04	-.08	-.24**	.85**	-	
6. Actual conflict	76.58	26.29	-.01	-.04	-.12	-.01	.06	-
7. Intent to remain	5.35	1.50	.04	.04	.40**	-.28**	-.26**	-.26**

* $p < .05$; ** $p < .01$

^aNote: $N = 137$. Although the correlations between the group- and individual-level variables were calculated using $N=137$, the group-level scores were assigned down to the individuals within those groups. Thus, the effective sample size for task conflict, relationship conflict and actual conflict is 54.

As this study combines data from two levels, i.e. individuals nested within teams/companies, hypotheses were tested using hierarchical linear modeling (HLM) (Raudenbusch and Bryk, 2002). Applying standard OLS regression to multilevel data is inappropriate as it does not take into account the non-independence of observations, resulting in misestimated standard errors and increased type I and type II errors (Raudenbusch and Bryk, 2002; Bliese and Hanges, 2004). As a first step it is generally advised to run a fully unconditional model (i.e. without any predictors) to check whether there is significant between-group variance in the outcome of interest and thus whether multilevel modeling is useful. Running this null model on intent to remain indicates that there is indeed significant between-group variation in intent to remain ($\tau_{00} = .85$, $\chi^2(53) = 132.83$, $p < .001$). More particularly, 63% of the variation in intent to remain seems to be between individuals, while 37% of the variation is between teams. The hypotheses are tested following the standard process used for HLM, i.e. first build and test the lower-level unit or individual model and only then proceed to testing the higher-level unit or team model. In this study, this corresponds with first analyzing the model including the control variables, which are all at the individual level (model 1). Then, hypothesis 1 is tested by adding the angel investor/entrepreneur dummy to the individual-level model (model 2). Finally, all other hypotheses are tested by modeling the intercept (model 3). The results for all models are shown in Table 4.2.

The results for the control model (model 1) reveal a significant, positive impact of perceived performance, but do not confirm a curvilinear effect. In other words, it seems as though the higher angel investors and entrepreneurs perceive the performance of their (portfolio) company, the longer they intend to remain with that company. This effect remains highly significant throughout all models analyzed. Together the four control variables (perceived performance, its quadratic term, age and tenure) explain 16% of the between-individual variance in intent to remain.

Table 4.2: Hierarchical linear modeling results for intention to remain – Fixed effects with robust standard errors^a

Variables	Model 1	Model 2	Model 3
Individual Level			
Age (γ_{10})	-.02*	-.01	-.01
Tenure (γ_{20})	.05	.01	-.00
Perceived Performance (γ_{30})	1.82*	2.10**	1.74**
Perceived Performance ² (γ_{40})	-.18	-.18†	-.14
Investor/entrepreneur (γ_{50})		1.76***	1.71***
Perceived performance ² x Investor/entrepreneur (γ_{60})		-.13**	-.13**
Team Level			
Task conflict (γ_{01})			-.54*
Relationship conflict (γ_{02})			.16
Actual conflict (γ_{03})			-.01**
R²	0.16^b	0.17^b	0.42^c

† < .10; * p < .05; ** p < .01; *** p < .001 (one-tailed tests for hypothesized effects)

^aLevel 1, N = 137 individuals; Level 2, N = 54 companies

^bR² = proportion of within-group variance explained by level 1 predictors (Raudenbusch and Bryk, 2002)

^cR² = proportion of between-group variance explained by level 2 predictors

Model 2 indicates clear support for hypothesis 1, in that entrepreneurs do indeed intend to stay longer with their companies than their respective angel investors. Although it does not explain much incremental variance in intent to remain (1.31%), its impact remains highly significant throughout all models. Furthermore, perceived performance now has a marginally significant curvilinear main effect on intention to remain, which is moderated by the fact whether the individual is an angel investor or entrepreneur. Upon closer inspection of this interaction effect, it seems that whereas perceived performance has little or no impact on the entrepreneurs' intentions to remain, it has a curvilinear effect for the angel investors. In other words, angel investors' intention to remain with their ventures is lowest when they perceive their portfolio companies to perform either poorly or excellent.

I then turn to testing the group-level effects (model 3). Perceived relationship conflicts (H2) and task conflicts (H3) between angel investors and entrepreneurs were hypothesized to have a significant negative impact on their intent to remain above and beyond the impact of the individual-level variables. While hypothesis 3 is clearly supported, hypothesis 2 is not. This is quite surprising given that previous conflict studies have generally either confirmed both effects on morale-related outcomes (e.g. Jehn, 1995) or at least relationship conflict's negative effect (e.g. Bayazit and Mannix, 2003). In this study though, relationship conflicts are not only less important in terms of their impact on intent to remain compared to task conflicts, but they are actually *unimportant* all together. Further, actual conflicts between angel investors and entrepreneurs, measured by degree of goal incongruence, were predicted to have a negative impact on their intention to remain (H4). Model 3 indicates significant support for this hypothesis. Adding these three team-level predictors to the control model explains 42% of the level-2 variance in intent to remain. In other words, of all the variation between angel-backed teams or companies in terms of their average intention to remain, 42% is explained by the degree of conflict, both perceived and actual, between the angel investors and entrepreneurs.

Several additional analyses were performed to check the robustness of these results (numbers not shown in tables). First, in order to control for potential differences in conflict dynamics across countries, the models were rerun controlling for location (Belgium or California) by including a dummy variable in the level 2 model. Not only was this variable insignificant, it also did not improve the fit of the model (as illustrated by a slightly higher level-2 residual variance) nor did it change the above-mentioned results. Second, the models were also rerun including more traditional control variables such as team size, company age and investment stage. There were no substantial changes in the hypothesized relations, nor did any of these control variables have a significant impact. Adding these variables, however, did increase the residual team-level variance, indicating a worse model fit. Third, two individuals had extreme values with regard to their tenure (12 and 15 years respectively), so analyses were redone without the two companies these individuals belonged to. Results remained the same. Fourth, as mentioned in the measures section, intent

to remain is a highly skewed variable. Therefore it was deemed appropriate to also run the models on a transformed, i.e. squared, version of the intent to remain variable. Again this did not alter the results and, moreover, this version of the model did not fulfill the level 1 homogeneity of variance-assumption. Fifth, considering the rather high correlation between task and relationship conflict, the final model was also run without relationship conflict. Although this resulted in a somewhat lower level-2 residual variance, it did not significantly alter the results. Sixth, in order to rule out a potential mediation effect for perceived performance, the procedure proposed by Zhang et al. (2008) to test for multilevel mediation was followed. Sobel tests indicated no significant mediation effects neither for perceived task and relationship conflict, nor actual conflict. Seventh, as several conflict studies focusing on individual-level outcomes have used individual perceptions of task and relationship conflict as predictors (e.g. Jehn, 1995; Jehn et al., 1999), models were rerun controlling for these variables at the individual level. Taking the impact of these variables into account, the team-level effects presented earlier remained robust. Finally, in order to shed some light on the rather untraditional results for the perceived conflict variables, a model was also built for individual-level satisfaction as this is traditionally strongly correlated with intent to remain (which is confirmed in this study: $r = .27, p < .001$). When running the satisfaction model, results were in line with what conflict literature predicts. Namely, relationship conflicts between angel investors and entrepreneurs had a significant negative impact on their individual-level satisfaction ($p < .001$), while task conflicts did not. Conflict theorists have generally classified intention to remain and satisfaction under the label “morale-related outcomes” and hence treated them as equivalents. The results in this study though would seem to indicate that while satisfaction of angel investors and entrepreneurs does fit this traditional box, intention to remain does not. The implications of this difference will be further elaborated upon in the discussion section.

4.6 Discussion

Despite exit representing one of the key phases in the partnership between external investors and entrepreneurs, little to nothing is known about what affects both parties' intentions or motivations to remain with or leave their ventures (DeTienne, 2008). The goal of this paper is to study the impact of both perceived and actual conflicts between angel investors and entrepreneurs on both parties' intent to remain with their respective (portfolio) companies. The findings reveal a significant, negative effect of perceived and actual task conflict on the angel investor's and entrepreneur's intent to remain, but they do not confirm the hypothesized effect for perceived relationship conflict. This study also confirmed an assumption implicit to many entrepreneurial finance papers that, all else constant, entrepreneurs want to remain with their companies longer than their angel investors. As such this paper has several contributions.

First, this study contributes to the entrepreneurship literature by shedding more light on what drives angel investors and entrepreneurs to remain with their ventures. By supporting perceived and actual conflict's effect on intention to remain this study is one of the very first to apply and confirm the importance of a socio-psychological perspective on investors' and entrepreneurs' decision to remain with a company. Not only does this study corroborate the relevance of looking into the darker sides of the relationship between investors and entrepreneurs, it also reveals some interesting differences between these two parties. More specifically, the results show that entrepreneurs do indeed want to remain with their ventures longer than angel investors do, hence confirming an always implicit, but never tested assumption in the entrepreneurial finance literature. Furthermore, results also reveal that angel investors' intention to remain is highest when they perceive their ventures to perform moderately. For entrepreneurs on the other hand, perceived performance has little to no effect, which could be explained by their high levels of psychological ownership towards their ventures.

Second, this study contributes to the conflict literature by broadening the definition of conflict to incorporate both a perceptual and actual component. Regardless of the specific approach taken, conflict studies over the past 20 years have been united by their common focus on perceptions or awareness (Thomas, 1992; Jehn, 1995; Pelled, 1996; Tjosvold, 1998; Chen et al., 2005; Mooney et al., 2007). Perceived incompatibilities however do not necessarily reflect actual ones, nor are actual incompatibilities necessarily perceived as such. This paper thus responds to this neglect of actual incompatibilities or conflict, as it was labeled by early conflict theorists (such as Deutsch, 1973; Thomas, 1976). The findings of this study support the view that actual conflicts, through increased competition between conflicting parties and a lack of problem-solving, result in lower intentions to remain. As such, it should be considered equally important as perceived conflicts in that both have a significant, separate and unique impact on team members' morale.

Distinguishing between perceived and actual conflicts could prove especially useful for those conflict studies which have been the subject of most debate, namely those focusing on its effect on performance-related outcomes. Considering both concepts quite clearly capture different aspects of the conflict process, both could also have a differential impact on task performance and innovation (see, for instance, Mannes, 2008). The lack of conformity in the definition, conceptualization and measurement of conflict may hence have proven to be the perfect breeding ground for the mixed findings that conflict studies have produced over the past few years. Theories advocating a positive or curvilinear function for task conflict on performance for instance generally base this on a conceptualization of conflict as objective differences in interests and opinions, not perceived ones (Mannes, 2008). Regardless, not all empirical research has measured task conflict accordingly. Although all under the label of "task conflict", most empirical evidence in support of a positive effect is found in laboratory or experimental studies measuring objective differences, while most negative evidence is based on field research measuring perceptions (Mannes, 2008). In other words, previous studies that found task conflicts to negatively impact team performance might also have 'suffered' from measuring task conflicts as perceived instead of actual incompatibilities.

Incorporating both objective and subjective differences of opinion into future research should thus allow us to gain a better insight into the complex relationship between conflict and team effectiveness.

Third, this study also contributes to the conflict literature by shedding more light on how perceived conflict impacts intent to remain. Regardless the type, perceived conflict is traditionally hypothesized to negatively affect morale-related outcomes, with relationship conflicts generally having the strongest effect (Jehn and Bendersky, 2003). The results of this study are therefore surprising in that one would expect either both relationship and task conflicts between angel investors and entrepreneurs to have a negative effect or just relationship conflicts. This paper though provides support for perceived task conflict's negative effect on intent to remain, due to associated feelings of stress, tension and discomfort, but not so for perceived relationship conflict. Considering the 'traditional' hypothesized effects do hold when running a model for the angel investors' and entrepreneurs' individual-level satisfaction (i.e. a significant, negative effect for perceived relationship conflict and an insignificant effect for perceived task conflict), it would seem as though these surprising results are not so much due to the specific conflict dynamics in this setting, but rather to the specifics of the outcome under study. More specifically, whereas traditional conflict literature has labeled both intention to remain and satisfaction as morale-related or affective outcomes, it seems as though – in this particular setting - this label is only justified for the angel investors' and entrepreneurs' satisfaction. Deciding whether or not to remain with their ventures on the other hand seems to be more of a business decision, which would also be corroborated by the effect of actual goal incompatibilities and perceived performance. In other words, depending on how high the stakes are for the individuals involved, some otherwise affective-driven outcomes might have a more pronounced business element to them.

Finally, this paper also contributes to the literature on the relationship between external investors and entrepreneurs, which has generally focused on either one side of the equation, i.e. either the investors or the entrepreneurs (e.g. Higashide and Birley, 2002; Parhankangas and Landström, 2006). By gathering

quantitative data from both angel investors and entrepreneurs within the same company, this paper can thus provide a more comprehensive view on their conflicts, interactions and relationship in general.

4.7 Limitations, future research and implications

This study is not without its limitations. First, all data were self-report data, which might give rise to concerns regarding common method variance. However, I believe that the several precautions taken in the design of the questionnaire, statistical tests conducted afterwards, the fact that there were several insignificant correlations in the study as well as the different resulting models for satisfaction and intent to remain all increase the probability that the results were not distorted. Second, considering the data were cross-sectional, caution is advised in drawing causal inferences. Some might argue that low intentions to remain, regardless the underlying motivation, could distort respondents' perceptions of conflict. In other words, as some kind of self-fulfilling prophecy, entrepreneurs and investors could make themselves *think* there is a lot of conflict *because* they want to leave and as such justify this decision or motivation to themselves. Although I cannot completely rule it out, I do believe its impact should be limited given the firm theory used to formulate hypotheses. Furthermore, reverse causality could not provide an adequate explanation for the results on actual conflict. Third, data were collected in two geographic locations (California and Belgium) and pooled based on the results from the multigroup CFA. An argument could be made that differences in degree of development of their respective risk capital markets could have an impact on the degree of professionalization of investors and entrepreneurs and hence on the intragroup dynamics that are at play in this relationship. Although the USA and Western-European countries are both known to have rather individualistic cultures, it would be interesting to see whether there are cross-cultural differences in conflict's impact in the angel investor-entrepreneur relationship. This was however beyond the scope of this paper.

Based on the results and limitations of the study, there are several avenues for future research. First, in order to build further support of the importance of distinguishing between perceived and actual conflicts, it would be interesting to see how actual conflicts between angel investors and entrepreneurs impact their performance, creativity and innovativeness. Second, considering the focus on conflict, this paper only serves as a first step to gather more insights into the underlying motivations and reasons as to when and why investors and entrepreneurs decide to exit their business. Considering the importance of this topic though, it definitely warrants further research. Third, it would also be valuable to extend this study by gathering follow-up actual turnover data. Not only would this help to relieve concerns regarding self-report data and reverse causality, it would also serve to see whether entrepreneur and investor intentions serve as a good proxy for their actual behaviour (Leroy et al., 2007). Fourth, angel investors and venture capitalists not only have many similarities, but also many differences. Therefore it would be interesting to see to what extent the findings of this study apply to the venture capitalist-entrepreneur relationship. Furthermore, as, to my knowledge, this represents the first study looking into actual conflict's impact on individual-level outcomes, it would also be interesting to see to what extent these findings could be generalized to other, more traditional teams.

Finally, this paper also has several practical implications. First, these findings suggest that both entrepreneurs and angel investors should pay careful attention to conflicts that might arise between them. Although personal criticisms will affect both parties' satisfaction, it will not necessarily affect their intention to remain. More important in this regard is when the objectives, both actual and perceived, of the angel investors and entrepreneurs diverge too much as this might result in the exit of one or both parties, which, if prematurely, is less than desirable for both. Hence, this paper suggests that careful goal alignment between entrepreneurs and angel investors should be a top priority from the very start of their partnership, i.e. even in their selection process of the optimal entrepreneur/investor. Having highly aligned goals from the very start will substantially increase the chances of a subsequent cooperative and harmonious relationship between these two parties.

4.8 References

- Amason, A.C., 1996. Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal* 39(1), 123-148.
- Amason, A.C., Schweiger, D.M., 1997. The effects of conflict on strategic decision making effectiveness and organizational performance. In: De Dreu, C.K., Van de Vliert, E., (Eds). *Using conflict in organizations*. Sage Publications, London, pp. 101-115.
- Amit, R., Brander, J., Zott, C., 1998. Why do venture capital markets exist? Theory and Canadian evidence. *Journal of Business Venturing* 13(6), 441-466.
- Armstrong, J.S., Overton, T.S., 1977. Estimating non-response bias in mail surveys. *Journal of Marketing Research* 14(3), 396-402.
- Bayazit, M., Mannix, E.A., 2003. Should I stay or should I go? Predicting team members' intent to remain in the team. *Small Group Research* 34(3), 290-321.
- Berger, A., Udell, G., 1998. The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking and Finance* 22(6-8), 613-673.
- Bezrukova, K., Jehn, K., 2008. Examining ethnic faultlines in groups: A multimethod study of demographic alignment, leadership profiles, coalition formation, intersubgroup conflict and group outcomes. Working Paper, Rutgers University.
- Black, B., Gilson, R., 1998. Venture capital and the structure of capital markets: banks versus stock markets. *Journal of Financial Economics* 47(3), 243-277.
- Bliese, P.D., Hanges, P.J., 2004. Being both too liberal and too conservative: The perils of treating grouped data as though they were independent. *Organizational Research Methods* 7(4), 400-417.
- Brigham, K.H., De Castro, J.O., Shepherd, D.A., 2007. A person-organization fit model of owner-managers' cognitive style and organizational demands. *Entrepreneurship Theory and Practice* 31(1), 29-51.
- Cable, D., Shane, S., 1997. A prisoner's dilemma to entrepreneur-venture capitalist relationships. *Academy of Management Review* 22(1), 142-176.
- Chen, G., Liu, C., Tjosvold, D., 2005. Conflict management for effective top management teams and innovation in China. *Journal of Management Studies* 42(2), 277-300.

- Cheung, G.W., Rensvold, R.B., 2002. Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling* 9(2), 233-255.
- Cumming, D.J., MacIntosh, J.G., 2003. A cross-country comparison of full and partial venture capital exits. *Journal of Banking and Finance* 27(3), 511-548.
- Davidsson, P., Wiklund, J., 2001. Levels of analysis in entrepreneurship research : Current research practice and suggestions for the future. *Entrepreneurship Theory and Practice* 26(4), 81-99.
- DeChurch, L., Marks, M., 2001. Maximizing the benefits of task conflict: The role of conflict management. *International Journal of Conflict Management* 12(1), 4-22.
- De Clercq, D., Sapienza, H.J., 2006. Effects of relational capital and commitment on venture capitalists' perception of portfolio company performance. *Journal of Business Venturing* 21, 326-347.
- De Dreu, C.K., 2008. The virtue and vice of workplace conflict: food for (pessimistic) thought. *Journal of Organizational Behavior* 29, 5-18.
- De Dreu, C.K., 2006. When too little or too much hurts: Evidence for a curvilinear relationship between task conflict and innovation in teams. *Journal of Management* 32(1), 83-107.
- De Dreu, C.K., Beersma, B., 2005. Conflict in organizations: Beyond effectiveness and performance. *European Journal of Work and Organizational Psychology* 14(2), 105-117.
- De Dreu, C.K., Gelfand, M., 2007. Conflict in the workplace: Sources, functions, and dynamics across multiple levels of analysis. In In: De Dreu, C., Gelfand, M. (Eds.) *The Psychology of conflict and conflict management in organizations*. Taylor and Francis LLC, New York, pp. 3-54.
- De Dreu, C.K., Weingart, L.R., 2003. Task versus relationship conflict, team performance and team member satisfaction: A meta-analysis. *Journal of Applied Psychology* 88(4), 741-49.
- De Dreu, C. K., Harinck, F., Van Vianen, A., 1999. Conflict and performance in groups and organizations. In: Cooper, C., Robertson, I. (Eds.) *International Review of Industrial and Organizational Psychology*. Wiley, Chichester, pp. 369-414.
- DeTienne, D., 2008. Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development. *Journal of Business Venturing*, In Press.
- DeTienne, D., Cardon, M., 2007. Entrepreneurial exit strategies: The case for intention. Working Paper.
- Deutsch, M., 1973. *The resolution of conflict*. Yale University Press, New Haven.
- Duffy, M., Shaw, J., Stark, E., 2000. Performance and satisfaction in conflicted interdependent groups: When and how does self-esteem make a difference? *Academy of Management Journal* 43(4), 772-782.

- Ensley, M. D., Pearson, A.W., Amason, A.C., 2002. Understanding the dynamics of new venture top management teams - Cohesion, conflict, and new venture performance. *Journal of Business Venturing* 17(4), 365-386.
- Fisher, R., 1998. Questioning the scope and relevance of the cooperative and competitive goal approach to conflict. *Applied Psychology – An International Review* 47(3), 314-317.
- Forbes, D., Borchert, P.S., Zellmer-Bruhn, M.E., Sapienza, H.J., 2006. Entrepreneurial team formation: An exploration of new member addition. *Entrepreneurship Theory Practice* 30(2), 225-248.
- Franke, N., Gruber, M., Harhoff, D., Henkel, J., 2006. What you are is what you like – similarity biases in venture capitalists' evaluations of start-up teams. *Journal of Business Venturing* 21(6), 802-826.
- Freear, J., Sohl, J.E., Wetzel, W., 2002. Angles on angels: financing technology-based ventures – a historical perspective. *Venture Capital* 4(4), 275-287.
- Freear, J., Sohl, J.E., Wetzel, W., 1994. Angels and non-angels: are there differences. *Journal of Business Venturing* 9(2), 109-123.
- Giebels, E., Janssen, O., 2005. Conflict stress and reduced well-being at work: The buffering effect of third-party help. *European Journal of Work and Organizational Psychology* 14(2), 137-155.
- Guerra, J.M., Martínez, I., Munduate, L., Medina, F., 2005. A contingency perspective on the study of the consequences of conflict types: the role of organizational culture. *European Journal of Work and Organizational Psychology* 14(2), 157-176.
- Heirman, A., Clarysse, B., 2005. The imprinting effect of initial resources and market strategy on the early growth path of start-ups. Working Paper 2005/310, Ghent University, Gent.
- Hellmann, T., 2006. IPOs, acquisitions, and the use of convertible securities in venture capital. *Journal of Financial Economics*, 81(3), 649-679.
- Higashide, H., Birley, S., 2002. The consequences of conflict between the venture capitalist and the entrepreneurial team in the United Kingdom from the perspective of the venture capitalist. *Journal of Business Venturing* 17(1), 59-81.
- Homan, A., van Knippenberg, D., Van Kleef, G., De Dreu, C., 2007. Interacting dimensions of diversity: cross-categorization and the functioning of diverse work groups. *Group Dynamics* 11(2), 79-94.
- Hu, L., Bentler, P.M., 1998. Fit indices in covariance structure modeling: Sensivity to underparameterized model misspecification. *Psychological Methods* 3(4), 424-453.

- Ireland, D., Reutzell, C., Webb, J., 2005. Entrepreneurship research in AMJ: What has been published, and what might the future hold? *Academy of Management Journal* 48(4), 556-564.
- James, L. R., Demaree, R. G., Wolf, G., (1984). Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology* 69(1), 85-98.
- Janssen, O., Van De Vliert, E., Veenstra, C., 1999. How task and person conflict shape the role of positive interdependence in management teams. *Journal of Management* 25(2), 117-142.
- Jehn, K.A., Bendersky, C., 2003. Intragroup conflict in organizations: A contingency perspective on the conflict-outcome relationship. *Research in Organizational Behavior* 25, 187-242.
- Jehn, K.A., Mannix, E.A., 2001. The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. *Academy of Management Journal* 44(2), 238-51.
- Jehn, K.A., Northcraft, G.B., Neale, M.A., 1999. Why differences make a difference: A field study of diversity, conflict, and performance in workgroups. *Administrative Science Quarterly* 44(4), 741-763.
- Jehn, K.A., Chadwick, C., Thatcher, S., 1997. To agree or not to agree: The effects of value congruence, individual demographic dissimilarity and conflict on workgroup outcomes. *International Journal of Conflict Management* 8(4), 287-305.
- Jehn, K.A., 1995. A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly* 40(2), 256-82.
- Klein, K.J., Kozlowski, S.W., 2000. From micro to meso: critical steps in conceptualizing and conducting multilevel research. *Organizational Research Methods* 3(3), 211-236.
- Kozlowski, S., Ilgen, D., 2006. Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest* 7(3), 77-124.
- LeBreton, J., Senter, J., 2008. Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods* 11(4), 815-852.
- Leroy, H., Manigart, S., Meuleman, M., 2007. Exit processes of micro businesses: the decision to transfer. Paper presented at the International Conference on Small Business.
- Lindell, M., Whitney, D. J., (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology* 86(1), 114-121.
- Mannes, A.E., 2008. The conflict over conflict. *Academy of Management 2008 Best Paper Proceedings, Conflict Management Division*. Anaheim, CA.

- Mason, C.M., 2006. Informal sources of venture finance. In: Parker, S. (Ed.) *The life cycle of entrepreneurial ventures*. Springer, New York, pp. 259-299.
- Mason, C., Harrison, R., 2002. Is it worth it? The rates of return from informal venture capital investments. *Journal of Business Venturing* 17, 211-236.
- Matsuo, M., 2006. Customer orientation, conflict, and innovativeness in Japanese sales departments. *Journal of Business Research* 59(2), 242-50.
- Medina, F., Munduate, L., Dorado, M., Martínez, I., Guerra, J., 2005. Types of intragroup conflict and affective reactions. *Journal of Managerial Psychology* 20(3/4), 219-230.
- Mooney, A.C., Holahan, P.J., Amason, A.C., 2007. Don't take it personally: Exploring cognitive conflict as a mediator of affective conflict. *Journal of Management Studies* 44(5), 733-758.
- O'Reilly, C.A. III, Chatman, J., Caldwell, D., 1991. People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal* 34(3), 487-516.
- Parayitam, S., R.S. Dooley. 2007. The relationship between conflict and decision outcomes: Moderating effects of cognitive- and affect-based trust in strategic decision-making teams. *International Journal of Conflict Management* 18(1), 42-73.
- Parhankangas, A., Landström, H., 2006. How venture capitalists respond to unmet expectations: The role of social environment. *Journal of Business Venturing* 21(6), 773-801.
- Pearson, A. W., Ensley, M. D., Amason, A. C., (2002) An assessment and refinement of Jehn's Intragroup Conflict scale. *The International Journal of Conflict Management* 13(2), 110-126.
- Pelled, L.H., 1996. Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science* 7(6), 615-31.
- Peterson, R.S., K.J. Behfar. 2003. The dynamic relationship between performance feedback, trust, and conflict in groups: A longitudinal study. *Organizational Behavior and Human Decision Processes* 92(1-2), 102-112.
- Podsakoff, P.M., Organ, D. W., (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management* 12(4), 531-544.
- Podsakoff, P.M., Mackenzie, S. B., Lee, J., Podsakoff, N. P., (2003) Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology* 88(5), 879-903.

- Pondy, L.R., 1967. Organizational conflict: Concepts and models. *Administrative Science Quarterly* 12(2), 296-320.
- PriceWaterhouseCoopers, Thomson Venture Economics, National Venture Capital Association, 2006. MoneyTree™ Survey.
- Prowse, S., 1998. Angel investors and the market for angel investments. *Journal of Banking and Finance* 22, 785-792.
- Raudenbusch, S.W., Bryk, A.S., 2002. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Sage Publications, Thousand Oaks, CA.
- Ross, R., 1989. Conflict. In Ross, R., Ross, J. (Eds.) *Small Groups in Organizational Settings*. Prentice-Hall, Englewood Cliffs, NJ, pp. 139-178.
- Sapienza, H.J., Gupta, A.K., 1994. Impact of agency risks and task uncertainty on venture capitalists – CEO interaction. *Academy of Management Journal* 37(6), 1618-1632.
- Schmidt, S.M., Kochan, T.A., 1972. Conflict: toward conceptual clarity. *Administrative Science Quarterly* 17(3), 359-370.
- Schwiebacher, A., 2008. Innovation and venture capital exits. *Economic Journal* 118(533), 1888-1916.
- Si, S., Bruton, G., 2005. Knowledge acquisition, cost savings, and strategic positioning: effects on Sino-American IJV performance. *Journal of Business Research* 58(11), 1465-1473.
- Smith, D., 2005. The exit structure of venture capital. *UCLA Law Review* 53(2), 315-356.
- Sohl, J., 2005. The angel investor market in 2005. Center for Venture Research, Durham.
- Spector, P., 2006. Method variance in organizational research: Truth or Urban legend? *Organizational Research Methods* 9(2), 221-232.
- Steenkamp, J.B., Baumgartner, H., 1998. Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Research* 25, 78-89.
- Stewart, W., Watson, W.E., Carland, J.C., Carland, J.W., 1999. A proclivity for entrepreneurship: A comparison of entrepreneurs, small business owners and corporate managers. *Journal of Business Venturing* 14(2), 189-214.
- Thomas, K., 1992. Conflict and conflict management: Reflections and update. *Journal of Organizational Behaviour* 13, 265-274.

- Thomas, K., 1976. Conflict and conflict management. In: Dunnette, J. (Ed.) *Handbook of Industrial and Organizational Psychology*. Rand McNally, Chicago, 889-935.
- Tjosvold, D., 1998. Conflict over the study of conflict: The challenge to make it cooperative. *Applied Psychology: An International Review* 47(3), 336-342.
- Tjosvold, D., 2007. Conflicts in the study of conflict in organizations. In: De Dreu, C., Gelfand, M. (Eds.) *The Psychology of conflict and conflict management in organizations*. Taylor and Francis LLC, New York, pp. 445-454.
- Ucbasaran, D., Lockett, A., Wright, M., Westhead, P., 2003. Entrepreneurial founder teams: factors associated with member entry and exit. *Entrepreneurship Theory Practice* 28(2), 107-127.
- Watson, D., Clark, L. A., Tellegen, A., (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology* 54(6), 1063-1070.
- Westerman, J.W., Cyr, L.A., 2004. An integrative analysis of person-organization fit theories. *International Journal of Selection and Assessment* 12(3), 252-261.
- Westhead, P., Ucbasaran, D., Wright, M., Binks, M., 2005. Novice, serial and portfolio entrepreneur behaviour and contributions. *Small Business Economics* 25(2), 109-132.
- Wijbenga, F., van Witteloostuijn, A., (2006). The entrepreneur and the venture capitalist as a team: A game-theoretic and upper echelon theory of cooperation and defection. In: Butler, J., Lockett, A., Ucbasaran, D. (Eds.), *Venture Capital and the Changing World of Entrepreneurship*. Information Age Publishing, Greenwich, CT, pp. 91-114.
- Wincent, J., Örtqvist, D., Drnovsek, M., 2008. The entrepreneur's role stressors and proclivity for a venture withdrawal. *Scandinavian Journal of Management* 24, 232-246.
- Yi-Feng, N., Tjosvold, D., Peiguan, W., 2008. Effects of relationship values and goal interdependence on Guanxi between foreign managers and Chinese employees. *Journal of Applied Social Psychology* 38 (10), 2440-2468.
- Yitshaki, R., 2008. Venture capitalist-entrepreneur conflicts – An exploratory study of determinants and possible resolutions. *International Journal of Conflict Management* 19(3), 262-292.
- Zhang, Z., Zyphur, M.J., Preacher, K.J., 2008. Testing multilevel mediation using hierarchical linear models. *Organizational Research Methods* (forthcoming).

4.9 Appendices

Appendix A:

Table 4.3 Descriptives for Belgian and Californian teams in the sample

Variables	Belgium	California
Team size	3.46	3.77
Age company	5.36	3.38
Early stage investment**	0.57	0.88
Age respondent**	44.35	49.29
Education respondent (No. years)	6.13	6.87
Entrepreneurial experience respondent (No. years)	8.54	11.05

** Mann-Whitney test, $p < .01$

Appendix B: Items for task and relationship conflict

1. Task conflict

- d. How many disagreements over different ideas have there been between the entrepreneurial team and the angel investor(s)?
- e. How many differences about the content of decisions have the angel investor(s) and the entrepreneurial team had to work through?
- f. How many differences of opinion have there been between the angel investor(s) and the entrepreneurial team?

2. Relationship conflict

- d. How much tension has there been between the angel investor(s) and the entrepreneurial team during decisions?
- e. How much personal friction has there been between the angel investor(s) and the entrepreneurial team during decisions?
- f. How much anger has there been between the angel investor(s) and the entrepreneurial team?

CHAPTER 5

Conclusion

The goal of this dissertation is to provide an insight into the scope and impact of potential pre- and post-investment problems between angel investors and entrepreneurs. Whereas the first paper of this dissertation focuses on the pre-investment relationship, the second and third paper focus on the post-investment relationship. More specifically, building on a traditional economic theory of market failure, the first study verifies the existence of pre-investment information problems and evaluates the extent to which the creation of business angel networks provides a solution to these problems. In the other two papers, building on conflict theory, the impact of both perceived and actual conflicts between angel investors and entrepreneurs is studied on innovation and intentions to remain (invested) in the company.

In this final chapter I will summarize and highlight the main findings of this dissertation. Furthermore, I will discuss the contributions, implications, limitations and avenues for future research.

5.1 Main findings

Academics, practitioners and policy-makers have all often claimed the angel financing market, despite its huge potential, to be an inefficient one (Sohl, 1999). Based on a market failure argument, caused by R&D externalities and information problems, governments from all over the world have therefore launched initiatives to stimulate this market (European Commission, 2003; Maula et al., 2007). One of those measures, aimed at reducing information problems by increasing the transparency of the market, is the public support and funding of business angel networks. These networks provide a communication channel between entrepreneurs and angel investors without giving up the anonymity of the latter (Harrison and Mason, 1996). However, conclusive evidence concerning the existence of a market failure is lacking and

so are evaluations of the effectiveness and efficiency of policies targeted towards angel investors (Maula and Murray, 2003; Jääskeläinen et al., 2006; Maula et al., 2007). Aiming to address this gap, the first study of this dissertation shows that information problems plague the angel financing market in that (1) prior to the time of angel investment and compared to similar non-angel-backed companies, companies that received angel financing had a lower probability of raising financing from other, traditional sources and (2) the only difference between companies that received angel financing through a business angel network and those that received it through another channel is that the entrepreneurs and angel investors of the former just had trouble in finding each other. Interviews corroborate these results and also indicate that business angel networks help reduce these problems. This all cannot be labeled as a market failure yet though as angel-backed companies are value-destroying in the short-term, but there are several indicators of future potential. Combined with their contribution to economic development and growth as well as indirect benefits resulting from business angel networks, government intervention in the angel financing market through public support of business angel networks thus seems to be justified.

In addition to examining whether angel investors and entrepreneurs encounter problems prior to the actual investment, this dissertation also studies potential problems between these two parties after the investment has taken place. Despite the importance of cooperation between external investors and entrepreneurs (Cable and Shane, 1997), there is still a lack of insight into the darker side of their relationship or, in other words, what happens when cooperation fades and conflict appears (Higashide and Birley, 2002; Parhankangas and Landström, 2006; Yitshaki, 2008). As such, the second and third paper of this dissertation aim to provide an insight into how conflicts between angel investors and entrepreneurs affect both the company they belong to and the individuals involved.

First, the results reveal that *task conflicts*, i.e. perceived disagreements or differences in opinion between angel investors and entrepreneurs about the task performed (Jehn and Mannix, 2001; Bezrukova and Jehn, 2008), have a significant, negative impact on the portfolio company's innovation and on both parties'

intentions to remain (invested) in the company. This would support the argument that in cases of task-related disagreements, the interaction between angel investors and entrepreneurs has a higher chance of turning into a competitive game or psychological warfare (Eisenhardt and Bourgeois, 1988; Amason, 1996; Brewer and Miller, 1996; LaBianca et al., 1998). Information sharing between these two parties will become impeded by higher levels of distrust, use of politics and cognitive barriers (Eisenhardt and Bourgeois, 1988; Baba et al., 2004; Bezrukova and Jehn, 2008). A truly open, creative debate will become less likely (Barkema and Shvyrkov, 2007) and these disagreements will redirect both parties' attention away from maximizing the innovative potential of their company, hence resulting in lower levels of innovation (Walton, 1969; Lovelace et al., 2001). In addition, these conflicts will produce feelings of stress, frustration and discomfort, making both parties less satisfied (Jehn, 1995; Jehn and Bendersky, 2003) and hence less inclined to remain with their ventures.

Second, the findings also show that *relationship conflicts*, i.e. perceived interpersonal incompatibilities between angel investors and entrepreneurs (Jehn and Mannix, 2001; Bezrukova and Jehn, 2008), negatively impact the portfolio company's innovation – albeit with a smaller impact than task conflicts – but do *not* affect both parties' intentions to remain. Its impact on innovation could be explained by the feelings of cynicism, avoidance and anxiety it creates, which would interfere with both parties' ability to handle and process new or complex information, would decrease cooperation and absorb time and energy necessary for creative thinking (Jehn, 1995; Amason, 1996; Matsuo, 2006). An alternative explanation for this finding is that the use of competitive tactics and politics in task conflicts between angel investors and entrepreneurs trigger relationship conflicts between these two parties (Simons and Peterson, 2000; Mooney et al., 2007), hence relationship conflict acting as a mediator of task conflict's negative effect on innovation. The absence of a significant effect for relationship conflicts on intentions to remain could indicate that deciding whether or not to remain with their ventures is more of a business decision to angel investors and entrepreneurs than an emotional one.

Third, *process conflicts*, i.e. an awareness of controversies between angel investors and entrepreneurs about aspects of how task accomplishment will proceed (Jehn and Mannix, 2001; Bezrukova and Jehn, 2008), are only investigated in relation to the portfolio company's innovation (due to data restrictions for the third paper). Its effect on innovation is *not* supported, which may be due to the specifics of this research setting. Namely, due to adverse selection and moral hazard risks, angel investors and entrepreneurs conduct severe pre-investment discussions concerning the specifics of their partnership, i.e. company valuation, ownership distribution, voting rights, resource allocation, role definitions etc. Hence many of the topics that could potentially lead to process conflicts could already have been discussed prior to or at the time of investment. If so, this could result in lower levels of and less variation in process conflict in this setting, which is corroborated by the data, hence making it harder to uncover a statistical effect.

Fourth, in addition to examining the impact of overt conflict or *perceived* incompatibilities between angel investors and entrepreneurs, this dissertation sought to explore the impact of *actual* incompatibilities or conflict. More specifically, the second and third paper focus on a specific type of actual incompatibilities prevalent in the angel investor-entrepreneur relationship, i.e. actual goal incompatibilities. As task conflicts are defined as perceived disagreements between angel investors and entrepreneurs regarding strategic decisions to be taken, such as what short-term and long-term objectives to set for the company, actual goal incompatibilities could be considered as a type of actual task conflict. The results reveal a moderating effect when relating this type of actual conflict to innovation and a main effect when relating it to intentions to remain. More specifically, perceived conflicts between angel investors and entrepreneurs, regardless the type, have a much stronger negative effect on innovation in the presence of higher rather than lower levels of actual conflict. This would support the argument that the negative emotions, frustrations, competitive tactics and disabled information-sharing process resulting from perceived conflicts are intensified by actual conflicts due to the associated lack of cooperation and problem-solving, more frequent communication and reduced quality of the information exchanged between angel investors

and entrepreneurs (Deutsch, 1973; Sapienza and Gupta, 1994; Fisher, 1998; De Clercq and Sapienza, 2006). Secondly, the findings also show a significant, negative main effect of actual conflicts between angel investors and entrepreneurs on their intentions to remain. This could be explained by the associated increased competition and lack of problem-solving decreasing the probability of creating a long-term, cooperative business partnership, hence making it less lucrative, useful or desirable to stay in this relationship (Deutsch, 1973; Fisher, 1998; Tjosvold, 1998). As similar mechanisms underlie actual conflict's main and moderating effects of perceived conflict, one could expect both to appear in the innovation and intentions to remain-models. A curvilinear effect for actual incompatibilities on innovation could not be uncovered, but this could be due to the small sample size. A potential explanation for the lack of a moderating effect of actual conflict in the intentions to remain model could be the strength of perceived task conflict's main effect. The innovation paper would namely suggest that low levels of actual conflicts are most beneficial for relationship and process conflicts. In other words, as perceived task conflict's negative main effect on innovation is the strongest of all three, it could also be the hardest one to turn around. Hence, it might be that, similarly, perceived task conflict's effect on intention to remain is so strong that it cannot be turned around by low levels of actual conflict.

5.2 Academic contributions

The contributions of this dissertation to the literature are multiple. First, it contributes to the *academic evaluation* literature. Theories of government intervention are generally based on a market failure argument, which can be caused by information asymmetries, high levels of uncertainty, increasing scale economies, externalities or public goods (Dollery, 1994). The large number of government intervention proponents notwithstanding, a substantial literature stream has focused on refuting the market failure paradigm (e.g. Wolf, 1979; Le Grand, 1991). More particularly, these critics argue that government initiatives do not always achieve their intended goal, due to government failure (Dollery, 1994). By providing an empirical test of the market failure argument, this dissertation provides more conclusive

evidence concerning its existence and as such provides support for theories favouring government intervention.

Second, this research also contributes to the *conflict literature* in multiple ways. Firstly, it sheds more light on how conflict impacts intentions to remain. Conflict researchers generally make a distinction between two types of outcomes, i.e. performance- and morale-related ones (Jehn and Bendersky, 2003; De Dreu and Beersma, 2005). The first category entails outcomes such as innovation, creativity and task performance, the second one covers individual well-being, satisfaction and intentions to remain. It is generally assumed that perceived conflict's effects are similar for outcomes within the same category, but can differ across outcome categories (see Jehn and Bendersky, 2003 for a review). This research shows that this traditional view might not always be warranted. More particularly, in the setting of angel investors and entrepreneurs perceived conflict's effects on outcomes within the same category, i.e. satisfaction and intentions to remain, do differ. Whereas satisfaction appears to be affective-driven or morale-related, intentions to remain appear to be more business-driven, as also corroborated by actual conflict's effect on intentions to remain. The more pronounced business element in deciding whether or not to remain with their companies might be due to the voluntary nature of the relationship between angel investors and entrepreneurs as opposed to that of many work and student teams. Namely, while angel investors and entrepreneurs choose to work together, members of work and student teams are generally assigned to their teams by a supervisor. If angel investors and entrepreneurs cannot find a way to work together, there is no use in continuing their partnership. While emotional problems also impede a smooth cooperation, they do not completely block the process as both parties' stakes are too high. Problems immediately relating to the task at hand though, i.e. having different objectives, substantially decrease the chances of forging a cooperative partnership. Members of more traditional teams generally do not have the option of abandoning their teams if cooperation is failing, hence maybe making business motives less important than emotional ones.

Secondly, this research sheds more light on the conflict-innovation relationship. Whether task conflicts are beneficial or detrimental to a team's or company's innovation and performance has been the subject of much debate (Lovelace et al., 2001; De Dreu, 2006; Matsuo, 2006). Some researchers have even openly raised the question as to whether these conflicts can ever be valuable and should not be avoided altogether (Tjosvold, 2007; De Dreu, 2008). The research presented in this dissertation provides two potential explanations for the mixed, i.e. positive and negative, findings that task conflict studies have produced over the years. First, most conflict studies have focused on conflict within teams, but neglected to recognize that teams can consist of subgroups (Bezrukova and Jehn, 2008). The findings revealed in this dissertation show that researchers might want to take this into account as the existence of subgroups can add some specific dynamics to the conflict process, potentially altering its effects. More specifically, subgroups having task-related disagreements could heighten the chance of them turning into warring factions, playing a competitive game, which would result in task conflicts between them having a negative impact. In other words, previous studies that found task conflicts to negatively impact team performance might in fact have 'suffered' from teams consisting of subgroups. An alternative explanation is the lack of conformity applied in the definition, conceptualization and measurement of conflict. Early conflict theorists defined conflict to include both perceived and actual incompatibilities (Pondy, 1967; Deutsch, 1973). Conflict studies over the years have neglected this distinction though, hence potentially confounding its results. Theories advocating a positive or curvilinear function for task conflict generally base this on a conceptualization as objective differences in interests and opinions, not perceived ones (Mannes, 2008). Regardless, not all empirical research has measured task conflict accordingly. Although all under the label of "task conflict", most empirical evidence in support of a positive effect is found in laboratory or experimental studies measuring objective differences, while most negative evidence is based on field research measuring perceptions (Mannes, 2008). In other words, previous studies that found task conflicts to negatively impact team performance might also have 'suffered' from measuring task conflicts as perceived instead of actual incompatibilities – as would be supported by this dissertation. As such, this dissertation thus provides two alternative explanations for conflict literature's mixed results regarding task

conflict's effect on team performance. The two views provided are interrelated as actual goal incompatibilities could be a source of subgroup formation (Lau and Murnighan, 1998). However, these incompatibilities do not necessarily lead to the creation of subgroups as other intrateam differences might neutralize their effect on subgroup formation (Lau and Murnighan, 1998). Similarly, even in cases of perfect goal congruence, these same other intrateam differences can still lead to subgroup formation.

Thirdly, this research contributes to the *entrepreneurship literature* in three ways. First, although cooperation is often mentioned as a key ingredient to a successful relationship between external investors and entrepreneurs, there is a lack of research looking into what happens if cooperation is missing (Cable and Shane, 1997; Parhankangas and Landström, 2006). This dissertation addresses this gap by showing that conflicts between angel investors and entrepreneurs can be detrimental both to the company's performance and to the individuals involved. As such, conflicts between these two parties should not be ignored. Second, little to none is known about what factors drive investors' and entrepreneurs' intentions and motivations to voluntarily remain with their businesses (DeTienne, 2008; Wincent et al., 2008). Applying a socio-psychological perspective, this research is among the first to shed some light on the antecedents of one of the most crucial phases of the partnership between investors and entrepreneurs, i.e. exit. Thirdly, two papers also provide a test for assumptions key to the entrepreneurial finance literature. Whereas the first paper reveals evidence for the inefficiency of the angel financing market, the third paper reveals evidence for entrepreneurs wanting to outstay their angel investors.

Finally, the papers in this dissertation also provide multiple *methodological contributions*. So far, studies evaluating the efficiency and effectiveness of government programmes relied on either qualitative or quantitative data (e.g. Murray, 1998; Maula and Murray, 2003). In this dissertation though, both approaches are combined allowing a richer and more rigorous analysis of the government measure of interest, i.e. the public funding and support of business angel networks. Second, by applying a multilevel

approach in the third paper, this research contributes to conflict and entrepreneurship research as both have suffered from a lack of multilevel studies (Ireland et al., 2005; De Dreu and Gelfand, 2007). Third, the team approach adopted in the final two papers of this dissertation required gathering data from both entrepreneurs and angel investors. As such it also contributes to the entrepreneurial finance literature, which has generally focused on the perceptions of only investors (e.g. Higashide and Birley, 2002; De Clercq and Sapienza, 2006) or entrepreneurs (e.g. Ehrlich et al., 1994; Saetre, 2003).

5.3 Practical implications

The findings presented in the three studies also have several practical implications for entrepreneurs, angel investors and policy-makers.

First, even today, business angel networks have a reputation of attracting the worst-quality deals, i.e. the most risky companies unable to secure financing elsewhere. As such, entrepreneurs in search of seed or start-up money often fear contacting a business angel network, as do angel investors in search of valuable investment opportunities. The results in this study show though that this reputation is more of a myth than it is reality as companies seeking angel financing through a network are not worse nor better than those seeking it through another channel. Hence business angel networks can represent a helpful resource to both entrepreneurs and angel investors.

Second, the relationship between angel investors and entrepreneurs is sometimes compared to a marriage. Both parties make a commitment with the best intentions (hopefully), a commitment which requires mutual trust. Some live happily ever after, others end prematurely. Similar to a marriage, it is therefore not odd that investors and entrepreneurs occasionally face conflicts and disagreements. What people however sometimes tend to forget is that these conflicts can have far-reaching effects. Not only will the people involved suffer from these conflicts, they may also affect the performance of the company involved. The

most potentially detrimental types of conflicts in this regard are those relating to strategic decisions to be taken. Angel investors and entrepreneurs perceiving the other party to have a different opinion or other objectives could lead to psychological warfare, distrust, consume their time and energy and create frustrations and tension. Not only could this adversely affect their combined creativity and innovativeness, it could also make both parties want to leave their ventures more rapidly. This is not to say that conflict between angel investors and entrepreneurs can never be constructive, quite the contrary. More specifically, through careful goal alignment angel investors and entrepreneurs can substantially increase the chances of creating a harmonious, cooperative relationship and value can be created out of conflict. If, on the other hand, actual goals of angel investors and entrepreneurs diverge too much, this could result in an exit of either one or both, which, if prematurely, is less than desirable for both. Secondly, it could also worsen the already negative effects of conflict on the company's innovation. Open and honest communication about personal objectives from the very start is thus of crucial importance to this partnership.

Third, angel investors are often considered the less professional and less formal counterparts of venture capitalists. This may lead some entrepreneurs to mistakenly assume that angel money is easy money in that, once they have received the money, they do not have to take the angel investors into account. This research adds to the empirical evidence that would warn entrepreneurs against making this assumption all too quickly. More particularly, on average and much alike venture capitalists, angel investors want to exit from their ventures more rapidly than the entrepreneurs. This would confirm that angel investors are not purely driven by altruistic motives to invest, as they see exit from the business as an important harvesting opportunity. In other words, entrepreneurs should keep in mind that, on average, angel investors do not just invest for fun and will want something in return (financially).

Finally, this research provides support for policy-makers creating measures to stimulate the angel financing market. Angel-backed companies contribute to local economic development and growth, but

angel investors and entrepreneurs sometimes have trouble in finding each other. As business angel networks help reduce these problems, public funding and support of those networks is vital. In addition, policy-makers should also take the results of this research as an incentive to create other measures to help raise the awareness of the array of financing sources available to entrepreneurs, as still too many of them have no idea what potential sources are out there.

5.4 Limitations and avenues for future research

This final section sets out to discuss the main limitations of this doctoral research and suggest some avenues for further research.

A first limitation of this research relates to the *theoretical perspectives* used. Whereas the first paper applies insights from the economic theory of market failure, the final two papers adopt a conflict theory lens. A theory of market failure is based on the premises that when markets fail, governments should intervene. Hence, an assumption implicit to this theory is that whenever governments *should* intervene, they *can*. It is exactly this assumption that scholars opposing any form of government intervention have used to formulate their theory of government failure. For example, the capture theory of government intervention states that governments are not able to achieve the targeted results, because of the interference of interest groups seeking to maximize their own wealth (Dollery, 1994). Although this limitation of the theory of market failure is not explicitly incorporated in the first study of this dissertation, it is addressed indirectly by examining whether or not BAN subsidization helped in contributing to economic development and in reducing information and resulting financing problems of entrepreneurial companies. Conflict theory on the other hand assumes that conflict is a process that starts with the experience or awareness of incompatibilities (Korsgaard et al., 2008). Even though most of these scholars recognize that perception or interpretation of conflict does not necessarily correspond with actual or objective events, conflict studies over the years have come to exclusively focus on the perceptual side of

the conflict story. This dissertation shows that excluding the actual incompatibilities that might (but not necessarily) underlie the perceived ones is a limitation of this theory as both have a unique role to play in the conflict process.

Secondly, there are several limitations in terms of the *variables* used in this dissertation. In the first paper value creation by angel-backed companies was measured through return on assets. Ideally this would have been compared to the companies' funding cost, however these data are unavailable for unquoted companies (which most angel-backed companies are). A similar measure for sales would have been preferable, but as small Belgian companies are not obliged to provide these data when filing their financial accounts this measure could not be constructed. Therefore, as an alternative, a measure for value added rescaled by total assets was created. In the second paper, innovation was measured by the ratio of intangible assets to total assets. Although this variable is generally considered a good proxy for innovative activity, it has to be acknowledged that it is likely to be more a reliable measure of innovation for companies operating in high-technology industries. To counteract this potential bias another measure was therefore integrated in the study, corresponding with a broader, more general conceptualization of innovation (incorporating for instance the company's adaptability to changes). We argue that both measures together provide us with a rather comprehensive view of the level of innovation in these companies. The outcome measure used in the third paper, intention to remain, could be critiqued for implicitly assuming that whenever angel investors and entrepreneurs want to remain with or leave their ventures, they can. However, this might not always be the case as, for instance, poorly performing entrepreneurs might be replaced by their external investors or external investors in highly performing ventures might always to exit as quickly as possible. In order to limit this bias, wording was somewhat altered to emphasize the voluntary aspect of the question and perceived performance was taken into account. In addition, confirming construct validity, data gathered on the Belgian companies revealed intention to remain to be significantly and positively related to turnover. Further, actual conflict was measured as the difference between the goal importance rankings of angel investors and entrepreneurs

based on Sapienza and Gupta (1994). As such, it represents an amalgam of potential goal differences, including financial goals such as sales growth, cash flow and return on investment, but also non-financial goals such as new product development, operating efficiency and personnel development. Although measuring goal incompatibility this way allows us to provide a broad overview of its potential role in the relationship between angel investors and entrepreneurs, it also suffers from problems such as conceptual ambiguity, discarded information and insensitivity to the sources of goal differences (Edwards, 1993; 2001). Therefore, for future research, it would be interesting to run polynomial regressions per goal which should allow us to get an insight into (1) which goals are the most important ones as drivers of effectiveness, both in terms of the portfolio company's performance as well as the individuals', i.e. angel investors' and entrepreneurs', attitudes (Hackman, 1987) and (2) per goal, whether exact correspondence between entrepreneurs' and investors' ratings always results in higher effectiveness or whether it is either the entrepreneurs' or the investors' ratings that have the predominant impact.

A third limitation of this research relates to the *internal validity* of the studies, due to different geographic locations used for data collection. Whereas the first two studies are based on Belgian data, the third study uses both Belgian and US (California) data. In cases of all-Belgian data, internal validity should be increased due to the fact that all angel-backed companies operate within the same economic, legislative, fiscal and cultural environment. When Belgian data are combined with those collected in California though, one might argue that the proposed relationships could somewhat differ depending on the location of data collection. More specifically, the angel financing market –as the risk capital market in general – is more developed in the USA compared to Continental Europe (EBAN, 2005). This might have an impact on the degree of professionalization of the investors and hence how they manage their investments in general and their relationships with entrepreneurs in particular. Furthermore, although the USA and Western European countries are both known to have rather individualistic cultures, slight differences in culture might also affect intragroup dynamics (e.g. Xie et al., 1998; Oetzel and Ting-Toomey, 2003). In this particular research, data would suggest the risk of damaged internal validity being limited though as

there are no significant differences between Californian and Belgian teams in terms of the level of perceived conflict (both task and relationship conflict) as well as the individuals' average intentions to remain in the company. The only difference is that Belgian teams have better aligned goals than Californian ones. As the correlation between goal incompatibility and intention to remain is negative and significant in both samples, I however believe that the effect of this difference should be small.

Fourthly, there are two threats to *external validity*, one relating to the limited geographical data coverage and one relating to the teams used for this research. First, one might argue that there is limited generalizability for papers using only Belgian data. However, I argue that external validity should be warranted as Belgium is rather similar to other European countries in terms of socio-economic indicators, its business angel networks and its fiscal treatment of angel investments (Stroobandt et al., 2005; EBAN, 2005). Hence the findings presented here could have relevant implications for other European countries. Furthermore, whereas angel financing literature is mainly based on US studies, the conflict literature is evenly spread over the US and Western Europe. As these studies have generally produced similar results, external validity should be warranted. A second threat to external validity relates to the type of teams investigated. Conflict studies so far have generally either focused on top management teams, student teams or work teams (Jehn, 1995; Amason, 1996; Jehn and Mannix, 2001). As angel investors and entrepreneurs enter their teams under a different status, one might not immediately be inclined to think of these groups as teams and hence question the generalizability of the results to more traditional teams. However, just like any other team, angel investors and entrepreneurs are also dependent on each other to reach a common, overarching goal hence making the conclusions of this research also valuable for these other teams. I do acknowledge though that, considering the focus of the research is on angel investors and entrepreneurs that are actively involved in strategic decision making, results are probably most relevant for teams executing similar, complex tasks, such as top management teams (Srivastava et al., 2006). The question then also arises how the results of this dissertation would translate to that other important group of external investors, namely venture capitalists. Much alike angel investors, venture capitalists and

entrepreneurs are also dependent on each other in fulfilling their roles to reach a common goal and could thus also be thought of as forming a team (Wijbenga and van Witteloostuijn, 2006). The relationship between both types of external risk capital investors and their entrepreneurs further presents many similarities in terms of potential conflict antecedents. For instance, in both cases there is some competition over scarce resources (whether it be money or power), communication is of huge importance and personal differences are something to be avoided rather than sought out. That being said though, there are some differences between these two groups that could alter the conflict dynamics at play in the relationship with their entrepreneurs. One could argue that venture capitalists and entrepreneurs are somewhat less dependent on each other than angel investors and their entrepreneurs are. This as venture capitalists are more concerned with market risk than they are with agency risk, making them rely more on pre-investment due diligence and contracting rather than post-investment monitoring (Fiet, 1995; Van Osnabrugge, 2000). Hence, both parties' roles will have been clearly outlined prior to investment, hence making them having to rely less on each other in order to complete these roles successfully. These lower levels of interdependency could in turn result in a reduced probability of perceived conflict presenting itself between venture capitalists and entrepreneurs. However, our data would also indicate that actual conflicts between these two parties (as actual goal incompatibilities) are higher than they are between angel investors and entrepreneurs. In other words, the chance of conflict between venture capitalists and entrepreneurs presenting itself might be lower compared to the angel investor situation, but if it does present itself it might be stronger. This could result in somewhat more extreme situations, with venture capitalist-entrepreneur pairs either being very happy together or very disgruntled. So, although, on average, the results presented in this dissertation could be similar for venture capitalists, there could be a more varied picture behind those averages.

Finally, the majority of the data gathered for this research are collected through surveys or interviews, which could increase the risk of several biases. In order to account for recollection bias and to provide an objective test of the subjective views gathered through the interviews, data in the first study were therefore

complemented with quantitative data based on the companies' financial accounts. This measure was also taken in the second paper, which also reduced the risk of common method variance problems. Furthermore, special care was taken in the sample selection as to further minimize recall and survival bias (as was done for the third paper). Although quantitative data could not be gathered for the third paper, precautions taken in designing the questionnaire and statistical tests conducted afterwards suggest that the risk of common method variance inflating the results is limited.

As time and space is limited in the process of writing a doctoral dissertation, several other issues are left for future research. First, in order to make a more robust conclusion concerning the existence of a failure in the angel financing market, additional data could be collected over a longer time frame, such as five to ten years after investment, in which to assess the value creation of angel-backed companies (Lerner, 1999). Second, it would be interesting to see whether a larger sample would allow uncovering a curvilinear effect of actual conflicts on performance and innovation. Other potential topics could include studying other types of actual conflict (i.e. other forms of actual incompatibilities instead of merely focusing on actual goal incompatibilities), the effect of actual conflicts on other outcomes besides innovation and intentions to remain and extending this research to other teams. Third, further research is warranted on the impact of intersubgroup dynamics on the conflict process. Future research could for instance study to what extent predictions made in this dissertation would hold for subgroups based on other differences than goals. Fifth, research on what drives the exit of entrepreneurs and investors is just beginning to arise (DeTienne, 2008). Although the third paper in this dissertation addresses this gap, much remains to be learned about what triggers actual exit. A potentially interesting research question could be under what conditions positive incentives for exit (such as a window of opportunity for an IPO) outweigh negative incentives (such as personal frustrations). Gathering additional turnover data would also help to reduce the threat of common method variance in the current study as well as make causal inferences more robust. Finally, considering angel investors share many similarities to, but also differ substantially from

venture capitalists, it would be interesting to see to what extent findings from this study could be extended to the venture capital setting.

5.5 References

- Amason, A.C., 1996. Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal* 39(1), 123-148.
- Baba, M.L., Gluesing, J., Ratner, H., Wagner, K.H., 2004. The contexts of knowing: natural history of a globally distributed team. *Journal of Organizational Behavior* 25(5), 547-587.
- Barkema, H.G., Shvyrkov, O., 2007. Does top management team diversity promote or hamper foreign expansion? *Strategic Management Journal* 28(7), 663-680.
- Bezrukova, K., Jehn, K., 2008. Examining ethnic faultlines in groups: A multimethod study of demographic alignment, leadership profiles, coalition formation, intersubgroup conflict and group outcomes. Working Paper, Rutgers University.
- Brewer, M.B., Miller, N., 1996. *Intergroup relations*. Brooks Cole Publishing Company, Pacific Grove, CA.
- Cable, D., Shane, S., 1997. A prisoner's dilemma to entrepreneur-venture capitalist relationships. *Academy of Management Review* 22(1), 142-176.
- De Clercq, D., Sapienza, H.J., 2006. Effects of relational capital and commitment on venture capitalists' perception of portfolio company performance. *Journal of Business Venturing* 21, 326-347.
- De Dreu, C.K., 2008. The virtue and vice of workplace conflict: food for (pessimistic) thought. *Journal of Organizational Behavior* 29, 5-18.
- De Dreu, C.K., 2006. When too little or too much hurts: Evidence for a curvilinear relationship between task conflict and innovation in teams. *Journal of Management* 32(1), 83-107.
- De Dreu, C.K., Gelfand, M., 2007. Conflict in the workplace: Sources, functions, and dynamics across multiple levels of analysis. In: De Dreu, C., Gelfand, M. (Eds.) *The Psychology of conflict and conflict management in organizations*. Taylor and Francis LLC, New York, pp. 3-54.
- De Dreu, C.K., Beersma, B., 2005. Conflict in organizations: Beyond effectiveness and performance. *European Journal of Work and Organizational Psychology* 14(2), 105-117.
- DeTienne, D., 2008. Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development. *Journal of Business Venturing*, In Press.
- Deutsch, M., 1973. *The resolution of conflict*. Yale University Press, New Haven.

- Dollery, B. 1994. Economic theory and policy analysis: Conceptual guidelines for public policy-makers, *Australian Journal of Public Administration* 53, 222-232.
- Edwards, J.R., 2001. Ten difference score myths. *Organizational Research Methods* 4(3), 265-287.
- Ehrlich, S.B., De Noble, A., Moore, T., Weaver, R.R., 1994. After the cash arrives: A comparative study of venture capital and private investor involvement in entrepreneurial firms. *Journal of Business Venturing* 9(1), 67-82.
- Eisenhardt, K.M., Bourgeois, L.J.III, 1988. Politics of strategic decision making in high-velocity environments: Toward a midrange theory. *Academy of Management Journal* 31(4), 737-770.
- EBAN (European Business Angel Network), 2005a. European directory of business angel networks in Europe. EBAN, Brussels.
- European Commission, 2003. Access to finance of small and medium-sized enterprises. EC, Brussels.
- Fisher, R., 1998. Questioning the scope and relevance of the cooperative and competitive goal approach to conflict. *Applied Psychology – An International Review* 47(3), 314-317.
- Harrison, R., Mason, C., 1996. Informal venture capital: Evaluating the impact of Business Introduction Services. Woodhead-Faulkner Ltd., Hertfordshire.
- Higashide, H., Birley, S., 2002. The consequences of conflict between the venture capitalist and the entrepreneurial team in the United Kingdom from the perspective of the venture capitalist. *Journal of Business Venturing* 17(1), 59-81.
- Ireland, D., Reutzell, C., Webb, J., 2005. Entrepreneurship research in AMJ: What has been published, and what might the future hold? *Academy of Management Journal* 48(4), 556-564.
- Jääskeläinen, M., Maula, M., Murray, G., 2006. Performance of incentive structures in publicly and privately funded hybrid venture capital funds. Paper presented at the International ProACT Conference 2006, Tampere, Finland.
- Jehn, K.A. 1995. A multimethod examination of the benefits and detriments of intragroup conflict. *Admin. Sci. Quart.* 40(2) 256-82.
- Jehn, K.A., C. Bendersky. 2003. Intragroup conflict in organizations: A contingency perspective on the conflict-outcome relationship. *Res. Organ. Behavior* 25, 187-242.
- Jehn, K.A., E.A. Mannix. 2001. The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. *Acad. Management J.* 44(2) 238-51.

- LaBianca, G., Brass, D.J., Gray, B., 1998. Social networks and perceptions of intergroup conflict: The role of negative relationships and third parties. *Academy of Management Journal* 41(1), 55-67.
- Lau, D. & Murnighan, J. K. (1998). Demographic diversity and faultlines: The compositional dynamics of organizational groups. *Academy of Management Review*, 23, 325-340.
- Legrand J., 1991. The theory of government failure, *British Journal of Political Science* 21, 423-442.
- Lerner, J., 1999. The government as Venture Capitalist: The long-run impact of the SBIR program. *The Journal of Business* 72(3), 285-318.
- Lovelace, K., D.L. Shapiro, L.R. Weingart. 2001. Maximizing cross-functional new product teams' innovativeness and constraint adherence: A conflict communications perspective. *Acad. Management J.* 44(4) 779-793.
- Mannes, A.E., 2008. The conflict over conflict. *Academy of Management 2008 Best Paper Proceedings, Conflict Management Division*. Anaheim, CA.
- Matsuo, M., 2006. Customer orientation, conflict, and innovativeness in Japanese sales departments. *Journal of Business Research* 59(2), 242-250.
- Maula, M., Murray, G., Jääskeläinen, M., 2007. Public financing of young innovative companies in Finland (Publications 3/2007). Ministry of Trade and Industry, Helsinki.
- Maula, M., Murray, G., 2003. Finnish Industry Investment Ltd: An International Evaluation (Publications 1/2003). Ministry of Trade and Industry, Helsinki.
- Mooney, A.C., Holahan, P.J., Amason, A.C., 2007. Don't take it personally: Exploring cognitive conflict as a mediator of affective conflict. *Journal of Management Studies* 44(5), 733-758.
- Murray, G., 1998. A policy response to regional disparities in the supply of risk capital to new technology-based firms in the European Union: The European Seed Capital Fund Scheme, *Regional Studies* 32, 405-419.
- Oetzel, J.G., Ting-Toomey, S., 2003. Face concerns in interpersonal conflict – A cross-cultural empirical test of the face negotiation theory. *Communication Research* 30(6), 599-624.
- Parhankangas, A., Landström, H., 2006. How venture capitalists respond to unmet expectations: The role of social environment. *Journal of Business Venturing* 21(6), 773-801.
- Pondy, L.R., 1967. Organizational conflict: Concepts and models. *Administrative Science Quarterly* 12(2), 296-320.
- Saetre, A.S., 2003. Entrepreneurial perspectives on informal venture capital. *Venture Capital* 5(1), 71-94.

- Sapienza, H.J., Gupta, A.K., 1994. Impact of agency risks and task uncertainty on venture capitalists – CEO interaction. *Academy of Management Journal* 37(6), 1618-1632.
- Simons, T.L., Peterson, R.S. 2000. Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust. *Journal of Applied Psychology* 85(1), 102-111.
- Sohl, J.E., 1999. The early-stage equity market in the USA. *Venture Capital* 1(2), 101-120.
- Srivastava, A., K.M. Bartol, E.A. Locke. 2006. Empowering leadership in management teams: Effects on knowledge sharing, efficacy and performance. *Acad. Management J.* 49(6) 1239-1251.
- Stroobandt F., Lievens, J. and Waeye, H., 2005. Cultuurparticipatie in het Europa van de 15. Vlaanderen: ‘Best in Class’?, in Lievens J. and Waeye H. (Eds) *Cultuurparticipatie in breedbeeld*, pp. 233-264, Uitgeverij De Boeck, Antwerpen.
- Tjosvold, D., 2007. Conflicts in the study of conflict in organizations. In: De Dreu, C., Gelfand, M. (Eds.) *The Psychology of conflict and conflict management in organizations*. Taylor and Francis LLC, New York, pp. 445-454.
- Tjosvold, D., 1998. Conflict over the study of conflict: The challenge to make it cooperative. *Applied Psychology: An International Review* 47(3), 336-342.
- Walton, R.E. 1969. *Interpersonal Peacemaking: Confrontations and Third Party Consultation*. Addison-Wesley, Reading.
- Wincent, J., Örtqvist, D., Drnovsek, M., 2008. The entrepreneur’s role stressors and proclivity for a venture withdrawal. *Scandinavian Journal of Management* 24, 232-246.
- Wolf, C., 1979. A theory of non-market failure: Framework for implementation analysis, *Journal of Law and Economics* 22, 107-139.
- Xie, J., Song, M., Stringfellow, A., 1998. Interfunctional conflict, conflict resolution styles, and new product success: A four-culture comparison. *Management Science* 44(12), S192-S206.
- Yitshaki, R., 2008. Venture capitalist-entrepreneur conflicts – An exploratory study of determinants and possible resolutions. *International Journal of Conflict Management* 19(3), 262-292.

Summary in Dutch (Nederlandstalige samenvatting)

Google, Amazon.com, Twitter, Starbucks, Skype...allen bekende voorbeelden van ondernemingen die financiering ontvangen hebben van business angels. Dit zijn individuen die een deel van hun persoonlijk vermogen investeren in niet-beursgenoteerde ondernemingen zonder een voorafgaande connectie met de ondernemer(s) (zoals familie of vrienden) en dit in ruil voor aandelen. Hoewel gegevens over Europese business angels zeldzaam zijn, zouden er volgens een recente schatting ongeveer 75 000 business angels zijn die jaarlijks samen 3 miljard EUR investeren. De relatie tussen deze investeerders en ondernemers kan zich uitstrekken over een periode van vijf tot zeven jaar. Niettegenstaande deze lange termijn weten we tot op heden nog vrij weinig over hoe deze partijen met elkaar interageren. Daarom bestuderen we in dit doctoraal proefschrift de omvang en impact van problemen die business angels en ondernemers kunnen ervaren, zowel voor het tijdstip van investering als erna.

De eerste studie van dit doctoraat bevestigt het bestaan van substantiële informatieproblemen in de markt voor business angel financiering. Ten eerste, ervaren business angels en ondernemers dikwijls problemen om elkaar te vinden, hetzij door de business angels' drang naar anonimiteit of een gebrekkige kennis van financieringsopties vanwege de ondernemers. Ten tweede, blijken business angels net die ondernemingen te financieren die traditioneel het minst kans maken op het verkrijgen van 'klassieke' financiering (zoals bankfinanciering). Dit is te wijten aan hun gebrek aan persoonlijke en zakelijke zekerheden wat een hoog risico met zich meebrengt voor potentiële investeerders. Teneinde deze problemen te reduceren werden business angel netwerken in het leven geroepen, die als communicatiekanaal dienen tussen kandidaat-investeerders en ondernemers. Een belangrijke bevinding van dit onderzoek is dat ondernemingen die financiering verkrijgen via deze netwerken niet slechter noch beter presteren dan ondernemingen die angel financiering verkrijgen op een andere manier. Met andere woorden, ze trekken niet – zoals vaak beweerd wordt – de slechtste deals aan en vormen aldus een handig en nuttig hulpmiddel voor zowel ondernemers

op zoek naar financiering als business angels op zoek naar investeringsopportuniteiten. Verder bevestigt deze studie de waarde van overheidsinterventie voor ondernemerschap in België. De business angel-gesteunde ondernemingen dragen immers bij tot de lokale economische ontwikkeling en groei, maar worden – zonder hulp – geconfronteerd met informatie- en financieringsproblemen. Aangezien uit dit onderzoek blijkt dat business angel netwerken deze problemen helpen te reduceren, maar zij niet op zelfstandige basis kunnen overleven, is overheidssteun voor dit soort organisaties dus cruciaal en goed besteed.

In de tweede en derde studie wordt de aandacht vervolgens verschoven naar de post-investeringsrelatie tussen business angels en ondernemers. Beide studies tonen aan dat conflicten tussen business angels en ondernemers een invloed hebben op zowel het bedrijf waartoe ze behoren als op de attitudes van de betrokken individuen. Meer specifiek blijkt uit dit onderzoek dat gepercipieerde conflicten over strategische beslissingen (vb. welke producten te ontwikkelen, welke markten te betreden of welke groei-strategie te volgen) een sterk negatieve impact hebben op de innovatie van de betrokken ondernemingen én op de intenties van zowel ondernemers als investeerders om bij het bedrijf te blijven. De eerder persoonlijke, gevoelsmatige discussies tussen beide partijen hebben enkel een negatief effect op de innovatie van de portefeuillebedrijven, maar niet op hun individuele attitudes. Dit laatste zou erop kunnen wijzen dat de beslissing om al dan niet bij hun onderneming te blijven eerder een zakelijke dan wel emotionele beslissing is voor business angels en ondernemers. Conflicten aangaande taakverdeling of toewijzing van middelen blijken dan weer geen effect te hebben op innovatie. Bovenop het onderzoeken van gepercipieerde conflicten, gingen we ook de invloed na van ‘echte’ conflicten. Conflicten worden doorgaans gedefinieerd als gepercipieerde onverenigbaarheden tussen individuen. Perceptie stemt echter niet noodzakelijk overeen met realiteit. De tweede en derde studie van dit doctoraat tonen aan dat de twee componenten belangrijk zijn in een conflictdefinitie aangezien ze beiden een unieke en significante invloed hebben op het conflictproces. We focussen hierbij specifiek op onverenigbaarheden in doelstellingen tussen business angels en ondernemers. Uit de tweede studie van dit doctoraat blijkt dat het

negatief effect van gepercipieerde conflicten op innovatie veel sterker is indien de doelstellingen tussen beide partijen sterk uiteen liggen. Omgekeerd blijkt echter ook dat indien business angels en ondernemers erin slagen hun doelstellingen zorgvuldig op mekaar af te stellen dit een atmosfeer kan creëren waarbinnen discussies en debatten wél resulteren in meer innovatie. In de derde studie bevestigen we dat grote onverenigbaarheden in doelstellingen tussen business angels en ondernemers verder kunnen uitmonden in de vroegtijdige exit van beide partijen (of één ervan). Open en eerlijke communicatie tussen business angels en ondernemers over persoonlijke doelstellingen van bij de start van hun relatie is dus van cruciaal belang.