

LEGITIMACY JUDGEMENTS IN BUSINESS INCUBATORS
A PERCEPTION MODEL OF SCREENING ENTREPRENEURIAL
VENTURES IN CHINESE BUSINESS INCUBATOR RESOURCE DECISIONS

by

XIANGYI KONG

A Dissertation submitted to the
Graduate School - Newark
Rutgers, The State University of New Jersey

In partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Graduate Program in Management

written under the direction of

Jeffrey Robinson

and approved by

Newark, New Jersey

January, 2019

Copyright page:

©[2018]

Xiangyi Kong

ALL RIGHTS RESERVED

ABSTRACT OF THE DISSERTATION

Legitimacy Judgments in Business Incubators
A Perception Model of Screening Entrepreneurial Ventures
in Chinese Business Incubator Resource Decisions

By XIANGYI KONG

Dissertation Director:

Professor Jeffrey Robinson

Based on the importance of resources to entrepreneurial ventures and the predominant role of legitimacy theory in explaining resource supports, this dissertation research explores the mechanism of resource decisions with a perceptual model of legitimacy judgment process. The model was then applied to business incubators, where the screening of new ventures plays a critical role under high uncertainties and in need of better theorization.

In study 1, a qualitative analysis with archival information and interviews revealed that opportunity characteristics and entrepreneur characteristics are

the two major components of new venture legitimacy in incubator contexts. Study 2 with 170 incubator managers tested the legitimacy judgment model with a vignette study for their effectiveness in explaining judgments formation and resource decisions in business incubators.

Results of the vignette study supported the positive effects of both project novelty and team credibility on incubator managers' legitimacy judgments, and the positive relationships between legitimacy judgments and managers' resource decisions. The study also confirmed that both CLJ and ELJ's mediate the effects of venture characteristics on incubator resource decisions. Study 2 did not support the moderation role of team credibility for the mediated relationships between project novelty and resource decisions. However, the between-group comparison analysis suggested that the composition of venture qualities is one critical factor for new venture legitimacy.

This research addressed the complexity of social dynamics in business incubators and directed further attention to specific contextual factors and individual-level processes (Bergek & Norrman, 2008; Phan et al., 2005). Business incubation context also supplied a ground for examining different objectives and outcomes of legitimation and revealing the interactive dynamics of legitimacy judgment process.

ACKNOWLEDGEMENTS

I would like to thank my committee chair Professor Jeffrey Robinson, whose guidance and spirit continually supported me through the toughs and roughs of the dissertation research. Without his encouragement and persistent help, this dissertation would not have been possible.

I would like to express my appreciation to my committee members, Professor dt ogilvie, Professor Danni Wang, and Professor Mingfeng Tang. Their feedbacks and expertise from different disciplines helped me better developed the dissertation.

Also, a thank you to Professor Brett Gilbert who lead me to conducting independent research and helped shape the initial idea of this dissertation.

In addition, I would like to thank the Department of Management and Global Business and the professors who had taught me in the program. They provided valuable insights and coached me along the hall of knowledge and in the development or my research ideas.

Finally, but by no means least, thanks go to my parents, my husband, and other family and friends for their unbelievable supports.

Table of Contents

ABSTRACT OF THE DISSERTATION	II
ACKNOWLEDGEMENTS	IV
TABLE OF CONTENTS	V
TABLES OF FIGURES	X
CHAPTER I. INTRODUCTION	- 1 -
A. RESOURCES AND ENTREPRENEURSHIP.....	- 1 -
1. <i>Entrepreneurial New Ventures</i>	- 1 -
2. <i>Critical Role of Resources for Entrepreneurial Opportunities</i>	- 1 -
3. <i>Resources and Stakeholder Decisions</i>	- 4 -
B. LEGITIMACY FOR RESOURCES.....	- 7 -
1. <i>Approaches to Resource Challenge</i>	- 7 -
2. <i>Legitimacy as Mechanism of Resource Decisions</i>	- 9 -
C. BUSINESS INCUBATION RESOURCES	- 10 -
1. <i>Business Incubators as Important Resource Providers for Ventures</i> ...	
.....	- 10 -
2. <i>Need from Business Incubators</i>	- 12 -
D. RESEARCH PURPOSES	- 14 -
CHAPTER II. LEGITIMACY REVIEW FOR VENTURE RESOURCE	
ACQUISITION	- 16 -
A. MULTIPLE PERSPECTIVES FOR LEGITIMACY.....	- 16 -
1. <i>Property View</i>	- 17 -

2. <i>Process View</i>	- 20 -
3. <i>Perception View</i>	- 21 -
4. <i>Limitations in the Property and Process Views and the Advance of Perception View</i>	- 22 -
B. THE INADEQUACY OF LEGITIMACY RESEARCH FOR ENTREPRENEURSHIP-	24 -

CHAPTER III. THE LEGITIMACY MODEL AND ITS APPLICATION TO BUSINESS INCUBATORS' SCREENING..... - 26 -

A. MAJOR MODEL BASES.....	- 26 -
1. <i>Tost's (2011) Model of the Legitimacy Judgment Process</i>	- 26 -
2. <i>Bitektine and Haack's (2015) Multilevel Model of Legitimacy</i> ...	- 29 -
B. MODIFIED MODEL	- 33 -
C. CONCEPTUAL IMPLICATION OF THE MODEL	- 36 -
1. <i>Multilevel Frame</i>	- 36 -
2. <i>Perceptual Construct Frame</i>	- 37 -
2. <i>Contingency Facet of Legitimacy</i>	- 43 -

CHAPTER IV. MODEL APPLICATION FOR BUSINESS INCUBATORS- 48 -

A. THE NEED AND DEMAND FOR APPLICATION.....	- 48 -
B. MODEL APPLICATION.....	- 50 -
C. VARIABLE DEVELOPMENT	- 52 -
1. <i>Legitimacy Content for Entrepreneurial New Ventures</i>	- 52 -
2. <i>Dual Mechanisms of Legitimacy Judgments</i>	- 54 -
3. <i>Variables for Legitimacy Judgments</i>	- 56 -
4. <i>Interplay within the Legitimacy Construct</i>	- 63 -

D. PROPOSITION DEVELOPMENT.....	- 64 -
1. <i>Venture Characteristics → Legitimacy</i>	- 64 -
2. <i>Legitimacy → Resources</i>	- 65 -
3. <i>The Effectiveness of Legitimacy Judgment Process</i>	- 66 -
4. <i>The Interplay between Legitimacy Factors</i>	- 68 -
CHAPTER V STUDY 1: QUALITATIVE EVIDENCE FROM THE	
INCUBATORS.....	- 70 -
A. DATA OVERVIEW.....	- 70 -
1. <i>General Background of Incubators in China</i>	- 70 -
2. <i>Incubators with Financial Capital Resources</i>	- 71 -
3. <i>Chengdu's Economic Background and Incubators</i>	- 72 -
B. OUTLINE OF STUDY 1	- 74 -
1. <i>Research Design</i>	- 74 -
2. <i>Qualitative Method</i>	- 75 -
C. STUDY 1 RESULTS.....	- 76 -
1. <i>Archival Information</i>	- 76 -
2. <i>Interviews with Field Professionals</i>	- 78 -
3. <i>Results</i>	- 82 -
4. <i>Suggested Adjustments to Vignette Survey Study</i>	- 93 -
CHAPTER VI STUDY 2: A VIGNETTE STUDY IN THE INDUSTRY ..	- 95 -
A. OUTLINE OF STUDY 2	- 95 -
1. <i>Procedure</i>	- 96 -
2. <i>Survey Sample</i>	- 97 -

B. MEASUREMENTS	- 99 -
1. <i>Project Novelty</i>	- 100 -
2. <i>Team Credibility</i>	- 102 -
3. <i>Cognitive and Evaluative Legitimacy</i>	- 105 -
4. <i>Resource Decisions</i>	- 108 -
C. STUDY 2 RESULTS.....	- 109 -
1. <i>Pilot Study</i>	- 109 -
2. <i>Vignette Survey Study Sample Descriptive</i>	- 113 -
3. <i>Manipulation Check and Independent Tests of Sample Groups</i>	- 115 -
4. <i>Regression Analysis</i>	- 121 -
5. <i>Analysis of Mediation Relationships</i>	- 124 -
6. <i>Moderation Effects Analysis</i>	- 139 -
7. <i>Post-hoc Analysis of Between-group Differences</i>	- 145 -
CHAPTER VII DISCUSSIONS	- 149 -
A. RESEARCH CONCLUSION AND INTERPRETATION	- 149 -
1. <i>The Content of New Venture Legitimacy</i>	- 150 -
2. <i>Legitimacy Judgments as the Resource Commitment Mechanism</i>	- 151 -
3. <i>The Interaction between Venture Factors</i>	- 153 -
B. CONTRIBUTIONS.....	- 156 -
1. <i>Theoretical Contribution</i>	- 156 -
2. <i>Practical Implications</i>	- 161 -

C. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS.....	- 163 -
1. <i>Limitations</i>	- 163 -
2. <i>Future Directions</i>	- 165 -
REFERENCES	- 168 -
APPENDIX 1	- 176 -
APPENDIX 2	- 177 -
APPENDIX 3	- 178 -
APPENDIX 4	- 180 -
1. INTERVIEW SUMMARY: RESOURCES AND RESOURCE ALLOCATION.	- 180 -
2. INTERVIEW SUMMARY: SUBJECTIVE FACTOR AND COMPLEXITY IN SCREENING.....	- 184 -
3. INTERVIEW SUMMARY: INCUBATOR ENTRY CRITERIA	- 188 -
4. INTERVIEW SUMMARY: UNQUALIFIED VENTURES FOR ENTERING....	- 199 -
5. INTERVIEW SUMMARY: SCREENING FOR FURTHER INVESTMENT.....	- 203 -
6. INTERVIEW SUMMARY: REJECTING FOR FINANCIAL SUPPORT	- 208 -
APPENDIX 5	- 210 -
APPENDIX 6	- 214 -
APPENDIX 7	- 220 -
APPENDIX 8	- 222 -
APPENDIX 9	- 229 -
APPENDIX 10	- 233 -

Tables of Figures

FIGURE III-1. TOST'S (2011) MODEL OF THE LEGITIMACY-JUDGMENT PROCESS.....	
.....	- 27 -
FIGURE III-2. BITEKTINE AND HAACK'S (2015) MULTILEVEL MODEL OF LEGITIMACY.	
.....	- 30 -
FIGURE III-3. A PERCEPTION MODEL OF LEGITIMACY JUDGMENT PROCESS	- 33 -
TABLE IV-1. NEW VENTURE LEGITIMACY CONTENT FROM THE INCUBATOR ROLE...	
.....	- 56 -
TABLE V-1. SUMMARY OF ARCHIVED INFORMATION FROM 38 BUSINESS INCUBATORS	
.....	- 77 -
TABLE V-2. SUMMARY OF RESOURCES FROM INTERVIEWEES' INCUBATORS	- 79 -
TABLE V-3. SUMMARY OF RESOURCES FROM INTERVIEWEES' INCUBATORS	- 83 -
TABLE VI-1. VIGNETTE DESIGN.....	- 96 -
TABLE VI-2. PROJECT NOVELTY MANIPULATION IN VIGNETTES	- 101 -
TABLE VI-3. TEAM CREDIBILITY MANIPULATION IN VIGNETTES	- 104 -
TABLE VI-4. PILOT SAMPLE RESPONDENTS SUMMARY	- 109 -
TABLE VI-5. PILOT SAMPLE MANIPULATION CHECK RESULTS BY VERSIONS-	111 -
TABLE VI-6. PILOT SAMPLE MANIPULATION CHECK RESULTS BY FACTORS-	111 -
TABLE VI-7. SUMMARY OF SURVEY SAMPLE BY VERSIONS	- 115 -
TABLE VI-8. SURVEY SAMPLE MANIPULATION CHECK RESULTS BY VERSIONS.....	
.....	- 116 -
TABLE VI-9. SURVEY SAMPLE MANIPULATION CHECK RESULTS BY FACTOR.....	
.....	- 116 -

TABLE VI-10. MANOVA RESULTS FOR LEGITIMACY JUDGMENTS	- 123 -
TABLE VI-11. MANOVA FOR LEGITIMACY JUDGMENTS ON RESOURCE DECISIONS	- 124 -
TABLE VI-12. MEDIATION MODEL OF PROJECT NOVELTY ON ENTRY THROUGH CLJ	- 125 -
TABLE VI-13. MEDIATION MODEL OF PROJECT NOVELTY ON FINANCIAL SUPPORT THROUGH CLJ	- 126 -
TABLE VI-14. MEDIATION MODEL OF TEAM CREDIBILITY ON ENTRY THROUGH CLJ	- 127 -
TABLE VI-15. MEDIATION MODEL OF TEAM CREDIBILITY ON FINANCIAL SUPPORT THROUGH CLJ	- 128 -
TABLE VI-16. MEDIATION MODEL OF PROJECT NOVELTY ON ENTRY THROUGH ELJ	- 129 -
TABLE VI-17. MEDIATION MODEL OF PROJECT NOVELTY ON FINANCIAL SUPPORT THROUGH ELJ.....	- 130 -
TABLE VI-18. MEDIATION MODEL OF TEAM CREDIBILITY ON ENTRY THROUGH ELJ	- 131 -
TABLE VI-19. MEDIATION MODEL OF TEAM CREDIBILITY ON FINANCIAL SUPPORT THROUGH ELJ.....	- 132 -
TABLE VI-20. MEDIATION MODEL OF CLJ ON ENTRY THROUGH ELJ	- 134 -
TABLE VI-21. MEDIATION MODEL OF CLJ ON FINANCIAL SUPPORT THROUGH ELJ	- 135 -
FIGURE VI-1. AMOS MODEL	- 136 -

TABLE VI-22. SIMPLE DIRECT EFFECTS IN PATH ANALYSIS.....	- 136 -
TABLE VI-23. INDIRECT EFFECTS IN PATH ANALYSIS	- 137 -
TABLE VI-24. SPECIFIC MEDIATION EFFECTS IN PATH ANALYSIS.....	- 138 -
TABLE VI-25. DIRECT AND TOTAL EFFECTS IN PATH ANALYSIS	- 139 -
TABLE VI-26. TEAM CREDIBILITY MODERATING PROJECT NOVELTY→CLJ→ENTRY	- 140 -
TABLE VI-27. TEAM CREDIBILITY MODERATING PROJECT NOVELTY→CLJ→FINANCIAL SUPPORT	- 141 -
TABLE VI-28. TEAM CREDIBILITY MODERATING PROJECT NOVELTY→ELJ→ENTRY	- 142 -
TABLE VI-29. TEAM CREDIBILITY MODERATING PROJECT NOVELTY→ELJ→FINANCIAL SUPPORT	- 143 -
FIGURE VI-2. TEAM CREDIBILITY MODERATING CLJ.....	- 144 -
FIGURE VI-3. TEAM CREDIBILITY MODERATING ELJ.....	- 144 -
TABLE VI-30. COMPARING NOVICE INCREMENTAL AND ELITE INCREMENTAL-	145 -
TABLE VI-31. COMPARING NOVICE PIONEER AND ELITE PIONEER.....	- 146 -
TABLE VI-32. COMPARING NOVICE INCREMENTAL AND NOVICE PIONEER..	- 146 -
TABLE VI-33. COMPARING ELITE INCREMENTAL AND ELITE PIONEER.....	- 147 -
TABLE VI-34. COMPARING ELITE PIONEER AND NOVICE INCREMENTAL.....	- 147 -
TABLE VI-35. COMPARING ELITE INCREMENTAL AND NOVICE PIONEER.....	- 148 -
TABLE VII-1. SUMMARY OF HYPOTHESES RESULTS	- 149 -

CHAPTER I. INTRODUCTION

A. Resources and Entrepreneurship

1. Entrepreneurial New Ventures

Human well-being is continuously enhanced by new technologies and scientific discoveries. Entrepreneurship is the major mechanism of realizing the value of and transforming new techniques and knowledge into products and services (Shane & Venkataraman, 2000). By linking innovations with human needs, entrepreneurship acts as a driving force for economic efficiency (Kirzner, 1997; Shane & Venkataraman, 2000) as well as a source of social changes (Schumpeter, 1934).

This critical role of entrepreneurship is mainly performed through the process of discovering and exploiting existing opportunities (Shane & Eckhardt, 2003) based on the definition of entrepreneurship as the nexus of lucrative opportunities and enterprising individuals (Venkataraman, 1997). Entrepreneurial opportunities take shape through connecting scattered resources and grow by leveraging available resources to obtain and create value with new resources.

2. Critical Role of Resources for Entrepreneurial Opportunities

a. Resource acquisition as an organizational process. Various forms of resources constitute the subjects of all fundamental organizational activities (Barney, 1991) covering variation, selection, selection, and retention (Baum & Shipilov, as cited in Clegg, Courpasson, & Phillips, 2006). Therefore,

the rising and falling of organizations always involve the interplay of resources (Pfeffer & Salancik, 1978).

Pfeffer and Salancik (1978) first proposed that organizations depend on resources from the environment. We see organizations as powerful when they take control over the allocation of resources. Organizations are also connected to other entities in their contexts through the exchange of resources (DiMaggio & Powell, 1983; Scott & Davis, 1995). To better manage the interdependent relationships with other organizations, it is necessary to adapt to external constraints, negotiate, and cooperate by settling conflicts of interests while building grounds of mutual benefits (Pfeffer & Salancik, 1978). These interactions through resources are even more critical when an organization is newly born and when its entrance into play depends on efficient identification and negotiation within the environment.

b. Resource acquisition for entrepreneurship. Resource acquisition is particularly important for entrepreneurial opportunities to survive and grow. Entities still in their entrepreneurial stage must grapple with the greatest possible variation in undertakings (e.g., everything from securing funding and patents to designing prototypes and developing logos and packaging); thus, their survival and growth depend extremely on procuring and deploying key resources. Barney (2001) suggested entrepreneurship as one field of study with a resource-based view. Besides the notion that entrepreneurs are themselves valuable resources (Rangone, 1999), entrepreneurial activities are regarded as processes in which entrepreneurs use their personal pools of

resources (e.g., abilities to discover opportunities, skills, and knowledge) to explore, coordinate, and recognize the value of other resources, such as “generating rents” (Alvarez & Busenitz, 2001, p. 763).

The processes through which an entrepreneurial opportunity progresses—from its elemental form of an idea into a business concept, then to a business model, and further into business plans and activities—is also the process of specifying and using the resources with values to deliver (Ardichvili, Cardozo, & Ray, 2003). These progresses are facilitated by the attraction and attrition of resources. Resource holders recognize the value of the opportunity and then commit their resources to grow it (Casson, 1982; Kirzner, 1997; Alvarez & Busenitz, 2001). These resources will further shape each other and the opportunity per se as they take form. Together, these resources will constitute an entity that will attract further resources and grow the opportunity into a more mature and complete form of venture. Therefore, nascent entrepreneurial opportunities’ survival and growth depend heavily on stakeholders’ recognition and commitments.

At the same time, entrepreneurial opportunities are especially bounded by the limitation of resources as they face higher uncertainty (Stinchcombe, 1965) and unstable embeddedness, thus facing higher pressure for justification (Zelditch, 2001). This liability of newness and smallness (Stinchcombe, 1965) will negatively affect the stakeholders’ confidence or perception and hinder them from accrediting and supporting entrepreneurial entities. Thus, nascent opportunities’ ability to leverage these existing

resources for support from more resource holders is further diminished (Starr & MacMillan, 1990). Business incubators and other early constituents play an important role in bridging the resource gap for nascent ventures as they provide physical, intellectual, financial, and social resources for new ventures' predicaments.

3. Resources and Stakeholder Decisions

For the key concept of resources, I follow the suggestion to synthesize the *resource dependency theory* (RDT) (Pfeffer & Salancik, 1978) and the firm-level *resource-based view* (Barney, 1986, 1991) for more integrative insights. Pfeffer and Salancik (1978) stated that organizations rely on resources held by other organizations in the environment. Because of others' possession or control over certain resources or access to them, organizations always face external constraints. In response, organizations will seek to shape their activities and outcomes accordingly, to resolve the uncertainties in coordination. On the other hand, with the power of social control, resource holders will assess whether the organization is compliant with their specific demands (Pfeffer & Salancik, 1978).

Barney (1991, p. 101) defined resources, as the basis of social exchanges and interorganizational relationships, as "all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc., controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness." Also, resources could come from a wide range of organization characteristics, and their sources,

nature, and manifestations are context- and time-specific (Wernerfelt, 1984; Barney, 1991). In other words, resources in this work will refer to all the constitutive factors for organizations, including physical, financial, human labor, intelligence, intangible patents, reputation, status, recognition, and so forth.

As with the various forms of resources, the commitment of resources by myriad resource holders could come in forms of proactive investment, passive endorsement, or just silent consent without questioning (Suchman, 1995). The different ways of commitment practices result from the nature of the focal resources as well as the personal preferences and situational pressure for resource holders' actions. As suggested by Pfeffer and Salancik (1978), resource exchange differs in magnitude and criticality; these variances will then affect the nature and ways of interdependencies based on the resource exchanges. Organizational outcomes are assessed with external parameters, and organizational activities are directed and shaped by the contexts in which the organizations are embedded. At the firm level, every organization is portrayed by a distinct pool of resource elements and their possible combination, forming its unique competitive advantages, limitations, and domains of operation (Barney, 1991).

This view of organizations as constellations of resources and interorganizational activities as flows of resources shares the same essence from stakeholder theory that "a corporation is a constellation of interests [and] stakeholders are identified by interests, and each merits their own interests"

(Donaldson & Preston, 1995, p. 66). As Choi and Shepherd (2005, pp. 573–574) connected stakeholder theory and resource dependence theory in their study of stakeholders' view on organizations' newness, they suggested that managing stakeholders' interests is critical for securing their support and thus attracting their resources. Though stakeholder theory focuses more on the interests, stakeholders' consents and affirmation, having recognized the interests, will constitute different types/levels of resources according to the definition. Therefore, stakeholders constitute one important group of resource holders. In this dissertation, I will mainly look at stakeholder perceptions to examine the mechanism of resource-commitment decisions.

Recognizing stakeholders' proactive role in resource commitments could also better integrate new ventures' relationship with their environment. Seen from a long-term dynamic perspective, the mobilization of resources around an organization constitutes its life cycle, and this is the basis for its connection with the immediate contexts and the larger environment (Pfeffer & Salancik, 1978). Since stakeholders work both as means to access resources and as two-way portals for institutions, they use norms to mold the forms and activities of organizations with their judgments and decisions (DiMaggio & Powell, 1983). At the same time, stakeholders construct the institutions by reinforcing or changing norms when they give meanings to organizations within social and cultural contexts (Scott, 1995).

Throughout the process, stakeholders will evaluate the opportunities for their own decisions of resource investment. The evaluation of opportunities will

scrutinize the vast number of resource combinations for the best fit as they attract more resources and mature into further stages (Ardichvili et al., 2003).

To examine these evaluations for resource acquisition, many scholars have resorted to legitimacy as the bar of stakeholders' commitment decisions (Baum & Oliver, 1991; Oliver, 1997; Brown, 1998; Zimmerman & Zeitz, 2002; Bitektine, 2011).

B. Legitimacy for Resources

1. Approaches to Resource Challenge

To tackle resource challenges for entrepreneurial ventures, many studies have explored strategic solutions for resource purposes (Martens, Jennings, & Jennings, 2007; Zott & Huy, 2007; Navis & Glynn, 2011; Desa, 2012; Nagy, Pollack, Rutherford, & Lohrke, 2012). Other studies have tried to figure out the systematic sources of the challenge from institutional and sociocultural structures such as neo-institutional theory (Meyer & Rowan, 1977; DiMaggio & Powell, 1983), network construction (Vissa, 2011; Hallen & Eisenhardt, 2012), or from Suchman's (1995) proposition of legitimacy as stakeholders' perceived conformity in predicting the acquisition of resources for survival.

However, any strategy needs to influence the stakeholders who are actually making resource decisions. Structural effects also need to be carried out by individual stakeholders in their personal decisions for resource commitment. Behavioral economists and management scholars have questioned the *perfect information assumptions* and *rational choice theory* in

economics and raised concerns for individual preferences (Becker, 2013), bounded rationality (Gigerenzer & Selten, 2002), cognitive abilities (Alvarez & Busenitz, 2001), uncertainties (Tversky & Kahneman, 1974), information presentation (Kahneman & Tversky, 2013), networks (Vissa, 2011), and other social and institutional factors in decision making.

Neither studies on actor-centric strategies nor studies on institution-level explanations have delved into a critical mechanism of resource holders' decision making. They have made direct connections between actors' strategies, practices, or features, and the resource outcomes. For them, resource holders work as black boxes generating resource decisions in reaction to different stimuli. Alternatively, they have simply treated resource holders as passive portals of institutions, carrying out systematic influences in resource mobilization. Hence, it is essential to explore further the role of resource holders and the mechanisms engaged in their resource commitment practices with a perceptual focus.

Legitimacy, as a perception, could integrate more subjective factors and facilitate a more direct subject for evaluation in order to make judgments about resource-seeking entities; thus, it has prescriptive implications for resource decisions even at the industry level (Deeds, Mang, & Frandsen, 2004). At an organizational level, legitimacy has been found to be a prerequisite to resource acquisition from a variety of resource holders, including financial resources (Deeds et al., 2004), human resources (Williamson, 2000;

Williamson, Cable, Aldrich, 2002), and social networks and alliances (Pollock & Gulati, 2007).

2. Legitimacy as Mechanism of Resource Decisions

Aldrich and Fiol (1994) suggested that entrepreneurs build cognitive and social-political legitimacy when they seek understanding and acceptance from stakeholders to persuade their resource commitments. Zimmerman and Zeitz (2002) defined legitimacy under institutional theory (DiMaggio & Powell, 1991) as the “social judgment of acceptance, appropriateness, and/or desirability.” Legitimacy increases stakeholders’ confidence in their judgments and decisions, despite the uncertainty and bounded rationality, by sending signals of conformity and appropriateness (Zimmerman & Zeitz, 2002). Zelditch and Walker (1984) also addressed the essence of legitimacy as the ability to mobilize supporters’ resources.

At the same time, as a lack of resources contributes to an important part of new ventures’ problematic legitimacy and to enhanced chances of acquiring resources with stronger legitimacy, this resource-mobilizing core of legitimacy is especially true for entrepreneurial opportunities. Legitimacy, therefore, is an important prerequisite for the survival and growth of entrepreneurial opportunities. Legitimation, to a large extent, is the key task of their daily activities since they face challenges of reaching legitimacy bars from a variety of resource holders (Überbacher, 2014).

More importantly, legitimacy as a perception “in the eye of the beholder” (Zimmerman & Zeitz, 2002) facilitates the possibility of filling the theoretical

link between legitimizing actors, social institutional contexts, and ultimate resource outcomes (Ruef & Scott, 1998; Choi & Shepherd, 2005). Cognitive processes (including attribution theory, social schemata, social references, and so forth) also provide an effective lens through which to examine how people understand others (Fiske & Taylor, 1991), and how resource holders perceive the entrepreneurial ventures seeking for supports. Business incubators are one of the most important resource providers at the initial stage of venture emancipation.

C. Business Incubation Resources

Just as the definition of resources includes all tangible and intangible constituents, accordingly, there are all types of resource holders for an entrepreneurial opportunity. Among them, this dissertation research chose the emerging group of business incubators as the target of study for both their distinct role as resource supports to nascent ventures and the critical procedure of evaluation and judgments for their decision-making challenges.

1. Business Incubators as Important Resource Providers for Ventures

Several studies of the special issue of incubators and science parks have taken the same view of the social and economic value of entrepreneurship (Shane & Venkataraman, 2000; Bøllingtoft & Ulhøi, 2005; Clarysse, Wright, Lockett, Van de Velde, & Vohora, 2005; Koh, Koh, & Tschang, 2005; Markman, Phan, Balkin, & Gianodis, 2005; Phan, Siegel, & Wright, 2005). They regarded technological ventures as a value chain transforming “resource and knowledge inputs to marketable outputs” and

incubators as “intermediate organizations” that facilitate the transformation with resources and other supports (Phan et al., 2005, p. 170) and, at certain stages, as part of the entrepreneurial team.

The definitions of business incubators range from shared office space facilities (Hackett & Dilts, 2004) and property-based organizations (Phan et al., 2005) to small business-grounding programs and economic development tools. Despite their differences, they all highlighted the role of supporting entrepreneurial businesses and facilitating their development through providing and leveraging for resources; support from business incubators includes training, consulting, financial assistance, and general accounting, marketing, and legal services (Mian, 1996; Lalkalka, 2003; Bøllingtoft & Ulhøi, 2005).

Accelerators also provide diverse resources for entrepreneurial ventures. However, business accelerators operate in shorter periods, with programs preparing ventures for market selection through product development, marketing guidance, and networking opportunities (Cohen, 2013). Ventures are selected through extremely intensive competition, and the winners enjoy dedicated support with all available resources (Cohen, 2013). In contrast, business incubators’ support and assistance will vary in their devotion and intervention level (Rice, 2002; Bergek & Norrman, 2008). Thus, more ventures will benefit from incubators in general, but few tenants will have access to the entire package of available resources. With the abundance of resources and relatively easier access, incubators could remedy the crucial

liability of newness and smallness for entrepreneurial new ventures through a variety of resource supports (Bøllingtoft & Ulhøi, 2005, p. 284). Access to business incubators entails not only services that facilitate current operation and development at relatively low or little cost, but also pathways for future growth from endorsements, visibility, affiliation, and capital leverage. On the other hand, the elasticity of resource commitments from incubators implies the crucial role of resource holders and better illustrates the content and process of legitimacy perception. Resource holders with different goals and resources make legitimacy judgments at varying threshold levels that entail different amount or strength of resource supports.

By exploring the perceptual mechanism of legitimacy, this research hopes to provide more information to entrepreneurial new ventures about what they will go through during the process of applying to incubators, what factors will boost or fail them in the legitimation process, and how legitimacy judgments regarding their ventures are formed.

2. Need from Business Incubators

Reviews of the business-incubator industry have updated the concept in line with developing trends. Hackett & Dilts (2004) emphasized BIs as total entities with their own operational models, internal and external networks, and mission to facilitate new venture development. Together with “total entity” recognition, researchers have raised the multilevel agency problem in business incubation (Markman et al., 2005; Phan et al., 2005) and the complexity in dynamic situations (Bøllingtoft & Ulhøi, 2005). These new trends

in business-incubator studies have shifted the emphasis from macro-level processes of political embedment (Campbell & Allen, 1987; Bøllingtoft & Ulhøi, 2005) and macro-level outcomes of economic developments (Hackett & Dilts, 2004) to incubator-level situations and individual-level processes (Phan et al., 2005).

Among the organizational and individual processes, the screening and selection of new ventures for business incubators have raised emerging concern (Mian, 1994; Hackett & Dilts, 2004; Aerts, Matthyssens, & Vandenbempt, 2007). How incubators screen potential venture projects are the result of the confluence of local and industry norms, their sponsorship structures, and other stakeholders' interests (Hackett & Dilts, 2004). In this sense, business incubators are typical audiences who evaluate legitimizing entities with norms applied from institutions and who confer legitimacy to ventures by their judgments and decisions. Business incubators are characterized, to a large extent, by their screening procedures. Screening practices shape the incubators not only because it is a major component of the incubation process (Lumpkin & Ireland, 1988; Aerts et al., 2007), but also because efficiency in screening could heavily influence the incubatees' success rate and thus the effectiveness of the incubators (Kuratko & LaFollette, 1987; Hackett & Dilts, 2004).

Efficiency in legitimacy judgments and the resource-decision challenge is also a goal for many incubators and incubator managers since the screening managers are the direct generators of the judgmental outcomes and

are the actual facilitators for integrating interests and expectations from multiple stakeholders (Alsos, Hytti, & Ljunggren, 2011; Miller, McAdam, McAdam, 2014). This dissertation is also designed to serve these practical needs from business incubators.

D. Research Purposes

In the following sections, I will first review legitimacy literature according to different perspectives, compare legitimacy models to find out the most comprehensive frameworks, and build upon them to construct an integrative understanding of the concept and lay out the structure of my two studies.

In the first study, I sought to identify the components of legitimacy judgments in the business-incubation context with a qualitative study. Entrepreneurship literature suggested some significant factors in predicting the capability and success of entrepreneurial new ventures. More clearly defined boundaries and constructs of entrepreneurship within other theories are required to better study entrepreneurship concepts and to make more distinctive application of other disciplines (Busenitz et al., 2001; Alvarez & Busenitz, 2004). Therefore, besides laying the foundation for the study on legitimacy judgment processes, it was worth defining the boundaries and constructs of entrepreneurship to figure out the factors of legitimacy content in entrepreneurial contexts.

In the second study, this dissertation research examined the perceptual mechanism of the legitimacy-judgment process with a vignette of a new venture applying to business incubators. I manipulated the venture profiles on

two dimensions: *project novelty*, representing opportunity characteristics, and *team credibility*, describing the qualities of entrepreneurs. In the vignette study, incubator managers were primed to read the proposals first for general conceptual impressions, and then for evaluation purposes followed by resource-commitment decisions, and they were asked to answer questions about both.

For the results analysis, I first studied the influence of the venture project novelty and entrepreneurial team credibility on legitimacy judgments to validate the effectiveness of the two factors I derived from the literature and confirmed in the first study. More importantly, this research looked at how mechanisms of legitimacy mediate the effects of venture qualities on resource-decision outcomes in business incubators.

Then, to further illustrate the perceptual process, Study 2 tested how cognitive-legitimacy and evaluative-legitimacy mechanisms affect resource commitments differently and also examined the potential relationship along and between the mechanisms.

Last but not least, the vignette study enabled me to study the interplay between legitimacy factors in legitimacy evaluation. By testing for the moderation effect of entrepreneurial team factors on the relationship between opportunity quality and legitimacy judgments in different vignette settings, I also intended to look at the variance of legitimacy thresholds depending on different mechanisms and goals of the legitimacy judgment process.

CHAPTER II. LEGITIMACY REVIEW FOR VENTURE RESOURCE ACQUISITION

A. Multiple Perspectives for Legitimacy

Legitimacy in organizations was first raised as a topic in institutional studies, and many of the dominant studies were also from this venue. The progress of legitimacy conception in institutional theory started as self-justification (Maurer, 1971) to validate their value of existence. The focus then shifted to cultural conformity where alignments with norms and rules are at the core (Dowling & Pfeffer, 1975; Pfeffer & Salancik, 1978; Pfeffer, 1981). Later scholars addressed cognitive aspect more than evaluative ones (Suchman, 1995), seeing legitimacy more as an extent of cultural support and objectification (Meyer & Scott, 1983; Ridgeway & Berger, 1986; Scott, 1991). Later, Scott (1995) proposed legitimacy as a status of institutional consonance instead of a commodity, and Suchman (1995), around the same time, raising the widely used definition of legitimacy as the collective perception of appropriateness and desirableness within social systems, pointed out the constitutive nature of institutions and the strategic view of legitimacy management.

The different concepts and theories of legitimacy helped explain the allocation of resources from diverse perspectives, but few of them has provided a comprehensive framework for the entire process.

Suddaby, Bitektine, and Haack (2017) summarized existing legitimacy studies into three streams: *property view*, *process view*, and *perception view*.

This addressed the basics of legitimacy works, and each category was self-consistent in explaining its characteristics and mechanisms. Though none provide an exhaustive integration, they all accentuate important facets of legitimacy from different perspectives.

These three configurations also clarified how legitimacy and legitimation concepts were relevant although were constructed differently in different approaches, addressed different roles of these concepts at multiple levels, and helped the understanding of different legitimacy mechanisms in previous research. More importantly for this dissertation, they fully revealed the potential of legitimacy theories to explain the process of entrepreneurial resource acquisition from multiple perspectives. Therefore, this dissertation will present their categorization as a mapping frame to review the legitimacy models in multiple approaches as it was used in my dissertation research.

1. Property View

The first approach of *legitimacy as a property* includes the majority of legitimacy works, including mostly institutional views and strategic views. Institutions are highly recognized and resilient social structures including cognitive, normative, and regulative dimensions and supporting and explaining social activities (Scott, 1995, 2001). Institutional theories emphasized entities' congruence and alignment with rules and norms (Meyer & Rowan, 1977; Meyer & Scott, 1992; Baum & Rao, 2004). In institutional studies, legitimacy is seen as a resource strengthening the subject entities' existence within larger institutions or acting as a gateway to access other resources. Institutions mold

the forms and activities of organizations through the forces of a various range of actors (all types of stakeholders) (DiMaggio & Powell, 1983) and give meanings to organizations within its social and cultural contexts (Scott, 1995). Though neo-institutionalism shifted attention toward cognitive and cultural explanations in achieving congruence (Powell & DiMaggio, 1991), the essence of legitimacy in the institutional view still centered on conformity and embeddedness with norms or rules (Suchman, 1995).

Research from the strategic view saw legitimacy as an asset that could be achieved with effective organizational strategies. Scholars in this realm emphasized the active role of individuals in developing and exercising actions to build legitimacy. Aldrich and Fiol (1994) examined the power and influence of communication strategies at the individual and organizational level for both cognitive legitimation and sociopolitical legitimation, stating that founders or managers work as agents to exercise these strategies. Zimmerman and Zeitz (2002) laid out four strategies for legitimation as conforming to, selecting from, manipulating, and creating the institutional environment. These general strategies could be realized through organizational activities as symbolic accounts and communication (Elsbach, 1994; Lounsbury & Glynn, 2001), acquiring endorsements and social ties (Baum & Oliver, 1991; Rao, 1994), and a range of impression management strategies such as storytelling and framings (Cornelissen & Clarke, 2010; Navis & Glynn, 2011; Nagy et al., 2012; Überbacher, 2014).

The strategic view also saw the instrumental outcomes of legitimacy from resource acquisition to industry development as the motives and goals for engaging in the legitimation processes as well as a measurement of the construct (Deephouse, 1996; Lounsbury & Glynn, 2001; Zimmerman & Zeitz, 2002; Dacin et al., 2007; Zott & Huy, 2007; Nicholls, 2010). However, the interactive facets between legitimizing actors and audiences and the active and determinant role of audiences are still discounted.

From the institutional perspective, perceived congruence and alignment could help achieve increasing commitments from constituents, which often entail valuable resources (Stinchcombe, 1965; Meyer & Rowan, 1977) for organizations or populations to survive and prosper (Hiatt, Sine, & Tolbert, 2009). Legitimacy here is seen as a resource strengthening the subjective entities' existence within larger institutions or acting as a gateway to access other resources. In other words, it is the key factor in establishing new entities in their contexts and connecting entrepreneurial opportunities with potential stakeholders for further development. It emphasizes the alignment between input from the entrepreneurial entities and pressures from general institutional norms.

In the strategic approach, the focus on legitimizing agents could answer the quest for entrepreneurs' role and capability of acquiring resources and developing the ventures. The focus of the analysis is on the way and to what extent entrepreneurial agents could shape their input to influence the perception and decisions of resource holders. The consequences for

legitimacy studies include entities' survival (Baum & Oliver, 1991; Rao, 1994; Choi & Shepherd, 2005; Hiatt et al., 2009) or populations' evolution (Navis & Glynn, 2010; Wry, Lounsbury, & Glynn, 2011), and resource acquisition (Aldrich & Fiol, 1994; Lounsbury & Glynn, 2001; Zimmerman & Zeitz, 2002; Martens et al., 2007; Zott & Huy, 2007; Pollack et al., 2012). These are also important outputs for entrepreneurial studies.

2. Process View

The *process view*, the second perspective of legitimation as a process focuses on ways of meaning construction and negotiation to rationale entities' causes of existence within their contexts. It also focuses on the prominent role of agency in shaping entities and the entire environment in the interactive social dynamics. Various actors involved in the process with different levels of agency carry out practices ranging from discursive attempts (Maguire & Hardy, 2009) focusing on presenting to rhetorical strategies (Suddaby & Greenwood, 2005) targeting at managing impressions, in order to select, fit in with, or change the institutional environment. They also suggested abstraction and theorization actions as useful for establishing and diffusing new organizational features or activities, or questioning and problematizing existing practices (Greenwood, Suddaby, & Hinings, 2002). They noted that when considering various contexts and practices; there is no universally best form of legitimacy, as in the conception of property. There could be different configurations of legitimacy, looking at outcomes of varying social construction processes. A typical statement was Jepperson's (1991) question (legitimacy for whom?) and

his notion that legitimacy for one could be illegitimacy for others. Even the legitimation process could vary according to circumstances (Suddaby & Greenwood, 2005). Therefore, the construction of legitimacy is a continuous process as emerging and extant stakeholders negotiate for a balance of interests.

Another important topic of legitimacy discussed in this stream of research is the “uniqueness paradox” (Martin, Feldman, Hatch, & Sitkin, 1983) or Brewer’s (1991) “optimal distinctiveness.” Legitimation processes are the incentives and goals of the identity work to establish their unique competency and conforming alignment at the same time (Rao, 1994; Deephouse, 1996; Navis & Glynn, 2010). As King and Whetten (2008) proposed, both the isomorphic and distinctive aspects of an entity are perceived in reference to the anchored social category. As the reference group changes for different contexts and situations, the legitimation work will set out in stages (Navis & Glynn, 2010) or in waves (Barnett, 2006) to tackle both challenges.

3. Perception View

The *perception view* of the legitimation process resonates with studies of entrepreneurial identity and its effects on acquiring recognition and resource commitments (Lounsbury & Glynn, 2001; Martens et al., 2007; Navis & Glynn, 2011). They resorted to sense-making theory (Boje, 1991; Weick, 1995) and organizational cultures (Scott & Lane, 2000) to explain behaviors of entrepreneurial entities (mostly narrative attempts) and the effects on their target audiences’ perceptions and resource commitment decisions. Legitimacy

works as a key dimension of evaluating entrepreneurial identity (Lounsbury & Glynn, 2001). It could also help disentangle the effects of different elements in entrepreneurial identity (founder, venture, institution) (Navis & Glynn, 2011) and help resolve the dilemma of “optimal distinctiveness” (Brewer, 1991; Lounsbury & Glynn, 2001) by explaining the contribution of being similar and dissimilar, respectively, from stakeholders’ legitimacy perceptions. Legitimacy can also bring in the “framework of meaning” (DiMaggio, 1997; Navis & Glynn, 2011) or, as in Lounsbury and Glynn’s (2001) study, institutional capital, in a more coherent structure. They contributed to the explanation that the different how and why inputs from entrepreneurial entities and evaluative stakeholders could affect the process and outcomes differently.

4. Limitations in the Property and Process Views and the Advance of Perception View

This dissertation suggests that current literature taking the property view or the process view of legitimacy are still flawed in conceptualization with respect to two major aspects: the level issue and the construct issue. These two aspects address problems from different concerns but are often related and inseparable. The property and process views of legitimacy contributed to our understanding and brought in valuable findings from their perspectives, but most studies did not adequately address the above two issues.

Institutional studies of legitimacy differ in forms and sources, but they all focus on individual players’ entrance into and influence upon institutions at the general level, with little emphasis on the legitimacy-building and manifestation

processes. Neo-institutionalism has shifted attention to cognitive and cultural explanations (Powell & DiMaggio, 1991). Still, the supra-individual focus could not capture the multilevel mechanism of legitimation.

In contrast to institutional views, while strategic studies were accentuating the individuation aspect of legitimation, the effects from and processes involving general external environments were often overlooked. They did not explain in specifics how individual efforts could affect collective perceptions within institutions; nor did they account for how individual legitimizing behaviors incorporate institutional factors. Although Suddaby et al. (2017) raised this shortcoming of ignoring environmental factors, they did not incorporate it with specific institutional contexts into a comparative analysis of competing dynamics or integrative confluence.

The institutional approach ignored micro-constructs at the individual level as the initial driver of the process; the strategic approach, on the other hand, limited the varying outcomes of legitimacy and was applied to examine the effectiveness of different strategies. While many studies have incorporated both the institutional and the strategic views to some extent (Suchman, 1995; Williamson, 2000; Maguire & Hardy, 2004), they did not provide a clear construct that could thoroughly elaborate the processes along both the horizontal and vertical directions.

Although scholars employing the process view regarded audiences as more than recipients providing reactive outcomes for legitimizing stimulus, their extended views were still limited to passive perception, and they

understated its initiative nature and cognitive processes (Baum & Shipilov, 2006; Suddaby et al., 2017).

Suddaby et al. (2017) defined *legitimacy-as-perception* as a set of cross-level sociocognitive processes. This stream of studies focused on the judgmental outcomes of the social-evaluation process mainly at the individual level, accentuating the role of the perceivers as the ones who generate the legitimacy perceptions. They also extended beyond the micro-foundation of individuals' cognitive processes to account for not only actors and judgments at the collective level, but also the interactions among individuals and social systems from the point of view of social cognitive theories (Bandura, 1989; Wood & Bandura, 1989). This proved an important step in making the connections across levels.

Therefore, although the perception view has its focus on individual cognitions and micro-level processes, it has the potential to integrate the property view and the process view, and it may also connect multilevel effects of legitimacy, including less-intentional perceptions, more-purposive judgments, individual actions, and organizational outcomes, and it could ultimately aggregate to institutional changes.

B. The Inadequacy of Legitimacy Research for Entrepreneurship

These level and process issues posed significant limitations in legitimacy studies. First, they confined legitimacy works to dissonant fragments, unable to cohere into a comprehensive construct. Second, they

bounded its application to specific contexts, especially for entrepreneurship, for which legitimacy is a significant concern.

Entrepreneurial ventures face changing and complex institutional environments. They not only need to legitimize themselves as a viable business within their industry and location; in many cases, they also need to construct a domain for their innovative ideas, persuade others of the plausibility of the opportunities, and gather information for proving their personal credibility. We will need a comprehensive framework to organize and examine the various factors from diverse constituents at multiple levels.

Moreover, compared to mature businesses, entrepreneurial opportunities are more distant from institutional players, and the norms of concern are often more flexible and subjective. Objective scales for legitimacy judgments are hardly available for the unstable nature of both stimulus and references. Therefore, to build a framework of legitimacy for entrepreneurship, the mechanisms of progression and interaction at the individual level needed to be analyzed more carefully, especially for how they pass or fail the legitimacy bar of resource acquisition from a variety of stakeholders in different contexts.

CHAPTER III. THE LEGITIMACY MODEL AND ITS APPLICATION TO BUSINESS INCUBATORS' SCREENING

The perception view of legitimacy laid the groundwork for analysis into the mechanism of legitimacy-judgment formation. It has also delineated cross-level channels with proactive individual processes. In this chapter, the dissertation reviews two comprehensive frameworks under this view and bases an integrated model on them.

A. Major Model Bases

1. Tost's (2011) Model of the Legitimacy Judgment Process

Tost (2011) decomposed the legitimacy-judgment process as generalizing and determining perceptions of an entity's appropriateness within its contexts. The formation of legitimacy judgments involves the aggregation and combination of a set of dimensions in evaluating the focal entity (Tost, 2011). Integrating social psychology and institutional theory, she developed a theoretical framework of the legitimacy-judgment process. Tost perceived instrumental, relational, and moral legitimacy as three dimensions in the process of legitimacy evaluation, instead of different types or sources of legitimacy; she also distinguished dimensions of legitimacy evaluations from the content of legitimacy judgments.

Tost addressed several aspects to clarify the construct of legitimacy as well as the process of institutionalization. She first carved out legitimacy as only one component of institutions, without the necessary feature of self-reinforcing (2011, p. 689). She identified further distinctions between

individual-level legitimacy, where the essence is individuals' judgments about appropriateness in specific contexts, and collective-level legitimacy, where the emphasis is on aggregate-level recognition and its potential to govern behaviors.

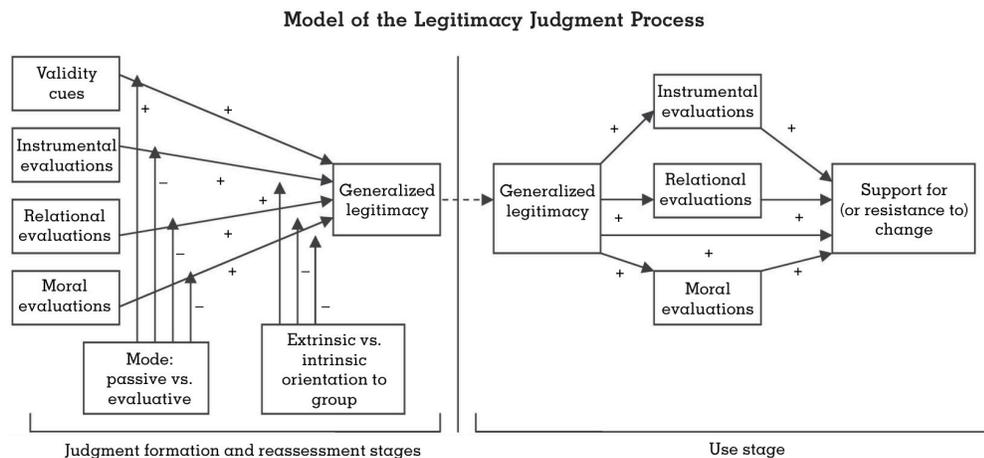


FIGURE III-1. TOST'S (2011) MODEL OF THE LEGITIMACY-JUDGMENT PROCESS.

Tost (2011) took from the social psychology studies of legitimacy the idea that audiences generate instrumental legitimacy when they perceive the legitimizing entities as promoting their material benefits, whereas relational legitimacy is based on the affirmation of psychological and intangible interests (p. 690). Here she took the bold move of arguing that instead of being different legitimacy models, these evaluative factors of legitimacy (instrumental legitimacy and relational legitimacy) represented different dimensions underlying the legitimacy judgments. After identifying the dimension-structure of legitimacy judgments, she further differentiated cognitive legitimacy from these evaluative dimensions. Tost (2011) followed Suchman's (1995) notion of cognitive legitimacy as comprehensiveness and unquestionableness. Cognitive legitimacy, based on their arguments, differs from the instrumental,

relational, and moral dimensions of legitimacy because these dimensions were actively evaluated based on pragmatic calculations for their respective concerns, while cognitive legitimacy is the outcome of passive cognitive processes based on the conformity to institutional expectations (Tost, 2011, p. 693).

The isolation of legitimacy as an individual-level perception and the separation of cognitive legitimacy from the evaluative ones are important advances in clarifying the concept of legitimacy. They also provide a logical lens for how legitimacy as property differs from legitimacy as process and how they could be connected by legitimacy as a perception construct.

Furthermore, Tost (2011) mentioned the varying attributions, potential overlap, and changing priorities among the different content describing the dimensions of legitimacy according to different circumstances (Tajfel & Turner, 1979; Amabile, Hill, Hennessey, & Tighe, 1994; Tyler, 1997). This triggered a mission to look into the dynamics within the legitimacy dimensions to determine which dimensions are activated and how they are prioritized and applied, all meaningful topics to fill the theoretical need of specification as well as the practical demand for a better-illustrated guidance.

One limitation of Tost's (2011) legitimacy model, which is also the limitation of many studies from the perception view, is that this work did not discuss the role of general institutions with the exception of providing the basic construct of dimensions. And although it discussed the implications, the model

did not extend to incorporating later processes such as how the use and outcomes of legitimacy judgments connect general level institutional results.

The view of this research also has a minor disagreement in the legitimacy construct of Tost's (2011) study. Regulative legitimacy, though excluded by Tost as a special case of heuristics (2011), I would still include it as one dimension of the evaluation since both endorsements and underwriting constitute part of an entity's social resources (Higgins & Gulati, 2006); audiences actively evaluate them as an important aspect of the entity's attributes to reduce uncertainty in the legitimacy-judgment process and the resource decisions that follow (Starr & MacMillan, 1990; Zimmerman & Zeitz, 2002).

Most importantly, I diverge from Tost's understanding of the activation between the two modes of judgment formation (evaluative mode and passive mode). Whereas she argued that the evaluative mode would dominate only when there are not enough validity cues or cultural conformity, I propose that in doing so she ignored the influence of evaluators on the manifestation of the judgment process to condition the mechanism on the legitimizing inputs alone. Audiences' proactive selection and both parties' perceived purposes of the evaluation will also significantly affect how the process will be carried out.

2. Bitektine and Haack's (2015) Multilevel Model of Legitimacy

A more integrative model was from Bitektine and Haack (2015). They construct a multilevel process of legitimacy that focused on individual evaluators' cognitive judgments, how they were shaped by social and strategic

forces, how they manifested with communication into organizational outcomes, and how these judgments could affect the collective opinions and bring changes to institutional environments.

A Multilevel Model of Legitimacy Under Conditions of Institutional Change

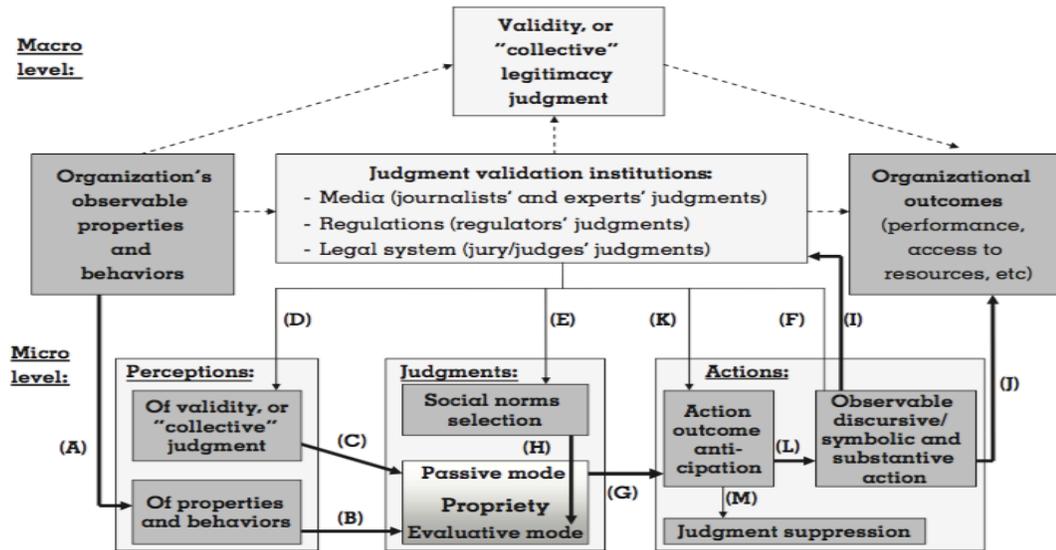


FIGURE III-2. BITEKTINE AND HAACK'S (2015) MULTILEVEL MODEL OF LEGITIMACY.

Bitektine and Haack (2015) emphasized the “generalized” aspect of legitimacy, referring to the aggregate recognition and approval for one organization, “independent of the endorsement of single individuals,” citing Golant and Sillince (2007) and Zimmerman and Zeitz (2002), and the collective actions on these judgments (though evaluations are individually generated). When looking at the micro-processes of legitimacy acquisition, it worth noting the two-way dynamics of generalization: general norms and beliefs are manifested in the evaluation process together with individual and contextual preferences and goals; and, the other way around, individual judgments aggregate into collective evaluations. Hence, even when we are

examining particular judgment-forming processes, the “generalized” nature is always embedded in the cognitive evaluation.

Bitektine and Haack’s (2015) model with two perceptual inputs also identified the comparisons between validities and proprieties as the input of legitimacy evaluation. What matters most here will be the match based on the dual inputs. In their work, the perception and evaluation of the legitimacy of one entity are not solely based on what individual evaluators receive from the legitimizing stimuli, nor are they simply formatted by any set of social validities. Complementary to Tost’s (2011) lack of focus on audiences’ imitateness, they suggested that evaluators will form a projection of the legitimizing entity from what it tended to construct, and they will also actively select from a variety of validities as the basis for the evaluation. This model is an important step in exploring the role of resource holders and the interaction effects of both actors and audiences/evaluators in the process of resource acquisition.

Bitektine and Haack (2015) also addressed the different stages (perceptions and judgments) in the evaluation process of legitimacy. The activation of the stages will be influenced by the inputs from legitimizing organizations and the normative schema selected. Therefore, this model makes it possible to address influence from both actors and evaluators on the manifestation of the process.

Another important contribution of their work is the theorization of legitimacy outcomes as malleable according to institutional forces. It is important to identify the flexibility of legitimacy outcomes since they can be

affected not only by institutional forces through encouraging or suppressing the expression of judgments, but also by diverse organizational purposes of legitimacy judgments from different stakeholders. This would also be a critical concept in studying the variability of the legitimacy threshold.

However, Bitektine and Haack's (2015) model embarked on institutional outcomes to look at the interactions between levels; they did not take into account more complex influences from the cognitive processes of social comparison, how validity norms are selected, or how actors' properties and behaviors are subjectively perceived and evaluated in the process.

Accordingly, they also did not look into the legitimacy construct on which legitimacy judgments are based. Neither did they pay attention to the conflicts and uncertainty in the evaluation process that could also be coming from the legitimizing actors and the complex aspirations of the evaluators.

I used Bitektine and Haack's (2015) model as the base structure for my framework. More specifically, I followed their model that audiences apply macro-level institutions in their micro-level processes as one input for the social comparison, with actors' legitimizing stimuli as the other source of inputs. The flexible organizational outcomes based on individual judgments will then constitute the institutions. I also applied Tost's (2011) advances in the construct of legitimacy and the mechanism of legitimacy judgments formation to illustrate the perceptual process clearly.

B. Modified Model

Bitektine and Haack (2015) made the valuable connection between the micro- and macro-levels of legitimacy processes from an institutional view. They looked at the cognitive aspect of legitimacy perception and judgments of evaluators, how they are shaped by factors at the institutional level, how they manifest with communication into organizational outcomes or direct institutional forces, and how these judgments and opinions could affect the collective opinions and stabilize or bring changes to institutional environments. In the multilevel framework, individual people are shaped by the environment; at the same time, they construct the environment (Wood & Bandura, 1989). Here I will describe how I first built my framework following their multilevel structure.

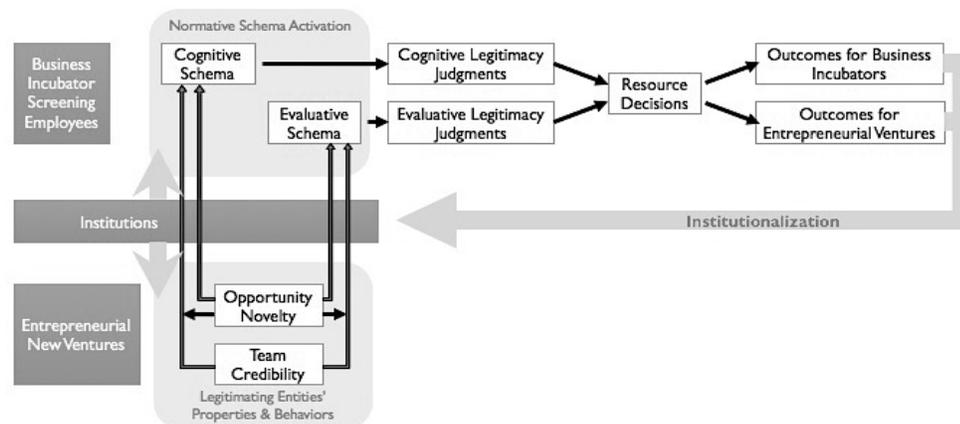


FIGURE III-3. A PERCEPTION MODEL OF LEGITIMACY JUDGMENT PROCESS

The dual inputs into the comparison and judgments in Bitektine & Haack's (2015) model are the following: (1) the organization's observable properties and (2) behaviors from the actors and the judgment validation institutions perceived and selected by the audiences. In my model, I treated these two inputs as (1) *legitimizing entities' properties and behaviors from the*

actors and (2) *normative schema activation from the audiences*. More specifically, I designated perceptions of validity or collective judgment (“D” in Bitektine & Haack, 2015) as *cognitive schema*, and I designated social norms selection (“E” in Bitektine & Haack, 2015) as *evaluative schema*. In my model, legitimacy outcomes (“passive mode propriety” in the perception stage of Bitektine & Haack, 2015), are termed *cognitive legitimacy judgment formation*, representing the cognitive perception of appropriateness and conformity. My model uses the phrase *evaluative legitimacy judgment formation* to represent what Bitektine and Haack (2015) called “evaluative mode propriety” in their judgments stage, as it engages the active pragmatic evaluations (Suchman, 1995); it could be more specifically illustrated with Tost’s (2011) “evaluative mode of judgment formation.”

My model uses *judgments/decisions* to refer to the “actions (following the judgments stage)” in Bitektine and Haack’s (2015) model. I further refined the *organizational outcomes* in their model, wherein the evaluating entities articulate and/or suppress judgment decisions and carry out corresponding actions of support. In my research, I call their “organizational outcomes for evaluating [an] entity” *business incubators*; this phrase encompasses the articulations, actions, and consequences of evaluating entities’ organizational performance. The legitimizing entities receive their outcomes of legitimacy judgments (e.g., getting support based on favorable judgments or suffering resource poverty based on poor judgments). They refer to these results as

organizational outcomes of legitimizing an entity. (Hereafter, I will use my term for these entities: *entrepreneurial ventures*).

As shown in Rindova and Fombrun (1999), organizations and their constituents jointly shape the environment they are embedded in; we cannot ignore the organizational consequences of legitimizing organizations following the resource-acquisition outcomes. Therefore, I propose that these activities of evaluating organizations and the ecological outcomes for legitimizing entities will together constitute the validation process of institutions, which I will refer to as the *institutionalization process*. As these collective evaluations reinforce or challenge existing institutions, the general landscape continuously changes to accommodate the majority's opinion, and will thus, in turn, affect organizations in the environment with the diffusion of changing norms and rules.

To further explore the mechanism of individuals' transitioning and initiative role in the process, I look into the perceptual construct of legitimacy-judgment formation by including a more specific legitimacy construct (Tost, 2011) (shown as the multiple-line arrows in Figure 1). I will elaborate further on the application of the framework in the next section and in Chapter IV.

This combined and selectively successive model integrates refined cognitive processes at the individual level to analyze the formation of legitimacy judgments and also connects the individual processes with general level institutions. It also makes it possible to examine the interactive process between individual variations and social conformity and how the role of individuals came to be comprehensively integrated into the process of

legitimation within general social institutions. This inclusive model attempts to resolve the level and process issues and to be more readily applicable to entrepreneurial situations.

C. Conceptual Implication of the Model

1. Multilevel Frame

Legitimacy, like any other construct, involves discussions at multiple levels (Klein, Dansereau, & Hall, 1994; Bitektine & Haack, 2015). It needs more clarification for conceptualizing legitimacy at different levels, for mechanisms of how cause-and-effect relationships are brought about within different levels, and for how the influence manifests across levels (Johnson, Dowd, & Ridgeway, 2006). Johnson et al. (2006) integrated social psychology and organizational studies to propose the construal of legitimacy as a social process of four stages: local innovation, local validation, with a process of diffusion to other situations, and general validation. Klein et al. (1994) emphasized the importance of the level issue in theory development beyond the statistic problem: they pointed out the critical task of clearly distinguishing differences between individuals within groups and between groups in theory construction and argued that the level issue could better guide research design and data selection.

At the same time, the risk of over individualism prompts a cross-level view of legitimacy (Suddaby et al., 2017). The legitimacy-as-process view focused on agents' attempts at social-meaning construction and raised the important issue of contingency in the configuration of legitimacy (Suddaby

et al., 2017). This process view, on the other hand, did not take into account other more stable and persistent factors from macro-institutional environments. Evaluators play a critical role in connecting multiple levels in legitimacy. While playing the recipient end for legitimizing entities' stimuli, they also work as tentacles of institution systems through which general social norms and rules can be diffused and permeated through audiences' reflective evaluations.

This multilevel perception model connects the individual actors' influence and institutional factors within the process of legitimacy judgments formation. Audiences work as more than a channel of institutional effects; they are also a processing mechanism through which the influence of individual factors and institutional factors rises and falls as they merge, interact, and compete with each other.

2. Perceptual Construct Frame

“For it all depends on how we look at things, and not on how they are in themselves.” Carl Jung's words (1933/2001, p. 67) resonate perfectly with those of Ashforth and Gibbs's (1990) notion of legitimacy in beholders' eyes that the essence of legitimacy is the perceptions of audiences. It is also the emphasis of this study as I try to build on their work to fill the paucity of legitimacy works from evaluators' perspective. Though Bitektine and Haack's (2015) process model mainly served macro-institutional research purposes, it is of great importance to follow their refinement of the process into passive perception, active evaluation, and judgment expressions since these

explanations clarified both the evaluation process with mechanisms of cognitive work and the different concepts of legitimacy in relation to different outcomes under analysis.

Legitimacy's nature is a collective perception (Suchman, 1995), but less attention has been directed to studying how these perceptions are formed and shaped by the interaction between legitimizing agents' information input and evaluative audiences' framings and interpretations. Similarly, little attention has focused on discovering how these perceptions influence further evaluations, judgments, and actual decisions following the legitimation process. What's more, the standard rules or even the conception of legitimacy are conditional on a variety of factors. What these factors are and what the mechanisms are like have rarely been discussed. Also, since legitimacy is basically perceived and evaluated in the eyes of the audiences (Zimmerman & Zeitz, 2002), a comprehensive framework of legitimacy needs to cover not only the process of how innovative activities are validated and diffused at the collective level (Johnson et al., 2006), but also the formation process of legitimacy perception and evaluation at the individual level.

a. Cognitive Legitimacy and Evaluative Legitimacy. Besides Bitektine & Haack (2015), other works on cognitive processes of legitimacy have also supported this separation of processes. Aldrich & Fiol (1994) differentiated cognitive legitimation by looking at the knowledge and understanding of the venture in public from the perspective of social-political legitimation, focusing on the extent to which important stakeholders accept or

approve the venture's actions. Suchman (1995) distinguished the objectives of legitimacy into persistency and credibility, saying that *persistency objectives* involve the supply of resources to desirable entities from audiences' evaluation, while *credibility objectives* address the meaningful and predictable account for the existence of an entity.

Similarly, Überbacher (2014) categorized new venture legitimation into cognitive views and evaluative views. *Cognitive views* from ecological and cultural entrepreneurship theories emphasize legitimation efforts to tap the comprehension and values of the audiences (Baum & Powell, 1995; Bitektine, 2011); *evaluative views* focus more on whether new ventures appear to be desirable (Überbacher, 2014). According to the institutional perspective on new venture legitimation, audiences are subject to influence from both evaluative institutions and cognitive institutions (Überbacher, 2014; Meyer & Rowan, 1977). The *passive mode* and *evaluative mode* suggested in Tost (2011) also resonates with this differentiation, although they were proposed according to varying levels of cognitive efforts since this varying level of cognitive efforts could also relate back to the different mechanisms of evaluation in my model.

Moreover, Petkova, Rindova, and Gupta (2013) distinguished between attention attraction and evaluation as different cognitive mechanisms of processing information. *Attention attraction* depends more on salience and availability of certain information, while *evaluation* examines the presence and

strengths of specific attributes (Fiske & Taylor, 1991; Pollock et al., 2008; Petkova et al., 2013).

Therefore, I will separate cognitive legitimacy and evaluative legitimacy as two distinct mechanisms, following the literature. *Cognitive legitimacy* is generated through matching actors' legitimizing stimuli with the cognitive schema for an assessment of general conformity; *evaluative legitimacy* is the outcome of comparing the content of stimuli to a more specific set of evaluative schema from the audiences.

b. social comparison as perceptual inputs. Since legitimacy is basically perceived and evaluated in the eyes of the audiences, a comprehensive framework of legitimacy needs to cover not only the process of how innovative activities are validated and diffused at the collective level, but also to capture the formation process of legitimacy perceptions and evaluations at the individual level. Although the strategic approach accentuates the role of legitimizing agents, the interactions among agents and audiences and the active and determinant role of audiences must not be discounted. Strategy views of legitimacy confer legitimizing actors with the centric role of selectively activating legitimacy schema and determining audiences' legitimacy assessments (Suchman, 1995). In these actor-centered views (Überbacher, 2014), audiences possess a pool of general and broad legitimacy norms, the execution of which is subject to legitimizing actors' manipulation (Santos & Eisenhardt, 2009).

The ecological view and institutional view of legitimacy were categorized as audience-centered (Überbacher, 2014) perspectives since they regarded legitimizing actors as either passive receivers (Baum & Shipilov, 2006) or reactors (Meyer & Rowan, 1977) to legitimacy judgments. However, even these research view mainly took a macro-level focus, where audiences are portals of institutions.

Hudson (2008) noted that social audiences compare organizations' attributes against their value systems. This view can be better explained as a social evaluation process. Evaluations for judgment formation are processes of social comparisons just as other social valuation processes (Zuckerman, 2012). The evaluations of subjects, be they objects or persons, were only actualized in reference to other subjects perceived by audiences. This process involved categorization into, comparison with, and positioning within social reference scales (Giorgi & Weber, 2015). The referent scales (a schema for comparison) will be the results of individual, organizational, and institutional factors. Social reference scales are derived from each audience from the context as a set of standards or schema to evaluate relevant stimuli; stimuli are signals sent by subjects and contain all types of information they manage to deliver to the evaluators.

Bitektine and Haack's (2015) dual-input model applied the essence of social comparison. They identified two inputs for the legitimacy assessment process: the stimulus of subjects for comparison (propriety perceptions), and the benchmarks/scales of social norms (validity). Evaluators then derive an

assessment of congruency from the two inputs. Therefore, this legitimacy model with a comprehensive individual foundation, including both legitimizing and evaluating entities, could help resolve the process of legitimacy evaluation and further judgments about the opportunities.

Each side of the comparison will have influences on the process. A stream of research from the strategy view has examined the effects of actors' narrative presentations and sense-giving tactics on legitimacy judgments (Lounsbury & Glynn, 2001; Khairi & Wadwhani, 2010; Cornelissen & Clarke, 2010). Relatively fewer studies have looked at variances in audiences' basis for comparison (Choi & Shepherd, 2005), and fewer still have explored the interaction between the two inputs during the comparison mechanism. Hence, I integrated this dynamic mechanism in my model.

In Tost's (2011) attempt, three dimensions (instrumental, relational, moral) and the notion of norm selection of Bitektine and Haack (2015) addressed the important conditional nature of legitimacy judgment from the audiences' side. What norms are selected and what the dimensional components and structures are like together constitute the basis of evaluation. Legitimizing stimuli need to prove a good match to the basis to reach prompt, positive legitimacy judgments from audiences. This is especially important for studies on entrepreneurship, in which the institutional frames are more uncertain and less developed, and on new ventures in emerging industries in particular. Starting from Tost's (2011) dimensional construct, I tried to integrate the contingency facet of legitimacy judgment in the model as well.

2. Contingency Facet of Legitimacy

a. Contingency in mechanism activation and legitimacy construct.

The objectives of legitimacy differ on the important dimension of what the actors are seeking from audiences (Suchman, 1995). Legitimacy for being unquestionable needs only to meet the lower threshold and to focus more on the aspect of making sense. Legitimacy for active supports from audiences requires an entity to pass more stringent bars and to prove its value.

Therefore, the activation of judgment modes is contingent on the audiences' objectives of legitimizing. Are they assessing the entity for the absence of questionable characteristics to validate conformity to institutional norms so that they can passively let it through? Or are they evaluating the entity with purposively selected schema and proactive attention to justify their decision of committing or not committing active support?

The activation of legitimacy judgment modes can also be affected by the content and presentation of actors' legitimizing work. As suggested by Bitektine and Haack (2015) and Tost (2011), the availability of validity cues could automatically prepare the way for different paths of categorizing and processing information. Therefore, there is no universal process regarding how the judgment formation mechanism manifests.

Tost (2011) also talked about prioritizing different dimensions of legitimacy judgments according to different circumstances regarding levels of identification and intrinsic and extrinsic orientation (Tyler, 1997; Tajfel & Turner, 1979; Amabile et al., 1994, as cited in Tost, 2011). This explanation approach

is limited since it relies on the fuzzy and unstable construct of identification. I propose that stakeholder theory could provide a more powerful and more generally applicable explanation than identification concerning the mechanism for prioritization. For example, employees or members of an entity will perceive the relational legitimacy as more important than others; investors and suppliers will put instrumental legitimacy at the critical place; and public regulators and opinion leaders might prioritize moral legitimacy for their judgments (Choi & Shepherd, 2005; Tost, 2011).

According to Lawrence & Lorsch (1967), organizations' forms will depend on the environment, and organizational goals and activities are coordinated by multiple stakeholders with their own purposes. Organizations have to negotiate their existence with stakeholders both within the organizations and those in the environment (Ruef & Scott, 1998). The effectiveness of an organization also rests on the satisfaction of various stakeholders' personal goals. The norms of legitimacy for each stakeholder group constitute part of the institutions as a subcontext. In addition to the availability of factors to evaluate, the relative importance of these items is also relatively stable at the group level. These normative factors and their relative priorities are often explicitly recognized as industry standards or templates for a population. In other cases, they could also be implicitly carried out by members of these groups in daily activities.

However, within each stakeholder group, individual evaluators would also vary in their priority when evaluating legitimizing entities. These

differences are partly rooted in their individual preferences since evaluation is a subjective cognitive process. This relative importance of each item could also be affected by the interaction between the legitimizing agent and the evaluators. The difference in the strength and format of stimuli provided by the agent could prime different dimensions of evaluation. The characteristics of the actors could also cause fluctuation in the different evaluative dimensions in the same way that the interpersonal relationship could affect the individual cognitive processes. Therefore, I needed to incorporate their relative importance within the legitimacy dimensions in the legitimacy evaluation model to examine its influence on legitimacy judgments and commitment decisions.

b. contingent outcomes. One distinction Suchman (1995) made for the objectives of legitimacy was whether the actors are seeking the passive acceptance of active support. It is the same reasoning for audiences; the goals they have for engaging in the legitimacy judgment affect the process and outcomes of the judgments. Interpretation and evaluation of an organization will vary according to both actors' legitimizing purposes and audiences' schema selection—and so will the resource outcomes of the entire judgment processes. The evaluators' purposes will determine whether they judge the entities as legitimate or no, and the different outcomes following the judgments.

Bitektine & Haack (2015) discussed the expression of evaluation as contingent on the tolerance and trends of external institutions. However, the expression is also determined by evaluators' assessment of necessity, their

willingness, and the purposes of evaluation. The choices depend on the purposes and contexts of the particular process. If not necessary, even conforming judgments won't be articulated or acted upon.

One important issue related to the contingency construct of legitimacy is the threshold of legitimacy. According to the earlier conception of resources that entities could acquire through building legitimacy, the resources vary, including silent consent, passive endorsements, or proactive investments and support (Suchman, 1995). These different resources could be acquired following a similar process of evaluation. So, the level to which the evaluator would support the legitimizing entities is also a continuous construct that depends on a continuous range of the legitimacy judgments.

In all three perspectives of legitimacy—property, process, perception (Suddaby et al., 2017)—there were discussions about whether the negative range of legitimacy exists as illegitimacy with similar compositions and forming processes or not (Elsbach & Sutton, 1992; Hudson, 2008; Hiatt et al., 2009; Hudson & Okhuysen, 2009; Maguire & Hardy, 2009). There were also discussions about whether legitimacy should be operationalized in a continuous status with varying levels of evaluations and judgments (Gardberg & Fombrun, 2006; Fisher, Kotha, & Lahiri, 2016) or in a dichotomy where legitimacy matters simply for its presence (Deephouse & Suchman, 2008).

There has not been general agreement on the valence of the legitimacy construct, nor on a definition of the opposite end of legitimacy. Few studies have looked into when and how legitimate or illegitimate judgments are

triggered, now have many focused on different audiences, to what extent, and for what purposes will they act upon legitimacy evaluations. By introducing the dimensional construct of legitimacy into the dual-mechanism legitimacy judgment process, with an emphasis on the interaction between actors and audiences, I set out to discern how the actors' and audiences' objectives influence the manifestation and content of legitimacy judgments, and in turn, the consequences of the process.

I intended for my model to connect multiple levels with an integrative structure and well-founded mechanisms at each linkage and for each transformation of outcomes. In that way, I could apply it to complex situations such as the pathways of problem-solving, and I could tend to each subject of analysis with the support of a general structure. It would also help in analyzing the complex and unstable conditions of entrepreneurship.

CHAPTER IV. MODEL APPLICATION FOR BUSINESS INCUBATORS

A. The Need and Demand for Application

Though business incubation studies have only begun to proliferate within the past two decades, they have already been raising attention to the perception and level issues this model plans to address. More attention has been paid to on macro-level issues in earlier studies with the dominant view from an economic development perspective (Hackett & Dilts, 2004). Many studies have also focused on public-funded business incubators (BIs) (Campbell & Allen, 1987). Indeed, as Bøllingtoft and Ulhøi (2005) reviewed incubators' historic path of development, they accentuated the financial dependency of a large number of public-funded BIs and the resulting problematic reporting of performance due to the "politically charged environment." In 2005, the *Journal of Business Venturing* published a special issue on science parks and business incubators. Although Markman et al.'s (2005, pp. 241–263) widely based study in that issue identified the "multilevel agency problem" (Phan et al., 2005, p. 171) by pointing out the influence of different agents' (entrepreneurs, incubator managers, incubator/science park sponsors) incentives and interests, they mainly dealt with system-level issues (Phan et al., 2005). Researchers in the field have proposed a complexity of social dynamics in BIs that could not be covered with a single model and directed further attention to specific contextual factors (Bøllingtoft & Ulhøi, 2005) and the need to unpack the process at the incubator level and the individual/team level (Phan et al., 2005). Phan et al. (2005) also argued for the

significance of individual-level explanations in fulfilling the quest of incubators' models and raised particular questions about incubator managers' active role in opportunity recognition and the factors forming their schemas (Gaglio, 1997) of scanning. The multilevel model provides a framework to integrate agents at multiple levels in the BI context and could help connect and analyze the predictors and outcomes at different levels.

The sponsorship complexity and the variety of agents also imply the complicated interests and purposes in business-incubation processes. Therefore, taking a contingency view is a prerequisite for accurate and sensible analysis of BI behaviors. Phan et al. (2005) pointed out that the crucial topic in analyzing incubators address beyond their ability to successfully nurture start-ups is to focus on their job of balancing their own interests, the start-up firms' interests, and the interests of the environmental systems due to their deep embedment (Clarysse et al., 2005; Koh et al., 2005). My model draws out the pathways of interests at different levels and for different entities, enabling me to analyze a panel of purposes in the process.

The task of actualizing contingencies and achieving interests balance will fall on individual incubator managers as they deal with different agents and procedures in their daily work. Therefore, it is necessary to look into individual-level factors. Bøllingtoft and Uihøi (2005) highlighted the importance of collaborative and networking skills in successful development within BIs and in the management of incubators themselves. Compounded with the importance of interaction between incubators and incubates, we will need more studies of

mechanisms to explain the process. My procedural model of the evaluation process, although it did not directly measure the outcomes of incubator performance, could provide substantial support for a critical screening stage of the incubation process. This screening stage heavily involves legitimacy concern in its operation. It could not only distinguish one incubator from another as a key feature of the configurations but could also help predict the performance of incubatees (Aerts et al., 2007). On the other hand, the application and evaluation processes are typical for regular resource acquisition; their diverse and large amounts of resources could provide varying outcomes of judgments for this study.

With the resonance of myriad focuses and the significant resource-supporting role they play in entrepreneurial ventures, BIs are the ideal subject for this research.

B. Model Application

For entrepreneurship, my legitimacy judgment model addressed the emphasis on individual-level interactions for entrepreneurial activities. Nascent entrepreneurial entities have less chance to deal with institutional processes, and entrepreneurs themselves play a more important role than managers and founders in a large organization. Resource providers for these entrepreneurial opportunities often take on the roles and mindset of entrepreneurs as well since they are crucial participants in developing the opportunities and may become stakeholders, shareholders, or even part of the entrepreneurial teams.

Therefore, the perceptual processes of legitimacy not only take on a large part of their daily activities but also bring about significant performance outcomes.

This model also refines the outcomes of legitimacy for entrepreneurial opportunities through the division of cognitive and evaluative legitimacy. Each mode of the process could generate positive results for the legitimizing entities, but only those strong enough would carry all the way down to resource commitment. Relating to the pragmatic legitimacy in Suchman (1995), determining the threshold of legitimacy and how expressive and inclusive the threshold depends not only on the strength of legitimate or illegitimate stimuli but also on the pressure and direction presented in the contexts. It is crucial to examine at what stage and for what factors do entrepreneurial opportunities fail to be legitimized for resources. This model provides the possibility of teasing out different factors at different stages to identify the delegitimizing elements of the opportunities.

For BIs, the “multilevel agency problem” (Phan et al., 2005; Markman et al., 2005) matches the multilevel framework of my model to incorporate influences from multiple levels. The shift in emphasis from business-incubation research to individual-level processes (Phan et al., 2005) and screening practices (Mian, 1994; Hackett & Dilts, 2004; Aerts et al., 2007) resonates with the perception view of legitimacy judgment process used in my dissertation research.

Diversified sponsorship (Campbell & Allen, 1987) and multiple evaluative factors provide the specific contexts and conditions within the

uncertain and instable institution of entrepreneurship. The context made it possible for me to examine the interaction among dimensions of legitimacy and dynamics within the evaluation mechanism. As a complexity of resource supports, BIs possess and confer access to a variety of tangible and intangible resources. According to their perceptions and judgments about new venture profiles, BIs will form beliefs and confidence in these new ventures and make decisions about what and how much resources they will commit. By providing varying types and amount of resource support (Bøllingtoft & Uihøi, 2005), the business incubation context supplies rich grounds for examining different objectives and outcomes of legitimation and, more importantly, for seeing how they refine the construct to reveal the interactive dynamics of legitimacy judgment process. In the following sections, this dissertation shows how I further applied and specified the legitimacy-judgment-formation process in the context of BIs screening new venture profiles for resource-commitment decisions.

C. Variable Development

1. Legitimacy Content for Entrepreneurial New Ventures

Venkataraman (1997) described entrepreneurship as the nexus of opportunities and individuals. Davidsson's (2015) reconceptualization also identified the two major components of entrepreneurship as the nexus of the "actor" and "nonactor" aspects of opportunity. These two dominant constituents of entrepreneurship are also the two subjects for legitimacy evaluation.

The two prominent features of entrepreneurship are uncertainty and novelty. New ventures' task of legitimating needs to address these two features in both opportunity characteristics and individual characteristics. While uncertainty and novelty are closely related, they each contribute to the conflicting needs for an entrepreneurial identity (Glynn & Abzug, 1998; Navis & Glynn, 2011) to be legitimate or institutionally appropriate (Aldrich & Fiol, 1994; Rao, 1994) as they nurture potential dissent and less coherent structure. However, they bring in unique and irreplaceable features (Barney, 1991) at the same time. Novelty is embedded in the business ideas around which the entrepreneurial ventures come into being. Uncertainty is exogenous, to a large extent, as organizations cope with challenges from the environment; the organizational feature countering the uncertainty is the venture's credibility. For ventures at the initial start-up stage, credibility mostly lies with the entrepreneurial team.

Bergek and Norrman (2008) mentioned that different incubators emphasize different criteria in venture selection. They divided the selection criteria into idea-focused selection and entrepreneur-focused selection. *Idea-focused selection* criteria include properties of the target market, competitive qualities of products or services, and other factors for business viability. *Entrepreneur-focused criteria*, in contrast, include personality, education, prior employment, and expertise. Business ideas and entrepreneurs, highlighted by project novelty and team credibility, were identified as the two major screening criteria for incubators.

Thus, this research proposed that business ideas and entrepreneurs' qualities are the dual subjects of legitimating activities that constitute the actor-side of input for the social comparison process of legitimacy formation. When matched to stakeholders' expectation or requirements for these two major aspects of entrepreneurial ventures, they could help improve stakeholders' confidence in entrepreneurial opportunities.

2. Dual Mechanisms of Legitimacy Judgments

Suchman (1995) suggested the taken-for-grantedness aspect of legitimacy as a distinct dynamic from interest- or evaluation-based legitimacy (Jepperson, 1991; Aldrich & Fiol, 1994). Bergek & Norrman (2008) also discussed criteria application in BIs' selection procedures, distinguishing between two approaches in applying selection criteria based on different purposes of evaluation: the "pick the winner" approach aims to identify ventures with great potential for growth and success with the aspiration for investment return; the "survival of the fittest" approach, on the other hand, less rigidly scrutinizes ventures with the help of market norms for the appropriate ones (Bergek & Norrman, 2008).

a. cognitive legitimacy. Comprehension is the key element of cognitive legitimacy (Suchman, 1995). Suchman further refined this categorization of legitimacy according to the temporal basis to distinguish legitimization dynamics operating on an episodic basis from those operating on a continual basis. The new-venture and business-incubator contexts represent an episodic basis for legitimacy. Therefore, I will use the comprehensibility

aspect of cognitive legitimacy in this study. The episodic facet of comprehensibility refers to audiences' predictable actions and plausible essence of new ventures (Suchman, 1995, p. 84).

b. Evaluative legitimacy. Pragmatic legitimacy in Suchman's (1995) (evaluative legitimacy) episodic category includes *exchange legitimacy*, implying the direct exchange of interests, and *influence legitimacy*, representing the social interdependency responsiveness (Meyer & Rowan, 1991; Suchman, 1995). Different stakeholder groups have different expectations and interests (Ruef & Scott, 1998; Bansel & Clelland, 2004; Choi & Shepherd, 2005). Therefore, the contents of the evaluative legitimacy vary with stakeholders.

This distinction is determined directly by evaluators' objectives of engaging in the selection and shares the same essence of legitimacy judgment mode. The "survival of the fittest" mode addresses the general perception and categorization appropriateness as cognitive legitimacy. Reviewers rely on a set of less rigid and less specific criteria from the institutions (cognitive schema) to accept ventures conforming to the general expectation. The "pick the winner" mode of pragmatic evaluation for legitimacy involves a more elaborate calculation based on a range of instrumental interests (evaluative schema). Therefore, the social comparison process of legitimacy judgments involves multifold input from both ends. The legitimating input contains a range of dimensions under assessment; in the case of entrepreneurial new ventures, the signals include project novelty and team

credibility. The judgment input includes cognitive schema and evaluative schema applied by audiences when they are primed with different goals and contexts of making legitimacy judgments. Hence, as shown in Table 1, the content of both cognitive and evaluative legitimacy contains the opportunity factor and the entrepreneur factor, making up the four components I proposed for legitimacy judgments: cognitive perception of opportunity, cognitive perception of entrepreneurs, evaluative assessment of opportunity, and evaluative assessment of entrepreneurs.

Social Comparison Matrix of Incubators' Legitimacy Judgment for New Ventures	Judgment Inputs from Incubator Screeners	
	Cognitive Schema	Evaluative Schema
Legitimizing Inputs From Entrepreneurial Ventures	Opportunity Entrepreneur	Cognitive Perception of Opportunity Cognitive Perception of Entrepreneur
		Evaluative Assessment of Opportunity Evaluative Assessment of Entrepreneur

TABLE IV-1. NEW VENTURE LEGITIMACY CONTENT FROM THE INCUBATOR ROLE

3. Variables for Legitimacy Judgments

As each of the four variables are the outcomes of comparisons between one aspect of legitimizing input and one type of evaluation schema, it will help to explain the four bases of comparison.

a. Opportunity Characteristics. Explanations of entrepreneurship relying on entrepreneurs' characteristics alone are limited because they ignore

the episodic nature of opportunities (Carroll & Mosakowski, 1987; Gartner, 1990; Eckhardt & Shane, 2003, Davidsson, 2015). When looking at the characteristics of opportunity, it is essential to confine the construct of opportunities. Davidsson (2015) provided a thorough review and suggested three further refined constructs for entrepreneurial opportunities: external enabler, new venture idea, and opportunity confidence. *External enabler* describes the changes at an aggregate level that carves out market opportunities for multiple potential ventures; *opportunity confidence*, in contrast, is the subjective favorable or unfavorable evaluation of the entrepreneurial stimulus; *new venture ideas* are the imagined entities integrating products, services, markets, and the means of connection. The opportunity confidence refers to the subjective evaluation of entrepreneurial stimuli's attractiveness, while external enablers and new venture ideas are entrepreneurial stimuli per se. Since the subjective evaluation concept is similar and highly relevant to legitimacy, I will not include this facet in the manipulation of opportunity to avoid introducing a priming effect to acquiring the legitimacy-judgment results.

In Navis and Glynn's (2011) study of investors' judgments of new ventures based on their entrepreneurial identities, they refined the new venture identity into three levels: founders, ventures, and markets. Through these interrelated layers of meanings, they addressed the multilevel issue (Klein et al., 1994) and provided insights into how an entrepreneurial new venture is constructed in the minds of evaluators (Navis & Glynn, 2011). They

separated market contexts from identity claims around founders and ventures. Market factors work as sources of legitimacy, providing signals for justification in ventures' sense-making. In Davidsson (2015), the external enabler shared the same view as market context, providing background and exogenous forces that affect a series of ventures such as technology availability or change at the society level, policy supports, economic trends, and so forth. These factors, however, as conceptualized by Navis and Glynn (2011), are not part of the venture's distinctive identity. Therefore, opportunity characteristics in this dissertation will refer to the *venture idea* aspect as product uniqueness, ways of actualization, strategic advantages, and other endogenous elements of the opportunities.

Eckhardt and Shane (2003) extended Schumpeter's (1934) categorization of opportunities based on the locus of change to identify three sources of opportunity typology. They proposed that there are opportunities from information asymmetry and opportunities from exogenous shocks, from the supply side and from the demand side, and from productivity-enhancing and rent-seeking. Novelty is the opposite characteristic of isomorphic, the typical way of conforming; on the other hand, being unique and competitively differentiated is a normative requirement for entrepreneurial ventures. This complex role of novelty adds to the "paradox of uniqueness" (Martin et al., 1983; Suddaby et al., 2017).

Older organizations mostly operate under rules and disciplines on a routine basis within their institutions. Entrepreneurial ventures, however, either

need to negotiate their entrance into a certain category to subsume themselves as an appropriate member or seek new space and opportunities by changing and creating new routines (institutional entrepreneurship). That is, to be perceived and recognized as promising ventures, the various opportunities seek to share some discernible components as newness, practicality, and uniqueness, or to resemble or relate to existing prototypes (Baron, 2004).

The novelty essence of entrepreneurship is brought by new means, new ends, and new connections to combine a particular set of means or to discover new matches between means and ends (Kirzner, 1997). These innovative elements, paired with possessions of non-substitutable means, ends, or connecting paths, could promise sustainable competitive advantages to a successful new venture with (Barney, 1986; Aldrich & Foil, 1994). Therefore, opportunities need to be distinctive enough to signal their potential for growth and success and to increase stakeholders' confidence in their viability. This research will use entrepreneurial ventures' novelty to represent the distinct opportunity aspect of a new venture.

b. entrepreneur characteristics. At the start-up or nascent venture stage, entrepreneurs are often the whole organization. Therefore, the credibility of entrepreneurs could largely represent the credibility of the venture. Legitimizing ventures could build their legitimacy by improving credibility. Unger, Rauch, Frese, & Rosenbusch's (2011) meta-analysis found that human capital is significantly related to entrepreneurial success. Many

studies in entrepreneurship have found the influence of a variety of individual characteristics for entrepreneurs, ranging from personality traits (Ardichvili, 2003; Rauch & Frese, 2007) to education (Bates, 1990; Davidsson & Honig, 2003; Ucbasaran, Westhead, & Wright, 2008) to work experiences (Gimeno, Folta, Cooper, & Woo, 1997) and to their status and network positions (Ardichvili et al., 2003; Davidsson & Honig, 2003). At an organizational level, qualities of entrepreneurial teams such as diversity (Beckman, Burton, & O'Reilly, 2007) and functional composition (Higgins & Gulati, 2006) have also been found to relate to entrepreneurship outcomes.

One clarification needs to be made here regarding the distinctions between entrepreneurs' procedural features and behaviors such as narrative strategies and impression management. Though they might be an important capability to acquire resources, it is hard to control or manipulate their execution. The term *entrepreneurial team* here refers only to the static resources and capabilities of an entrepreneurial team, not to the procedural tactics above. Therefore, the credibility of the entrepreneurial teams is mainly described by features such as their education, expertise, experience, and achievements.

c. cognitive schema. The sense-making essence of cognitive legitimation corresponds to the smooth exercise of fast-thinking reasoning of social psychology through cognitive heuristics (Kahneman & Egan, 2011; Kahneman & Shane, 2002). There is also evidence from previous research (Lamont, 2012; Graffin, Boivie, & Carpenter, 2013) and support from social

psychology (Ashmore, Deaux, & McLaughlin-Volpe, 2004), Giorgi & Weber (2015) proposed the effect of comparative references. The cognitive schema refers to the heuristic and reference scales at a general and less rigid level. If there is a mismatch to the schema, meaning a falling out of the expected range of conformity, the stimuli will either fail the legitimation process or trigger further evaluations with more cognitive efforts in a more attentive instrumental analysis.

d. Evaluative schema. When talking about the perceptual process of individual evaluations and judgments, it is critical to take into account the cognitive frames individuals apply to the process, such as propriety judgment outcomes depending on individual evaluators' selection of social norms as benchmarks (Bitektine & Haack, 2015). These cognitive frames are directly determined by the perceptions and purposes of the process and may also be affected by individual preferences of audiences.

Contextual purposes will determine what factors are perception-relevant and what factors are essential for evaluations for the particular cases. Tost's (2011) three dimensions (instrumental, relational, moral) and the notion of norm selection in Bitektine and Haack (2015) addressed the important conditional nature of legitimacy judgment. The selective application of criteria, or even the conception of legitimacy criteria, is conditional on a variety of contextual factors. *Evaluative schema* here means the set of assessment criteria and their relative importance used by BIs in screening new ventures.

Cognitive perception of opportunity novelty depicts to what extent a venture's opportunity novelty matches incubator screeners' heuristic categorizations of a plausible venture. Likewise, the level of fit between information about the venture's team and incubator screeners' general belief about a credible entrepreneurial team will determine the cognitive perception of team credibility. When assessing new ventures carefully, the *evaluative assessment of novelty* refers to how much the distinctiveness of a venture's core idea satisfies the pragmatic expectations of incubator screeners for an ideal entrepreneurial venture. Similarly, incubators have their standards when they evaluate the entrepreneurial team. The evaluative assessment of team credibility represents the extent that the information about the venture's team meets these specific requirements from incubators.

e. Contingent Resource Decisions as Outcome Variables. Incubators supply a series of physical and intangible resources (Lee & Oysteryoung, 2004). Following the distinct goals and selection processes (Bergek & Norrman, 2008), the outcomes will vary accordingly. This construct could potentially reveal the variance in thresholds of legitimacy judgments as well.

General screening for "survival of the fittest" will reach an outcome of cognitive legitimacy, conferring a sense of perceived conformity, and it will also support the selected ventures with acceptance or other lower-level supports. In BIs, lower-level support includes working space, administrative services, and other resources with a relatively generous supply. More rigid scrutinizing for "pick the winner," however, entails a more sophisticated process of

evaluation. Positive evaluation of ventures will increase audiences' confidence in their beliefs in the business, reaching an evaluative legitimacy, and will prompt the commitment of more scarce and valuable resources such as funding, mentorship, significant network leverage, and other services.

The general goal for applying for business incubation is to acquire resource support for developing entrepreneurial new ventures. Resources from new-generation BIs include nearly all necessary resources for an organization except the raw materials and means for producing products or services (Lee & Oysteryoung, 2004; Bruneel & Kim, 2012). To examine the variance in resource outcomes, I will look at the lowest level (entry) and the highest level of support (access to finance). These two types of resources also address the practical necessity for new ventures. For entry to incubators, though it only guarantees working space and basic administrative services, it entails the possibility of accessing more resources and resource holders. Access to funding represents the highest level of recognition and commitment by the incubators and is also one of the most important resources for ventures' early development.

4. Interplay within the Legitimacy Construct

Similar to Tost's (2011) dimensional construct of legitimacy, Packalen (2007) ca attention to the interaction dynamics among different facets of founding teams' characteristics. This study further examined the moderation effects of one type of characteristic on other characteristics' effects on the commercialization results of new technologies. This research also applied this

structure of analysis to the legitimacy construct developed in the previous sections. The presence and quality of entrepreneurial teams' characteristics could moderate the opportunity characteristics' influence on legitimacy judgments and expedite or hinder resource decisions from BIs.

D. Proposition Development

1. Venture Characteristics → Legitimacy

Social norms and rules will influence the cognitive perception stage by providing the references to perceive and categorize the features of entities (Tost, 2011); audiences use these schemas of categorization in their comprehension of entities. Conforming to these norms and rules could potentially achieve recognition and categorization within the schemas. In studies examining cognitive legitimacy's effects on new-venture resource acquisition, most have addressed cognitive legitimacy as the understandability or comprehensibility (Shepherd & Zacharakis, 2003; Choi & Shepherd, 2005; Pollock et al., 2012; Nagy et al., 2013). This comprehensibility requires legitimating entities to make sense within their contexts. Conforming to the institutional expectations will prompt a quick positive categorization.

On this basis, I began with the first of my hypotheses:

H1a: Ventures' project novelty will have a positive effect on cognitive legitimacy judgments.

H1b: Ventures' entrepreneurial team credibility will have a positive effect on cognitive legitimacy judgments.

Evaluative legitimacy focuses on entities' desirability based on the instrumental evaluation (Suchman, 1995; Überbacher, 2014) through more attentive assessments of specific attributes (Petkova et al., 2013) compared to their value systems (Hudson, 2008). Therefore, the evaluative legitimacy is, in essence, a match level to audiences' expectations. Thus, I present my next two hypotheses:

H2a: Ventures' project novelty will have a positive effect on evaluative legitimacy judgments.

H2b: Ventures' entrepreneurial team credibility will have a positive effect on evaluative legitimacy judgments.

2. Legitimacy → Resources

Entrepreneurs leverage legitimacy to acquire resource commitments (Aldrich & Fiol, 1994). Actors send legitimating stimuli in their venture profile to cultivate a positive belief and thus increase the possibility of obtaining resource support (Williamson, 2002; Zimmerman & Zeitz, 2002; Pollock & Gulati, 2007; Nagy et al., 2012). Cognitive legitimacy represents the most subtle but powerful effects of embedment (Suchman, 1995). With the stimuli of conformity and appropriateness, the barriers of comprehension and categorization are easily resolved, thus clearing the way to resources (Baum & Powell, 1995; Bitektine, 2011). My next two hypotheses follow:

H3a: Incubator managers are more likely to make entry decisions when their cognitive legitimacy judgment for the venture is high.

H3b: Incubator managers are more likely to make financial support decisions when their cognitive legitimacy judgment for the venture is high.

With the essence of pragmatically calculated interests (Suchman, 1995), evaluative legitimacy increases stakeholders' confidence in their judgments and decisions despite uncertainty and bounded rationality (Zimmerman & Zeitz, 2002). Evaluation under a specific schema will elaborate on whether the expectations for instrumental interests and social relational needs are satisfied. Based on the evaluation results, audiences will commit resources accordingly. This led to my next two hypotheses:

H4a: Incubator managers are more likely to make entry decisions when their evaluative legitimacy judgment for the venture is high.

H4b: Incubator managers are more likely to make financial support decisions when their evaluative legitimacy judgment for the venture is high.

3. The Effectiveness of Legitimacy Judgment Process

Legitimacy fills the theoretical link between legitimating actors, social-institutional contexts, and ultimate resource outcomes (Ruef & Scott, 1998; Choi & Shepherd, 2005; Pollock et al., 2012). Signals of validity in legitimating entities' characteristics will reach a cognitive judgment of legitimacy and thus help resolve the uncertainty and limited-information problem for resource-commitment decisions for new ventures. To test for the effectiveness of cognitive legitimacy in acquiring resources, I will examine the mediation effect

of legitimacy for venture characteristics' influence on resource outcomes with four more hypotheses:

H5a: Cognitive legitimacy judgments positively mediate the effects of project novelty on the likelihood of managers' incubator entry decision.

H5b: Cognitive legitimacy judgments positively mediate the effects of project novelty on the likelihood of managers' financial support decision.

H5c: Cognitive legitimacy judgments positively mediate the effects of entrepreneurial team credibility on the likelihood of managers' incubator entry decision.

H5d: Cognitive legitimacy judgments positively mediate the effects of entrepreneurial team credibility on the likelihood of managers' financial support decision.

In a "pick the winner" approach, incubators will scrutinize the ventures more rigidly, comparing a series of venture characteristics based on their instrumental schema of evaluation (Bergek & Norrman, 2008). Satisfaction with these pragmatic interests will construct a sense of evaluative legitimacy in audiences' cognition, thus inject more confidence in their decisions of resource commitment. This led to four more hypotheses:

H6a: Evaluative legitimacy judgments positively mediate the effects of project novelty on the likelihood of managers' incubator entry decision.

H6b: Evaluative legitimacy judgments positively mediate the effects of project novelty on the likelihood of managers' financial support decision.

H6c: Evaluative legitimacy judgments positively mediate the effects of entrepreneurial team credibility on the likelihood of managers' incubator entry decision.

H6d: Evaluative legitimacy judgments positively mediate the effects of entrepreneurial team credibility on the likelihood of managers' financial support decision.

4. The Interplay between Legitimacy Factors

Components in a legitimacy construct may not have equal importance. Packalan (2007) talked about the priority and structure variance among the features of the founding team. Similarly, Davidsson (2015) suggested that the effects of opportunity characteristics and the effects of actor characteristics are contingent on each other. In Chandler and Hanks's (1998) work, the background strength of founders could substitute the role of initial financial capital in bringing the ventures to success. Here, I focused on the moderation effects of entrepreneurs' characteristics to opportunity characteristics' influence on legitimacy judgments.

Another reason that contributes to the proposal of the moderation effect is the compound nature of entrepreneurs. Entrepreneurs, when presenting their businesses, legitimize actors as proactive presenters as well as resources by themselves. Relating to the notion that legitimacy involves both

instrumental and relational components (Tyler, 1997), entrepreneurs' characteristics will appeal to both components of legitimacy. As a proactive presenter, actors might have more direct and prominent effects on the process. Procedural tactics such as symbolic management can lead to narrative strategies, network implications (Ebbers, 2014), and other individual efforts having a stronger influence on individuals' perceptions. Thus, I added two more hypotheses:

H7a: The effects of project novelty on incubator managers' resource decisions through cognitive legitimacy judgments will be higher for ventures with high team credibility than for ventures with low credibility teams.

H7b: The effects of project novelty on incubator managers' resource decisions through evaluative legitimacy judgments will be higher for ventures with high team credibility than for ventures with low credibility teams.

Chapter V

Study 1: Qualitative Evidence from the Incubators

A. Data Overview

1. General Background of Incubators in China

As its subjects, this dissertation research used people associated with technology incubators in Chengdu, China. The number of BIs has dramatically increased since 2000; after 2005, the number more than quadrupled (Zhu, 2016). Until 2016, there were 3,255 incubators serving nearly 400,000 entrepreneurial companies and promoting over 2 million employment opportunities and attracting 93 billion investments (MOST, 2017d). The number of graduate enterprises also increased from 39,562 in 2011 to 74,838 at the end of 2015 (MOST, 2017b).

During the period between 2010 and 2015, incubators in China shifted their focus from traditional incubation-facility building toward the cultivation of new industries and entities within and have now become irreplaceable sources of wealth and employment. This five-year period generated more than 100,000 new tech firms, with a total R&D investment of ¥200 billion. By 2015, over 100,000 firms were under incubation—nearly double the number from 2010. These firms had 150,000 patents, providing ¥1.65 million employment opportunities, including 170,000 for new college graduates. By the end of 2015, 74,000 firms had graduated from incubators, and more than 800 of them went into the market through initial public offerings (IPOs). Incubators have become important frontiers for tech-innovative entrepreneurship, and have

been continuously vitalizing economic development (MOST, 2017b). The thriving demand from the market, the government's guidance for the development, and the trend of further globalization all indicate the need for further research on incubators in China.

2. Incubators with Financial Capital Resources

Among the private business incubators, this study excluded those incubators providing only shared space and basic administrative services. During the twelfth five-year period (2010–2015), incubation funds and angel investments both scaled up. Incubation funds reached a total of ¥36.5 billion by 2015, and 26,577 firms under incubation got about ¥84.2 billion total in investments over the five years (MOST, 2017b).

Incubators in China are facing an increasing need to include financial capital and consulting in the resources they provide. This is primarily because financial resources are the most-needed resources applicants are looking for from these private incubators in China (iiMedia, 2016). A second reason is that optimization of incubation financial services is one of the nine major tasks set by the Ministry of Science and Technology (MST), with a target goal of over 50% of the national-level incubators and crowd innovation spaces providing financial capital resources (MOST, 2017b); the MST hoped to satisfy the financial needs of enterprises at different stages by building a multilevel financial service system, with policy incentives intended to boost a foreseeable increase in the number of incubators providing financial resources. Yet another reason is that BIs with these resources often engage in stricter screening

procedures, as they will devote more resources and expect more interactions with the incubates, so an intense evaluation process would better suit this perceptual model.

3. Chengdu's Economic Background and Incubators

Located in the resource-abundant "country of heaven," whose known history extends back over four thousand years, Chengdu has always been the center of western China. It is the third-largest city in population (National Bureau of Statistics, 2017). Recently, Chengdu has also become more and more recognized globally for its livability and economic vitality. Chengdu was ranked as the most livable city in Mainland China by the Asian Development Bank in 2014, and it is the only city in China on CNN's list (at No. 8) of the "17 best cities to visit in 2017" (Hetter, Cripps, Shadbolt, Neild, & Hunter 2017).

The city's role as an emerging economic center became even more pronounced with the increasing government support following the One Belt One Road (OBOR) initiative. It now holds branches from 299 "Fortune 500 companies" (investinchengdu.com, 2016). For the second time ever, the Milken Institute ranked Chengdu at number one in its list of Best-Performing Cities in China of 2015 (Wong & Lin, 2017), a report on China's most successful economies. According to the Milken Institute, Chengdu has a high concentration of foreign direct investment (FDI) and has become a "key manufacturing hub for the world." More importantly, the host city of the 2017 Global Innovation Entrepreneurship Fair is becoming a world-recognized center for entrepreneurship (Li, 2017).

In 2016, the number of enterprises in the Chengdu high-tech industrial development zone ranked number nine among all 146 national-level high-tech industrial zones. The number of employees in those enterprises was the seventh-highest, with their total income ranked the eighth-highest and total exports ranked the seventh-highest (National Bureau of Statistics of China, 2017). Five other high-tech zones are also located in the Chengdu agglomeration and have been generating good performance as well, and with the recently completed intercity high-speed railway, all these are within an hour's reach of Chengdu. More industrial parks, including many internationally cooperative high-tech industrial parks, are under construction with the expansion of the city and the establishment of a modern international urban area. The upgrades of the business environment attract not only investments and opportunities all over the world, but also innovators and entrepreneurs from a variety of industries. Chengdu also has the fifth-largest number of college and university students at school or graduating in China; these young talents in Chengdu have a high propensity for entrepreneurship (National Bureau of Statistics of China, 2017) and are willing to work in new ventures and industries or start their own businesses.

Incubators, as important facilitators and supporters of entrepreneurship, have also been prospering alongside the development of entrepreneurial and innovative ecology in Chengdu. As the focus of innovative- and entrepreneurial-economy development has extended beyond the eastern and

southern coastal region, more incubators have started to cover relatively undeveloped regions (MOST, 2017b).

By the end of 2016, the number of incubation facilities for innovative entrepreneurship in the Sichuan Province reached a total of 570, with nearly 30,000 entities under incubation. Among them are 26 national-level tech incubators, five national university science and technology parks, and 55 nationally registered crowd innovation spaces (MOST, 2017a).

B. Outline of Study 1

1. Research Design

The research for Study 1 started with my leading research questions about what critical characteristics resource holders perceive in an ideal entrepreneurial opportunity during their resource-decision processes. By exploring this question, my study sought to delve into the legitimacy judgment for an entrepreneurial venture in the resource-acquisition context and from the perceivers' perspectives.

Study 1 was designed to lay out a grand picture of the operation of BIs, as well to describe how incubators scrutinize various ventures and allocate their resources among them. The study first gathered information from incubators' self-descriptions and the criteria for venture-recruiting, as stated on their websites, to have a general understanding of the expectations from the field. For the second part, I conducted a set of interviews with professionals in the incubators that contributed to my knowledge of the factors in their

screening criteria and how they applied these criteria in their resource decisions.

2. Qualitative Method

Through the interviews, informants from incubators and entrepreneurship mentors based in the incubators provided insights and clarified their expectations from the demand side for ventures (supply side for resources). The information from archived incubator profiles described the norms at the organizational level. Moreover, this information is also presented publicly in the economic environment by each incubator. While they send out these signals at the organizational level, they are also consciously or unconsciously conforming with and reinforcing the expectations of the industry (Bitektine & Haack, 2015). Therefore, this study has integrated views from multiple perspectives.

At the same time, the publicly available statements and description of criteria such as that in the archived information are also an important source of knowledge provided to ventures and entrepreneurs about the incubators. They fashion the basis on which entrepreneurs form their impressions and understandings from the supply side of ventures (demand side for resources). The integration of multiple perspectives is another reason for and benefit of using qualitative study for this section of research (Strauss & Corbin, 1994, p. 280; Weiss, 1995).

It was also appropriate for this research to make use of qualitative methodology because the empirical studies in this area are relatively

immature, the focal phenomenon is relatively complicated, and the process involves significant subjective factors that are difficult to capture through quantitative methods (Weiss, 1995).

C. Study 1 Results

1. Archival Information

Through the search of websites of well-known incubators in Chengdu, this study looked for statements about entry criteria, including any information involving expectations for or descriptions of ideal ventures.

The search found 38 incubators with clearly stated entry criteria, which I categorized into two big groups: project characteristics and team characteristics. I then subdivided the factors according to the conceptual units emerged from the statements. Table 2 summarizes the archival information about the factors for screening criteria.

There were nine factors mentioned that concerned project characteristics, including industry fit, technology fit, market potential, the size and stage of development, intellectual properties, creativity level, whether they had seed capital, their openness of equity investment, and the ventures' business model. Eight factors summarized the ventures' team characteristics in addition to general statements of "team quality," including technology skills, university education background, management capability, capability match among team members, innovativeness of the team, understanding and cohesiveness within the team, and the teams' passions about the ventures.

Project Factors Mentioned		Team Factors Mentioned	
Industry	34	General	4
Technology	13	Technology Skills	8
Market Potential	11	Education	7
Size/Stage	7	Managerial Capability	6
Property Rights	6	Capability Match	3
Novelty	5	Innovative Capability	3
Having Seed Capital	3	Understanding within Team	2
Openness to Equity Investment	2	Passion	1
Business Model	2	Cohesion within Team	1
Sum	83	Sum	35

TABLE V-1. SUMMARY OF ARCHIVED INFORMATION FROM 38 BUSINESS INCUBATORS

These factors aligned with the levels of a new-venture identity as founders, ventures, and markets (Navis & Glynn, 2011). According to the number of times mentioned in the public statements, the incubators addressed project characteristics (83 times) much more than team characteristics (35 times). The industry factors mentioned in their statements was more about market context and the incubators' industry specialization rather than venture properties about founders and ventures (projects). However, even when I excluded statements about industry fit to concentrate on organizational venture qualities, the project-related criteria are still mentioned 40% more (49 times) than the team-related criteria. The emphasis on projects in these statements sent signals to the public that project quality was more frequently addressed and thus more highly valued by the incubators than team quality. This represented not only the organizational norms but also the institutional norms for the industry, and they provided some guidance for entrepreneurs in

preparing and presenting their ventures and for incubator managers in forming their specific screening standards.

2. Interviews with Field Professionals

The interview sample included one major group of informants: decision makers from BIs and another supplemental group, entrepreneurial mentors, including professional investors and professional advisors from industry or other institutes. The search for interview subjects revealed that these two groups overlap heavily. Therefore, this study has the representation of each industry in the interview sample.

I conducted 18 semi-structured interviews in total, one with a participant involved in venture capital and 17 with participants involved in a variety of BIs (for a descriptive summary of interviewee profiles, see Table 3; for more detailed profiles, see Appendix 2). Out of the 17 participants from BIs, 14 were directors of their incubators and three were managers. Directors are the founders or the executive supervisors of the incubators. Incubator managers are those mid-level managers in charge of the function of venture incubation.

Seven of the directors were also angel investors or venture capitalists at the same time, while eight of the directors also took on mentor roles for other incubators, innovation spaces, or science parks based on their investment of industry experiences. Mentors are professionals in the field with successful experiences in running incubators, or founding and investing in a series of entrepreneurial ventures.

Age	34.33			Gender	Male	11	61.11%
District	Gao Xin	10	55.56%		Female	7	38.89%
	Wen Jiang	2	11.11%	Edu	Bachelor	9	50.00%
	Long Quan	1	5.56%		Master	8	44.44%
	Jin Jiang	1	5.56%		Doctorate	1	5.56%
	Jin Niu	1	5.56%	Job Role	Director	17	94.44%
	Qing Yang	1	5.56%		Mentor	8	44.44%
	Shuang Liu	1	5.56%		Investor	10	55.56%
	Pi Du	1	5.56%		Entity Sponsorship	Private	6
Entity Type	Incubator	14	77.78%	Enterprise		6	33.33%
	Accelerator	3	16.67%	University		2	11.11%
	Venture Capital	1	5.56%	Government		4	22.22%

TABLE V-2. SUMMARY OF RESOURCES FROM INTERVIEWEES' INCUBATORS

a. Source of Participants. For this dissertation, I worked closely with the Chengdu Scientific and Technology Business Incubator Association for data collection. The association was formerly part of the Department of Science and Technology, but separated from the government in 2016 to form a professional association under the new regulations two years ago. However, they still have a very close relationship with the government. This close connection confers on them some authority and many resources, enabling them to have a big impact on and strong networks within the industry.

The influence and resources of the association were very useful for the research in three ways. First, almost all the BIs and innovative spaces in

Chengdu are members of the association. Second, they hold regular activities where they invite lecturers to speak either to employees of the incubators or to early entrepreneurs; these lecturers are often directors or mentors for the business incubators. Third, they are the only organization in West China to hold training camps and certification tests for the Certificate of Incubator/Innovative Space Specialist; in those training camps, they invite professional directors of business incubators with rich experiences and government officials specializing in relevant policies.

I got to know seven (D, G, H, L, N, O, and R) of my interviewees from the activities held by the association, three (A, B, and I) of them from the certificate training camp they held. I found the other eight subjects through my networks and other references.

b. Procedures. I carried out all the interviews myself rather than using professional agents or hired students, for three reasons. First, the interviewees were all distinguished professionals in the industry. Therefore, besides the valuable insights they could provide, I recognized them as important nodes for further access to other incubators and professionals for the Study 2 portion of this research. Conducting the interviews and related conversations personally enabled me to better explain my research to them and obtain their support and endorsements for the later stages of my research. Second, research in business incubators are receiving increasing attention. Meanwhile, the knowledge and understandings of incubator managers have different focuses from the field of research. Moreover, according to my conversations with the

professionals about my perception-based research topic, the interviewees might have been easily tempted to allow the focus to stray off topic to unnecessarily detailed discussions (for my purposes) of their own incubators or to general discussions about the norms and difficulties of the industry. To ask third parties to keep the subjects on track seemed unreasonable, so I therefore I decided to do it myself. My decision was based on the need for efficiency. The number of interviews planned was 15 to 20, which is not a large number, so I believed that my time and effort that would have been required for training other interviewers could be better invested elsewhere in the research.

I acquired the interviewees' consents for audio recording before starting the interviews. After completing the interviews, I uploaded the recordings to a software sound translator called "iflyrec," which transcribed them into text form. The software was developed by iFLYTEK Group and provided the most advanced voice user interface (VUI) technology in Chinese. Using my knowledge of entrepreneurship and BIs, I then organized and translated the transcriptions myself in both Chinese and English.

At the beginning of the interviews, I briefly introduced my research purposes and started with basic questions about their incubators' mission statements, performance indices, resource provision, and allocation situations. Before moving on to further questions, I would first ask them to think of several typical ventures that they were willing to take in to their incubators (without identifying them). Then I would ask them about the characteristics of an

entrepreneurial venture that they identify as an ideal venture at this stage. Then, as guided by my theoretical development, I would ask about their specific expectations for the venture projects and the entrepreneurial teams.

The contrast principle of qualitative research suggests that it is important to learn about what it is *not* when building knowledge (Spradley, 1979, 1980). More importantly, it is also one of my research purposes to look at the negative side of legitimacy and the pressure points of failure in incubator entry. Therefore, I asked the incubator manager and directors to think about several ventures they that they would decline from allowing to enter the incubator, and I followed up with similar questions about disqualifying characteristics in their rejection decisions.

For a higher level of resources, I repeated the above question format for ventures to which they conferred financial support and for ventures that they were willing to accept into their incubators but to which they were not willing to commit financial support (see Interview Questions in Appendix 3).

3. Results

Resources & Allocation

Incubator managers' answers were organized into topics (see Appendix 4). The results of the questions about resource supply confirmed that incubators provide different types of resources in support of entrepreneurial ventures. A summary of the resources provided appears in Table 4. All the incubators provided physical space for the ventures to work in, either free of charge or at a discounted rent. Most of the incubators stated that they had

some sort of resource- docking function to connect to broader suppliers of resources for the ventures. Only a few of the incubators had direct investment funds or industry resources.

A	physical space; consulting and analysis aids; Office 365 cloud service; technique consultation; market support in sales; direct investment; investment help and organization
B	physical space; help in their operation; accounting and tax and law; consulting (business modes, product structure); help in investment progress; resources pushing them into market growth
C	capital (direct investment, investor alliance); market (docking with leading companies in the market); transformation of tech achievements, tech supports; early consulting, policy solutions
D	policy consulting, training, accounting and law, finance (direct investment and loans)
E	investment; help with policy benefits; consulting; resource match (market, capital, etc.)
F	resource match; problem-solving; property, accounting, tax, law; mentoring; marketing; finance
G	physical space, utilities, property management, commute, meals, apartment, policy application, market docking, finance channels; direct investment
H	policy application; training service; mentor; coaching; recommendation for presentation opportunities; seed funds; loan endorsement
I	service; training; resource docking
J	funds; resource docking; market access
K	funds, investments; IPO training; mentor board; national-wide resources; business modes polishing
L	space renting; consulting; investments
M	services and resources; space, policy, investment activities; strategy, business modes, market docking
N	space; on-line markets, research, and industry; resource docking
O	government policy (endorsements, proof, application); life package; training camp; finance docking; market test; media resources; talents attraction; brand aggregation effects; eco-chain; CEO coaching; interaction with peers, and industry.
P	space; allowances; skill building; training; resources; project landing; sales & market; government resources; community, communication within industry; investor alliance; mentoring
Q	free space; service package; free cloud service; mentoring; sales; big data guide for market; crowdfunding

TABLE V-3. SUMMARY OF RESOURCES FROM INTERVIEWEES' INCUBATORS

These resources varied not only in their categories, but also in their availability. Five of the directors of the incubators directly stated that they had clear rankings of their resources. Most of the directors indicated directly or indirectly that there were at least two levels of resources, as stated by director G and I.

G: Resources could be divided into two types, basic physical resources, and specialized services.'

I: We have physical resources, including space, property, administration, activities; and soft resources like policy, law and accounting service, help with technology, networks, industry, and investments.

Most of the directors noted that their resources were limited relative to the demand from the ventures. Therefore, they had their own priorities when assigning the limited resources.

A: The provision of resources is quite intense in incubators.

D: After all, our energy is limited. There might be 7 or 8 ventures waiting. If we let one in, we have to reject the others.

G: The general principle is that our resources, time, and energy are all limited. We can only spend our limited resources and energy on the projects that worth our attention.

Accordingly, 11 directors stated that they had different ranks when they were allocating resources among the ventures in their incubators. Moreover, the ventures were not receiving equal resource supports from the incubators. The uneven allocation of resources was frequently addressed as a "20–80" rule, where most resources were supplied to a small number of the best

ventures. Therefore, there were more complex screening criteria according to different ranks of resources.

- A: So usually we apply the principle of 20-80, meaning, 80% of the resources will be invested to 20% of the teams.
- H: We will pick around 20 ventures as our focal group. Since we have a limited number of project managers, each cannot incubate too many ventures. The focal group means ventures in it will receive more visits from us, we'll have a more thorough understanding of them, and there will be more frequent opportunities for resource docking.
- J: The ventures could not expect to get everything once they enter. I could not give equal attention to all the ventures in the incubator, even considering the different degrees of match, it is not possible. There could be five ventures sharing 5% of our energy, while there might be one team receiving 30% to 50% of our attention. It all depends on specific situations.
- O: We will have a basic differentiation upon their entering of our incubator. We will put them in rough ranks, in different tracks, and under the popular themes in the market. And according to the 20-80 principle, if you are high-quality ventures, we will naturally lean to you with more resources, all the resources. For ordinary ventures, we will provide them with space and basic services; we will help with their difficulties. But we could offer less proactive efforts to them; we could not cover every aspect.

Complexity and Subjectivity of Venture-Screening Criteria

The screening criteria varied with each managers' personal understanding as well as the nature of the business incubator. Different backgrounds and sponsorship of incubators (Campbell & Allen, 1987) and subjective preferences from the individual level processes (Phan et al., 2005) add to the complexity of the venture-screening process. What is more, there is little data available on track records to rely on in reviewing early stage ventures. When answering my questions about screening criteria, most of the

directors highlighted the difficulties and challenges of reviewing new ventures, pointing out that they make judgments mostly with the personal heuristics developed within the industry and that they often seek help from other professionals with different expertise.

B: It relies a lot on facts and data in evaluating ventures. However, most of the time, we are still blind in terms of data and facts. We are exploring a huge object in the dark; our judgments will only be based on the parts we were able to reach.

There are some features that we can feel it out based on our experiences, such as their presentation and their prior experiences. All combined, there will be an invisible but very sensitive score.

C: The structure of investment evaluation is very complicated, including all kinds of balancing and compromises. I cannot assume an ideal format of a good venture. There are all kinds of ventures, some of them have great talents, some have innovative technologies, some others perform well on other aspects. There are no single specific criteria out there.

E: The judgment about whether the venture is viable or not is based on my personal knowledge and experiences developed along the years I worked in those related areas.

G: It will require professional teams with specialized knowledge in reviewing ventures for investment. The standards are quite strict since the industries and fields of the ventures vary from one another.

O: We need to apply different standards for ventures in different industries. There might never be a single way to standardize it. Moreover, for nascent ventures, everything has just started, we cannot estimate their chance of success, nor the potential of their opportunity. Sometimes, for a red sea market, ventures are still entering. But they might have their unique point. Thus there's still opportunities for them. On the other hand, even for a project in a blue sea market, if your team could not support what you are doing, there's no chance for you.

Interviewer A provided a useful metaphor to explain the mechanism of venture screening:

A: I think there is some logic in the black box of judgment. This logic, in fact, is the same as artificial intelligence. It also includes two components: algorithms and data. The algorithm means that we have several levels of mechanisms. For example, for evaluation of projects, there will be a framework of more detailed methods to guide the application of different factors. Judging the founders also need to refer to a set of dimensions.

After the algorithm comes out, the other piece is the data. As you have seen more and more projects, especially as you have seen more projects in the certain industry, the deeper your understanding of this industry, the deeper your understanding of human nature, and the deeper your understanding of this society. In this way, the results from the model will be more accurate. In the process of applying the model based on the data, we will modify the model and its algorithm. In the end, it will form a loop in your head. It will become a feeling that is more similar to intuition, a black box for data output.

For example, if our people take one look at a project, they will know at once that we do not want it; then they see another project, with one look, they will reject it. Or, there will be a situation where a project has been reviewed for several times, and we will say "Let's talk to them." This is because the data entered cannot generate solid output.

The algorithm for the "black box" is exactly what I thought I would find with this study. In the next part, I will summarize the factors mentioned in the interviewees' answers to my questions about the characteristics of qualified and unqualified ventures for incubator entry and further financial investment.

Venture Characteristics for Incubator Entry Decisions

Many incubator directors confirmed our proposition of opportunity and people as the dual components of legitimacy content for new ventures.

A: 'No more than three things, the project, the people, and the match with us.'

F: Among the factors we consider, the first thing is their project, and the other aspect is the teams.

I: I usually use the heuristics developed as a professional investor. I will look at their core technology, their intellectual properties, the stability of the future market, and a matching background of the founding team.

M: Whether a venture is viable depends on many factors. First of all, the people, the founder; secondly, the team; then follow the actual business and enterprise.

N: When a venture come to us, we will review them from two aspects, firstly the project itself, and secondly the team.

Q: Yes, we have our own system of selecting projects. We will first look at the team development. Most of them are tech ventures, right? So a developed team would surely have some research or tech development members as well as operational specialists. Secondly, we need to review the progress of their product. Is their project still an idea, or they have actionable plans underway?

More than half the directors pointed out industry fit as a prerequisite for venture entry either because of guidance from the government or from their own industry backgrounds. Of the 17 incubator managers, 15 mentioned project features for the ventures, while 14 emphasized team qualities. The most addressed project feature was future market potential and the chance of growth. Besides these more exogenous features and business models, core competence and novelty were most often mentioned as the key factors. These responses confirmed that novelty and viability are the essential features of entrepreneurship. These factors are also preconditions that incubators look for in venture candidates since the overall survival rate and venture growth are also key parameters for incubators.

C: To judge the techniques' advanced degree, we will see that whether they could add something to the current market. It needs to have some novelty, some comparable competence.

- E: Essentially, most ventures' teams are okay, projects are viable; it would be best if they have some novelty or some scientific and technology content.
- G: We hope that their projects have certain technical content, it is best to bring a little technical and a little barrier. This is better.
- M: We need to evaluate whether their ideas could actually land into products and enterprises, and whether their ideas and business models are relatively good and innovative.

For team qualities, matching industry backgrounds, entrepreneurial experience, and the completeness of the team were emphasized most, followed by the teams' technological skills. Incubator managers also pointed out the importance of the team-maturity stage (whether they had gone through the beginning stage of storming to reach a more harmonious and efficient way of cooperation), internal cohesiveness, and persistent passion in their evaluations. Two typical statements about team criteria were provided by manager A and N.

- A: Come back to talk about people, meaning their backgrounds, and whether their ability match with their project. The match of the ability includes the execution of project landing; their vision and whether their planning for future operation and development is reliable; whether the composition of their team has any defects, and whether they have remedies if their team is not ideal; and their equity structure within the team.
- N: To be honest, most early investments are investing in people. It is very rare for a very good idea to attract capital by itself; mostly, we still invest in people.

For people, we have a few dimensions in our review. Firstly, do they have industry experiences? Ideally, we would like entrepreneurs coming from BAT, or from big enterprises like Huawei. Having worked in those big companies are in itself endorsements for their abilities. They will have better industry knowledge and resources as well. The second dimension would be entrepreneurs coming back from abroad.

They have acquired better vision, ideas, and theories applicable to China market.

And the third type is those we love best, the serial entrepreneurs. They understand what they will need to suffer during the process, what problems they might face and how they could be avoided. Practice leads to real knowledge.

In addition to listing the factors, many managers also talked about the relative importance among the factors and their relationships. Four managers directly pointed out that they look at the match between the project and the team.

C: And their experience and ability have to match with the project they are working on.

M: their qualities and abilities match with the project; thus they could achieve what they planned for.

Two managers named project qualities as more important than team qualities, either because of an exceptionally good project or out of concern that there might be inflated information about the founders. In contrast, six managers spoke of the entrepreneurial teams as the most important factor in their evaluation.

B: 'The essence of early ventures is their founders. This is a one-vote veto. Even if the opportunity is very good, if the founder is not ideal, then it won't work.'

H: There are also those that do not fully meet these requirements, such as a venture with an especially strong team.

L: These visible analysis items are just tactics. They are not as important as the deep-rooted values and thoughts of the people. If the founder is not good, I will not consider. Other things we can work on it and try to fix it, but if the problem lies in the person, sorry, there's nothing I can do. I won't work with them.

M: Especially for early-stage ventures, we pay much more attention to the people for sure. Since they have no stable revenues, no formal financial statements, even no completed or marketable products, you have no reliable information except for entrepreneurs themselves.

For characteristics of ventures rejected by incubators, 14 managers addressed project reasons (wrong industry directions, traditional businesses with no growth potential, no core competence, etc.), while 15 managers ascribed their rejection decisions to problems with the entrepreneurs or their teams (lack of experience, incomplete team, discredited records, no great leaders, etc.). Four of them also pointed to mismatches between venture projects and teams as a cause for rejection.

D: We will feel that the team's skill and resources could not support and actualize their business plan. Products are always just products if they could not actually get it to sell in the market.

G: We feel that these people cannot do these things. The project they work on is irrelevant to their previous experiences. We will reject them when the project and the team are both defective, or when they have a very poor match.

O: the third type is that the team of the venture could not support the project. The team has different backgrounds from the project they are working on. It's not compatible in nature.

P: that is to say, their executive ability does not match with what they wanted to do, their team could not actualize their business plan.

Venture Characteristics for Financial-Support Decisions

During the second part of interview, which included questions about ventures qualifying incubators' financial supports, some participants became less patient and felt that the questions were somewhat redundant. As a result, the managers talked less in this part in general.

Fifteen of the managers identified the nature of the projects as reasons for not committing further financial support to some ventures. However, several of the managers were just answering in general; those who gave more detailed answers revealed that the real issue in such cases was market growth potential. Ten managers named team factors as a main reason for their rejections, with the most mentioned being team completeness, industry background, and experiences. Those two sets of criteria are flexible. One manager mentioned that an especially good project could affect their desire for high standards for the team. Simultaneously, two other managers pointed out team that problems could outweigh the quality of the projects.

L: If I found a really good founder, I will definitely invest. It's okay their projects are not good. I can find good projects for them, I can help fix the resource of technical problems. I will be more than happy to help.

N: To be honest, most early investments are investing in people. It's very rare for a very good idea to attract capital by itself; mostly, we still invest in people.

As for the factors they identified as reasons for rejecting ventures' requests for financial support, eleven managers said "project qualities" and ten managers said "team problems." Again, detailed answers revealed that uncertain market value and growth were the main underlying reasons. Team problems included incomplete team composition, an early-stage team with less cohesive and inefficient cooperation, and a lack of consistent passion. Four directors also mentioned dishonesty and problematic credit records as critical reasons for their rejection decisions.

4. Suggested Adjustments to Vignette Survey Study

Among the interviewed incubator managers, many of them mentioned that they were responsible for reviewing ventures themselves without the help of lower-level managers. Either the managers and directors of the incubators took sole responsibility in this job or the venture profiles were forwarded to professional mentors in the field. One of the managers provided a good explanation for the phenomenon.

J: Most of the projects are reviewed by me alone. This is actually a unique feature of business incubators. The professional ability of the incubator, and its resources, in fact, is generally in the hands of the person founding or supervising the incubator, all in his/her hands. Then because it is also a relatively open position, the director needs to integrate and integrate many resources, put them into the incubator, and then distribute them to the ventures. The director of an incubator is a core point. The quality of the incubator's operations relies heavily on personal judgment, which resides primarily in the director.

Therefore, instead of drawing on an average of five employees per incubator from 50 incubators for Study 2, I was able to determine that a better-targeted respondent group would be the directors or managers rather than lower-rank employees. This told me that to acquire enough respondents, I would need to send surveys to around 100 incubators and related organizations.

Having reviewed the business profiles I designed, they also pointed out that the low-credibility team's qualities were not low enough, and the novelty difference is not visible enough. I followed their suggestion to change the education level of low-credibility teams from an average of Bachelor degree to below college. According to their suggestion, I also added an experts'

feedback card in the venture profile, in which professionals in the industry clearly commented on the advanced level of their technologies and innovativeness in the field.

The third suggestion from the managers I interviewed was that for the vignette study to capture the lower bounds of incubators' judgments for new-venture legitimacy, it would be more effective to examine a resource decision involving the upper bounds of incubators' help. They recommended a question that identified managers' willingness to offer further discounts to the entering ventures since operational space and profits are the pain points for most BIs, regardless of their sponsorship. Therefore, I added a question to the resource-decision section of the survey: "Assuming that your incubators have the requiring resources, would you accept the venture's request for 100 square meters of office space, 500 square meters of storage space, and a 20% discount for other fees?"

CHAPTER VI

STUDY 2: A VIGNETTE STUDY IN THE INDUSTRY

A. Outline of Study 2

The second study of vignette surveys was designed to examine incubator managers' legitimacy judgments for different aspects of venture information and how these judgments affected their resource decisions. The study was designed as a semi-experiment in which I provided a business profile to the managers that resembled a business plan that they might typically receive for review, so their processes of review and decision making would be similar to those they followed in their daily work of venture screening.

The vignette surveys were randomly assigned to the respondents. After filling out some basic information about themselves, the respondents would review a venture profile, answer some assessment questions, and make decisions about their resource commitments based on their review. The survey asked resource-decision questions about different levels of resources to include the effect of their legitimacy-judgment purposes and outcomes. To capture the differences between cognitive legitimacy judgments (CLJs) and evaluative legitimacy judgments (ELJs), the instructions on the vignette first asked the respondents to answer a series of CLJ-measurement questions after a quick scan of the venture profile, and then, for the second round, to read the profile more carefully and answer the questions capturing their ELJ.

The participants for Study 2 were 170 managers from 111 different incubators in Chengdu, China. They answered the surveys from August to

October in 2018. Most of the surveys (140) were collected through an online survey platform (sojump.com); the other 30 responses were hard copies.

1. Procedure

For this vignette study, I created a fictitious new venture to provide legitimating stimuli typical of what would be sent by new ventures through their business profiles to incubators for the initial screening process. I created different versions of the profile, manipulating it along two critical dimensions of an entrepreneurial venture: the opportunity (project) and the entrepreneur (team), with high and low levels; the two-by-two combination produced a total of four versions.

High Team Credibility	Low Project Novelty X High Team Credibility <i>(Elite Incremental)</i>	High Project Novelty X High Team Credibility <i>(Elite Pioneer)</i>
	Low Project Novelty X Low Team Credibility <i>(Novice Incremental)</i>	High Project Novelty X Low Team Credibility <i>(Novice Pioneer)</i>
Low Team Credibility	Low Project Novelty	High Project Novelty

TABLE VI-1. VIGNETTE DESIGN

The vignette described a venture in the backdrop of the trend of the “sharing economy” (e.g., peer-to-peer temporary access to goods or services, redistribution markets, collaborative lifestyles), which is surging worldwide, including in China. The venture profiles varied in terms of project novelty and

team credibility. Since there were multiple factors in each dimension, and since the strength levels for each factor varied, I used the general number and intensity of validity cues (Tost, 2011; Bitektine & Haack, 2015) to differentiate high and low levels of the characteristics. For example, positive information about technology novelty (innovation aspect in project characteristics) was considered a positive stimulus; having no team member with a business education background (education in team characteristics) was considered a negative stimulus. High and low levels of project novelty and team credibility were designed to represent varying qualities in the ventures' opportunity characteristics and entrepreneur characteristics, respectively.

2. Survey Sample

As was substantiated in the interview answers in Study 1, it is the job of the incubator managers responsible for screening, reviewing, and selecting ventures for nurturing to interact frequently with venture applications and entrepreneurs and to form and apply their CLJ procedures. In many BIs, many of the managers are also directors, since business recruiting is the key function of an incubator. It is common for BIs to invite outside entrepreneurial mentors or investors to offer professional advice on the attractiveness and feasibility of ventures. These facts were confirmed by the interview results. Naturally, entrepreneurial mentors, in the incubator context, have their own understandings and perceptions according to their experiences of entering and interacting with incubators. Therefore, my interviews with incubator screening managers and entrepreneurial mentors represented the views of

these types of resource holders about their perceptions of legitimate ventures acquiring different levels of resources.

For Study 2, I selected incubator managers with the active functional responsibility of reviewing and selecting entrepreneurial ventures who also had at least one year of experience in that role. The respondents were from a total number of 111 incubators in Chengdu—over 50% of all the incubators there in numbers. The incubators were drawn from multiple types of sponsorships and industries, and thus they represented a variety of business models and industrial norms.

As with Study 1, I accessed the survey subjects through the Chengdu Scientific and Technology Business Incubator Association. I had built a close relationship with the association, attended many of their activities, and had even studied and been certified in their training camp. More importantly, I had cooperated with them on some upcoming field studies, so they were more likely to help me with my research. I explained my research to them in detail, and also shared my findings from the interviews. They were able to target incubators with multiple levels of resources and, more importantly, the persons specialized in reviewing entrepreneurial ventures. The Association sent my online surveys to the directors and relevant managers of their member incubators and helped hand out the paper surveys to professionals at the activities and events they held. They obtained 16 hard-copy responses and around 100 online responses in this way. They also helped send out surveys

either through their direct contacts or by referring me to some target subjects so I could contact them directly.

B. Measurements

The normative schema used was the set of reference scales selected and applied by audiences in legitimacy judgments. I employed the general legitimacy construct for new ventures, which covers the basic characteristics of opportunities and entrepreneur teams. Further refining the components, as I addressed the contingency nature of the process, was more involved, as there was no universal scale of references. Therefore, I used the dominant factors of project novelty and team credibility from the two components (opportunities and entrepreneur teams) as a rudimentary, first-pass attempt to capture a snapshot of the dynamic process.

Since the dimensions would be ultimately perceived and used in the perception process, I also validated the actual application and stability of these factors with manipulation check questions in both the pilot version and the main version of Study 2: I asked the audiences to identify judgment criteria before reading the venture profile, again after the first round of general assessment, and once more after the second round of intensive evaluation. The manipulation levels of high (1) and low (0) were the categorical input of my study. By using the survey-experiment form *vignette study*, I was better able to ensure higher internal validity in proposing causal relationships in the process of legitimacy judgments and resource decisions. The simulation in

forms of a real practice and the high representation of BIs in the city also conferred generalizability for this dissertation research.

Through qualitative analysis of the legitimacy construct, from industry reports and the incubators' self-reports at organizational and institutional levels, I have verified the significance of an opportunity's novelty and the entrepreneurs' credibility during the process of incubator screening. At the individual level, feedback from the interviews in Study 1 provided me with the specific information that incubator managers valued in a good project or a qualified team. For example, "advanced technology level" was frequently mentioned by the interviewees talking about project quality, with some also emphasizing "intellectual properties" and the "opinions of industry experts." The "founder teams' industry background and matching skills" were the most often cited as measures of an entrepreneurial team's quality. Some interviewees highlighted the founders' entrepreneurial experience as well. This feedback confirmed the direction of my original vignette design and supplemented it with additional and more refined details (the complete venture profile in Appendix 5).

1. Project Novelty

In the vignette study, the general business ideas of the four versions of the business profile stayed the same to allow me to control for industrial and market factors as well as general organizational characteristics such as age, size, and development stage. The only features I manipulated were the level of product uniqueness, market potential, technology advancement level, and

relative advantages in ways of actualization. Table 6 below shows a summary of the comparative information for high and low levels of project novelty.

		Low	High
Project Novelty	Core Idea	<ul style="list-style-type: none"> A sharing space for small restaurants serving CBDs with launching supports, operational services, and brand development. 	<ul style="list-style-type: none"> More aggressive product with independent order system and delivery platforms as including pop-up stores for popular local restaurants.
	Market	<ul style="list-style-type: none"> A complementary add-on to the existing ordering and delivery platforms in the market. 	<ul style="list-style-type: none"> An independent system and exclusive supply of popular new restaurants is a radical service with growth potential.
	Expert Opinions	<ul style="list-style-type: none"> The GPS based data-mining technology for order tracking and delivery routes is commonly used in the industry. 	<ul style="list-style-type: none"> The GPS based data-mining technology for order tracking and delivery routes is unique and advanced in the industry.
	Competition	<ul style="list-style-type: none"> Branding service, lower rate from scale effect, and ability of business attraction and establishing as a local player. 	<ul style="list-style-type: none"> The independent order system and supply of popular popup restaurants are unique in the current competition.

TABLE VI-2. PROJECT NOVELTY MANIPULATION IN VIGNETTES

The low-novelty project described a more incremental venture with mediocre supporting technologies and some complementary resources and functions to the current market. The high-novelty project, however, showed a pioneer venture with leading technology and unique functions; the exclusive supply of popup restaurants would enable the pioneer venture to tap into new market potential, or to at least extend the current market, and their novel technology would bring them competitive advantages in integrating incumbent businesses.

In the low-novelty version of the venture profile, the project idea, market potential, and technology advancement and competitive advantages were all described as low. In the high-novelty version, all four of these features were described as being at a much higher level. After manipulation checks, I used the low-high level of these features as the independent variable of *project novelty* (0,1).

2. Team Credibility

Alvarez and Busenitz (2001) called attention to the individual-specific resources of entrepreneurs and their effects in recognizing and developing entrepreneurial opportunities. Moreover, they included the cognitive capabilities of entrepreneurs, which are significant elements for entrepreneurs that are patently distinct from general managerial and human capabilities and resources.

Since the more subjective factors like personality traits (Baron, 1998; Ardichvili et al., 2003) not generally discernible in the application profiles sent to BIs, I included only the commonly observable indicators of entrepreneurs' characteristics in my study. These are briefly defined below and are shown in Table 7.

a. Education: Education is one widely addressed factor included in the entrepreneurs' backgrounds (Bates, 1990; Davidsson & Honig, 2003; Ucbasaran et al., 2008). I used "level of education" (Davidsson & Honig, 2003) instead of "years of education" as a general indicator, and also included business-related majors as a distinct factor.

b. Previous work experience: Another major component typically included in entrepreneurs' description of their general and professional knowledge is their previous work experience (Gimeno et al., 1997; Ucbasaran et al., 2008). More specifically, I included entrepreneurial experience, tech-professional experience, and managerial experience in the profiles. I used prior employment affiliation with a sense of both "years of experience" and "level of relevance." I implied the entrepreneurs' social networks and affiliations within the education and experience information (Higgins & Gulati, 2006).

c. Achievements: As a normative procedure for the participants of this study, I included entrepreneurs' significant achievements from previous experience in the profiles.

d. Aggregate and diversity: Since entrepreneurs more than often operate in teams, I also addressed whether the entrepreneurs could be described as more heterogeneous or homogenous group (Beckman et al., 2007).

In the profiles, the founders of the teams with high credibility all had master's degrees in related areas and senior experiences in the corresponding fields. The CEO and CTO also had successful entrepreneurial experiences, while the CMO had distinguished achievements in the appropriate field. The less credible team had one student still attending university, one person with a two-year college degree, and one person with a

bachelor’s degree. The founders had limited industry experiences, and only their CEO had any entrepreneurial experience. The variable of *team credibility* was represented with (0, 1) for low and high level of entrepreneurial teams as assigned through the business profiles.

		Low	High
Team Credibility	Education Background	<ul style="list-style-type: none"> CEO: College degree in hotel management. CMO: Bachelor degree in marketing. CTO: Senior university student in information system management. 	<ul style="list-style-type: none"> CEO: Bachelor degree in Management; Master degree from Canada in Economics. CMO: Bachelor degree and master degree in Marketing. CTO: Bachelor degree in Information system management; Master degree in software development.
	Industry Experience	<ul style="list-style-type: none"> CEO: Having started a restaurant while at college. CMO: Sales manager of M Group Delivery in City C. CTO: Intern of the operation technology department of M Group Delivery. 	<ul style="list-style-type: none"> CEO: UM Capital investment manager focusing on consumption fields. CMO: Sales supervisor for M Group Delivery in City C. Rich local resources. CTO: Four years of Internet operation experiences in M Group Delivery. Leading a team of data mining, developers, and tech support.
	Entrepreneurial Experience or Achievements	<ul style="list-style-type: none"> CEO: Created a restaurant brand with over ten chain stores. 	<ul style="list-style-type: none"> CEO: Started a restaurant while in University. Cofounders for GO HOME Delivery, reaching Pre A. CMO: Having attracted over 200 retailers in a month with a ten-person team in City C. CTO: Cofounding e-Baking with three physical stores and 300K followers online.

TABLE VI-3. TEAM CREDIBILITY MANIPULATION IN VIGNETTES

3. Cognitive and Evaluative Legitimacy

a. Cognitive legitimacy. For cognitive legitimacy, I used Pollack et al.'s (2012) measurement scale, with one item added from Choi & Shepherd (2005). Pollack and colleagues defined cognitive legitimacy as the passive judgments for understandability, differing from the active evaluation of desirability (Shepherd & Zacharakis, 2003) or regulative alignment. Their original five items were developed from theoretical works for new-venture legitimacy. After confirmatory factor analysis (CFA) and exploratory factor analysis (EFA) tests, two underperforming items were deleted. The three remaining items had good construct validity with significant loading. Pollack et al. (2012) studied the mediation role of CLJs for the relationship between entrepreneurs' preparedness behaviors and the investors' funding amount with the data of television pitches. Thus, they shared the same concept of cognitive legitimacy as well as similar research context and purposes as my study. Therefore, their items of cognitive legitimacy were also appropriate for my study.

The construct had three items on a 5-point Likert scale. Respondents rated these items from strongly disagree (1) to strongly agree (5).

b. Evaluative legitimacy. I based the evaluative legitimacy measurement on Choi and Shepherd's (2005) dimensions of newness (age, cognitive legitimacy, product/service reliability, organizational accountability, affective congruence, strategic flexibility). They used this construct to measure stakeholders' perceptions of an organization to predict their differences in

supplying supports. In this sense, their construct describes the desirability nature of evaluative legitimacy. Moreover, this model of newness was developed to integrate a new organization's positive and negative characteristics in addressing adaptation challenge through solving entrepreneurial, engineering, and managerial problems (Miles, Snow, & Meyer, 1978). These dimensions encompassed most opportunity and entrepreneur characteristics for new ventures. Hence, the application of this construct suited the legitimacy judgment model in the business incubator context.

I made minor modifications in wording to accommodate this study. First, I excluded the age dimension, since the ages for ventures applying to incubators have no significant difference and I controlled for it in the vignette. More importantly, venture age is an objective venture characteristic rather than a perceptual outcome by audiences, so venture age could not serve as a constituent of legitimacy here. Choi and Shepherd's (2005) cognitive legitimacy item is a more straightforward evaluation targeted at comprehensibility of the business idea compared to Pollack et al.'s (2012) item for cognitive legitimacy. I removed this item from the scale for evaluative legitimacy judgment (ELJ) as evaluative legitimacy focuses more on a pragmatic assessment of desirability. Instead, I added this item to the scale of cognitive legitimacy judgment (CLJ) to get a more comprehensive capture of the content. For organizational accountability, though audiences could hardly derive the quality of organizations' documentation directly from the given profile, their perceptions about the venture's managerial capability (Miles et al.,

1978) from learning about the entrepreneurs' experience and education could reflect their beliefs in efficient operations in the future; therefore, I kept the entire accountability item for assessing audiences' evaluative legitimacy judgments. Affective congruence was not a suitable item for my context since it was highly related to the industry preferences suggested in Study 1. I expected that the diverse composition and high representation in my sample would cancel out the effects of industry preference, so I deleted this item to avoid noise in the results. The remaining items for the ELJ were from Choi and Shepherd (2005).

Product/service reliability. Response scales ranged from high (you expect the organization will repeatedly produce its products with very high consistency in product quality around an average level of "good" quality) to low (you expect the organization will repeatedly produce its products with very low consistency in product quality around an average level of "good" quality).

Organizational accountability. Response scales ranged from high (you expect the organization will be highly organized in terms of documenting how resources are used and highly organized in its organizational decisions, rules, and actions) to low (you expect the organization will be highly disorganized in terms of documenting how resources are used and highly disorganized in its organizational decisions, rules, and actions).

Strategic flexibility. Response scales ranged from high (you expect the organization has a very high capacity to assimilate new information about changes in environments [e.g., technology, customer] to create new knowledge) to low (you expect the organization has a very low capacity to assimilate new information about changes in environments [e.g., technology, customer] to create new knowledge).

(Choi & Shepherd, 2005)

In the original scale, audiences rated the five dimensions using a 7-point Likert scale from very unlikely (1) to very likely (7). To keep the same

scale format, I adjusted this into 5-point Liberty Scale, still ranging from very unlikely (1) to very likely (5).

4. Resource Decisions

The study used a 5-point Likert scale to assess the likelihood of (1) accepting the new venture into the incubator and (2) introducing the new venture to funding access. Following the normal procedure of entrance, I captured the likelihood of acceptance with a direct survey question of initial acceptance and a question about the evaluators' urgency of moving on to the next step (interview). Based on the sources of financial capital, financial support decisions were surveyed through the likelihood of recommendation to financial investment departments and alliances and through their interest in making direct equity investments. As was suggested in Study 1, I also added questions about personal follow-up interests and the likelihood of providing additional discounts to capture the lower and higher bounds of incubator commitments.

C. Study 2 Results

1. Pilot Study

Descriptive Data of Pilot Sample Based on Versions

	Version I	Version II	Version III	Version IV	Sample Total
Sample Size	8 26.67%	7 23.33%	8 26.67%	7 23.33%	30 100%
Age	36.50	30.57	35.13	37.86	35.07
Male	5 62.5%	5 71.43%	6 75%	5 71.43%	21 70%
Female	3 37.5%	2 29.57%	2 25%	2 29.57%	9 30%
College and under	1 12.5%	0 0%	0 0%	1 14.33%	2 6.67%
Bachelor	4 50%	6 85.7%	4 50%	3 42.86%	17 56.67%
Master	2 15%	1 14.3%	3 37.5%	3 42.86%	9 30.00%
Doctorate	1 12.5%	0 0%	1 12.5%	0 2.33%	2 6.67%
Years in current BI	5	4.28	4.88	4.29	4.63
Years in fields	8.13	1.57	4.13	8.86	5.70
BI director	4 50%	3 42.86%	3 37.5%	2 28.57%	12 40%
Project Manager	1 12.5%	2 28.57%	1 12.5%	2 28.57%	6 20%
BI Mentor	3 37.5%	2 28.57%	4 50%	3 42.86%	12 40%

TABLE VI-4. PILOT SAMPLE RESPONDENTS SUMMARY

I carried out a pilot study to test for the manipulation effectiveness of my vignettes and to get feedback on the design of the survey. Twelve of the respondents had also been Study 1 interviewees; the other 18 were employees from incubators. I carried out these surveys in person to accrue questions, advice, and suggestions they might have during the process. Before conducting the survey, I explained the design and purposes of the study. Because of the face-to-face format, all responses from pilot studies are valid. The manipulation check questions were composed of direct questions about respondents' perceptions and questions taken from questionnaires evaluating the innovation aspect and the team aspect of an entrepreneurial opportunity. For project novelty, I asked them to rate (agree/disagree) this

statement: “From the review, this venture project’s business idea meets your expectation for a promising entrepreneurial opportunity.” The second measurement question was adapted from the item used to detect differences in perceptions of novelty levels of creative products: “The project is unusual or infrequently seen in a universe of projects from the same industry” (Besemer, 1998). Similarly, to capture respondents’ perception of team credibility, I used this statement for direct measurement: “From the review, this venture’s entrepreneurial team meets your expectations for a promising entrepreneurial opportunity.” I adapted two items for educational capability and industry related competence from Shepherd’s (1999) study of venture capitalists’ assessment of new venture survival: “The entrepreneurial team has considerable resources and skills from their education” and “The entrepreneurial team has considerable experience and knowledge with the related industry.”

The respondents answered manipulation-check questions twice, once after the first-round review of the venture profile where I instructed them to scan very quickly (within one minute) and again after their second-round review of the venture profile, which they were asked to read more carefully.

I first carried out chi-square test and one-way ANOVA to check the effectiveness of the vignette design with version code in general. The results of the manipulation tests are summarized in Table VI-5. For both rounds, the distribution and means of different versions are significantly different, suggesting that respondents assigned to different versions recognized and were affected by the design of the four different versions.

Manipulation Check for Pilot Sample on Version Code

N=30		Rating 1		Rating 2	
		Project Novelty	Team Credibility	Project Novelty	Team Credibility
Version Code	Chi Square	36.286**	38.116*	34.663*	34.554*
	ANOVA	20.233***	5.576**	15.107***	11.476***

TABLE VI-5. PILOT SAMPLE MANIPULATION CHECK RESULTS BY VERSIONS

The manipulation check results from the pilot study suggested that the design of the vignette was effective. Respondents could identify ventures with high-novelty projects as higher in novelty and low-novelty projects as low in novelty; they also perceived ventures with a high-quality team as more credible and a low-quality team as less credible.

I also checked the two manipulation dimensions (project novelty and team credibility) separately with a two-way ANOVA to account for the inherent interaction between the two vignette dimensions (For complete test results, see Appendix 7).

Manipulation Check for Pilot Sample on Factor Effect

N=30 Vignette Assigned Level of	Rating 1		Rating 2	
	Project Novelty	Team Credibility	Project Novelty	Team Credibility
Project Novelty	51.884***	0.004	35.236***	2.648
Team Credibility	3.191	14.990**	4.706*	31.700***
Project*Team	5.051*	1.115	4.706*	0.429

TABLE VI-6. PILOT SAMPLE MANIPULATION CHECK RESULTS BY FACTORS

For the proportionate of the variance in the dependent variable (DV) accounted for by each independent variable (IV), I used a partial omega-squared (ω_p^2) indicator as it was less biased than an eta-squared (η_p^2) indicator (Carroll & Nordholm, 1975; Skidmore & Thompson, 2013). I found

more than one significant F value for both rounds of project-novelty ratings. I therefore calculated the partial omegas squared for each round of the ratings to identify the main effects, using the equation from Keren and Lewis (1979).

Assigned vignette level of project novelty had a highly significant contribution ($F = 51.884$, $p < 0.001$) to respondents' ratings for perceived project novelty in the first round, while the interaction between project novelty and team credibility also had a significant contribution ($F = 5.051$, $p < 0.05$). The ω_p^2 of interaction effect was 0.119, much smaller than the ω_p^2 of project novelty by itself (0.629). Therefore, the assigned level of project novelty conferred the major effect to Project Novelty Rating 1.

Similarly, for the second round of project-novelty rating, the assigned vignette level of project novelty had a highly significant F value (9.226, $p < 0.001$), while the assigned team credibility and the interaction had significant F values as well ($p < 0.05$). With the calculation of the partial omega-squared values (ω_p^2), the ω_p^2 for the assigned project novelty level (0.532) was much higher than the ω_p^2 for the other two (both 0.110). Hence, I concluded that the main effect on variances in Project Novelty Rating 2 were from the assigned level of project novelty.

Analyzed from the input factors separately, the respondents reacted with significantly varied ratings for the fictitious venture's project novelty but with no significant differences in their ratings for team credibility. These results confirmed that my designed differences in the project information were accurately targeted; they could affect the respondents' perceptions of project

novelty without an influence on their perceptions of team characteristics. In addition, the results gauging the manipulation of the high and low levels of team credibility also indicated that my manipulation of the team information provided in the venture profile could confer differences in reviewers' perceptions of team credibility without influencing their perceptions of project novelty at the same time.

2. Vignette Survey Study Sample Descriptive

Since I sent out my surveys to an accurately targeted group of informants, with the help from the CSTBI, the response rate and the percentage of valid surveys were both much higher than if they had been a random sampling. I received 33 responses through hard copies and 146 responses through an online survey platform. After a quality check, I deleted four duplicate responses. I also excluded six responses with quality issues, including three with a straight-line pattern suggesting disingenuous respondents, two incomplete responses, and one misrepresented one. I set all questions as mandatory in the online survey platform; respondents needed to complete all the questions before submission, with no missing data.

In the end, I had a total of 170 responses—30 from paper surveys and 140 from online surveys. The respondents had an average age of 32.22 and an average of three years' experience in BIs. The group of respondents receiving Version II ventures had a much lower average of years working in BIs. After reviewing the data, I found no systematic causes. The abnormal

number of this group was due to the chance of having more extremely low values and fewer upper-end outliers at the same time.

The reported years of experience in related fields came out as less than the years in BIs, which is theoretically impossible since the number of years in related fields would include the years worked with incubators. One possible reason is that the statement of the survey question about their experience in the entrepreneurship-related field led to some misunderstanding, and many respondents mistook the question as asking about their entrepreneurial experience.

Most of the respondents (93.33%) held a bachelor's degree or higher. There were 98 male respondents (57.65%) and 72 female respondents (42.35%). Considering that my respondents were mostly managers and directors, the smaller percentage of female respondents was in line with the lower representation of women at higher management levels. Eighty-one (81) respondents (47.65%) were directors of their incubators, mentors for incubators, or both. Sixty-eight (68) respondents (40%) were project managers or incubating department managers. The rest 21 (12.35%) were managers of other departments in the incubators. The composition of the survey respondents conformed with the notion from my interviews that incubator directors or outside mentors generally take the job of venture screening. A summary of the survey sample appears in Table VI-7.

Summary of Survey Sample by Versions

	Version I	Version II	Version III	Version IV	Total
Sample Size	42 24.71%	42 24.71%	43 25.29%	43 25.29%	170 100%
Age	32.224	32.881	31.000	33.093	32.224
Male	23 54.76%	21 50%	30 69.77%	24 55.81%	98 57.65%
Female	19 45.24%	21 50%	13 30.23%	19 44.19%	72 42.35%
College	3 7.14%	3 7.14%	6 13.95%	4 9.3%	16 9.41%
Bachelor	30 71.43%	28 66.67%	26 65.12%	25 58.14%	111 65.29%
Master	7 16.67%	11 26.19%	8 18.6%	13 30.23%	39 22.94%
Doctorate	2 4.76%	0 0%	1 2.33%	1 2.33%	4 2.35%
Business Major	14 33.33%	14 33.33%	15 34.88%	14 32.56%	57 33.53%
STEM Major	15 35.71%	14 33.33%	17 39.53%	17 39.53%	63 37.06%
Social Science Major	10 23.81%	11 26.19%	7 16.28%	8 18.60%	36 21.18%
Literature Major	3 7.14%	3 7.14%	4 9.30%	4 9.30%	14 8.24%
Years in current BI	4.098	2.521	3.25	3.225	3.161
Years in fields	3.013	1.613	3.006	3.631	3.012
BI director	15 35.71%	19 45.24%	17 45.24%	16 37.21%	67 39.41%
Project Manager	16 38.10%	18 42.86%	17 42.86%	17 39.53%	68 40.00%
Other Managers	7 16.67%	3 7.14%	5 7.14%	6 13.95%	21 12.35%
BI Mentor	4 9.52%	2 4.76%	4 4.76%	4 9.30%	14 8.24%

TABLE VI-7. SUMMARY OF SURVEY SAMPLE BY VERSIONS

3. Manipulation Check and Independent Tests of Sample Groups

a. Manipulation Check

To make sure that the manipulation worked effectively for the whole sample of the study, I did a second manipulation check with the entire survey sample (Table 11). The results confirmed that the design of the vignettes was effective.

Manipulation Check for Survey Sample on Version Code

N=170		Rating 1		Rating 2	
		Project Novelty	Team Credibility	Project Novelty	Team Credibility
Version Code	Chi Square	49.377***	49.255**	39.682**	60.136*
	ANOVA	10.411***	12.730***	10.565***	16.852***

TABLE VI-8. SURVEY SAMPLE MANIPULATION CHECK RESULTS BY VERSIONS

As with the pilot study, I ran manipulation checks on assigned levels of project novelty and team credibility separately with a two-way ANOVA (For complete test results, see Appendix 7).

Manipulation Check for Survey Sample on Factor Effect

N=170 Vignette Assigned Level of		Rating 1		Rating 2	
		Project Novelty	Team Credibility	Project Novelty	Team Credibility
Project Novelty		20.338***	1.732	13.640***	1.332
Team Credibility		6.483*	34.981***	15.167***	48.832***
Project*Team		4.637*	1.514	3.037	0.374

TABLE VI-9. SURVEY SAMPLE MANIPULATION CHECK RESULTS BY FACTOR

For the first round of the project-novelty rating, the assigned vignette level of project novelty had a highly significant F value (20.338, $p < 0.001$), while the assigned team credibility level ($F = 6.483$, $p < 0.05$) and the interaction level ($F = 4.637$, $p < 0.05$) had significant F values as well. Partial omega-squared values (ω_p^2) for the assigned project-novelty level (0.102) were much higher than the ω_p^2 for the other two (0.031 and 0.021). Hence, the main effect on variances in Project Novelty Rating 1 were from the assigned level of project novelty.

The assigned vignette level of project novelty had a highly significant contribution ($F = 51.884$, $p < 0.001$) to the respondents' second-round ratings for perceived project novelty. The assigned team credibility level also had a significant contribution ($F = 15.167$, $p < 0.001$). The ω_p^2 of assigned team credibility level was 0.076, even higher than the ω_p^2 of the assigned project novelty level (0.069). The assigned vignette level of team credibility, therefore, would be a competitive main effect in the overall effect of the assigned project-novelty level on the respondents' second rating of project novelty. This can be easily explained, however, since the respondents' second ratings were collected after two rounds of review and the CLJs. As the literature and my Study 1 suggested, most managers pay more attention to team qualities. Having read the profiles twice and filled out some judgment questions, it is more likely that the respondents were deeper impressed by the teams' quality. Therefore, the effect of the assigned project-novelty level on the second ratings for the project would be confounded with the effect from assigned team-credibility level.

In general, the assigned level of project novelty brought major effects to respondents' perceptions of ventures' project quality, with no effects on their perceptions of team credibility. On the other hand, the results on the manipulation of the high and low levels of team credibility also indicated that my manipulation of the team information provided in the venture profile could confer differences in reviewers' perceptions of team credibility without causing differences in their perceptions of project novelty at the same time. Each

manipulation addressed the planned aspects of respondents' perception of the ventures.

b. Independent Sample Tests

To examine the influence of the respondents' demographic backgrounds and the survey format, I did t-tests and chi-square tests between subgroups based on the sample source (paper survey vs. online survey), gender, education, their roles in the incubators, and their job responsibilities (See summary tables in Appendix 8).

The respondents who completed paper surveys had significantly longer experiences in related field (mean difference = 2.9537, $p < 0.01$) than the respondents who completed the online version of the survey, according to both the t-tests and the chi-square tests. This is almost certainly because the respondents who completed the hard-copy surveys were known to be more senior in their fields; I approached them personally at events where there were either speakers or guests. Another important reason could be the misunderstanding caused by the statement in a survey question asking for experience in entrepreneurship-related fields. I contacted several respondents when I found that they had put smaller numbers for entrepreneurship-related field experience than the number of years for their business incubator experiences; they explained that they had understood the entrepreneurship-related field experience as the experience of *being* an entrepreneur.

Another significant difference was found in respondents' decisions of offering a better deal to the venture. Respondents for paper surveys were

found to be less likely to offer such deals to the ventures. However, this difference was only significant in mean comparison (t-test). I inferred that the reason was that more of the senior and experienced incubator managers and mentors were stricter and more cautious about offering limited resources to ventures.

For gender differences, female respondents were significantly younger than the male respondents (mean difference = 3.3271, $p < 0.01$), with significantly less experience (mean difference = 1.7973, $p < 0.01$) in related fields. This is in line with the lower representation of women in higher ranks of management as well as in entrepreneurial careers. The female respondents also differed significantly in their major of education ($p < 0.001$). This is reasonable as I had included a big proportion of STEM-majored respondents, among whom women are also underrepresented.

Respondents with higher educational levels had a significantly lower rating in ELJ (mean difference = -.2578, $p < 0.05$) and in their likelihood of providing financial support ($p < 0.01$).

For different roles in the incubators, directors and mentors were significantly older and more senior than department or project managers (mean difference = 5.5628, $p < 0.001$). For the same reason as the survey source difference in offer decisions, directors and mentors were also significantly less likely to follow up venture projects personally, according to a t-test (mean difference = -.3238, $p < 0.05$), because a higher organizational

position is also significantly related to experience in the field, thus again conferring higher screening criteria and more cautious decisions.

For different job responsibilities, respondents in charge of business attraction (mean difference = 1.4728, $p < 0.01$), project management (mean difference = 1.2388, $p < 0.05$), and financing support (mean difference = 2.0860, $p < 0.001$) jobs all had significantly more experience in the field compared with respondents in other jobs. As suggested earlier, this is because these jobs are closely related to the core business of BIs, so only the more professional managers hold these positions. More specifically, differences in the judgments for the ventures' evaluative legitimacy evaluations (mean difference = -.1966, $p < 0.05$) and discount-offer decisions (mean difference = -.3159, $p < 0.05$) were also significant for managers and directors handling financing support. This provided a more refined support for the previous explanation that people with more experience in a particular field hold a higher standard for screening ventures.

The above independent sample tests suggested that there were no significant group effects from the control variables on the outcome variables I hypothesized, except for the respondents' experience in entrepreneurship-related fields. In total, 56 responses had questionable answers for this question. However, having tested the models with this variable and the models without it, there were only slight differences in significance levels. Therefore, I deleted the variable of 'years of experience in entrepreneurship-related fields'

to avoid misunderstandings. The experience factor was still accounted for with the 'years of experience in business incubator' variable.

4. Regression Analysis

a. H1 and H2: Venture Quality → Legitimacy Judgments

This study first used the hierarchical linear regression to test the relationships in hypotheses 1 to 4. Variables included perceptions, evaluations, and decisions of respondents, and these were acquired from the same survey at the same time. Hierarchical linear regression helps account for autocorrelations among measurements, and allowed me to see outcomes of models with different compositions of input variables. Model 1 is the regression on Project novelty alone; model 2 is the regression on Team credibility. Model 3 include both Project novelty and Team credibility in the regression. Model 4 added the interaction variable to model 3. Detailed results are displayed in Appendix 9.

For the hierarchical linear regression on CLJ, the interaction between project novelty and team credibility in model 4 is not significant. So I used model 3 as the regression model for the analysis. The output of model 3 showed a marginally significant positive relationship between project novelty and cognitive legitimacy judgments ($B=0.140$, $t=1.880$, $p<0.062$); it also showed a highly significant positive relationship between team credibility and CLJ ($B=0.242$, $t=3.241$, $p<0.01$). The effect of project novelty became significant when introduced the interaction variable.

For the hierarchical linear regression on the evaluative legitimacy judgments, model 3 showed a significant positive relationship between project novelty and ELJ ($B=0.207$, $t=2.836$, $p<0.01$), and a highly significant positive relationship between team credibility and ELJ ($B=0.257$, $t=3.517$, $p<0.01$). The effect of project novelty became insignificant when I introduced the interaction variable.

Since I had multiple dependent variables, I then examined the models with a MANOVA to account for the possible inflation of error 1 when there is more than one dependent variable.

Project novelty was positively related to Cognitive Legitimacy Judgments. And their positive relationship was significant at the $p<0.05$ level ($F=5.972$). The relationship between team credibility and CLJ was also positive and significant ($F=11.306$, $p<0.01$). The results supported Hypothesis 1a and Hypothesis 1b.

When analyzing for evaluative legitimacy judgments, project novelty has a significant positive relationship with ELJ ($F=11.468$, $p<0.01$). Team credibility is related to ELJ positively and significantly as well ($F=11.957$, $p<0.01$). The adjusted R squared of the model for CLJ was 0.099. For ELJ, the adjusted R squared for the model was 0.125.

The results of this model support Hypothesis 2a and 2b.

MANOVA Results for Legitimacy Judgments

Factors	DV	Sum of Squares	df	Mean Square	F	Sig.
Project Novelty	CLJ	2.563	1	2.563	5.972*	.016
	ELJ	3.755	1	3.755	11.468**	.001
Team Credibility	CLJ	4.852	1	4.852	11.306**	.001
	ELJ	3.915	1	3.915	11.957**	.001
Team*Project	CLJ	.680	1	.680	1.585	.210
	ELJ	.191	1	.191	.584	.446

TABLE VI-10. MANOVA RESULTS FOR LEGITIMACY JUDGMENTS

In general, regression results confirmed the positive effects of project novelty and team credibility on both modes of legitimacy judgments, supporting Hypotheses 1a, 1b, 2a, 2b in this research.

b. H3 and H4: Legitimacy Judgments→Resource Decisions

The hierarchical linear regression of both modes of legitimacy judgments showed that cognitive legitimacy judgments of the ventures were positively related to respondents’ decisions about whether to accept the venture into their business incubators (B=0.373, t=5.490, p<0.05). The evaluative legitimacy judgments had a positive relationship with entry decisions (B=0.046, t=4.365, p<0.001) with a lower coefficient but a higher significance level.

In the regression for financial support decisions, CLJ has a significant positive relationship with respondents’ decision for providing financial support to the venture (B=0.264, t=3.151, p<0.01). At the same time, ELJ is related to financial support decisions (B=0.346, t=4.128, p<0.001) with a higher coefficient and at a higher significant level.

Similarly, I supplemented these relationship tests with MANOVA. In MANOVA, both CLJ (F=2.734, p=0.002) and ELJ (F=2.423, p=0.015) hold

positive relationships with incubators' entry decisions. They are also positively related to financial support decisions with high significance levels ($F=2.599$, $p=0.003$; $F=2.738$, $p=0.006$). The Adjusted R-squared for entry decisions is 0.380, while 0.367 for financial support decisions.

MANOVA Results for Resource Decisions						
Factors	DV	Sum of Squares	df.	Mean Square	F	Sig.
CLJ	Entry	17.603	13	1.354	2.734**	.002
	Financial Support	17.940	13	1.380	2.599**	.003
ELJ	Entry	10.800	9	1.200	2.423*	.015
	Financial Support	13.081	9	1.453	2.738**	.006
CLJ*ELJ	Entry	25.794	36	.717	1.447	.075
	Financial Support	22.038	36	.612	1.153	.282

TABLE VI-11. MANOVA FOR LEGITIMACY JUDGMENTS ON RESOURCE DECISIONS

The results of both regression and MANOVA support Hypotheses 3a, 3b, 4a, and 4b.

5. Analysis of Mediation Relationships

To examine the mediation relationships in hypotheses 3 and 4, I used the Bootstrap approach from Preacher & Hayes (2004). Compared with the causal step regression (Baron & Kenny, 1986), this approach could deal with different types of variables and situations where the distributions of ab do not comply with the normal distribution. I used the PROCESS syntax (Hayes, 2018) to analyze the mediation relationships in the hypotheses. I first tested the mediation of CLJ and ELJ respectively; I then ran them together to allow for possible interactions between them.

a. The mediator role of cognitive legitimacy judgments (CLJ)

In the model of project novelty on entry decisions, the confidence interval (.0203, 0.2792) of the $a \times b$ value (0.1332) covered 0 (Table VI-12).

There was an interaction effect from project novelty on the incubator managers' entry decisions. The direct effect of project novelty was not significant ($B = 0.0962$, $p = .4494$). The significant ab and the insignificant c implied that CLJ fully mediated the relationship between project novelty and the incubators' entry decisions. The results support Hypothesis 5a.

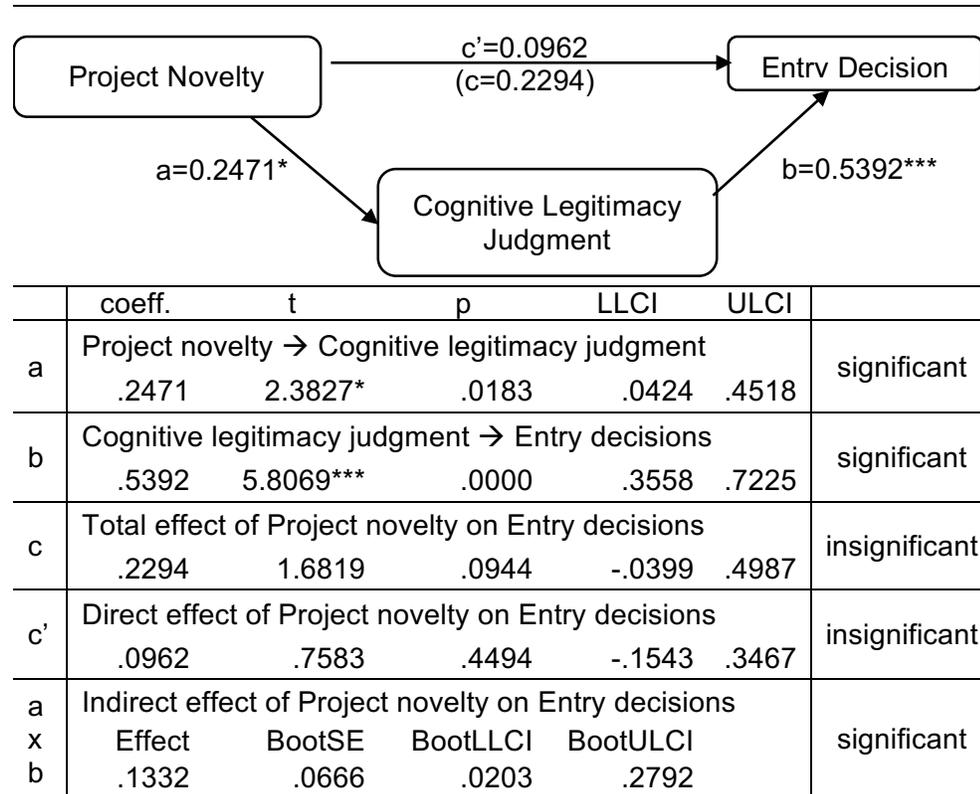
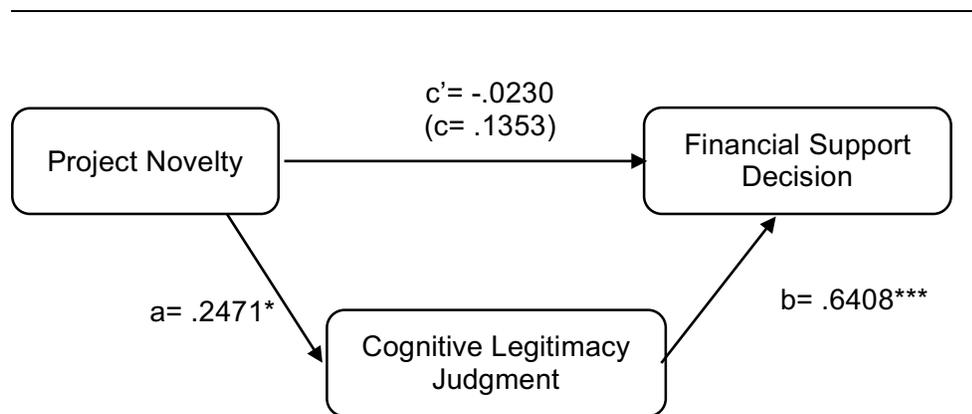


TABLE VI-12. MEDIATION MODEL OF PROJECT NOVELTY ON ENTRY THROUGH CLJ

Similarly, the $a \times b$ value (0.1729) in the model of project novelty on financial support decisions had a confidence interval of (0.0214, 0.3360), not including 0 (Table VI-13). At the same time, the direct effect after controlling for mediation was insignificant ($B = -.0230$, $p = 0.8554$). Project novelty had an interaction effect on the incubators' financial-support decisions for ventures.

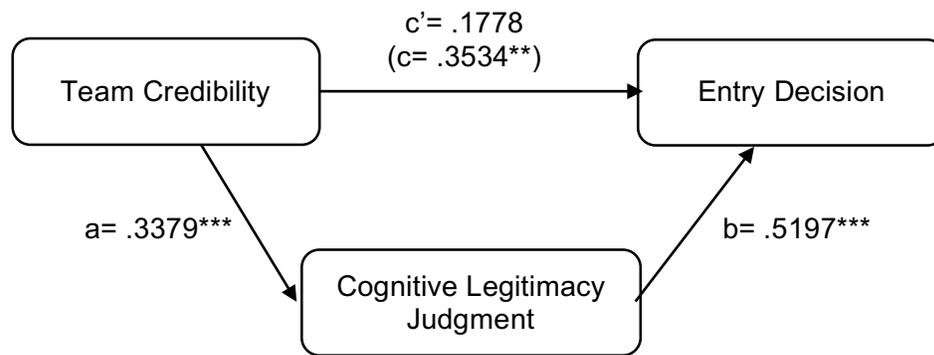
CLJ was the only mediator to the effect on project novelty, supporting Hypothesis 5b.



	coeff.	t	p	LLCI	ULCI	
a	Project novelty → Cognitive legitimacy judgment					significant
	.2471	2.3827*	.0183	.0424	.4518	
b	Cognitive legitimacy judgment → Entry decisions					significant
	.6408	6.9393***	.0000	.4585	.8231	
c	Total effect of Project novelty on Financial Support					insignificant
	.1353	.9633	.3368	-.1420	.4126	
c'	Direct effect of Project novelty on Financial Support					insignificant
	-.0230	-.1825	.8554	-.2722	.2261	
a	Indirect effect of Project novelty on Entry decisions					significant
x	Effect	BootSE	BootLLCI	BootULCI		
b	.1729	.0803	.0214	.3360		

TABLE VI-13. MEDIATION MODEL OF PROJECT NOVELTY ON FINANCIAL SUPPORT THROUGH CLJ

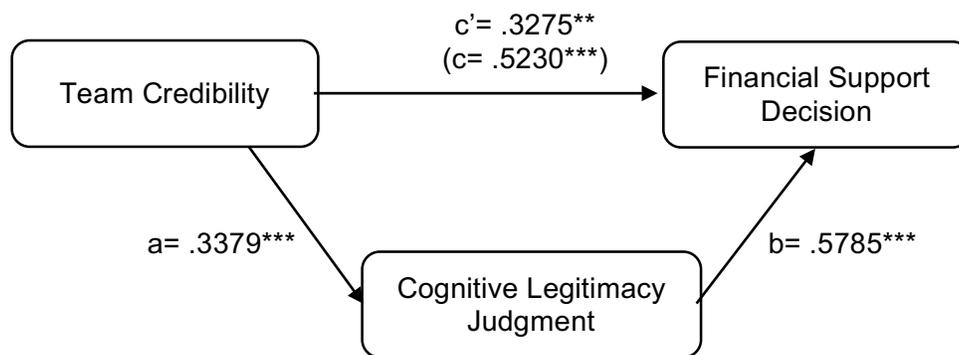
The indirect effect of team credibility was significant (effect = 0.1756, CI: 0.0642 to 0.3154) for the mediated relationship with incubators' entry decisions (Table VI-14). The direct effect of team credibility was 0.1778 (p = .1676), decreased from the total effect of 0.3534 (p < 0.01). The results indicated a partial mediation effect of CLJ on team credibility's influence on entry decisions. The results supported Hypothesis 5c.



	Coeff.	t	p	LLCI	ULCI	
a	Team Credibility → Cognitive legitimacy judgment					significant
	.3379	3.3075***	.0012	.1362	.5396	
b	Cognitive legitimacy judgment → Entry decisions					significant
	.5197	5.5367***	.0000	.3344	.7050	
c	Total effect of Team Credibility on Entry decisions					significant
	.3534	2.6213**	.0096	.0872	.6196	
c'	Direct effect of Team Credibility on Entry decisions					insignificant
	.1778	1.3860	.1676	-.0755	.4311	
a	Indirect effect of Team Credibility on Entry decisions					significant
x	Effect	BootSE	BootLLCI	BootULCI		
b	.1756	.0641	.0642	.3154		

TABLE VI-14. MEDIATION MODEL OF TEAM CREDIBILITY ON ENTRY THROUGH CLJ

The indirect effect of team credibility was also significant (effect = 0.1955, CI: 0.0752 to 0.3388) for the direct relationship between team credibility and financial-support decisions (Table VI-15). There was a decrease from team credibility's total effect of 0.5230 ($p < 0.001$) to the direct effect of 0.3275 ($p < 0.01$). The decreased but still significant effect of team credibility together with a significant $a \times b$ value suggested a partial mediation effect from cognitive legitimacy judgment, supporting Hypothesis 5d.

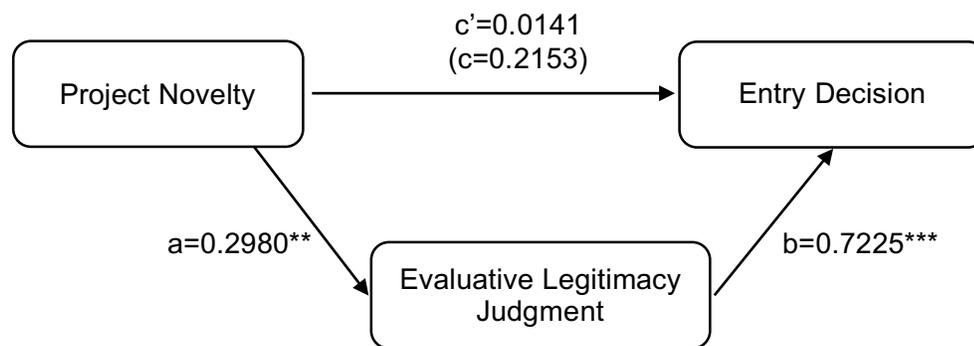


	Coeff.	t	p	LLCI	ULCI	
a	Team Credibility → Cognitive legitimacy judgment					significant
	.3379	3.3075***	.0012	.1362	.5396	
b	Cognitive legitimacy judgment → Entry decisions					significant
	.5785	6.2956***	.0000	.3971	.7599	
c	Total effect of Team Credibility on Entry decisions					significant
	.5230	3.8754***	.0002	.2566	.7894	
c'	Direct effect of Team Credibility on Entry decisions					significant
	.3275	2.6079**	.0099	.0796	.5754	
a	Indirect effect of Team Credibility on Entry decisions					significant
x	Effect	BootSE	BootLLCI	BootULCI		
b	.1955	.0670	.0752	.3388		

TABLE VI-15. MEDIATION MODEL OF TEAM CREDIBILITY ON FINANCIAL SUPPORT THROUGH CLJ

b. The mediator role of evaluative legitimacy judgment (ELJ).

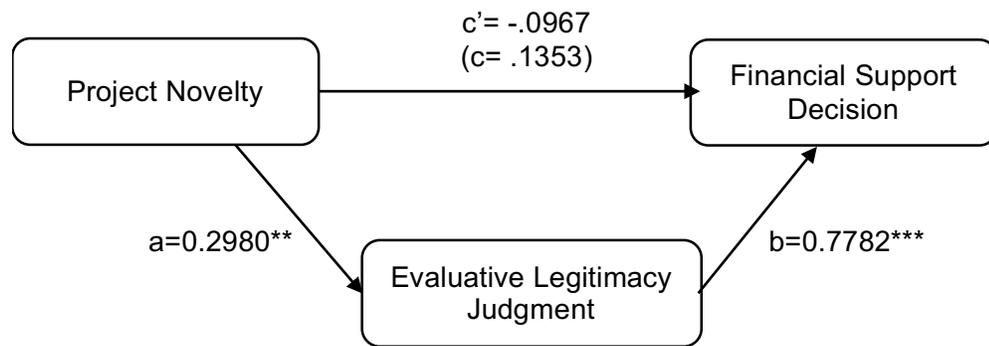
When the ELJ worked as the mediator for the relationship between project novelty and the incubators' entry decisions, the model was effective (effect = 0.2153, CI: 0.0854 to 0.3535). The direct effect of project novelty (0.0141, p = 9096) was smaller than its total effect of 0.2294 (p < 0.0944) after mediation, but both were insignificant. Therefore, ELJ fully mediated the positive effect of project novelty on entry decisions. Hypothesis 6a was supported.



	coeff.	t	p	LLCI	ULCI	
a	Project novelty → Evaluative legitimacy judgment					significant
	.2980	3.2938**	.0012	.1194	.4767	
b	Evaluative legitimacy judgment → Entry decisions					significant
	.7225	7.0568***	.0000	.5203	.9246	
c	Total effect of Project novelty on Entry decisions					insignificant
	.2294	1.6819	.0944	-.0399	.4987	
c'	Direct effect of Project novelty on Entry decisions					insignificant
	.0141	.1137	.9096	-.2305	.2587	
a	Indirect effect of Project novelty on Entry decisions					significant
x	Effect	BootSE	BootLLCI	BootULCI		
b	.2153	.0682	.0854	.3535		

TABLE VI-16. MEDIATION MODEL OF PROJECT NOVELTY ON ENTRY THROUGH ELJ

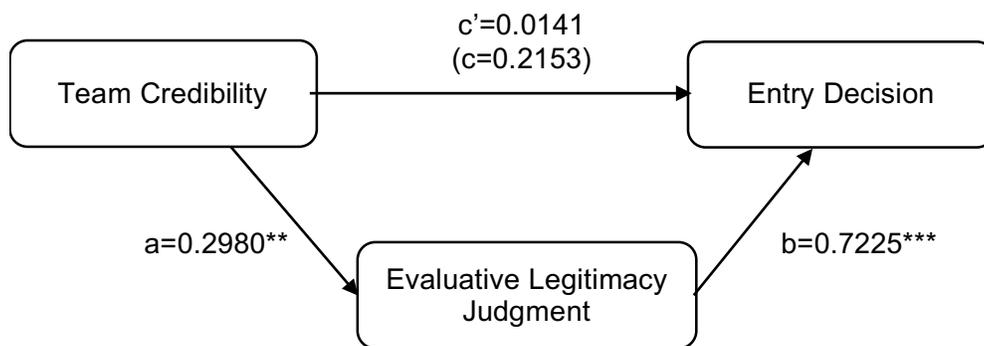
When ELJ mediated the effect of project novelty on the incubator managers' financial-support decisions, the indirect effect was also effective (effect = 0.2319, CI: 0.0939 to 0.3753) (Table 24). The total effect of project novelty was positive, while the direct effect of project novelty decreased to negative with the indirect effect. Thus, Hypothesis 6b was supported as a full mediator since the direct effect of project novelty was insignificant (-.0967, $p = .4433$).



	coeff.	t	p	LLCI	ULCI	
a	Project novelty → Evaluative legitimacy judgment					significant
	.2980	3.2938**	.0012	.1194	.4767	
b	Evaluative legitimacy judgment → Financial support					significant
	.7782	7.4882***	.0000	.5731	.9834	
c	Total effect of Project novelty on Financial support decisions					insignificant
	.1353	.9633	.3368	-.1420	.4126	
c'	Direct effect of Project novelty on Financial support					insignificant
	-.0967	-.7685	.4433	-.3449	.1516	
a	Indirect effect of Project novelty on Entry decisions					significant
x	Effect	BootSE	BootLLCI	BootULCI		
b	.2319	.0715	.0939	.3753		

TABLE VI-17. MEDIATION MODEL OF PROJECT NOVELTY ON FINANCIAL SUPPORT THROUGH ELJ

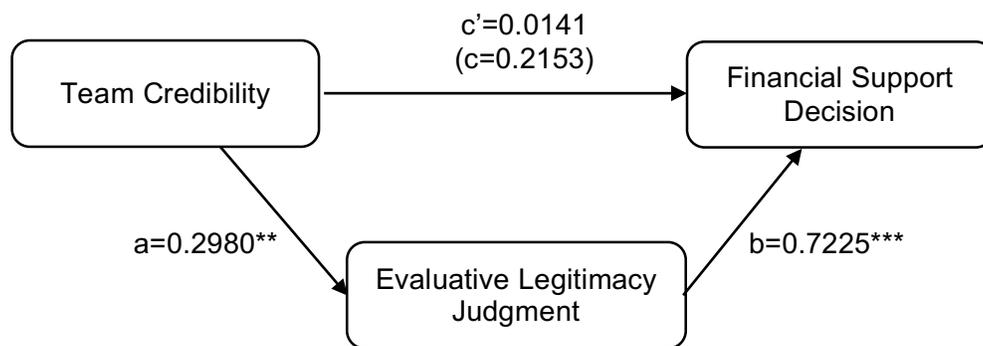
The indirect effect of team credibility was significant (effect = 0.2112, CI: 0.0929 to 0.3335) for the relationship between team credibility and the incubators' entry decisions (Table 25). The insignificant direct effect of team credibility (0.1422, $p = 0.2515$) was smaller than its significant total effect of 0.3534 ($p < 0.001$) after mediation. The results revealed a full mediation relationship. Hypothesis 6c was supported.



	coeff.	t	p	LLCI	ULCI	
a	Team Credibility → Evaluative legitimacy judgment					significant
	.3035	3.3583**	.0010	.1251	.4820	
b	Evaluative legitimacy judgment → Entry decisions					significant
	.6959	6.8154***	.0000	.4943	.8974	
c	Total effect of Team Credibility on Entry decisions					significant
	.3534	2.6213**	.0096	.0872	.6196	
c'	Direct effect of Team Credibility on Entry decisions					insignificant
	.1422	1.1508	.2515	-.1017	.3861	
a	Indirect effect of Team Credibility on Entry decisions					significant
x	Effect	BootSE	BootLLCI	BootULCI		
b	.2112	.0628	.0929	.3335		

TABLE VI-18. MEDIATION MODEL OF TEAM CREDIBILITY ON ENTRY THROUGH ELJ

The indirect effect of team credibility was also significant (effect = 0.2106, CI: 0.0873 to 0.3486) with respect to team credibility's effect on the incubator managers' financial-support decisions. The analysis approved a partial mediation, as the direct effect of team credibility was still significant (0.3124, $p < 0.01$), although it was smaller and less significant than its total effect (0.5230, $p < 0.001$) on financial-support decisions. Hypothesis 6d was supported.



	coeff.	t	p	LLCI	ULCI	
a	Team Credibility → Evaluative legitimacy judgment					significant
	.3035	3.3583**	.0010	.1251	.4820	
b	Evaluative legitimacy judgment → Financial support					significant
	.6938	6.7819***	.0000	.4918	.8958	
c	Total effect of Team Credibility on Financial support					significant
	.5230	3.8754***	.0002	.2566	.7894	
c'	Direct effect of Team Credibility on Financial support					insignificant
	.3124	2.5232*	.0126	.0680	.5568	
a	Indirect effect of Team Credibility on Entry decisions					
x	Effect	BootSE	BootLLCI	BootULCI		significant
b	.2106	.0666	.0873	.3486		

TABLE VI-19. MEDIATION MODEL OF TEAM CREDIBILITY ON FINANCIAL SUPPORT THROUGH ELJ

When I tested CLJ and ELJ simultaneously in each model (see Appendix 9 for full results), the results came out with no big differences. CLJ and ELJ fully mediated the relationship between project novelty and both resource decisions. They also fully mediated the relationship between team credibility and the incubators entry decisions. The mediation effect was only partial for team credibility's effects on financial-support decisions. The results generally confirmed the effectiveness of legitimacy judgments as the mediation mechanism for resource decisions in business incubator contexts. The partial mediation also implied that team credibility had some direct effects

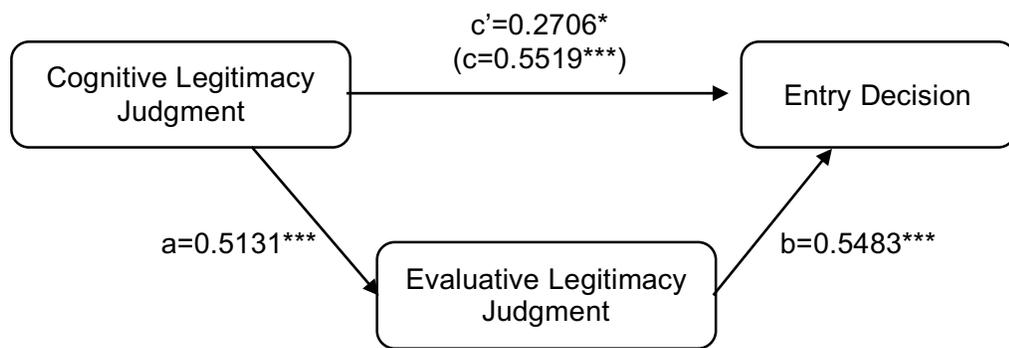
on financial-support decisions beyond the mediation mechanism of legitimacy judgments. Also, when looking at the partial indirect effects, the mediation effects of CLJ on entry decisions were all insignificant. This change means that ELJ was the major mediating mechanism for the incubator' entry decisions.

Overall, cognitive legitimacy judgment and evaluative legitimacy judgment were effective mediators for venture qualities' effects on incubators' resource decisions. However, if we explore further, the effects of evaluative legitimacy were higher in the multiple-mediator models and in all the separate mediation models. What is more, the mediation effects of CLJ further decreased when tested with ELJ as another mediator. The effect even dropped to an insignificant value in one of the models, raising the question of whether CLJ worked as an a priori stage in the cognitive process before ELJ.

To examine the possible dynamics with CLJ and ELJ, I further analyzed the mediation effect of ELJ on the relationship between CLJ and resource decisions.

c. post-hoc mediation analysis of evaluative legitimacy judgment

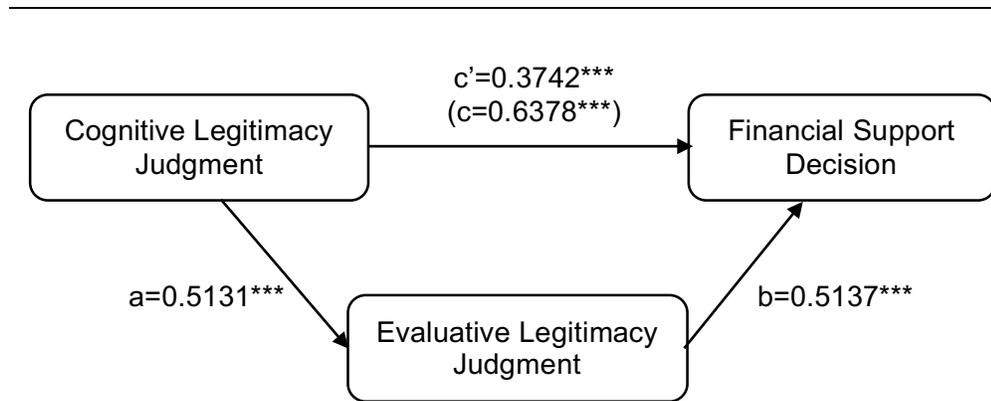
I used the same bootstrap approach (Preacher & Hayes, 2004). In the model of CLJ and entry decisions, the indirect effect was 0.2813 with its CI from 0.1621 to 0.4321, not including 0 (Table 27). The direct effect of CLJ was 0.2706 ($p < 0.05$), decreased from the total effect of 0.5519 ($p < 0.001$). The results suggested that evaluative legitimacy was a partial mediator on the effect of CLJ on incubators' entry decisions.



	coeff.	t	p	LLCI	ULCI	
Cognitive legitimacy judgment → Evaluative legitimacy Judgment						
a	.5131	9.2144***	.0000	.4032	.6230	significant
Evaluative legitimacy judgment → Entry decisions						
b	.5483	4.5910***	.0000	.3125	.7841	significant
Total effect of Cognitive legitimacy judgment on Entry						
c	.5519	6.0512***	.0000	.3718	.7319	significant
Direct effect of Cognitive legitimacy judgment on Entry						
c'	.2706	2.5582*	.0114	.0618	.4797	significant
Indirect effect of Cognitive legitimacy judgment on Entry						
x	Effect	BootSE	BootLLCI	BootULCI		significant
b	.2813	.0695	.1621	.4321		

TABLE VI-20. MEDIATION MODEL OF CLJ ON ENTRY THROUGH ELJ

In models where CLJ was mediating the effect of project novelty on financial-support decisions, CLJ's mediator role was significant for low-credibility teams (effect = 0.2219, CI: 0.0474 to 0.4278), but not for high-credibility teams (effect = 0.0710, CI: -0.0863 to 0.2507) (Table 30). However, the difference of CLJ's mediation effects between high- and low-credibility teams was not significant (index = -0.1509, CI: -0.3970 to 0.0926).



	coeff.	t	p	LLCI	ULCI	
a	Cognitive legitimacy judgment → Evaluative legitimacy Judgment					
	.5131	9.2144***	.0000	.4032	.6230	significant
b	Evaluative legitimacy judgment → Financial support decisions					
	.5137	4.3023***	.0000	.2780	.7495	significant
c	Total effect of Cognitive legitimacy judgment on Financial support					
	.6378	7.0423***	.0000	.4590	.8166	significant
c'	Direct effect of Cognitive legitimacy judgment on Entry decisions					
	.3742	3.5386***	.0005	.1654	.5829	significant
a	Indirect effect of Cognitive legitimacy judgment on Financial support					
x	Effect	BootSE	BootLLCI	BootULCI		significant
b	.2636	.0754	.1216	.4233		

TABLE VI-21. MEDIATION MODEL OF CLJ ON FINANCIAL SUPPORT THROUGH ELJ

The results for the post-hoc analysis indicated that ELJ worked as a mediating mechanism for the effect of CLJ on the incubators' resource decisions, especially on entry decisions. Although partial mediation implied that there were other complementary mediations in the process, the mediation role of ELJ supported my argument that there is some kind of layered or serial relationship between the more perceptual cognitive legitimacy judgment and the more specific and purpose-oriented evaluative judgment.

d. Robustness check for mediation relationships with path analysis

Since there are multiple mediators and dependent variables, the study used the path analysis in Amos to test the entire model as a robustness check.

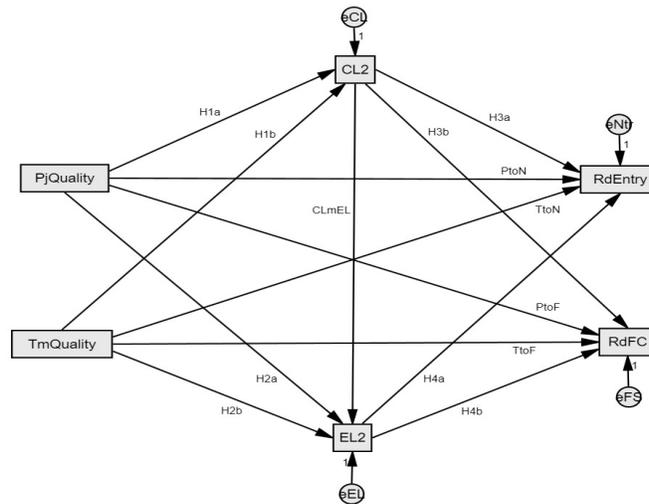


FIGURE VI-1. AMOS MODEL

In the results from Amos, direct relationships between venture qualities (project novelty and team credibility) and legitimacy judgments, and relationships between legitimacy judgments and resource outcomes are mostly significant.

Simple Direct Effects				
Parameter	Est.	Lower	Upper	P
CLJ←Project novelty	.181	.023	.312	.022
CLJ←Team credibility	.247	.104	.377	.001
Entry←ELJ	.362	.213	.496	.001
FS←ELJ	.330	.154	.502	.001
ELJ←CLJ	.522	.384	.637	.001

TABLE VI-22. SIMPLE DIRECT EFFECTS IN PATH ANALYSIS

The results confirmed that the introduction of mediation relationships did not deteriorate the direct effects in the model.

As shown in the table below, the indirect effects of all mediated relationships are all significant. CLJ and ELJ positively mediate the effect of venture qualities (project novelty and team credibility) on incubator managers' resource decisions. The mediation role of CLJ is also significant for the relationships between venture qualities and ELJ. Meanwhile, ELJ significantly mediates the positive relationships between CLJ and resource decisions.

Indirect Effects				
Parameter	Est.	Lower	Upper	P
Project novelty to ELJ	.094	.020	.175	.015
Project novelty to Entry	.125	.051	.209	.001
Project novelty to FS	.129	.053	.211	.001
Team credibility to ELJ	.129	.056	.212	.001
Team credibility to Entry	.140	.070	.215	.002
Team credibility to FS	.147	.081	.222	.002
CLJ to Entry	.189	.106	.294	.001
CLJ to FS	.172	.079	.288	.001

TABLE VI-23. INDIRECT EFFECTS IN PATH ANALYSIS

I also defined specific Estimands in the Amos model to examine specific mediation effects for each mediator. The mediation effects are significant for each mediator. The results supported Hypothesis 5 and 6, the mediation role of CLJ in the process of generating ELJ, and the mediation role of ELJ for the effects of venture qualities on resource decisions through CLJ.

Specific Mediation Relationships				
Parameter	Est.	Lower	Upper	P
H5a: Project to CLJ to Entry	.064	-.002	.181	.060
H5b: Project to CLJ to FS	.086	.015	.216	.010
H5c: Team to CLJ to Entry	.087	-.002	.216	.056
H5d: Team to CLJ to FS	.118	.031	.254	.002
H6a: Project to ELJ to Entry	.098	.023	.199	.012
H6b: Project to ELJ to FS	.091	.023	.196	.009
H6c: Team to ELJ to Entry	.079	-.005	.178	.065
H6d: Team to ELJ to FS	.073	.000	.172	.051
Project to CLJ to ELJ	.114	.026	.219	.013
Project CLJ to ELJ to Entry	.061	.015	.138	.010
Project to CLJ to ELJ to FS	.057	.014	.138	.008
Team to CLJ to ELJ	.085	.019	.150	.013
Team to CLJ to ELJ to Entry	.045	.013	.091	.009
Team to CLJ to ELJ to FS	.042	.013	.090	.006

TABLE VI-24. SPECIFIC MEDIATION EFFECTS IN PATH ANALYSIS

By comparing the total effects and direct effects in mediated relationships, CLJ was found as a partial mediator for the effects of project novelty on ELJ, while as a full mediator for the effects of team novelty on ELJ. ELJ partially mediate the relationships between CLJ and resource decisions. CLJ and ELJ together fully mediate the effects of project novelty on incubator managers' entry decisions. They partially mediated the relationship between team credibility and managers' financial support decisions. The negative indirect effects and insignificant direct effects of project novelty on financial support decisions indicate that there are competing mediators besides the partial mediator of CLJ and ELJ.

Parameter	Total Effects				Direct Effects			
	Est.	Lower	Upper	P	Est.	Lower	Upper	P
EL←Pj	.246	.094	.373	.002	.152	.021	.275	.022
EL←Tm	.251	.096	.384	.004	.122	-.017	.252	.086
Entry←CL	.387	.185	.543	.001	.198	-.026	.387	.100
FS←CL	.434	.278	.571	.001	.262	.081	.438	.003
Entry←Pj	.129	-.018	.269	.086	.004	-.126	.142	.942
FS←Pj	.074	-.079	.212	.349	-.054	-.184	.091	.457
Entry←Tm	.198	.038	.336	.011	.058	-.071	.189	.410
FS←Tm	.286	.130	.423	.001	.139	.007	.270	.040

TABLE VI-25. DIRECT AND TOTAL EFFECTS IN PATH ANALYSIS

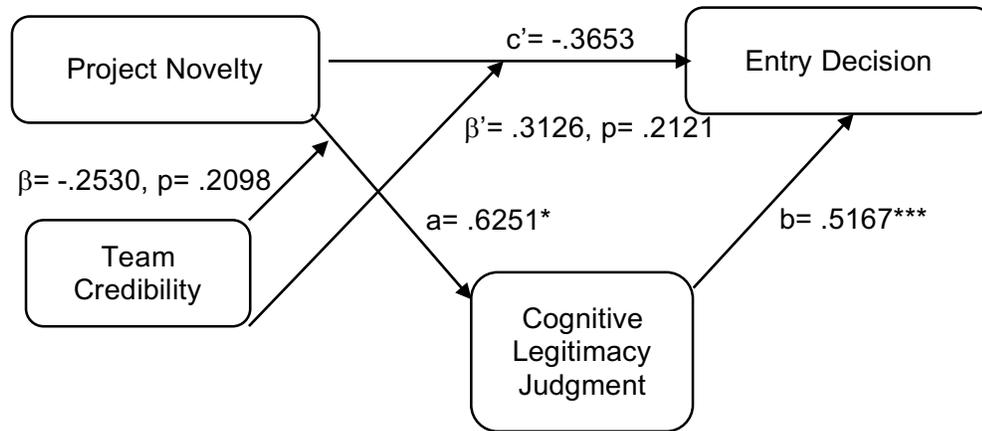
The results of the robustness check for all mediation effects are supported.

6. Moderation Effects Analysis.

I used the moderated mediation model from the PROCESS syntax by Hayes (2018) to examine the moderation effect of team credibility on the relationship between project novelty and legitimacy judgments. Using the bootstrap approach with this method is not only more effective in testing moderation effects but it also takes into account the change and effectiveness of mediation effects at different levels of the moderator (Preacher, Rucker, & Hayes, 2007).

For the moderation effect of team credibility on the relationship between project novelty and entry decisions mediated by CLJ, project novelty was found to have a significant mediation effect for low-credibility teams (effect = 0.1922, CI: 0.0440 to 0.3827) but no significant mediation effect for high-credibility teams (effect = 0.0615, CI: -0.0690 to 0.2266) (Table 29).

However, the difference of CLJ's mediation effects between high- and low-credibility teams was not significant (index = -.1307, CI: -0.3470 to 0.0701).



		coeff.	t	p	LLCI	ULCI
Moderation on Mediation		-.2530	-1.2590	.2098	-.6499	.1438
Moderation on Direct Effect		.3126	1.2526	.2121	-.1802	.8054
Conditional Effects	Team Credibility	Effect	t	p	LLCI	ULCI
Conditional Direct Effect	1	-.0527	-.2957	.7678	-.4046	.2992
	2	.2599	1.4681	.1440	-.0896	.6095
Conditional Indirect Effect	Team Credibility	Effect	BootSE	Boot LLCI	Boot ULCI	
	1	.1922*	.0877	.0440	.3827	
	2	.0615	.0749	-.0690	.2266	
Moderated Mediation		Index	BootSE	Boot LLCI	Boot ULCI	
		-.1307	.1052	-.3470	.0701	

TABLE VI-26. TEAM CREDIBILITY MODERATING PROJECT NOVELTY → CLJ → ENTRY

In models where CLJ was mediating the effect of project novelty on financial-support decisions, CLJ's mediator role was significant for low-credibility teams (effect = 0.2219, CI: 0.0474 to 0.4278), but not for high-credibility teams (effect = 0.0710, CI: -0.0863 to 0.2507) (Table 30). However, the difference of CLJ's mediation effects between high- and low-credibility teams was not significant (index = -0.1509, CI: -0.3970 to 0.0926).

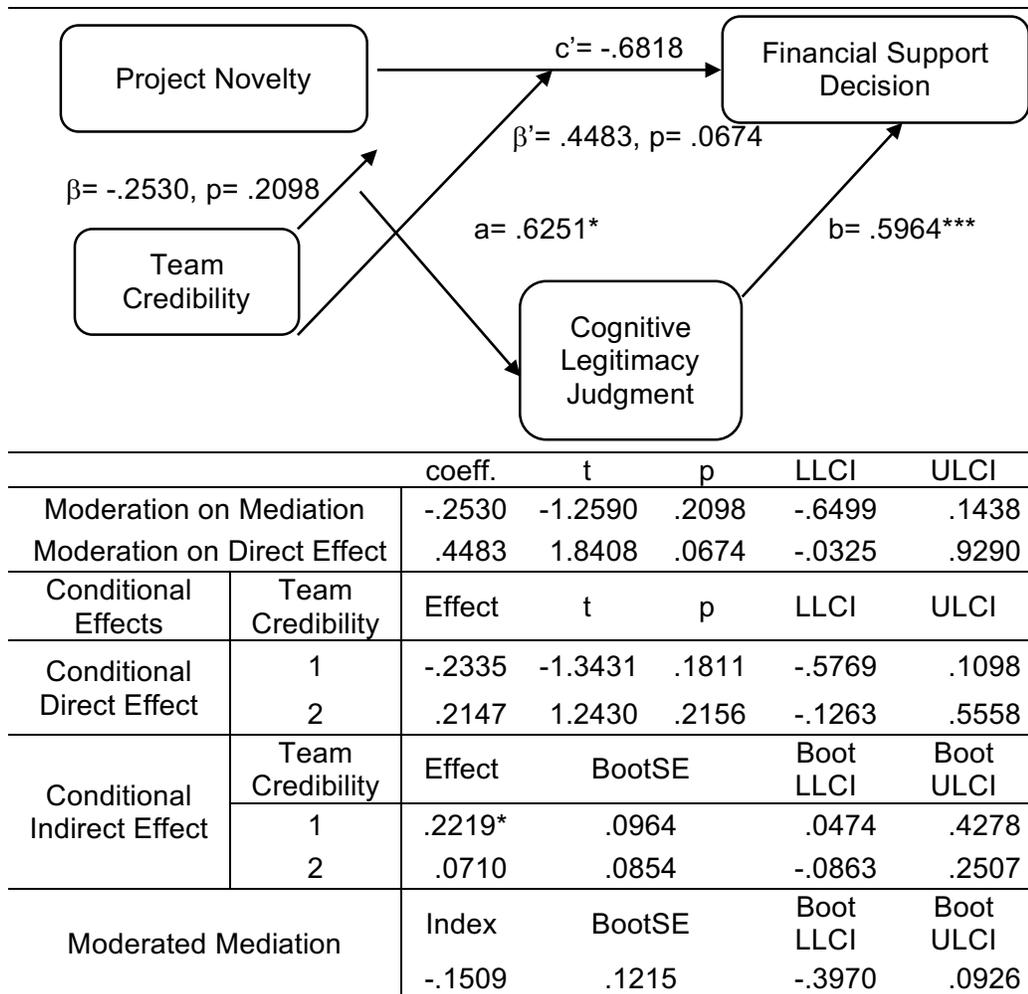
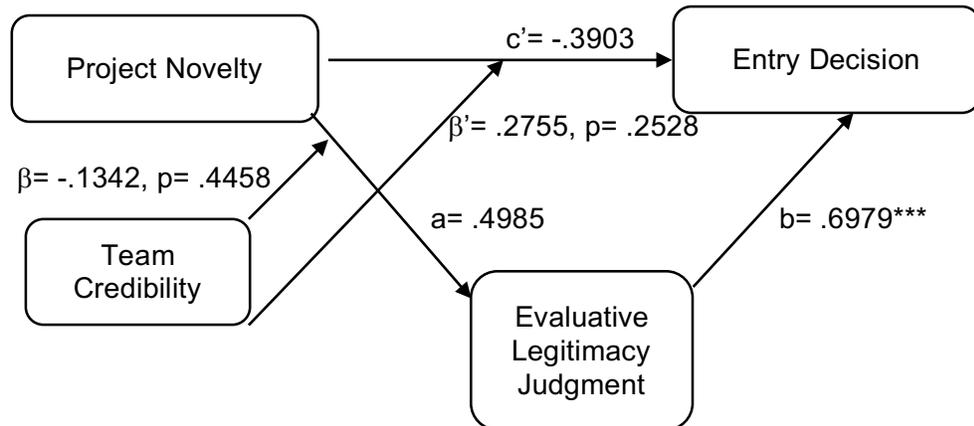


TABLE VI-27. TEAM CREDIBILITY MODERATING PROJECT NOVELTY → CLJ → FINANCIAL SUPPORT

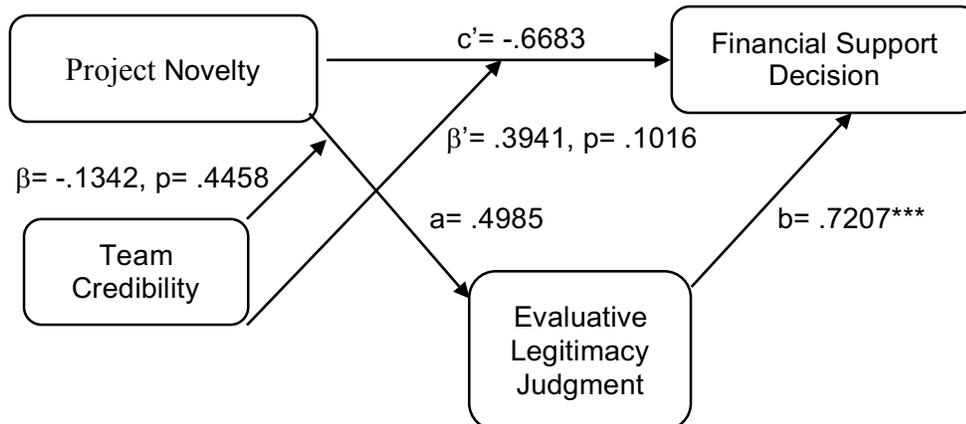
For the moderated mediation model with evaluative legitimacy judgment as mediators, ELJ significantly mediated the relationship between project novelty and entry decisions for both low-credibility and high-credibility team ventures (effect = 0.2543, CI: 0.0706 to 0.4620; effect = 0.1606, CI: 0.0082 to 0.3177) (Table 31). However, the difference of ELJ's mediation effects between high- and low-credibility teams was not significant (index = -0.0937, CI: -0.3531 to 0.1378).



		coeff.	t	p	LLCI	ULCI
Moderation on Mediation		-.1342	-.7643	.4458	-.4808	.2124
Moderation on Direct Effect		.2755	1.1476	.2528	-.1985	.7496
Conditional Effects	Team Credibility	Effect	t	p	LLCI	ULCI
Conditional Direct Effect	1	-.1148	-.6639	.5077	-.4560	.2265
	2	.1608	.9337	.3518	-.1792	.5008
Conditional Indirect Effect	Team Credibility	Effect	BootSE	Boot LLCI	Boot ULCI	
	1	.2543*	.0993	.0706	.4620	
	2	.1606*	.0782	.0082	.3177	
Moderated Mediation		Index	BootSE	Boot LLCI	Boot ULCI	
		-.0937	.1243	-.3531	.1378	

TABLE VI-28. TEAM CREDIBILITY MODERATING PROJECT NOVELTY → ELJ → ENTRY

When ELJ was mediating the effect of project novelty on financial-support decisions, its mediation effect was significant for the relationship between project novelty and financial-support decisions for both low-credibility and high-credibility team ventures (effect = 0.2626, CI: 0.0734 to 0.4737; effect = 0.0114, CI: 0.0082 to 0.3316) (Table 32). However, the difference of ELJ's mediation effects between high- and low-credibility teams was not significant (index = -0.0967, CI: -0.3587 to 0.1558).



		coeff.	t	p	LLCI	ULCI
Moderation on Mediation		-.1342	-1.7643	.4458	-.4808	.2124
Moderation on Direct Effect		.3941	1.6464	.1016	-.0785	.8666
Conditional Effects	Team Credibility	Effect	t	p	LLCI	ULCI
Conditional Direct Effect	1	-.2742	-1.5915	.1134	-.6144	.0660
	2	.1198	.6081	.4861	-.2191	.4588
Conditional Indirect Effect	Team Credibility	Effect	BootSE	Boot LLCI	Boot ULCI	
	1	.2626*	.1019	.0734	.4737	
	2	.1659*	.0815	.0114	.3316	
Moderated Mediation		Index	BootSE	Boot LLCI	Boot ULCI	
		-.0967	.1292	-.3587	.1558	

TABLE VI-29. TEAM CREDIBILITY MODERATING PROJECT NOVELTY→ELJ→FINANCIAL SUPPORT

The moderation effects of team credibility are not supported for any of the models. The results are also depicted in the plots below. Hypothesis 7a and 7b are not supported.

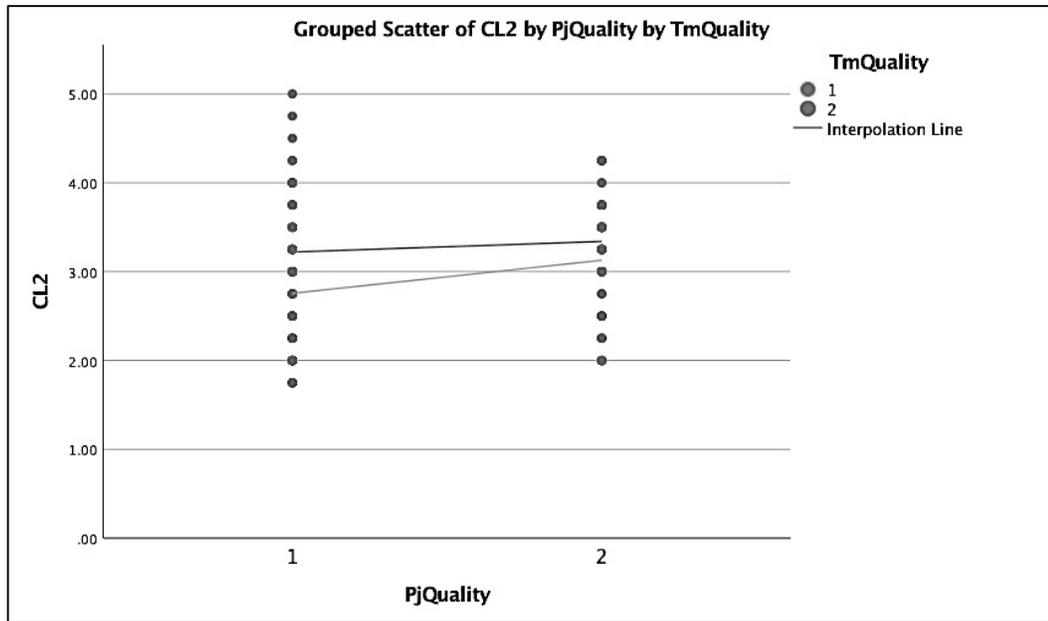


FIGURE VI-2. TEAM CREDIBILITY MODERATING CLJ

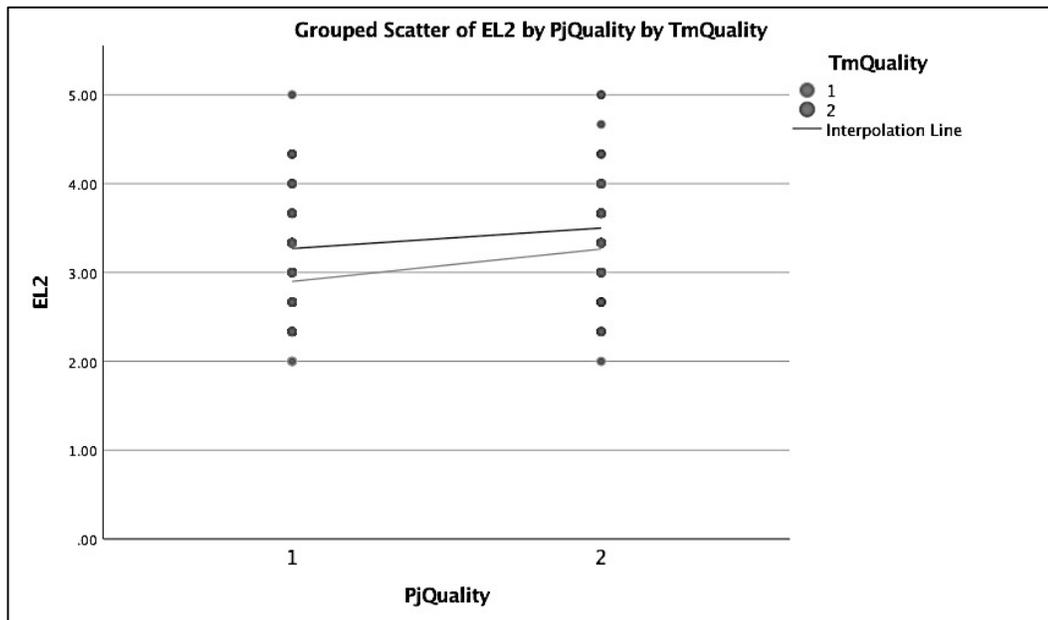


FIGURE VI-3. TEAM CREDIBILITY MODERATING ELJ

7. Post-hoc Analysis of Between-group Differences

Though I found no significant moderation effects from the assigned team credibility levels, I observed some interaction effects within the vignette design other than the simple direct effects of project novelty and team credibility alone from previous regression analysis, mediation analysis, and moderation analysis. As a post-hoc analysis, I decided to test the between-group differences for different versions of the vignettes. I compared respondents' legitimacy judgments ratings and resource decisions between each pair of vignette group with ANOVA.

For respondents reviewing venture profiles with a low project novelty level, there are significant between-group differences for Cognitive and Evaluative legitimacy judgment ($p < 0.01$). However, the differences in entry decisions are not significant. The significance level for the differences of financial support decisions is relatively low ($p < 0.1$). The results indicate that when the project novelty of the venture is low, reviewers' legitimacy judgments will be higher if they have teams with high credibility. Resource decisions will not vary with team credibility if the project novelty is low.

Novice vs. Elite	Variables	F	p
Novice Incremental vs Elite Incremental	Cognitive Legitimacy Judgment	9.092**	.003
	Evaluative Legitimacy Judgment	8.598**	.004
	Entry Decisions	1.630	.205
	Financial Support Decisions	3.137	.080

TABLE VI-30. COMPARING NOVICE INCREMENTAL AND ELITE INCREMENTAL

For high project novelty venture profile reviewers, their response differences for CLJ are only marginally significant ($p = 0.105$), the differences for ELJ are significant for 10% level confidence ($p = 0.056$). Meanwhile, the

differences for Entry decisions and Financial support decisions ($p < 0.001$) are all significant between Novice Pioneer group and Elite Pioneer group. When the venture has a novel project, there are no significant differences between respondents' legitimacy judgments no matter what kind of team the venture has. However, ventures with novel projects and credible teams are more likely to acquire resources from incubators than ventures with novel projects but less-credible teams.

Novice vs. Elite	Variables	F	p
Novice Pioneer vs Elite Pioneer	Cognitive Legitimacy Judgment	2.680	.105
	Evaluative Legitimacy Judgment	3.766	.056
	Entry Decisions	6.616*	.012
	Financial Support Decisions	16.065***	.000

TABLE VI-31. COMPARING NOVICE PIONEER AND ELITE PIONEER

When testing for differences between Novice Incremental and Novice Pioneer, differences are significant for CLJ ($p < 0.05$) and ELJ ($p < 0.01$). The differences for resource decisions, however, are insignificant for both entry decisions and financial support decisions. The results showed that when the entrepreneurial teams have low credibility, the legitimacy judgments for the ventures are higher for ventures with novel projects. Nevertheless, the ventures' chances for acquiring resources are low despite the novelty level of the venture projects.

Incremental vs. Pioneer	Variables	F	p
Novice Incremental vs Novice Pioneer	Cognitive Legitimacy Judgment	6.519*	.012
	Evaluative Legitimacy Judgment	7.435**	.008
	Entry Decisions	.578	.449
	Financial Support Decisions	.004	.952

TABLE VI-32. COMPARING NOVICE INCREMENTAL AND NOVICE PIONEER

The respondents' ratings have no significant differences for CLJ and resource decisions between Elite Incremental group and Elite Pioneer group. The only significant difference between the two groups appears in the ratings for ELJ ($p < 0.05$). The results indicate that when a venture has a credible team, respondents' CLJ and resource decisions will all be favorable even when the novelty level of the venture's project is relatively low. Project novelty will only affect respondents' ELJ for the venture, where ELJ for Elite ventures with novel projects is higher than Elite ventures with less-novel projects.

Incremental vs. Pioneer	Variables	F	p
Elite Incremental vs Elite Pioneer	Cognitive Legitimacy Judgment	.742	.391
	Evaluative Legitimacy Judgment	4.126*	.045
	Entry Decisions	2.682	.105
	Financial Support Decisions	2.248	.138

TABLE VI-33. COMPARING ELITE INCREMENTAL AND ELITE PIONEER

The analysis then moves on to compare between extreme groups. The differences for all the legitimacy judgments (CLJ: $p < 0.001$; ELJ: $p < 0.001$) and resource decisions (Entry decisions: $p < 0.01$; Financial support decisions: $p < 0.001$) are highly significant between Novice Incremental group and Elite Pioneer group. The Elite Pioneer group is better on both project novelty and team credibility. It is quite reasonable that incubator managers rate higher for the Elite Pioneer group than the Novice Incremental group.

	Variables	F	p
Elite Pioneer vs Novice Incremental	Cognitive Legitimacy Judgment	18.241***	.000
	Evaluative Legitimacy Judgment	23.139***	.000
	Entry Decisions	11.399***	.001
	Financial Support Decisions	13.705***	.000

TABLE VI-34. COMPARING ELITE PIONEER AND NOVICE INCREMENTAL

While it is more obvious that respondents' ratings will vary between Elite Pioneer group and Novice Incremental group, there are more uncertainties in the legitimacy judgments and resource decisions between the Elite Incremental group and the Novice Pioneer group. When comparing rating differences between these two groups, the results are not significant for legitimacy judgments and entry decisions. The differences for financial support decisions are significant at the 10% confidence interval. The results revealed that the Elite Incremental group and the Novice Pioneer group have no significant differences in their legitimacy judgments and entry resources from the incubators. However, the Elite Incremental group has significantly higher chances ($p < 0.1$) of accessing financial support resources than the Novice Pioneer group.

	Variables	F	p
Elite Incremental vs Novice Pioneer	Cognitive Legitimacy Judgment	.391	.533
	Evaluative Legitimacy Judgment	.003	.960
	Entry Decisions	.358	.551
	Financial Support Decisions	3.636	.060

TABLE VI-35. COMPARING ELITE INCREMENTAL AND NOVICE PIONEER

This confirms that evaluations value an elite team with an incremental idea over a novice team with a pioneering idea.

Chapter VII

Discussions

A. Research Conclusion and Interpretation

The direct effects and mediation effects of this dissertation research are all supported. The hypothesized moderation relationships are not significant, but results from between-group comparisons revealed more refined effects for ventures with a different combination of project and team characteristics.

Table 7.1 summarized the analysis outcomes for the hypotheses.

H1a	Project novelty → CLJ	supported
H1b	Team credibility → CLJ	supported
H2a	Project novelty → ELJ	supported
H2b	Team credibility → ELJ	supported
H3a	CLJ → Entry decisions	supported
H3b	CLJ → Financial support decisions	supported
H4a	ELJ → Entry decisions	supported
H4b	ELJ → Financial support decisions	supported
H5a	Project novelty → CLJ → Entry decisions	supported
H5b	Project novelty → CLJ → Financial support decisions	supported
H5c	Team credibility → CLJ → Entry decisions	supported
H5d	Team credibility → CLJ → Financial support decisions	supported
H6a	Project novelty → ELJ → Entry decisions	supported
H6b	Project novelty → ELJ → Financial support decisions	supported
H6c	Team credibility → ELJ → Entry decisions	supported
H6d	Team credibility → ELJ → Financial support decisions	supported
H7a	Project novelty × Team credibility → CLJ	Not supported
H7b	Project novelty × Team credibility → ELJ	Not supported

TABLE VII-1. SUMMARY OF HYPOTHESES RESULTS

1. The Content of New Venture Legitimacy

The qualitative Study 1 revealed that opportunity characteristics and individual qualities are the two major components of venture-level properties for new-venture legitimacy. Compared to the external enabler (Davidsson, 2015) of market factors (Navis & Glynn, 2011), these two aspects of the venture are also more controllable and presentable for entrepreneurs. On the other hand, business opportunities and individual entrepreneurs are also key parameters for BIs assessments of new ventures; they are the only reliable features of a less-established new ventures and are also more visible and impressive among the legitimating signals sent by from the ventures.

More specifically, project novelty acts as one dominant factor for venture-opportunity characteristics, and individual entrepreneurs' qualities are represented mostly by the entrepreneurial team. With these two refined factors, the vignette study results supported my Hypotheses H1 and H2 that project novelty and team credibility would have positive effects on legitimacy judgments. The survey experiment approach of the vignette study provided ventures from the same industry and targeting the same niche of target customers, thus controlling for the influences of market factors, business models, and other project-related features. At the same time, the ventures depicted in each version of the vignettes had the same founder-team structures, and the founders were all specialized in the same divisions of skills. In other words, the design of the vignette only allowed the level of project novelty and team credibility to vary, not the content of the projects nor the

make-up of the teams. Therefore, the results had high internal validity in supporting the explanatory powers of project novelty and team credibility on incubator managers' legitimacy judgments for new ventures.

2. Legitimacy Judgments as the Resource Commitment Mechanism

In Study 1, most of the incubators and incubator managers confirmed that they had at least a simple set of standards for venture screening. They allowed the ventures to enter or to be passed on to further stages of resource supplies if they felt that the ventures met their requirements. As this dissertation research used legitimacy theory to explain these resource decisions, the relationships between legitimacy judgments and resource decisions were examined in Study 2.

a. Purposes of legitimacy judgments.

Both cognitive and evaluative legitimacy judgments were shown to be positively related to incubator managers' resource decisions. For entry decisions, CLJ had a higher coefficient (.373) than ELJ (.046). In contrast, ELJ was related to incubators' financial-support decisions with a higher coefficient (.346) than CLJ (.264). These differences imply that CLJ had a bigger explanatory share for entry decisions, while ELJ counted more in the relationship with financial-support decisions.

Entering a business incubator confers the lowest rank of incubator resources. Financial support is provided only to ventures of high quality. Many incubators of the directors confirmed the existence of differentiation among the ranks of resource supply as well as the corresponding criteria for resource

commitment. For lower-level resources, resource holders mainly applied their personal heuristics to perceive and categorize ventures at a more general level (Tost, 2011). For more scarce and valuable resources such as financial support, incubator managers needed to carry out a rigid process of pragmatic assessment. The results suggested that the different incubator models of “survival of the fittest” and “pick the winners” (Bergek & Norrman, 2008) were further extended for different purposes of screening based on types of resources under consideration. The results resonated with the interview feedbacks where incubator directors highlighted the “80-20 rule” of resource allocation and the divided criteria for commitments.

b. A potential procedural process of legitimacy judgments.

In the regressions for legitimacy judgments and resource decisions, the significance levels of the relationships were higher for evaluative cognitive legitimacy for both entry decisions and financial-support decisions. In later mediation analyses, I also found that when it was examined in the same multiple-mediator models together, CLJ’s mediation effect decreased for most models and became insignificant for entry decisions. Meanwhile, ELJ’s effect was higher in the integrated model.

Connecting this findings to Bitektine and Haack’s (2015) process model of legitimacy judgment process, including passive perception, active evaluation, and judgment expression, I saw the possibility that CLJ in this research could represent the prior stage of passive perception, while ELJ was the following stage of active evaluation.

In performing a post-hoc mediation analysis of CLJ's effect on resource decisions through ELJ, I found a partial mediation effect from ELJ. This result supported the process model of legitimacy under a perception view; when ventures first come under review in an incubator, signals from their venture profiles (or business plans) will first enter the heuristics for automatic fitting. Pollack, Rutherford, and Nagy (2012) also mentioned the passive nature of cognitive legitimacy proposed by Shepherd & Zacharakis (2003, p. 151). Understandability and categorization are the main missions for this stage. For any information raising sense-making problems and concerns for inconsistency contradictions, or uncertainties ("red flags" in Pollack et al., 2012; "challenges and questions" in Tost, 2011), the next stage of proactive evaluation will deal with them.

Compared with incubator entry, the commitment of financial resources is a more challenging purpose for venture screening, with more "red flags" for the higher standards. Therefore, decisions on financial support involved more extensive involvement of the evaluation stage beyond the general perception of CLJ. However, since CLJ and ELJ were rated in the same vignette study by the incubator managers, the mediation role of ELJ will need further examination.

3. The Interaction between Venture Factors

This dissertation set out to find interaction effects between project characteristics and team characteristics. However, no direct moderation effect was found from team credibility. The failure to capture any significant

conditional effects was partly due to the oversimplified design for the vignette. The variance in real venture qualities is much more extensive than the high- or low-level representations I used (for convenience and manageability) in the vignettes. More interactions would appear when allowing for the flexible variance in each factor.

Nevertheless, when analyzing the between-group differences, the effect of each factor varies for different vignette group. The Novice Incremental group and the Elite Incremental group differ significantly for legitimacy judgments, but not for resource decisions. The Novice Pioneer group and the Elite Pioneer group differ significantly for resource decisions, but only marginally for legitimacy judgments. Although incubator managers judge ventures' legitimacy differently with different levels of project novelty, these differences in legitimacy judgments will not affect their resource decisions.

When comparing the Novice Incremental group and the Novice Pioneer group, their ratings for legitimacy judgments differ significantly. The difference for resource decisions is not significant between the two groups. The Elite Incremental group and the Elite Pioneer group have significant difference only for evaluative legitimacy judgments. There is not much difference in incubator managers' resource decisions based on the novelty level of a project, as long as the teams are at the same credibility level.

The comparisons along the two dimensions imply that incubator managers are more sensitive to project novelty when they are judging the legitimacy for the ventures. On the other hand, incubator managers will refer

more to the credibility level of the entrepreneurial teams than to the project novelty when they are making resource decisions for the ventures.

For the best and worst conditions, the results are not surprising. All ratings differ significantly between the Elite Pioneer group and the Novice Incremental group. To the contrary, the differences between the Elite Incremental group and the Novice Pioneer group are not yet clear. The results found no significant differences for legitimacy or the incubators' Entry decisions. However, incubator managers are significantly more likely to provide financial supports to an Elite Incremental venture, than to a Novice Pioneer venture.

Financial support resources are generally more valuable and less available for incubators. When incubator managers make decisions about this type of resources, entrepreneurial teams are more important factors for venture evaluation. Similar to Hypothesis 7a and 7b, the result conforms with the emphases on entrepreneurs over other resources in an entrepreneurial venture (Chandler & Hank, 1998; Alvarez & Busenitz, 2001; Unger et al., 2011). In legitimacy theory, the compounded role of entrepreneurs as both intelligence resources and resource organizers could appeal to both then instrumental and relational aspect of legitimacy (Tyler, 1997), thus providing additional confidence for resource holders against the uncertainties of their commitment.

B. Contributions

1. Theoretical Contribution

a. To Entrepreneurship.

This dissertation followed the suggestions from McMullen and Dimov (2013) to study entrepreneurship as a process, looking at a more substantial set of explanations of the nature of entrepreneurship rather than focusing on abstract system-level variances. In this dissertation, the focal entrepreneurship process of the incubator managers' screening practices reached beyond the fixed entity of social evaluation and the outcomes of resource commitment decisions, as suggested by Langley et al. (2013), to look at how the evaluative construct and the mechanism varied for different stages (Van de Ven, 2007).

Managers' norm selection and application represent the institutional forces from the environment, and by looking at how these normative schemas interact with entrepreneurial actors' input into the judgment-formation process, this dissertation attempted to address the challenge of integrating contexts and process to better understand entrepreneurial success (Aldrich & Martinez, 2001).

To look into these micro-processes, the cognitive analysis could provide important explanations. Cognitive research on entrepreneurship or venture creation have emerged in recent years. This approach looks into mental processes to explain what people think, say, and behave (Baron, 2004). The use of the cognitive approach can help understand entrepreneurs and stakeholders' perceptions of opportunities and address the basic research

question of “Why do some persons but not others recognize opportunities for new products or services that can be profitably exploited?” (Baron, 2004). For the process of opportunity recognition, it is this mental process that matters most in studying how information is processed and how perceptions are made.

This research also contributed to the analyses of different stakeholders’ roles in entrepreneurship. By accounting for the contexts and purposes involved in entrepreneurial activities, we can better understand their decisions and behaviors. With the understanding of each particular stakeholder group and the more specific conditions, the environment for entrepreneurial ventures is more clearly elaborated. Exchanges between organizations can also be better explained in situations with high uncertainties.

b. To Business Incubation.

The multilevel framework of legitimacy mapped out the structure of the “multilevel agency problem” in incubators (Markman et al., 2005; Phan et al., 2005). The legitimacy-judgment model lays out how institutional and organizational factors manifest within and interact with the individual incentives and practices. The study of the screening processes of BIs also helps illustrate how this procedure characterizes the incubators and predicts their performance as well as ventures in them (Aerts et al., 2007).

By identifying different layers of resource supplies and varying operational goals in BIs, the subjective and contingency aspects of judgments and decisions become especially important. With its survey experiment vignette study, this research was able to examine critical factors relating to

incubators' judgments for new ventures. The process in which signals of venture qualities are processed into subjective perceptions and judgments was clearly portrayed, with the integration of multiple factors and their interactions in new ventures. In the research, incubator managers' different sensitive levels to venture qualities were found when different judgment purposes and resource outcomes were considered. The results highlighted the influence of subjective cognition under uncertainties.

With the distinctions between legitimacy-judgment modes and between ends of different resource exchanges, the research has extended the different approaches of selection criteria ("survival of the fittest" and "pick the winners" modes suggested by Bergek and Norrman (2008, p. 23). The distinguished criteria were based on not only incubator types or models but also on selection purposes at the individual level when different levels of resource commitments were under consideration.

c. To Resource-dependency Theory (RDT).

This research applied both the asset view (Barney, 2001) and the dependence view (Pfeffer & Salancik, 1978) of resources. The static asset view was used to describe the need and objective possession of resources from new ventures and the supply of diverse resource from incubators. More importantly, the resource-based theory delineated the exchange relationships between new ventures and BIs. The variability of resource commitments not only reflected the outcomes of the incubators' venture assessments but also shaped the judgment processes by priming them with different incubator

demands and expected coalitions. Therefore, by placing ventures and incubators in the specific process under analysis, the research provided a clear ecology picture of the organizations, enabling us to better understand their judgments and behaviors.

I also integrated the resource-dependency theory with stakeholder theory in this dissertation. External and internal contingencies are among the key similarities between RDT and the stakeholder theory (Hillman, Withers, & Collins, 2009, p. 1417). Business incubators as one stakeholder group perceive new ventures within a specific framework of factors for their viability and values as the norms of the industry. Incubator managers apply the norms with more refined criteria based on organizational or personal contingencies. This research examined how individual and organizational resources are perceived as key capabilities by stakeholders and how stakeholders assess the match and value of resource status and make decisions to confer further resources.

d. To Legitimacy Theory.

This dissertation attempted to build the bridges suggested in Überbacher (2014) by connecting audience view and actor view within the perceptual mechanism. The integrative model linked the micro- and macro-views by examining how macro-level legitimacy manifests at the micro-level and how micro-processes generate outcomes that constitute macro-institutions.

By proposing the variance in resource outcomes, the model also addressed how the goal of legitimation could affect the criteria and manifestation of the legitimacy-judgment process. By empirically studying these contingency effects, the research explored approaches to incorporate various factors systematically to construct a more generalizable model of legitimacy.

This research also addressed the problematic assumption of shared legitimacy judgments among different stakeholders (Überbacher, 2014). By exploring the legitimacy content evaluated by BIs, I specified the context and basis for the focal judgments (Lamin & Zaheer, 2012; Pontikes, 2012) and tried to reveal how the social norms are selected and applied in the judgment-formation process by individual audiences (Cattani, Ferriani, Negro, & Perretti, 2008; Hannan, 2010; Überbacher, 2014). The findings of the vignette study confirmed that the opportunity and entrepreneur factors of general venture legitimacy also apply to BIs' judgments. The legitimacy judgments were also supported as effective mechanisms in the cognitive process leading to resource commitments.

By comparing the cognitive and evaluative modes of legitimacy judgments, this research also provided some evidence of differences in their relative influences. Their judgments reflect different venture qualities with different strengths; additionally, the significance level of their further influences on resource decisions vary according to the features of the resources. Moreover, the partial mediation effects of ELJs on the relationships between

CLJs and resource outcomes helped elaborate on the potential interaction within the process. The finding provided empirical support for the procedural nature and selective activations of the legitimacy-judgment process.

More importantly, the vignette study integrated further contingency factor into this legitimacy model. With the comparisons between different vignette groups where the venture profiles entailed different combinations of project and team characteristics, the results implied that the composition of venture qualities might also be an important factor for resource acquisition. Differential effects from different qualities as well as the cohesiveness among the range of qualities could potentially affect resource holders' evaluations and decisions. This result supported Navis and Glynn's (2011) proposition of identity coherence as a key parameter in venture legitimacy. The content of legitimacy includes both the constituting factors and the structures through which they cohere.

2. Practical Implications

The exploration into the judgment-formation process helps resolve the "black box" mystery for incubator managers' judgments on new ventures: insights into the structure of new-venture legitimacy and the procedures of legitimacy judgments provide some clues for incubators to understand the execution of the critical screening practice.

Selection criteria are built upon incubators' goals and models, and they shape the operations and performance of incubators. This dissertation research divided venture qualities into project characteristics and team

characteristics. The results confirmed the effectiveness of the two general selection focuses—ideas and entrepreneurs (Bergek & Norrman, 2008). Resource decisions for incubator entry and financial support differ in their value and scarcity in incubators. The results for these two types of resource outcomes addressed the strictness dimension of Bergek and Norrman's selection strategies—"survival of the fittest" and "pick the winners" (2008). The framework for selection strategies may also help incubator managers identify appropriate tactics according to multiple contextual factors (Bøllingtoft & Uihøi, 2005) such as their profit models, sponsorships, and the specific resource features under consideration.

The independent and interaction effects of new ventures' qualities addressed the interactions among incubators' goals and the thresholds for different considerations (Phan et al., 2005). Deconstructing the application of incubator goals and values clearly lays out the basis for their operational models. Thus, BIs will be able to develop a more efficient approach in guiding venture screening and other practices to achieve their performance goals.

By integrating goal priorities and the execution of different approaches of applying selection criteria, this dissertation also provides a construct for making meaningful comparisons between BIs and for guiding the future development of effective organizational structure and processes in BIs. Additionally, it provides a comprehensive sketch of incubators' expectations for new ventures. The results present the varying criteria for different levels of resources, enabling the ventures to foresee their constraints along the path.

The interactions within incubators' evaluation criteria also direct ventures in crafting the ways they build and present their ventures' characteristics to resource holders.

C. Limitations and Future Research Directions

1. Limitations

a. Disadvantages of vignette study.

The simple design of high and low levels of venture qualities, though it successfully primed the reviewers' perceptions for new ventures, could not completely capture the finer changes and more subtle differences in the ventures' details. Threshold issues for legitimacy judgments and incubators' resource supports cannot not be addressed with a factorial design.

The limited number of factors manageable in a vignette study only allowed me to examine very limited aspects of new ventures. Although this research used the most representative factors for the two major factors of new ventures, a more inclusive construct is still necessary to provide a comprehensive pool of venture qualities.

Moreover, besides its realistic format of new-venture review and judgment processes for incubator managers, a vignette study designed in the form of venture profiles could represent only one source of venture screening. There are still other screening accesses for potential ventures, such as interviews, public presentations, and field visits. A comparison of multiple sources could provide more external validity for the studies.

b. Reviewer and incubator background.

All incubator managers must face not only the uncertain nature of new ventures but also do so within the context of operational pressures from their own organizations. They need to rely on institutional norms and organizational criteria in addition to their own judgments.

The incubator managers in this dissertation research had diverse backgrounds and represented different types of incubators. However, I was not able to group them into clear-cut categories since many of the incubators shared a complex constitution of sponsorships and interests. The feedback on my interview questions about their mission statements and operational performance elaborated how they manage as private entities or enterprise-based organizations while concurrently acting as economic drivers for the local economy with government sponsors. The results conformed to and supported Phan et al.'s (2005) notion of the multilevel agency problem in incubators. A more robust system for categorizing BIs is needed to capture the between-group differences.

c. Single sample and sources.

This dissertation research was based on a sample of 170 incubator managers in Chengdu, China. Although the sample was large enough to represent BIs in the city, a different sample (e.g., from another city or even another country) would be helpful to increase the external validity of the study. Situational influences such as corporate and government policies, economic

conditions, and business and social cultures could also be examined using a wider sample.

Incubator managers' legitimacy judgments and resource decisions were captured in the same vignettes survey. Although the format simulate their daily practices of venture review, there will be some concerns about consistency biases. A different format of questions or experiment conducted at separated points of time might work with more accuracy.

2. Future Directions

a. Parallel comparisons.

As suggested by the interview responses, the industry norms might differ slightly between incubators in China and those in Western developed countries. For legitimacy judgments, the relative strengths of cognitive schema and evaluative schema could also vary according to cultural preferences for compliance. Therefore, a comparison study with incubators from different economic environments and cultures could integrate other cognitive factors in individual perceptions, judgments, and decision making.

b. Real Venture-based examinations of factor variance and interaction.

I controlled for signal inputs from the demand side of resources in this research. It would also be valuable to look at ventures subjected to the same set of criteria in screening for resource supports. A large venture pool with real variances in all aspects might capture more comprehensively the attempts and responses from the venture side. The sample of real ventures could potentially

provide more factors through which ventures proactively deal with their constraints.

c. The mediation role of perception.

In the manipulation checks of this research, subjects' perceptions for the venture qualities were effectively primed by the vignette design while significantly related to their legitimacy judgments. The results revealed the partial mediation effects of perceptions for the relationship between venture qualities and legitimacy judgments. It is possible to further deconstruct the process to examine how external information is processed in different cognitive stages.

d. More stakeholders and resource decisions.

Business incubators are one of the most important providers of various resources for entrepreneurship at an early stage. There are other critical stakeholders at the outset, however, such as cofounders, angel investors, local associations and governments, and suppliers. Even more stakeholders begin to interact with the ventures as they develop—for example, venture capitalists, strategic alliances, customer representatives, and so on. Real ventures have more numerous and diverse resource exchanges than could be analyzed in this research. It would be invaluable to be able to analyze different legitimacy constructions for new ventures from the perspective of different stakeholders and to study how new ventures cope with the myriad (and possibly contrasting) expectations.

D. Conclusions

With the inductive qualitative study and the vignette study, the results of this research supported project novelty and team credibility as the key factors for business incubator managers' legitimacy judgments. This research also confirmed the mediation effects of both the cognitive and evaluative legitimacy judgments on resource decisions. Comparisons between ventures with different compositions of project and team qualities highlighted the importance of a credible team over a pioneering idea.

This dissertation research explored the legitimacy judgment process with a refined perspective, and provided valuable insights for the practice of business incubators and resource-seeking ventures.

References

- Aerts, K., Matthyssens, P., & Vandenbempt, K. (2007). Critical role and screening practices of European business incubators. *Technovation*, 27(5), 254-267.
- Aldrich, H. E., & Martinez, M. A. (2001). Many are called, but few are chosen: An evolutionary perspective for the study of entrepreneurship. *Entrepreneurship Theory and Practice*, 25(4), 41-56.
- Alvarez, S. A., & Busenitz, L. W. (2001). The entrepreneurship of resource-based theory. *Journal of management*, 27(6), 755-775.
- Aldrich, H. E., & Fiol, C. M. (1994). Fools rush in? The institutional context of industry creation. *Academy of management review*, 19(4), 645-670.
- Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. M. (1994). The Work Preference Inventory: assessing intrinsic and extrinsic motivational orientations. *Journal of personality and social psychology*, 66(5), 950.
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business venturing*, 18(1), 105-123.
- Ashforth, B. E., & Gibbs, B. W. (1990). The double-edge of organizational legitimation. *Organization science*, 1(2), 177-194.
- Ashmore, R. D., Deaux, K., & McLaughlin-Volpe, T. (2004). An organizing framework for collective identity: articulation and significance of multidimensionality. *Psychological bulletin*, 130(1), 80.
- Asian Development Bank (2014). *Developing indicators and monitoring systems for environmentally livable cities in the Peoples Republic of China*. Mandaluyong City, Metro Manila, Philippines: Asian Development Bank.
- Bandura, A. (1989). Human agency in social cognitive theory. *American psychologist*, 44(9), 1175.
- Bansal, P., & Clelland, I. (2004). Talking trash: Legitimacy, impression management, and unsystematic risk in the context of the natural environment. *Academy of Management Journal*, 47(1), 93-103.
- Barney, J. B. (1986). Types of competition and the theory of strategy: Toward an integrative framework. *Academy of management review*, 11(4), 791-800.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of management*, 27(6), 643-650.
- Barnett, M. L. (2006). Waves of collectivizing: A dynamic model of competition and cooperation over the life of an industry. *Corporate Reputation Review*, 8(4), 272-292.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Baron, R. A., & Ward, T. B. (2004). Expanding entrepreneurial cognition's toolbox: Potential contributions from the field of cognitive science. *Entrepreneurship Theory and Practice*, 28(6), 553-573.
- Bates, T. (1990). Entrepreneur human capital inputs and small business longevity. *Review of Economics and Statistics*, 72(4), 551.

- Baum, J. A., & Oliver, C. (1991). Institutional linkages and organizational mortality. *Administrative science quarterly*, 187-218.
- Baum, J. A., & Rao, H. (2004). Evolutionary dynamics of organizational populations and communities. *Handbook of organizational change and innovation*, 212-258.
- Baum, J. A., & Shipilov, A. V. (2006). 1.2 Ecological Approaches to Organizations. *The Sage handbook of organization studies*, 55.
- Becker, G. S. (2013). *The economic approach to human behavior*. University of Chicago press.
- Bergek, A., & Norrman, C. (2008). Incubator best practice: A framework. *Technovation*, 28(1-2), 20-28.
- Bitektine, A., & Haack, P. (2015). The “macro” and the “micro” of legitimacy: Toward a multilevel theory of the legitimacy process. *Academy of Management Review*, 40(1), 49-75.
- Boje, D. M. (1991). The storytelling organization: A study of story performance in an office-supply firm. *Administrative science quarterly*, 106-126.
- Bøllingtoft, A., & Ulhøi, J. P. (2005). The networked business incubator—leveraging entrepreneurial agency?. *Journal of business venturing*, 20(2), 265-290.
- Brewer, M. B. (1991). Optimal distinctiveness theory: Its history and development. *Handbook of theories of social psychology: Volume two*, 81-98.
- Brown, A. D. (1998). Narrative, politics and legitimacy in an IT implementation. *Journal of Management Studies*, 35(1), 35-58.
- Bruneel, J., Ratinho, T., Clarysse, B., & Groen, A. (2012). The Evolution of Business Incubators: Comparing demand and supply of business incubation services across different incubator generations. *Technovation*, 32(2), 110-121.
- Campbell, C., & Allen, D. N. (1987). The small business incubator industry: micro-level economic development. *Economic Development Quarterly*, 1(2), 178-191.
- Carroll, R. M., & Nordholm, L. A. (1975). Sampling Characteristics of Kelley's ϵ and Hays' ω . *Educational and Psychological Measurement*, 35(3), 541-554.
- Chandra, A., He, W., & Fealey, T. (2007). Business incubators in China: a financial services perspective. *Asia Pacific Business Review*, 13(1), 79-94.
- Choi, Y. R., & Shepherd, D. A. (2005). Stakeholder perceptions of age and other dimensions of newness. *Journal of Management*, 31(4), 573-596.
- Clarysse, B., Wright, M., Lockett, A., Van de Velde, E., & Vohora, A. (2005). Spinning out new ventures: a typology of incubation strategies from European research institutions. *Journal of Business venturing*, 20(2), 183-216.
- CNN. (2017, August 2). 17 Best Places to Visit in 2017. Retrieved December 1, 2017, from <http://www.cnn.com/travel/article/best-places-to-visit-in-2017/index.html>
- Cohen, S. (2013). What do accelerators do? Insights from incubators and angels. *Innovations: Technology, Governance, Globalization*, 8(3-4), 19-25.
- Cook, K. S., & Hardin, R. (2001). *Norms of cooperativeness and networks of trust*. Russell Sage Foundation.
- Cornelissen, J. P., & Clarke, J. S. (2010). Imagining and rationalizing opportunities: Inductive reasoning and the creation and justification of new ventures. *The Academy of Management Review*, 539-557.
- Dacin, M. T., Oliver, C., & Roy, J. P. (2007). The legitimacy of strategic alliances: An institutional perspective. *Strategic Management Journal*, 28(2), 169-187.

- Davidsson, P. (2015). Entrepreneurial opportunities and the entrepreneurship nexus: A re-conceptualization. *Journal of Business Venturing*, 30(5), 674-695.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of business venturing*, 18(3), 301-331.
- Deeds, D. L., Mang, P. Y., & Frandsen, M. L. (2004). The influence of firms' and industries' legitimacy on the flow of capital into high-technology ventures. *Strategic Organization*, 2(1), 9-34.
- Deephouse, D. L. (1996). Does isomorphism legitimate?. *Academy of management journal*, 39(4), 1024-1039.
- Deephouse, D. L., & Suchman, M. (2008). Legitimacy in organizational institutionalism. *The Sage handbook of organizational institutionalism*, 49, 77.
- DiMaggio, P., & Powell, W. W. (1983). The iron cage revisited: Collective rationality and institutional isomorphism in organizational fields. *American Sociological Review*, 48(2), 147-160.
- DiMaggio, P. J., & Powell, W. W. (Eds.). (1991). *The new institutionalism in organizational analysis* (Vol. 17). Chicago, IL: University of Chicago Press.
- Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of management Review*, 20(1), 65-91.
- Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: Social values and organizational behavior. *Pacific sociological review*, 18(1), 122-136.
- Elsbach, K. D. (1994). Managing organizational legitimacy in the California cattle industry: The construction and effectiveness of verbal accounts. *Administrative science quarterly*, 57-88.
- Elsbach, K. D., & Sutton, R. I. (1992). Acquiring organizational legitimacy through illegitimate actions: A marriage of institutional and impression management theories. *Academy of management Journal*, 35(4), 699-738.
- Fisher, G., Kotha, S., & Lahiri, A. (2016). Changing with the times: An integrated view of identity, legitimacy, and new venture life cycles. *Academy of Management Review*, 41(3), 383-409.
- Gaglio, C. M. (1997). Opportunity identification. *Advances in entrepreneurship, firm emergence and growth*, 3, 139-202.
- Gardberg, N. A., & Fombrun, C. J. (2006). Corporate citizenship: Creating intangible assets across institutional environments. *Academy of management Review*, 31(2), 329-346.
- Gigerenzer, G., & Selten, R. (Eds.). (2002). *Bounded rationality: The adaptive toolbox*. MIT press.
- Giorgi, S., & Weber, K. (2015). Marks of distinction: Framing and audience appreciation in the context of investment advice. *Administrative Science Quarterly*, 60(2), 333-367.
- Graffin, S. D., Boivie, S., & Carpenter, M. A. (2013). Examining CEO succession and the role of heuristics in early-stage CEO evaluation. *Strategic Management Journal*, 34(4), 383-403.
- Greenwood, R., Suddaby, R., & Hinings, C. R. (2002). Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of management journal*, 45(1), 58-80.
- Hackett, S. M., & Dilts, D. M. (2004). A systematic review of business incubation research. *The Journal of Technology Transfer*, 29(1), 55-82.
- Hallen, B. L., & Eisenhardt, K. M. (2012). Catalyzing strategies and efficient tie formation: how entrepreneurial firms obtain investment ties. *Academy of Management Journal*, 55(1), 35-70.

- Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication Monographs*, 85(1), 4-40.
- Hiatt, S. R., Sine, W. D., & Tolbert, P. S. (2009). From Pabst to Pepsi: The deinstitutionalization of social practices and the creation of entrepreneurial opportunities. *Administrative Science Quarterly*, 54(4), 635-667.
- Higgins, M. C., & Gulati, R. (2006). Stacking the deck: The effects of top management backgrounds on investor decisions. *Strategic Management Journal*, 27(1), 1-25.
- Hudson, B. A. (2008). Against all odds: A consideration of core-stigmatized organizations. *Academy of Management Review*, 33(1), 252-266.
- Hudson, B. A., & Okhuysen, G. A. (2009). Not with a ten-foot pole: Core stigma, stigma transfer, and improbable persistence of men's bathhouses. *Organization Science*, 20(1), 134-153.
- iiMedia (2016) *2016 The Development Status of Chinese Incubator Research Report*, iiMedia Research Group
- Invest in Chengdu. (2016, January 31). 299 OF THE FORTUNE 500 COMPANIES ARE NOW LOCATED IN SICHUAN. Retrieved December 4, 2017, from <http://www.investinchengdu.com/299-of-the-fortune-500-companies-are-now-located-in-sichuan.html>
- Jepperson, R. (1991). Institutions, institutional effects, and institutionalism. *The new institutionalism in organizational analysis*, 143-163.
- Johnson, C., Dowd, T. J., & Ridgeway, C. L. (2006). Legitimacy as a social process. *Annu. Rev. Sociol.*, 32, 53-78.
- Jung, C. G. (2001). *Modern man in search of a soul*. Psychology Press.
- Lalkaka, R. (2003). Business incubators in developing countries: characteristics and performance. *International Journal of Entrepreneurship and Innovation Management*, 3(1-2), 31-55.
- Lamont, M. (2012). Toward a comparative sociology of valuation and evaluation. *Annual Review of Sociology*, 38.
- Li, F. (2017, June 22). At global fair, entrepreneurs and academics fete innovation. *The Telegraph*. Retrieved December 1, 2017, from <http://www.telegraph.co.uk/news/world/china-watch/business/chengdu-innovation-fair/>
- Kahneman, D., & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. *Heuristics and biases: The psychology of intuitive judgment*, 49, 49-81.
- Kahneman, D. (2011). *Thinking, fast and slow*. Macmillan.
- Kahneman, D., & Tversky, A. (2013). Prospect theory: An analysis of decision under risk. In *Handbook of the fundamentals of financial decision making: Part I* (pp. 99-127).
- Keren, G., & Lewis, C. (1979). Partial omega squared for ANOVA designs. *Educational and Psychological Measurement*, 39(1), 119-128.
- Khaire, M., & Wadhvani, R. D. (2010). Changing landscapes: The construction of meaning and value in a new market category—Modern Indian art. *Academy of Management Journal*, 53(6), 1281-1304.
- Kirzner, I. M. (1997). Entrepreneurial discovery and the competitive market process: An Austrian approach. *Journal of economic Literature*, 35(1), 60-85.
- Klein, K. J., Tosi, H., & Cannella, A. A. (1999). Multilevel theory building: Benefits, barriers, and new developments. *Academy of Management review*, 24(2), 248-253.

- Koh, F. C., Koh, W. T., & Tschang, F. T. (2005). An analytical framework for science parks and technology districts with an application to Singapore. *Journal of business venturing*, 20(2), 217-239.
- Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and integration in complex organizations. *Administrative science quarterly*, 1-47.
- Lounsbury, M., & Glynn, M. A. (2001). Cultural entrepreneurship: Stories, legitimacy, and the acquisition of resources. *Strategic management journal*, 22(6-7), 545-564.
- Maguire, S., Hardy, C., & Lawrence, T. B. (2004). Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada. *Academy of management journal*, 47(5), 657-679.
- Markman, G. D., Phan, P. H., Balkin, D. B., & Gianiodis, P. T. (2005). Entrepreneurship and university-based technology transfer. *Journal of business venturing*, 20(2), 241-263.
- Martens, M. L., Jennings, J. E., & Jennings, P. D. (2007). Do the stories they tell get them the money they need? The role of entrepreneurial narratives in resource acquisition. *Academy of Management Journal*, 50(5), 1107-1132.
- Martin, J., Feldman, M. S., Hatch, M. J., & Sitkin, S. B. (1983). The uniqueness paradox in organizational stories. *Administrative Science Quarterly*, 438-453.
- Maurer, J. G. (1971). *Readings in organization theory: Open-system approaches*. Random House (NY).
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American journal of sociology*, 83(2), 340-363.
- Meyer, J. W., & Scott, W. R. (1992). *Organizational environments: Ritual and rationality*. Sage Publications, Inc.
- Ministry of Science and Technology (MOST). (2017a, January 20). Retrieved December 1, 2017, from http://www.most.gov.cn/dfkj/sc/zxdt/201701/t20170120_130645.htm
- Ministry of Science and Technology (MOST). (2017b, June 29). Retrieved December 1, 2017, from http://www.most.gov.cn/mostinfo/xinxifenlei/fgzc/gfxwj/gfxwj2017/201707/t20170711_133971.htm
- Ministry of Science and Technology (MOST). (2017c, September 25). Retrieved December 1, 2017, from http://www.most.gov.cn/xinwzx/mtjj/ztjj/201709/t20170925_135063.htm
- Ministry of Science and Technology (MOST). (2017d, November 3). Retrieved December 1, 2017, from http://www.most.gov.cn/kjbgz/201711/t20171103_135962.htm
- Nagy, B. G., Pollack, J. M., Rutherford, M. W., & Lohrke, F. T. (2012). The influence of entrepreneurs' credentials and impression management behaviors on perceptions of new venture legitimacy. *Entrepreneurship Theory and Practice*, 36(5), 941-965.
- National Bureau of Statistics of China (2017). *China Statistical Yearbook—2017*. Beijing: China Statistics Press
- Navis, C., & Glynn, M. A. (2010). How new market categories emerge: Temporal dynamics of legitimacy, identity, and entrepreneurship in satellite radio, 1990–2005. *Administrative Science Quarterly*, 55(3), 439-471.
- Navis, C., & Glynn, M. A. (2011). Legitimate distinctiveness and the entrepreneurial identity: Influence on investor judgments of new venture plausibility. *Academy of Management Review*, 36(3), 479-499.
- Nicholls, A. (2010). The legitimacy of social entrepreneurship: reflexive isomorphism in a pre-paradigmatic field. *Entrepreneurship theory and practice*, 34(4), 611-633.

- Oliver, C. (1997). Sustainable competitive advantage: Combining institutional and resource-based views. *Strategic management journal*, 697-713.
- Parmentier, M. A., Fischer, E., & Reuber, A. R. (2013). Positioning person brands in established organizational fields. *Journal of the Academy of Marketing Science*, 41(3), 373-387.
- Petkova, A. P., Rindova, V. P., & Gupta, A. K. (2013). No news is bad news: Sensegiving activities, media attention, and venture capital funding of new technology organizations. *Organization Science*, 24(3), 865-888.
- Phan, P. H., Siegel, D. S., & Wright, M. (2005). Science parks and incubators: observations, synthesis and future research. *Journal of business venturing*, 20(2), 165-182.
- Phillips, N., Tracey, P., & Karra, N. (2013). Building entrepreneurial tie portfolios through strategic homophily: The role of narrative identity work in venture creation and early growth. *Journal of Business Venturing*, 28(1), 134-150.
- Pfeffer, J., & Pfeffer, J. (1981). *Power in organizations* (Vol. 33). Marshfield, MA: Pitman.
- Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence approach*. NY: Harper and Row Publishers.
- Pollock, T. G., & Gulati, R. (2007). Standing out from the crowd: The visibility-enhancing effects of IPO-related signals on alliance formation by entrepreneurial firms. *Strategic Organization*, 5(4), 339-372.
- Pollack, J. M., Rutherford, M. W., & Nagy, B. G. (2012). Preparedness and cognitive legitimacy as antecedents of new venture funding in televised business pitches. *Entrepreneurship Theory and Practice*, 36(5), 915-939.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers*, 36(4), 717-731.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate behavioral research*, 42(1), 185-227.
- Rangone, A. (1999). A resource-based approach to strategy analysis in small-medium sized enterprises. *Small Business Economics*, 12(3), 233-248.
- Rao, H. (1994). The social construction of reputation: Certification contests, legitimation, and the survival of organizations in the American automobile industry: 1895-1912. *Strategic management journal*, 15(S1), 29-44.
- Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of work and organizational psychology*, 16(4), 353-385.
- Ridgeway, C. L., & Berger, J. (1986). Expectations, legitimation, and dominance behavior in task groups. *American Sociological Review*, 603-617.
- Rindova, V. P., & Fombrun, C. J. (1999). Constructing competitive advantage: The role of firm-constituent interactions. *Strategic management journal*, 691-710.
- Ruef, M., & Scott, W. R. (1998). A multidimensional model of organizational legitimacy: Hospital survival in changing institutional environments. *Administrative science quarterly*, 877-904.
- Schumpeter, J. (1934). *Capitalism, socialism, and democracy*.

- Scott, W. R. (1991). Unpacking institutional arrangements. *The new institutionalism in organizational analysis*.
- Scott, W. R. (1995). Institutions and organizations. Foundations for organizational science. *London: A Sage Publication Series*.
- Scott, W. R. (2001). Institutions and organizations. *Thousand Oaks: Sage*.
- Scott, W. R. (2013). *Institutions and organizations: Ideas, interests, and identities*. Sage Publications.
- Scott, S. G., & Lane, V. R. (2000). A stakeholder approach to organizational identity. *Academy of Management review*, 25(1), 43-62.
- Shane, S., & Eckhardt, J. (2003). The individual-opportunity nexus. In *Handbook of entrepreneurship research* (pp. 161-191). Springer US.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.
- Shaver, K. G., & Scott, L. R. (2002). Person, process, choice. *Entrepreneurship: Critical Perspectives on Business and Management*, 2(2), 334.
- Shepherd, D. A., & Zacharakis, A. (2003). A new venture's cognitive legitimacy: An assessment by customers. *Journal of Small Business Management*, 41(2), 148-167.
- Skidmore, S. T., & Thompson, B. (2013). Bias and precision of some classical ANOVA effect sizes when assumptions are violated. *Behavior research methods*, 45(2), 536-546.
- Spradley, J. *The ethnographic interview*. New York: Holt, Reinhardt and Winston, 1979. Srull, T.K. & Wyer, R.S. Jr. Person memory and judgment. *Psychological Review*, 1989, 96, 58-83.
- Starr, J. A., & MacMillan, I. C. (1990). Resource cooptation via social contracting: Resource acquisition strategies for new ventures. *Strategic Management Journal*, 79-92.
- Stinchcombe, A. L. (1965). Organizations and social structure. *Handbook of organizations*, 44(2), 142-193.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of management review*, 20(3), 571-610.
- Suddaby, R., Bitektine, A., & Haack, P. (2017). Legitimacy. *Academy of Management Annals*, 11(1), 451-478.
- Suddaby, R., & Greenwood, R. (2005). Rhetorical strategies of legitimacy. *Administrative science quarterly*, 50(1), 35-67.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. *The social psychology of intergroup relations*, 33(47), 74.
- Tost, L. P. (2011). An integrative model of legitimacy judgments. *Academy of Management Review*, 36(4), 686-710.
- Tyler, T. R. (1997). The psychology of legitimacy: A relational perspective on voluntary deference to authorities. *Personality and social psychology review*, 1(4), 323-345.
- Tversky, A., & Kahneman, D. (1975). Judgment under uncertainty: Heuristics and biases. In *Utility, probability, and human decision making* (pp. 141-162). Springer Netherlands.
- Überbacher, F. (2014). Legitimation of new ventures: A review and research programme. *Journal of Management Studies*, 51(4), 667-698.
- UNESCO. (n.d.). Chengdu. Retrieved December 1, 2017, from <https://en.unesco.org/creative-cities/chengdu>

- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research. *Advances in entrepreneurship, firm emergence and growth*, 3(1), 119-138.
- Vissa, B. (2011). A matching theory of entrepreneurs' tie formation intentions and initiation of economic exchange. *Academy of Management Journal*, 54(1), 137-158.
- Weick, K. E. (1995). *Sensemaking in organizations* (Vol. 3). Sage.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180.
- Wood, R., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of management Review*, 14(3), 361-384.
- Xu, L. (2009). Business incubation in China: Effectiveness and perceived contributions to tenant enterprises. *Management Research Review*, 33(1), 90-99.
- Williamson, I. O. (2000). Employer legitimacy and recruitment success in small businesses. *Entrepreneurship theory and practice*, 25(1), 27-42.
- Williamson, I. O., Cable, D. M., & Aldrich, H. E. (2002). Smaller but not necessarily weaker: How small businesses can overcome barriers to recruitment. In *Managing People in Entrepreneurial Organizations* (pp. 83-106). Emerald Group Publishing Limited.
- Wong, P., Lin, M. C., & Lee, J. (2017). *Best-Performing Cities China 2017 The Nation's Most Successful Economies* (Rep.). Santa Monica, CA: Milken Institute. Retrieved December 4, 2017, From <http://best-cities-china.org/2017-overview.html>
- Wry, T., Lounsbury, M., & Glynn, M. A. (2011). Legitimizing nascent collective identities: Coordinating cultural entrepreneurship. *Organization Science*, 22(2), 449-463.
- Zelditch, M., & Walker, H. A. (1984). Legitimacy and the stability of authority. *Advances in group processes*, 1, 1-25.
- Zelditch, M. (2001). Theories of legitimacy. *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations*, 33.
- Zhu, Y. (2016). Inter-Incubator Relationships and New Venture Performance in China's Technology Business Incubators between 2008 and 2012. In *TECHNOLOGY ENTREPRENEURSHIP AND BUSINESS INCUBATION: Theory• Practice• Lessons Learned* (pp. 87-124).
- Zimmerman, M. A., & Zeitz, G. J. (2002). Beyond survival: Achieving new venture growth by building legitimacy. *Academy of management review*, 27(3), 414-431.
- Zott, C., & Huy, Q. N. (2007). How entrepreneurs use symbolic management to acquire resources. *Administrative Science Quarterly*, 52(1), 70-105.
- Zuckerman, E. W. (2012). Construction, concentration, and (dis) continuities in social valuations. *Annual Review of Sociology*, 38, 223-245.

Appendix 1

Reports from BI associations, MOST department: 13th 5-yr plan for science and technology incubators

“Incubators in new industries as TMT, cloud data, robotics and intelligence, new materials, modern agriculture, aerospace, cultural innovation, etc., has shaped new products and services, new industry and new ecology.”

“focus on international cooperation, develop local economic capacity, balance economic and social value...”

“provide conditions for high-tech entrepreneurship, derivative entrepreneurship, internet+, and cross-boarder entrepreneurship...”

http://www.most.gov.cn/mostinfo/xinxifenlei/fgzc/gfxwj/gfxwj2017/201707/t20170711_133971.htm

Industry reports from consulting firms

iiMedia: *“Business incubators’ screening factors in 2016: potential of entrepreneurial project (77.4%), capability of innovation (60.2%), market potential (51.1%), technical skills (45.7%), management model (24.2%), reputation and brands (20.3%), organization culture (19.6%), other (7.6%)”* <http://www.iimedia.cn/1459930903380n2906.pdf>

News about BI from major media--Xinhua net: Business Incubators’ 2015

“Development of new technology revolution, new industry ecology, open source software and science, inclusive technologies, various crowdfunding mode, mew business model, and new industry organization model. Incubators need to promote new models of entrepreneurship, and accept innovation and entrepreneurships of diverse forms and from a variety of industries.”

http://www.xinhuanet.com/chanye/2015-12-30/c_1117622536.htm

Appendix 2

N	Name	Gender	Age	Education	Job ^a Role	District	Entity Type	Organization Sponsorship
A	Wang, Yujia	1	36	2 Bachelor	123	Gao Xin	Accelerator	2 Enterprise
B	Xia, Chunfen	2	39	3 Master	123	Gao Xin	Incubator	1 Private
C	Zheng, Xiaolong	1	35	3 Master	123	Gao Xin	Accelerator	2 Enterprise
D	Li, Xingjie	2	30	3 Master	1	Gao Xin	Incubator	1 Private
E	Wu, Ming	1	43	3 Master	123	Wen Jiang	Incubator	4 Government
F	Rao, Lei	2	32	2 Bachelor	1	Wen Jiang	Incubator	1 Private
G	Liu, Guangyu	1	33	3 Master	1	Long Quan	Incubator	3 University
H	Yang, Wei	1	32	2 Bachelor	1	Shuang Liu	Incubator	4 Government
I	Shao, Shiwei	1	36	3 Master	123	Jin Niu	Incubator	3 University
J	Wu, Gang	1	29	2 Bachelor	13	Gao Xin	Incubator	1 Private
K	Wang, Xijiao	2	29	2 Bachelor	12	Wu Hou	Accelerator	2 Enterprise
L	Li, Jiang	1	44	3 Master	123	Gao Xin	Incubator	2 Enterprise
M	Chen, Yu	1	46	2 Bachelor	12	Jin Jiang	Incubator	4 Government
N	Xiao, Yue	2	25	2 Bachelor	13	Gao Xin	Incubator	2 Enterprise
O	Luo, Cheng	1	36	2 Bachelor	1	Gao Xin	Incubator	4 Government
P	Zhang, Yan	2	27	3 Master	1	Qing Yang	Incubator	1 Private
Q	Zhang, Xiaojuan	2	32	2 Bachelor	1	Pi Du	Incubator	2 Enterprise
R	Duan, Zhouyang	1	34	4 Doctorate	23	Gao Xin	VC	1 Private

- a: 1 Director/Manager of Incubator/Accelerator
 2 Entrepreneurial Mentor
 3 Professional Investor

Appendix 3

INTERVIEW QUESTIONS (1 HOUR)

1. What's the mission for your incubator?
2. More specifically, what are the operational goals each year?
3. What resources do you provide? And how do you allocate these resources?

Please think about a few ventures that you have, or are willing to accept into your incubator. You don't have to tell me, just have them in your mind for the following questions.

4. What a qualified new venture should be like and for applying for incubation?

(what their business ideas should be like? What the entrepreneurial teams should have?)
5. What characteristics you ask evaluators to look for and pay most attention to for those qualified ventures?

Now please think about a few ventures that you have, or will decline from entering your incubator. You don't have to tell me, just have them in your mind for the following questions.

6. What an inadmissible new venture should be like for applying for incubation?

(what their business ideas should be like? What the entrepreneurial teams should have?)

7. What characteristics you use to generally describe those inadmissible ventures to evaluators?

Now please think about a few ventures that you have, or are willing to accept into your incubator and provide financial supports to. You don't have to tell me, just have them in your mind for the following questions.

8. What a new venture should be like for qualifying your financial investment? (what their business ideas should be like? What the entrepreneurial teams should have?)

9. What characteristics you will as evaluators to look for or pay most attention to for those qualified ventures for potential investments?

Now please think about a few ventures that you have, or are willing to accept into your incubator but will decline from financial investment.

You don't have to tell me, just have them in your mind for the following questions.

10. What are new venture that qualified for entry but not for financial investment should be like? (what their business ideas entrepreneurial teams should be like?)

11. What characteristics you use to generally describe those ventures to evaluators or ask them to pay most attention to as okay to join but unqualified for investments?

Appendix 4

1. Interview Summary: Resources and Resource Allocation

Resource Ranks

- D: 'Basic resources are provided to all ventures in our space... Then, for better enterprises, they will request for specific resources from us, and we'll try to satisfy them.'
- G: 'Resources could be divided into two types, basic physical resources and specialized services.'
- I: physical resources [space, property; administration; activities] and soft resources [policy, law, accounting, techniques, networks, industry, investments]
- L: 'The real estate renting business and the consulting & investment business are entirely separated.'
- P: 'The first category includes space and allowances; the second category is skill building and training; the third category include all kinds of resources (market, government, project landing); the forth part is community resources; an additional category is investment and mentoring.'

Resources

- A: physical space; consulting and analysis aids; Office 365 cloud service; technique consultation; market support in sales; direct investment; investment help and organization
- B: physical space; help in their operation; accounting and tax and law; consulting (business modes, product structure, etc.); help in investment progress; resources pushing them into market growth
- C: capital (direct investment, investor alliance); market (docking with leading companies in the market); transformation of tech achievements, tech supports; early consulting, policy solutions
- D: policy consulting, training, accounting and law, finance (direct investment and loans)
- E: investment; help with policy benefits; consulting; resource match (market, capital, etc.)
- F: resource match; problem-solving; property, accounting, tax, law; mentoring; marketing; finance
- G: physical space, utilities, property management, commute, meals, apartment, policy application, market docking, finance channels; direct investment
- H: policy application; training service; mentor; coaching; recommendation for presentation opportunities; seed funds; loan endorsement
- I: service; training; resource docking

- J: funds; resource docking; market access
- K: funds, investments; IPO training; mentor board; national-wide resource docking; business modes polishing
- L: space renting; consulting; investments
- M: services and resources in return for shares; space, policy, investment activities; strategy, business modes, market docking
- N: space; on-line markets, research and industry; resource docking
- O: government policy (endorsements, proof, application); life package; training camp; finance docking; market test; media resources; talents attraction; brand aggregation effects; eco chain; CEO coaching; interaction with peers, industry, etc.
- P: space; allowances; skill building; training; resources; project landing; sales & market; government resources; community, communication within industry; investor alliance; mentoring
- Q: free space; service package; free cloud service; mentoring; sales; big data guide for market; crowdfunding

Mentioned that there are limited resources and energy in incubators.

A: 'The provision of resources is quite intense in incubators.'

D: 'After all, our energy is limited.'

We have limited space. There might be 7 or 8 ventures waiting. If we let one in, we have to reject the others.

E: 'My energy to manage the projects now is quite limited.'

F: We have more than 160 ventures, it's not possible for us to know each one in details, we just get our grasp on a focal group of ventures.

G: 'The general principle is that our resources, time, and energy are all limited. We can only spend our limited resources and energy on the projects that worth our attention.'

J: 'In facts, the time and energy for an incubator team is limited for every year, and for every day. I could only put my best efforts to the best teams.'

O: 'We really have a lot of ventures in our incubator, over 200. Our department has only 7 persons, including our director. Therefore, our energy is quite limited.'

Allocate according to some screening standards

A: growth potential; product/tech progress; core business development; team changes; founder capability

B: track; business logic; data presentation

D: better quality; government's guidance

- E: potential to grow and scale up; small and medium sized firms
- G: According to the judgments of our managers, when the projects enter our incubator, we will actually have an initial grading.
- J: the values the ventures can bring
- K: 'We will evaluate the ventures' operation, performance, revenue, tax, property rights, etc.'
- L: 'Good ventures will have the ability to pay for their own growth.'
- M: profitable
- N: teams are really good; have investment value
- O: quality; size; potential to have eruptive growth
- P: 'We will have a training club upon their entering. We will then have a more accurate judgment about what stage they're at, and about what needs they might have.'
- Q: 'Our incubator is market-oriented. We will provide some resource packages for the ones with good market potential.'

Allocate according to need/stage

- C: districts; their need for resources; the characteristics of the ventures
- F: their current needs; development stage
- G: 'We are encouraging our team to offer help to the ventures regardless of the returns, as long as we have the resources and ability. We have to think in this way, if we don't help them this time, they might miss the chance forever. It should not be our first consideration to get something in return when we help the ventures.'
- J: 'The first thing is their needs. If they have more needs, then we will consider introducing more resources to them. Since many teams will have more need for resources when they are in critical stage for development.'
- K: 'It will be based mainly on their needs, what stage they are at, and what problems they are facing.'
- Q: 'But if they don't need our services, then we will not push it to them.'

Allocate according to industry/areas

- B: areas—new material
- E: 3 major industries

Confirming the layered screening criteria and resource allocation

- A: 'So usually we apply the principle of 20-80, meaning, 80% of the resources will be invested to 20% of the teams.'

D: 'We will choose some ventures with good quality, so we can better serve them.'

Our screening for ventures focuses on the ventures entering our nursery space, we won't screen too much for the ventures coming just for renting space as long as they could pay for it. For space renting, we'll prioritize scientific and technique ventures. Ventures entering our nursery space, however, will face a higher standard of screening for their teams.

E: 'We used something called a "nursery space" as a buffer. For the ventures with viable ideas and plans, but with low quality teams, we will put them in the nursery space. In there, we will just keep an eye on their progress, not intending to invest in further resources.'

We do not have very strict distinction on the initial entering ventures, only a brief industry guidance will be applied. As long as they are related to our industry focuses, have some science and technology content, and under the regulations of government.

For the second stage of further commercialization, we require ventures be closely relate to our industry, specialized in one of our three leading industries, and have the potential to reach a certain scale.

G: 'That is to say, we will have grade A ventures, Grade B ventures, and grade C ventures based on some simple analysis. Grade A projects are, of course, relative good ones, we will pay more attention to them; grade B projects are moderate ones; and grade C projects usually have some flaws.'

H: 'We will pick around 20 ventures as our focal group. Since we have a limited number of project managers, each cannot incubate too many ventures. The focal group means ventures in it will receive more visits from us, we'll have a more thorough understanding of them, and there will be more frequent opportunities for resource docking.'

J: 'The ventures could not expect to get everything once they enter. I could not give equal attention to all the ventures in the incubator, even considering the different degrees of match, it's not possible. There could be 5 ventures sharing 5% of our energy, while there might be one team receiving 30% to 50% of our attention. It all depends on specific situations.'

L: 'Of course I will review all the projects. But if they just come to rent a working space, why would I bother to know what they are working on. No I won't look at them.'

M: 'Not all the resources will be given to all the ventures in my incubator. Some of the services are not profitable for us. So we will place more emphasis on those that could pay for our services.'

We mainly evaluated based on their experiences or data, if data is available. The most usual practice for us as investors in asking questions. Incubators start with good intention to help, while investors start with critical judgment to doubt the ventures.

O: 'We will have a basic differentiation upon their entering of our incubator. We will put them in rough ranks, in different tracks, and under the popular themes in the market. And according to the 20-80 principle, if you are high quality ventures, we will naturally lean to you with more resources, all the resources. Ordinary ventures will also receive our attention; we will invite them to all of our activities. But in case of time conflicts with other ventures, we'll have to coordinate. We will also satisfy the needs from larger firms.'

'Therefore, according to our categorization of ventures and our limited time and energy, we will invest more into high quality ventures. For ordinary ventures, we will provide them with space and basic services, we will help with their difficulties. But we could offer less proactive efforts to them, we could not cover every aspect.'

P: 'Basically we will match their needs according to their stages. For ventures in their infancy with just ideas, we will provide them with training and mentoring. For ventures in start-up stage, we will provide incubating services. For developing stage ventures, we will directly dock capitals for them.'

2. Interview Summary: Subjective Factor and Complexity in Screening

Subjective Factor

A: I think there is some logic in the black box of judgment. This logic, in fact, is the same as artificial intelligence. It also include two components: algorithms and data. The algorithm means that we have several levels of mechanisms. For example, for evaluation of projects, there will be a framework of more detailed methods to guide the application of different factors. Judging the founders also need to refer to a set of dimensions.

After the algorithm comes out, the other piece is the data. As you have seen more and more projects, especially as you have seen more projects in the certain industry, the deeper your understanding of this industry, the deeper your understanding of human nature, and the deeper your understanding of this society. In this way, the results from the model will be more accurate. In the process of applying the model based on the data, we will modify the model and its algorithm. In the end, it will form a loop in your head. It will become a feeling that is more similar to intuition, a black box for data output.

For example, if our people take one look at a project, they will know at once that we do not want it; then they see another project, with one look, they will reject it. Or, there will be a situation where a project has been reviewed for several times, and we will say "Let's talk to them." This is because the data entered cannot generate solid output.

B: 'There are some features that we can feel it out based on our experiences, such as their presentation and their prior experiences. All combined, there will be an invisible but very sensitive score.'

B: In facts, we are trying to figure out a theory or framework we could apply when reviewing ventures. But it's too difficult. For current stage, I could not comb through the factors involved. Moreover, for the field of entrepreneurship, including incubators, it's nearly impossible to replicate these criteria. And the application of screening criteria relies extremely on investor's personal judgment. This is because the subjects of the review are also human beings, people review people. It's very difficult to replicate. And the combination of personal characteristics is unique and rare, making it more uncertain. Even when we have some approaches and strategies, they could often times lead to the wrong judgments.

Therefore, when individual investors review individual founders, the diverse elements such as personal characteristics, competition barriers, their future plans, and the combination of all make the process extremely uncertain and sensitive.

C: Investment process include 4 stages: searching, investing, managing, and exiting. The most important ones are managing and exiting. Managing involves managing before investment and managing after investment. Both practices are very complicated, requiring lots of communication and interaction with the venture.

The structure of investment evaluation is very complicated, including all kinds of balancing and compromises.

I cannot assume an ideal format of good venture. There are all kinds of ventures, some of them have great talents, some have innovative technologies, some others perform well on other aspects. There's no single specific criteria out there.

E: The judgment about whether the venture is viable or not is based on my personal knowledge and experiences developed along the years I worked in those related areas.

M: There are so many factors under consideration for investments. It's more about the first impression and feelings of the investors. At this early stage, we cannot evaluate ventures with the same standards of venture capitalists. No ventures would survive those standards.

We mainly evaluated based on their experiences or data, if data is available. The most usual practice for us as investors in asking questions. Incubators start will good intention to help, while investors start with critical judgment to doubt the ventures.

O: There are so many things that could not be articulated in to clear factors. It's more subconscious.

Confirming Screening Criteria Are Complex

- A: 'We'll have to consider all these things comprehensively before we make the decision to let them in.'
- B: It relies a lot on facts and data in evaluating ventures. However, most of the time, we are still blind in terms of data and facts. We are exploring a huge object in the dark, our judgments will only be based on the parts we were able to reach.
- C: 'Recruiting ventures is a process of filtering waves after waves. We have to go through the process to find the really good ventures. The quality depends on the base amount.'
- Our venture review is national wide. We'll have a board selected from all of our department. The board includes people specialized in techniques, marketing, finance, etc.
- G: It will require professional teams with specialized knowledge in reviewing ventures for investment. The standards are quite strict since the industries and fields of the ventures vary from one another.
- H: We cannot make direct investment decisions. Our incubator does not have professionals for investments. We have to rely on the resources and expertise of the enterprise group behind us.
- I: Usually we won't refer to their business plans in considering investments. Incubators rarely do investments by themselves. Even for those incubators with an investment function, their investments at the very surface level. Because incubators and professional investment organizations have different backgrounds, and therefore, different motives and profit models.
- J: Most of the projects are reviewed by me alone. This is actually a unique feature of business incubators. The professional ability of the incubator, and its resources, in fact, is generally in the hands of the person in charge of the incubator, all in his/her hands. Then because it is also a relatively open position, the director needs to integrate and integrate many resources, put them into the incubator, and then distribute them to the ventures. The director of an incubator is a core point. The quality of the incubator's operations relies heavily on personal judgment, which resides primarily in the director.
- If the incubator is really doing an incubating business, then it would have many criteria in reviewing entering projects. Such as for my new incubator, we set 9 dimensions. Even I cannot remember all of them.
- K: I'm not the only one reviewing venture projects. We have many mentors in our strategic alliance, investment specialists, policy specialists, industry specialists, etc. I only review the ones I feel familiar with. If I have ventures beyond my knowledge, we'll send out to the professionals to review.
- O: We need to apply different standards for ventures in different industries. There might never be a single way to standardize it. Moreover, for nascent

ventures, everything has just started, we cannot estimate their chance of success, nor the potential of their opportunity. Sometimes, for a red sea market, ventures are still entering. But they might have their unique point, thus there's still opportunity for them. On the other hand, even for a project in a blue sea market, if your team could not support what you are doing, there's no chance for you.

P: I personally cannot review ventures for investments. It's the job of the more professional person of our company. They have rich experiences in working with incubators and entrepreneurial fields.

3. Interview Summary: Incubator Entry Criteria

Confirming There Are Established Screening Criteria

A: 'Most incubators have their own screening mechanism for entering based on their positioning and their own operational tactics.'

We have two layers of screening criteria; the first one is carried out by our administrative team; the second layer is our weekly review.

Under each of an incubator's screening criteria, there are more refined and segmented standards.'

B: 'There are some features that we can feel it out based on our experiences, such as their presentation and their prior experiences. All combined, there will be an invisible but very sensitive score.'

C: 'We will have an internal review when the projects enter. We have an entire procedure of review in our management system.'

P: For more specific screening, we have some certain criteria. Firstly, they should be in the areas that we are good at, for example, the community service. For the second part, we have 3 dimensions of concern.

Q: During the process, the ventures need to meet some certain requirements. Yes, we have our own system of selecting projects.

ENTERING QUALITIES

Points

A: 'No more than 3 things, the project, the people, and the match with us.'

C: 'Whether the project match out incubator, whether there are things we could help, what cooperation we might have in the future, we have an entire system of project review.'

The review is focused on their venture modes and opportunities, and the team of the ventures. Projects need to be scientific tech ventures. Based on that, we'll look at the background of the founders, and secondly, the advanced degree of their techniques in the market. We don't pay too much attention to the business modes, we mainly emphasize on the techniques and the team.

D: First we will basically select ventures that match the leading industries of our district (new information and technology, internet-related, and big data); then secondly we'll look at the background of the team, ideally they could have some related experience or resources, thus it would be more likely for them to succeed; thirdly we need to review that whether their project represent the future trend of development, entailing higher chance of survival and growth, and more opportunities in the market.

E: For the scientific park we operate for the government, we select projects according to government's needs, whether they have development plans for

certain industries, or have requirements for the performance of individual ventures. Essentially, most ventures' teams are okay, projects are viable; it would be best if they have some novelty, or some scientific and technology content.

F: Among the factors we consider, the first thing is their project, and the other aspect is the teams.

G: First of all, we have an industry classification for the project. If this industry is familiar to us, then we will continue to review. There are several dimensions. The first thing is to evaluate that whether your technology is advanced and how advanced it is. The second dimension is about whether you have a business model and whether there's a market for it. The last and most important thing is the person, the team. We apply these three dimensions to probably all the projects we review.

I: I usually use the heuristics developed as a professional investor. I will look at their core technology, their intellectual properties, the stability of the future market, and a matching background of the founding team.

J: First, the venture need to fall in the range of our focal industries. I have a lot of industry resources behind me, I expect that these resources will come out really useful for the ventures. Secondly, I'll check whether the venture, and the founders have illegal records or bad credit. Thirdly, from an investor's view, I expect that the projects have growth potential and space in the future. It entails a series of considerations such as their competition barrier, their founding team, their experience and resources in the industry, the size of the market, their core competence, and their financing plans, etc. The forth criteria is that I expect the ventures would recognize the resources of my incubator and are willing to accept my help. The fifth one is the match with the local government guidance.

L: Firstly, I'll see whether the entrepreneurs have strong subjective passion; Secondly, whether they have prepared the resources needed, especially the financial resources; Thirdly, are they psychologically prepared. These 3 points compose the first module.

The second model is about whether the founders really love what they are doing. In order to have some achievements, people need to pick from things they love to make a living, instead of picking a career that makes money with what they are good at. Thus they will have aspiration and resilience during the process.

Then the third module will be the so-called tactics. Is the business mode viable? Is the market a blue sea or red sea? What is your competitive barrier? What is the background and capability of your team? What financial and technology resources do you have?

M: Whether a venture is viable depends on many factors. First of all, the people, the founder; secondly, the team; then follow the actual business and enterprise.

- N: When a venture come to us, we will review them from two aspects, firstly the project itself, and secondly the team.
- P: First of all, the venture must fall into the big category of social entrepreneurship. For more specific screening, we have some certain criteria. Firstly, they should be in the areas that we are good at, for example, the community service. For the second part, we have 3 dimensions of concern. We review mainly for people, the entrepreneurial team. The first thing is their motivation, and the ability of the founding team. We hope that they start the venture in an attempt to solve some social problems relevant to themselves, or are the pain points of people around them. Only in this way will they have consistent passion for venturing. The second thing is about their business, their business models; is it in a social enterprise model, how is its profitability. Then the third dimension is market. We need to consider for future investment, so we would also require the venture to have future market potential, most of the time meaning that they are replicable.
- Q: Yes, we have our own system of selecting projects. We will first look at the team development. Most of them are tech ventures, right? So a developed team would surely have some research or tech development members as well as operational specialists. Secondly, we need to review the progress of their product. Is their project still an idea, or they have actionable plans underway?

Industry

- A: 'Our administrative team only do one thing, collecting basic information about the ventures. I gave them a range of industry areas, they put the ventures in as long as they fall into the big circle.'
- C: 'The first criteria is the match with our industry positioning, the ventures need to be relevant to our focal industry.'
- D: First we will basically select ventures that match the leading industries of our district (new information and technology, internet-related, and big data);
- E: We do not have very strict distinction on the initial entering ventures, only a brief industry guidance will be applied. As long as they are related to our industry focuses, have some science and technology content, and under the regulations of government.
- For the second stage of further commercialization, we require ventures be closely relate to our industry, specialized in one of our three leading industries, and have the potential to reach a certain scale.
- H: We will first check with their direction of industry when reviewing the project. First of all, it is a leading industry that is in line with the guiding direction of the our district. Now the range of leading industries are relatively broad, projects in general will be more or less related in these three major industries: electronic information, aviation economy and green

energy. As long as they are relevant to the three leading industries, we will consider allowing them to enter.

J: In the previous stage, I'll judge simply based on their documents that whether their industry match the ones of my incubator. First, the venture need to fall in the range of our focal industries. I have a lot of industry resources behind me, I expect that these resources will come out really useful for the ventures. The fifth one is the match with the local government guidance.

K: Normally, our clients need to match the investment direction of our incubator. For example, we locate in Gaoxin district, the focal industries here are electronic information, bio pharmacy, and new economy. Okay, well, we will follow these directions, too.

N: Local incubators like us, we still prefer internet related ventures.

P: First of all, the venture must fall into the big category of social entrepreneurship.

Project

A: 'The first quality for projects means that whether they are on the right track; whether they have opportunities; whether there's value in what they are doing; their core competence, the route and time for the commercialization of their competence; whether their project match our resources. In one sentence, these criteria could be summarized as 'whether the project they are doing is meaningful on the specific track'.'

C: Too judge the techniques' advanced degree, we'll see that whether they could add something to the current market. It need to have some novelty, some comparable competence. The market is a basic essential in making our initial judgment.

D: thirdly we need to review that whether their project represent the future trend of development, entailing higher chance of survival and growth, and more opportunities in the market.

We'll compare it to the current development of the specific industry, and check whether their project falls into the future development direction of the respective technology.

E: Essentially, most ventures' teams are okay, projects are viable; it would be best if they have some novelty, or some scientific and technology content.

G: We will consider that, even if the idea is very good, but we feel that there is no way to land and no one would be paying for it within ten years. Then this is a problem. Then, if you can make money and have a market, what is your business model? What is the logic that you use to make money? This is also what we will pay attention to.

We hope that their projects have a certain technical content, it is best to bring a little technical and a little barrier. This is better.

Then the business model, we hope they can think about the business model. But if his technology is OK, the team is OK, in fact, the business model is very simple, that is, just the gameplay, we can help them to develop. So this is not very important.

For advanced technology, we will rely on universities, research institutes or enterprises to conduct a research and judgment on their technology. In addition, we will not reject it because someone has already done it. If the market is big enough, even if someone is doing it, even if they are already a leading company, we can't say that there's no chance for others. It's possible that your skills are a bit less advanced, but you can have your own set of gameplay in your vertical field, or in your circle. If they can make it small and exquisite, it is also OK.

H: We also have requirements for the quality of the project. If the project is destined to be a seed that cannot be developed, it is difficult to cultivate it. The project to be introduced first needs to be a growth project.

Or there is another type, that is to say, its group company or its parent company is a listed company or a large enterprise group. They are setting up a new subsidiary in Sichuan or Chengdu, we would love to see these kinds of ventures to come, too. Because they have background resources behind them, making it relatively easy to succeed.

I: I will look at their core technology, their intellectual properties, the stability of the future market

J: Thirdly, from an investor's view, I expect that the projects have growth potential and space in the future. It entails a series of considerations such as their competition barrier, their founding team, their experience and resources in the industry, the size of the market, their core competence, and their financing plans, etc.

Whether they have the potential to grow, their future earning estimation,

K: We feel it's a promising industry; it could generate tax; they have very good business modes; have the potential to become unicorn enterprises;

the other dimension is that they follow the trend of the government policy, they could benefit from the policy dividends by following the industries encouraged by the government, and there will be a big market accordingly

They should have a corporate culture from the start, with well-established mission statements and regulation rules

L: Then the third module will be the so-called tactics. Is the business mode viable? Is the market a blue sea or red sea? What is your competitive barrier? What is the background and capability of your team? What financial and technology resources do you have?

M: I'll look at their business plan and their value points. We need to evaluate whether their ideas could actually land into products and enterprises.

Their ideas and business models are relatively good and innovative

N: The entering ventures are either those who could afford our rents, mostly the upgraded spin-offs from traditional industries; or those meeting our investment criteria.

For the project itself, we'll evaluate whether the targeting market is big enough, and in addition, whether it is a constantly growing market. Besides, we will also check whether there's already some leading players in the market.

O: The essence of an enterprise is dealing with the human nature. A good project need to dig deep enough into the human nature for the constant need.

The on-line stream data. Your technology and skills, your channels and background.

P: The second thing is about their business, their business models; is it in a social enterprise model, how is its profitability. Then the third dimension is market. We need to consider for future investment, so we would also require the venture to have future market potential, most of the time meaning that they are replicable.

Q: Secondly, we need to review the progress of their product. Is their project still an idea, or they have actionable plans underway?

Team/Founder

A: 'Come back to talk about people, meaning their backgrounds, and whether their ability match with their project. The match of the ability includes the execution of project landing; their vision and whether their planning for future operation and development is reliable; whether the composition of their team has any defects, and whether they have remedies if their team is not ideal; and their equity structure within the team.'

B: 'The essence of early ventures is their founders. This is a one-vote veto. Even if the opportunity is very good, if the founder is not ideal, then it won't work. There are some features that we can feel it out based on our experiences, such as their presentation and their prior experiences. All combined, there will be an invisible but very sensitive score. Most of the time, knowing the people is the most critical.'

C: 'The other aspect is the team. The experience of the team members, their recruiting logic, their education. And their experience and ability have to match with the project they are working on.'

D: then secondly we'll look at the background of the team, ideally they could have some related experience or resources, thus it would be more likely for them to succeed.

It would be best if they have worked in the particular area for some time, thus have some related and meaningful experiences. It's also valuable to

have related channels and resources in the related areas, it will make it easier for the progress from 0 to 1.

- G:** The most important thing is the team. We will do some simple due diligence. The founders, whether they are senior in the industry. Then we will also go to the respective circle to ask about whether they have entrepreneurial experiences before, how many ventures they have started before, how their venturing process progressed; and about their reputation, their character, and any problems about any aspects of the founders.
- H:** They have certain entrepreneurial experiences, and then go back to start a business, plus the background of colleges and universities, supplying some technology and skills.

Our main point now is to find college students with some work experience to start a business. They found a job after graduation from college and worked for a while before starting a business. We also try to find employees who have worked in a large enterprise and then come out to start a business. They have better understanding about the market, have some accumulation of social networks as well as financial capital. These resources will make it easier for their venture to survive and succeed.

- J:** Secondly, I'll check whether the venture, and the founders have illegal records or bad credit. The first concern for me would be the people. First impression is important to me. I will evaluate their spirit. Whether they are more of the geek guys, and whether they could make a good leader.

the completeness of their team, their professionalism on their technology, their industry back ground.

- K:** their teams are good, such as those with studying- or working-abroad experiences

The industry background of the team

They have clear allegation of job and strong capability of execution, in addition, the team need to have high cohesion from inside

We would also prefer founders with entrepreneurial experiences, even those with failing experiences. They usually have a better understanding of what lie on the road of venturing, and will cope with them more readily.

- L:** Firstly, I'll see whether the entrepreneurs have strong subjective passion; Secondly, whether they have prepared the resources needed, especially the financial resources; Thirdly, are they psychologically prepared. These 3 points compose the first module.

The second model is about whether the founders really love what they are doing. In order to have some achievements, people need to pick from things they love to make a living, instead of picking a career that makes

money with what they are good at. Thus they will have aspiration and resilience during the process.

The people always come first. Is it your passion, or just a business? We will of course look at the technology background of the team, but the tech skills are not as important as the character of the leader. His/her character, vision, sense of responsibility, etc. If the leader is not good, then there's no need to look at other things since he/she won't be able to gather and coordinate other resources and talents.

M: and whether the founding team is capable of operating and actualizing the business plan.

Evaluation of people is based on their experience, their backgrounds, the resources behind them, the coordination and completeness of the team, whether they have the ability, resources and the resilience to accomplish what they are signed up for.

They could come up with solutions and adjust to changes when they are faced with difficulties.

Therefore, the ideal group of entrepreneurs are serial entrepreneurs, especially those with failing experiences. The second best would be entrepreneurs with some industry and management experiences from big companies. The third group are entrepreneurs with limited experiences but novel projects.

N: To be honest, most early investments are investing in people. It's very rare for a very good idea to attract capital by itself; mostly, we still invest in people.

For people, we have a few dimensions in our review. Firstly, do they have industry experiences. Ideally we would like entrepreneurs coming from BAT, or from big enterprises like Huawei. Having worked in those big companies are in itself endorsements for their abilities. They will have better industry knowledge and resources as well. Second dimension would be entrepreneurs coming back from abroad. They have acquired better vision, ideas, and theories applicable to China market.

And the third type are those we love best, the serial entrepreneurs. They understand what they will need to suffer during the process, what problems they might face and how they could be avoided. Practice lead to real knowledge.

O: The key members of your founding team are capable to support the project. We don't worry too much for people with higher education. They have some accumulation of social networks. More importantly, they can make a living even if their projects do not work out well at the beginning. They could survive with other income and feed back to the venture. They could also concentrate more on the R&D and landing of their project since they have less pressure on financing.

We will evaluate whether the founding team could actualize the business plan based on their backgrounds and technological skills. These characteristics could often be reflected by their educational level.

- P: We review mainly for people, the entrepreneurial team. The first thing is their motivation, and the ability of the founding team. We hope that they start the venture in an attempt to solve some social problems relevant to themselves, or are the pain points of people around them. Only in this way will they have consistent passion for venturing.
- Q: We will first look at the team development. Most of them are tech ventures, right? So a developed team would surely have some research or tech development members as well as operational specialists.

Match btw project & team

- A: 'Come back to talk about people, meaning their backgrounds, and whether their ability match with their project.'
- C: And their experience and ability have to match with the project they are working on.
- I: a matching background of the founding team
- M: their qualities and abilities match with the project; thus they could achieve what they planned for

Match with incubator

- A: 'The first quality for projects means that ...; and whether their project match our resources.'
- 'The next step is to consider what we can provide them. We will evaluate whether their project could be integrated to the AI of Microsoft, whether we can quickly improve the value, capability, and market of their product. And the same time, we will also consider whether the project could be put in our venture pool of early ventures.'
- 'We will also calculate, based on the resources we provided, what is their quality of growth in the coming years.'
- C: 'Whether the project match out incubator, whether there are things we could help, what cooperation we might have in the future, we have an entire system of project review.'
- J: First, the venture need to fall in the range of our focal industries. I have a lot of industry resources behind me, I expect that these resources will come out really useful for the ventures. The forth criteria is that I expect the ventures would recognize the resources of my incubator and are willing to accept my help.
- K: Normally, our clients need to match the investment direction of our incubator.

P: Firstly, they should be in the areas that we are good at, for example, the community service.

Q: At the same time, we expect their projects are in line with the direction of our industry.

Project overriding team

E: 'Unless their project is really good, then we will give them more suggestions about what is lacking from their team, and about how they could improve it.'

O: We will certainly review the starting and the current development of the project. Because if you give more weights to the founders, there's a possibility that someone are better at presenting and impressing than others.

Team overriding project

A: We mainly review from the founders, and whether the story you told us is reliable.

B: 'The essence of early ventures is their founders. This is a one-vote veto. Even if the opportunity is very good, if the founder is not ideal, then it won't work.'

Most of the time, knowing the people is the most critical.

Even the technology ventures, their key techs will be bounded to the person.

H: There are also those that do not fully meet these requirements, such as a venture with an especially strong team.

L: These visible analysis items are just tactics. They are not as important as the deep-rooted values and thoughts of the people.

The people always come first. Is it your passion, or just a business? We will of course look at the technology background of the team, but the tech skills are not as important as the character of the leader. His/her character, vision, sense of responsibility, etc. If the leader is not good, then there's no need to look at other things since he/she won't be able to gather and coordinate other resources and talents.

If the founder is not good, I will not consider. Other things we can work on it and try to fix it, but if the problem lies in the person, sorry, there's nothing I can do. I won't work with them.

M: Especially for early stage ventures, we pay much more attention to the people for sure. Since they have no stable revenues, no formal financial statements, even no completed or marketable products. You have no reliable information except for entrepreneurs themselves.

Mentor/Advisor Opinion

C: We'll have a board selected from all of our department. The board includes people specialized in techniques, marketing, finance, etc.

F: Whether the project is good and bad, we are not professional enough to make the judgments. That is to say, is there any prospect in the future; is it feasible for this project to work out; whether the tech achievements could transform into a product, etc. When we communicate with the ventures, we will invite our mentors to discuss and review in depth. After that, our entrepreneurial mentors give the final opinion, and we will then make our decisions based on that. We are not professional after all, there is no way for us to accurately evaluate the projects, so we will invite professionals to do professional things.

The specific criteria that the mentors use may be very specific, we will only rely on their final suggestion. The mentors stand on their perspective to do project analysis; our incubator will also analyze from our perspective. The mentors just give us suggestions; we will be making the decision.

G: But if we find out at the beginning that the project is not familiar to us, we will not proceed to further review. We will have the project reviewed by related professionals.

H: We have a judging panel. Whether it's viable to allow a project to enter, will be up to their decisions. The judging panel are composed of specialists that we invited from our mentor pool. They will unanimously advise on whether a project should enter. The decisions are largely based on their opinions. We believe that they are more professional, since the mentors we invited are all well-known in the related fields.

K: We have many mentors in our strategic alliance, investment specialists, policy specialists, industry specialists, etc. I only review the ones I feel familiar with. If I have ventures beyond my knowledge, we'll send out to the professionals to review.

O: For further review, we need to recruit professionals. For example, we will have professors in related fields to supervise the technical issues; we also have mentors from the industry, with plenty of experience in management, decision-making, investment, etc.

4. Interview Summary: Unqualified Ventures for Entering

Project

A: The venture has no potential market value
The story told is not reliable

D: Some ventures came to us with just an idea, or an invention.
they might have a good business model, but they have no operational advantages

E: The venture cannot be illegal ones; this is the first thing. Secondly, they could not be polluting enterprises, since we strictly follow the government's policies.

There are also some ventures that are really poor in their operation based on the data presented. Also, we won't consider ventures that have no advanced technologies but still higher costs than their competitors. Those ventures have no core competence at all, they will fail anyway.

F: If their project has just R&D, with no other management, operation, or marketing contents at all, we can not let them in.

G: Their projects are on a totally wrong direction

H: They don't have a clear business model. Or they have pollution.

I: too low-graded

J: Their growth potential from the investment perspective. We don't want ventures just doing a traditional business, they are pseudo project to us, since they have no chance to scale up in the market.

K: or if their venture looks unreliable

L: I would reject those ventures which exist only to gather and leverage on resources for some profits. They don't have any vision or aspiration for the future, they will easily yield to challenges and will have little chance for growth.

M: If their business plan has no chance to survive, then there's no point for supporting them. They could not land anyway.

O: they don't have core value, nor technology barriers. The depth of their product is not enough, they won't have any chance for growth.

The first type is that they build upon pseudo market demand; the second type is that they have little novelty points or distinction from current products in the market.

They don't hold the core competence or the key barriers in their own venture, instead, these core competence comes from outside sources.

We don't like ventures based purely on business model innovation.

P: The initial motivation of the venture. If they are doing philanthropy or pure business, then they do not fall into the category of social enterprises.

Q: We'll pass it if the venture is just a business idea, without a demo product, even no clues how they could build one

Team

A: those early stage ventures, the founders of which just graduated from school, with no experiences or resources;

B: the credibility of the founder, their reputation in the past

C: most of the time, it's not about the project itself. We might reject them for their morality, their dishonesty, and their style of doing things. These are more subjective, unrelated to the business. After all, incubation is a process of cooperation, we look beyond just products. People are working with other people in the end.

Those who have just graduated from college, they have no experience, nor specialty, they have little chance to succeed. Most of these ventures are based on the so-called business model innovation, I don't quite buy it. In my eyes, these are just traditional businesses.

D: They have no team yet, or their team has very limited experiences and capability.

Their team's composition, whether they have complementarity to each other. And for each member, do they have experiences in their areas

F: Some ventures have just one person on the teams

G: do they have experiences? Do they have people specialize in the related fields? Do they have entrepreneurial experiences?

H: Those pure academic teams, with just professors or students. They don't understand market.

They have no real passion in venturing

They don't have technology or R&D person

The composition of the team is problematic, for example, some teams have an average age over 60

J: We will also investigate on the team. Are they on the blacklist for their bad credit? What is their character? We want to work with honest and reliable people since it will be a long-term cooperation.

K: We would not work with them if they are dishonest,

L: If the founder is not good, I will not consider. Other things we can work on it and try to fix it, but if the problem lies in the person, sorry, there's nothing I can do. I won't work with them.

M: student team are often very problematic. They consider things in an ideal way, they don't understand the real market.

N: Student teams or fresh graduates are rarely qualified. They don't have enough basic knowledge, their experiences and other aspects of ability are hardly enough for venturing.

If someone comes all by him- or herself, we won't consider it no matter how good the business plan looks. It's impossible.

Another possibility is that the founders have really low emotional intelligence. Even if they have great technology and competitive barriers, if they don't know how to manage people, or how to construct an organization, they could not operate the entire venture. Even when they have great tech teams and good products, if there's no one good at operating or marketing, they won't be able to generate any revenue, be it to-C or to-B.

O: the third type is that the team of the venture could not support the project. The team have different backgrounds from the project they are working on. It's not compatible in nature.

Student teams have little chance to succeed considering their lack of resources and experiences.

P: The other possibility is rejection based on the capability of the team. It's common to see many teams with little executive actions. They have all kinds of ideas, but they have no one to take on the actions. That is to say, their executive ability does not match with what they wanted to do, their team could not actualize their business plan.

Q: We will also pass if they have incomplete teams

Match with BI

C: It sometimes depends on our specialty. I'm good at capital investment, so I will consider from the investment perspective. It relies on what we have in mind. We will pay more attention to the projects and information related to the framework I have in mind. If they are unrelated, even if they are presenting some really good projects, I would not easily judge them as good.

E: If they are totally irrelevant to our industry, we will reject them right away. Or if we expect that our resources could not satisfy their needs, there's no point letting them in.

F: If the venture requires resources beyond our ability, we have to reject them. And we won't recruit ventures in unrelated industries, they won't match our positioning. Also we would not allow polluting enterprises to enter since we operate under the government's regulations.

I: they don't fit with our incubator

Match btw Project and Team

- D: We will feel that the team's skill and resources could not support and actualize their business plan. Products are always just products if they could not actually get it sell in the market.
- G: We feel that these people cannot do these things. The project they work on is irrelevant to their previous experiences. We will reject them when the project and the team are both defective, or when they have a very poor match.
- O: the third type is that the team of the venture could not support the project. The team have different backgrounds from the project they are working on. It's not compatible in nature.
- P: that is to say, their executive ability does not match with what they wanted to do, their team could not actualize their business plan

5. Interview Summary: Screening for Further Investment

Project

A: Most of the projects we invested, founders were the most important. For founders, there are several dimensions for evaluation. The first dimension, we can summarize as 'whether these people can do these things'. The core of this dimension is that they 'can do', and how well they can do. The second dimension is about their goal and aspiration for the venture. This is also very important, since when people have a higher goal, they often times have better visions as well.

We will also try to discern their resilience toward pressure, their version, and other aspects such as their psychological traits.

C: Based on the match with our focal areas, there are many determinants in investment evaluation, including their team, intellectual properties, technology skills, financial capital, and the entire business model.

Will there be high-speed growth for the venture?

Does the venture have strong linkages with my core business?

The long-term development and success depend on several critical factors. According to different positioning, we will review ventures with different approaches.

If most aspects of the team are good, or even moderate, and they are in a relative balance, we will consider investing in them. This is our general rule we've been using when reviewing ventures.

D: They need to have some technology basis and resources in their area. Of course they need to survive first. It would be best if they can have more potential of growth. For their technology, it needs to be somewhat radical in their specific area, more advanced than their competitors. Then we will look at the potential of the market, not only the size, but also the structure of the market.

E: For nascent ventures, I focus more on their projects, including the market, the technology, financial capital, and other related resources that they will need. Their technology skills need to be strong enough to manufacture the products.

Coming to investment, our eyes are still on the actual income that the venture can generate for us.

F: We mainly look at ventures in bio pharmacy and electronic information related industries. We will consider investment when they need financial support and when the project is really good. The project could bring some social values. They have some strengths, like their property rights, their own inventions, etc. They also need to have demand in the future market,

have some novel distinctiveness compared with their competitors. The project need to be viable on the whole.

G: Their technology is advanced, with few competitors in the same product line.

In analysis, we want to see high potential from the market, not explored by others.

The next concern is their business model. How would they bring their products to the market and actually realize their value?

H: And of course, the venture project need to be a good quality one.

J: The second part is about ventures' projects. There are also 3 dimensions of evaluation for projects. Firstly, they need to have clear business model. Secondly, their project and business model need to be viable. If the project is already running, then how's the operation data? The third factor is their core competence. I need to see that why the project could succeed among its competitors in the market and what would support their persistent growth.

K: Before recommending to our investors, we will carry out an initial review about the ventures' business model, their team, market potential, and future growth etc.

L: If the founders are all okay, of course I will go with better projects. I need projects with great growth potential. Can their revenue grow by ten times, or even by a hundred times? Can their project go national wide beyond local market?

The critical point is their business model and their target market.

M: The projects must be at an early stage. And they need to have good growth potential and development. The most important basis is their investment value, that is the value of the ventures as a business, their market value.

After review for the person, then it's just about business. First of all, the project need to be on the right direction, meaning the pie in the market is big enough. Then for the second step, how much can they cut from the pie, this relies on their business plan. And the third problem is how they can actually take that share of market. This is about their core competence and their execution capabilities.

N: The evaluation for the projects focuses on whether they have the product developed and tested, whether they have recognizable value in the market, and whether they are on the right directions in terms of industries and focal areas.

O: We will look at the direction of their product, the inherent social and economic value.

P: They mainly look at the future of the direction and the project's chance of survival and growth in the market.

Q: They need to have a ready product with some intellectual properties. Thus their project will be marketable. And their product need to be attractive with, for example, some new features or functions not available in the current market.

Team

A: For projects, we will look at their industry, the market of their industry, their products or services, business models, their marketing strategies, etc. All of these factors could be summarized as 'how they will do it', and whether their project match the market trend.

According to the stages of the projects, the emphases for early-stage, mid-stage, and late-stage projects are all different.

D: The first thing we consider might be the team. The core advantages lie in the founding team, their ability and resources.

E: For more mature ventures, I focus more on their teams. The teams need to support all aspects of the project.

G: The last thing would be the team. The team need to be a complete one, with resources not only for R&D, but also for financing, marketing and operation.

It would be better if the team has some international and specialized background.

J: It's about the teams. Yes, I will examine the backgrounds of the team first. I always pay more attention to person, and so do many investment organizations in China.

There are 3 facets about entrepreneurial team when reviewing for investments. The first aspect is the completeness of the team. For example, in the internet industry in China, the typical ideal team would be a BAT team, meaning that they have cofounders from Baidu, Alibaba, and Tencent. And it would be best if they have different specialization, one in product management, one in technology, and one in operation. But this is nearly impossible, just an ideal one. But we do care about the completeness of the team. If their team is incomplete, there will be a problem.

The second aspect about teams is their industry background. If they don't have experiences in the area you want to do, there's no chance form them.

The third aspect would be their previous experience of cooperation, their cohesiveness and chemistry within the team. It could reflect the level of maturity of the team, that whether they have gone through the storming stage to work out their way of cooperation.

K: Before recommending to our investors, we will carry out an initial review about the ventures' business model, their team, market potential, and future growth etc.

The entrepreneurs and the investors need to have similar understanding and consistent expectation about the venture, thus there will be less conflicts in the future development and cooperation.

L: The entrepreneurs need to have capability, sense of responsibility, vision and tolerance, and with passion and dream. And he/she should have the money to start, and have deep understanding about the industry and technology. At the same time, he/she need to be a great leader to gather people around them. It's extremely hard to find a good founder.

M: The critical point is about the people, especially the leader of the team. They need to have some entrepreneurial spirit and matching ability, taking the venture toward a positive direction. The second consideration is the completeness of the team as well as the cohesiveness within the team, pushing the venture forward with high synergy.

N: It's all about people in early investments. The founder is the most important element of a venture before and after investments. We will also look at the entire entrepreneurial team. Is the team complete with complementary skills and specialties? Is the venture self-structured with cohesive coordination?

P: Their team need to be mature with effective technology and development teams as well as marketing professionals.

Need

H: First of all, the ventures really have a critical need for financial investment.

Project overriding team

J: when the entrepreneurial team is incomplete at this stage, if their project is really good with great core competence, they I will further assess whether I can help solve their team problem. That is to say, when a venture has technology core competence, we will be less rigid for the weaknesses in their team.

Team overriding project

L: If I found a really good founder, I will definitely invest. It's okay their projects are not good. I can find good projects for them, I can help fix the resource of technical problems. I will be more than happy to help.

N: To be honest, most early investments are investing in people. It's very rare for a very good idea to attract capital by itself; mostly, we still invest in people.

If someone comes all by him- or herself, we won't consider it no matter how good the business plan looks. It's impossible.

Another possibility is that the founders have really low emotional intelligence. Even if they have great technology and competitive barriers, if they don't know how to manage people, or how to construct an organization, they could not operate the entire venture. Even when they have great tech teams and good products, if there's no one good at operating or marketing, they won't be able to generate any revenue, be it to-C or to-B.

6. Interview Summary: Rejecting for financial support

Project

- A: If they don't have core competence, or any technology barriers, then they will eventually die.
- C: It's the same as the Cannikin Law, the quality of the project is determined by the shortest planks. If we they have only a few weaknesses and we can help with them, then we'll consider taking and fixing it. If they have too many problems and all beyond our ability to help, then we'll pass.
- E: If their market is very limited, or they have nor market at all, they will never get investments.
- G: The first thing is the future of the industry and the project's future in the industry. If they have no competitive advantages, or their resources and demand are limited to local markets.
- H: We would not invest in ventures with a problematic cost management. It will bring in additional and uncontrollable risks for the investment.
- J: It could be their structure of equity shares.
- K: They are not yet prepared for the stage of investment. And some ventures are not yet clear and settled for their business model.
- M: Some ventures are good businesses, but have no investment values, meaning that they have little potential for future development.
- N: We won't invest in ventures with untested products. And we won't invest in those traditional businesses.
- O: It could be the equity share problem, or because that the technology of the project is not as good as expected, or their business model can hardly work.
- R: The product has uncertain features or there's some inflated contents in their business model.

Team

- A: We care most about the people. If the person has some ethical problems or an ingenuous attitude. Though sometimes they can hide it, we won't step in once we find out.
- B: We will try to collect and validate more information about the entrepreneurs, if their qualities are not satisfying or even faked, we will not invest.
- D: If the project of the venture is novel and credible, but they don't have the team skills of resources to support it, then we will usually pass.
- E: If their team and resources do not match with the project they are doing, then they are doomed.

G: The second consideration will be about the venture itself, their teams. Even for some teams who have some distinct strengths in their technology skills, or industry resources, etc., if the teams are not complete, it's still problematic.

And the vision from of the founder also matters. If the founder started the business just as a short-term side path, then we would not cooperate with them.

J: If the teams are not open to alternative solutions we suggested, then we can expect many problems in the future. So we won't invest from the beginning.

L: If they don't have consistent passion, not led by their dream, they can enter, but I will not give them further attention. On the whole, if the founders are not good, it won't work.

And of course teams with no relevant experiences or functional capabilities are never good opportunities for investments.

N: If their teams are still at the early stage of cooperation, we might think twice. And we won't invest in founders with limited visions and little knowledge about the industry or the entrepreneurial field.

P: Some ventures have no subjective motives, or their actions show that they are not in critical need for investment.

R: the team need to have strong motives, matching resources and capabilities. We won't invest if the venture lack any of these.

Appendix 5

食岛云餐【外卖食堂集成平台】

项目简介

- 整租A类商圈1000到1500平方米面积的二流位置，改造为30余个独立厨房，统一配备基础设施。
- 厨区统一打包，建配送点，限商圈内订单。设置分区订单柜专人分拣、高效配送。
- 独立的移动设备端订单系统App、小程序。商家客户端和消费者客户端智能管理订单。
- 代理证照办理、卫生安全监管控系统。提供市场、供应链、数据等全流程服务。
- 提供机动厨位，流动引进人气和特色餐饮。为食客搜罗美食、为商家开拓市场。







CEO 冯封 对外经贸大学管理学本科
多伦多大学经济学硕士

- 大学期间创办经营一家快餐店
- UM资本投资经理，关注消费领域项目
- Go Home外卖合伙人，实现Pre-A轮融资

CMO 韩涵 西华大学市场学本科
重庆大学市场学硕士

- M团外卖华南C城销售总监
- 餐饮招商和地区资源丰富
- 曾带领10人团队一月攻下C城200商家

CTO 唐棠 西南大学信息管理专业本科
电子科大软件开发专业硕士

- M团外卖4年互联网运营经验
- 创建e烘焙，线下店铺3家、线上粉丝30万
- 带领专业开发、数据专家和技术支持团队

核心竞争优势

- 📍 品质餐饮区域集成管理，订单-配送-管理一体化。
- 📍 饮食社群化，运用专利技术精准高效供应商圈。
- 📍 为商家做低成本扩张试水，为商圈引进多元美食。
- 📍 APP、小程序嵌入操作便捷。
- 📍 提供线上管理、品牌和数据支持，佣金费率较低。

专家导师对项目技术水平的意见

技术专利：区域卫星物流云算系统专利技术
数据热点分析法专利权

专家意见：所用技术在行业中比较新颖

食岛云餐【外卖食堂集成平台】



项目简介

- 整租A类商圈1000到1500平方米面积的二流位置，改造为30余个独立厨房，统一配备基础设施。
- 厨房统一打包，建配送点，限商圈内订单。设置分区订单柜专人分拣、高效配送。
- 代理证照办理、卫生安全监督管控系统。提供市场、供应链、数据等全流程服务。



CEO → **冯封** 对外经贸大学管理学本科
多伦多大学经济学硕士

- 大学期间创办经营一家快餐店
- UM资本投资经理，关注消费领域项目
- Go Home外卖合伙人，实现Pre-A轮融资

CMO → **韩涵** 西华大学市场学本科
重庆大学市场学硕士

- M团外卖华南C城销售总监
- 餐饮招商和地区资源丰富
- 曾带领10人团队一月攻下C城200商家

CTO → **唐棠** 西南大学信息管理专业本科
电子科大软件开发专业硕士

- M团外卖4年互联网运营经验
- 创建e烘培，线下店铺3家、线上粉丝30万
- 带领专业开发、数据专家和技术支持团队

核心竞争优势



- 📍 品质餐饮区域集成管理，订单-配送-管理一体化。
- 📍 饮食社群化，精准高效供应商圈。
- 📍 提供线上管理、品牌和数据支持。
- 📍 APP、小程序嵌入操作便捷。
- 📍 佣金费率较低。

专家导师对项目技术水平的意见



技术专利：区域卫星物流云算系统专利技术

专家意见：所用技术在行业中比较常见

食岛云餐【外卖食堂集成平台】

项目简介

- 整租A类商圈1000到1500平方米面积的二流位置，改造为30余个独立厨房，统一配备基础设施。
- 厨区统一打包，建配送点，限商圈内订单。设置分区订单柜专人分拣、高效配送。
- 独立的移动设备端订单系统App、小程序。商家客户端和消费者客户端智能管理订单。
- 代理证照办理、卫生安全监管管控系统。提供市场、供应链、数据等全流程服务。
- 提供机动厨位，流动引入人气和特色餐饮。为饕客搜罗美食、为商家开拓市场。



CEO ▶ 冯封 职业学院酒店管理专业

- 大专期间创办经营一家快餐店
- 毕业后创办自主餐饮品牌，扩张到10余家连锁店

CMO ▶ 韩涵 重庆大学市场学本科

- M团外卖华南C城销售经理

CTO ▶ 唐棠 西南大学信息管理专业 在校大学本科

- M团外卖运营技术部实习

核心竞争优势



- 品质餐饮区域集成管理，订单-配送-管理一体化。
- 饮食社群化，运用专利技术精准高效供应商圈。
- 为商家做低成本扩张试水，为商圈引进多元美食。
- APP、小程序嵌入操作便捷。
- 提供线上管理、品牌和数据支持，佣金费率较低。

- 专家导师对项目技术水平的意见
- 技术专利：区域卫星物流云算系统专利技术 数据热点分析法专利产权转让
- 专家意见：所用技术在行业中比较新颖

食岛云餐【外卖食堂集成平台】



项目简介

- 整租A类商圈1000到1500平方米面积的二流位置，改造为30余个独立厨房，统一配备基础设施。
- 厨区统一打包，建配送点，限商圈内订单。设置分区订单柜专人分拣、高效配送。
- 代理证照办理、卫生安全监管控系统。提供市场、供应链、数据等全流程服务。



CEO ▶ **冯封** 职业学院酒店管理专科

- 大专期间创办经营一家快餐店
- 毕业后创办自主餐饮品牌、扩张到10余家连锁店

CMO ▶ **韩涵** 重庆大学市场学本科

- M团外卖华南C城销售经理

CTO ▶ **唐棠** 西南大学信息管理专业在校本科生

- M团外卖运营技术部实习

核心竞争优势



- 📍 品质餐饮区域集成管理，订单-配送-管理一体化。
- 📍 饮食社群化，精准高效供应商圈。
- 📍 提供线上管理、品牌和数据支持。
- 📍 APP、小程序嵌入操作便捷。
- 📍 佣金费率较低。

专家导师对项目技术水平的意见



技术专利：区域卫星物流云算系统专利技术

专家意见：所用技术在行业中比较常见

Appendix 6

Survey Questions

Fill out the information below (All information will be confidential except to the researcher, and will only be used for the research purposes)

1. Position_____ 2. Age_____ 3. Gender_____
4. Highest education level_____ 5. Major of education_____
6. Number of years in the company__
7. Number of years in the industry_____
8. What are you responsible for in this incubator? (in short phrases)

9. What are the requirements for screening for your incubator? Please list

<hr/>	<hr/>

10. Please rank the above criteria for the relative importance on the right

Now you will see a venture project plan, please quickly scan the project in about 3 minutes, and complete the following survey about your general impression.

11. From the review, this venture project's business idea meets your expectation for a promising entrepreneurial opportunity

Strongly Disagree Disagree Neutral Agree Strongly Agree

12. from the review, this venture project's entrepreneurial team meets your expectation for a promising entrepreneurial opportunity

Strongly Disagree Disagree Neutral Agree Strongly Agree

13. The project is unusual or infrequently seen in a universe of projects from the same industry.

Strongly Disagree Disagree Neutral Agree Strongly Agree

14. The entrepreneurial team has considerable resources and skills from their education

Strongly Disagree Disagree Neutral Agree Strongly Agree

15. The entrepreneurial team has considerable experience and knowledge with the related industry

Strongly Disagree Disagree Neutral Agree Strongly Agree

16. I envision the business receiving high profile endorsements in the future

Strongly Disagree Disagree Neutral Agree Strongly Agree

17. I envision this business receiving favorable press coverage in the future

Strongly Disagree Disagree Neutral Agree Strongly Agree

18. From the review, you got considerable knowledge about the venture and believe it to be good quality?

Strongly Disagree Disagree Neutral Agree Strongly Agree

19. I envision this business having a top management team that will benefit the organization.

Strongly Disagree Disagree Neutral Agree Strongly Agree

20. What is the main failing/approving factor?

1). _____ 2). _____ 3). _____

Now please read the venture project more carefully and complete the following survey about your evaluation of the venture.

21. From the review, this venture project's business idea meets your expectation for a promising entrepreneurial opportunity

Strongly Disagree Disagree Neutral Agree Strongly Agree

22. From the review, this venture project's entrepreneurial team meets your expectation for a promising entrepreneurial opportunity

Strongly Disagree Disagree Neutral Agree Strongly Agree

23. The project is unusual or infrequently seen in a universe of projects from the same industry.

Strongly Disagree Disagree Neutral Agree Strongly Agree

24. The entrepreneurial team has considerable resources and skills from their education

Strongly Disagree Disagree Neutral Agree Strongly Agree

25. The entrepreneurial team has considerable experience and knowledge with the related industry

Strongly Disagree Disagree Neutral Agree Strongly Agree

26. From the review, you expect the service of high consistency in good quality

Strongly Disagree Disagree Neutral Agree Strongly Agree

27. Based on your review, you expect the organization will be highly organized in its organizational decisions, rules, and actions

Strongly Disagree Disagree Neutral Agree Strongly Agree

28. From the review, you find the goals and values of the organization to be highly consistent with yours and you have a high emotional attraction to the organization

Strongly Disagree Disagree Neutral Agree Strongly Agree

29. From the review, you expect the organization has a high capacity to assimilate new information to create new knowledge

Strongly Disagree Disagree Neutral Agree Strongly Agree

30. What is the main failing/approving factor?

1). _____ 2). _____ 3). _____

31. You will put this venture to the acceptance list

Definitely No Probably No Might or Might Not Probably Yes Absolutely Yes

32. You will arrange an interview with them within a week

Definitely No Probably No Might or Might Not Probably Yes Absolutely Yes

33. You will forward this project to your financial alliances

Definitely No Probably No Might or Might Not Probably Yes Absolutely Yes

34. You are interested in discussing with them for equity investment

Definitely No Probably No Might or Might Not Probably Yes Absolutely Yes

35. Assuming that your incubators have the requiring resources, you will accept the venture's request for a 100 square-meters office space, a 500 square-meters storage space, and a 20% discount for other fees."

Definitely No Probably No Might or Might Not Probably Yes Absolutely Yes

36. You will personally follow up with this project in the future

Definitely No Probably No Might or Might Not Probably Yes Absolutely Yes

Appendix 7

t-test for Equality of Means

t	df	Sig. (2- tailed)	Δ Mean	Δ Std. Error	95% Confidence Interval of the Difference		
					Lower	Upper	
Manipulation Pj1	-6.460	28	.000	-1.1161	.17278	-1.4699	-.76215
	-6.473	27.677	.000	-1.1161	.17242	-1.4694	-.7627
Manipulation Tm1	.052	28	.959	.01190	.22979	-.4588	.48261
	.053	26.977	.958	.01190	.22467	-.4491	.47291
Manipulation Pj2	-5.229	28	.000	-1.1116	.21259	-1.5471	-.6761
	-5.362	26.534	.000	-1.1116	.20730	-1.5373	-.6859
Manipulation Tm2	1.133	28	.267	.25893	.22856	-.2092	.72711
	1.132	27.359	.268	.25893	.22879	-.21023	.72809

Manipulation Check for Pilot Sample on Project novelty

t-test for Equality of Means

t	df	Sig. (2- tailed)	Δ Mean	Δ Std. Error	95% Confidence Interval of the Difference		
					Lower	Upper	
ManipulationPj1	-1.128	28	.269	-.30000	.26607	-.84502	.24502
	-1.128	22.919	.271	-.30000	.26607	-.85052	.25052
ManipulationTm1	-4.015	28	.000	-.73333	.18267	-1.10752	-.35915
	-4.015	26.958	.000	-.73333	.18267	-1.10817	-.35850
ManipulationPj2	-1.511	28	.142	-.43333	.28674	-1.02070	.15404
	-1.511	24.618	.143	-.43333	.28674	-1.02436	.15769
ManipulationTm2	-5.494	28	.000	-.88889	.16178	-1.22028	-.55750
	-5.494	27.954	.000	-.88889	.16178	-1.22031	-.55747

Manipulation Check for Pilot Sample on Team Credibility

Independent Samples Test on Project Novelty for Survey Sample

t-test for Equality of Means							
	t	df	Sig. (2-tailed)	Δ Mean	Δ Std. Error	95% Confidence Interval of the Difference	
						Lower	Upper
Mc-P	-4.368	168	.000	-.4647	.1064	-.6747	-.2547
	-4.368	167.427	.000	-.4647	.1064	-.6747	-.2547
Mc-T	-1.186	168	.237	-.1176	.0992	-.3135	.0782
	-1.186	167.967	.237	-.1176	.0992	-.3135	.0782
Mc-P	-3.508	168	.001	-.3941	.1124	-.6159	-.1723
	-3.508	167.297	.001	-.3941	.1124	-.6159	-.1723
Mc-T	1.026	168	.306	.10196	.0994	-.0942	.2981
	1.026	167.880	.306	.10196	.0994	-.0942	.2981

Independent Samples Test on Team Credibility for Survey Sample

t-test for Equality of Means							
	t	df	Sig. (2- tailed)	Δ Mean	Δ Std. Error	95% Confidence Interval of the Difference	
						Lower	Upper
Mc-P	-2.389	168	.018	-.2638	.1104	-.4818	-.0459
	-2.389	167.724	.018	-.2638	.1104	-.4819	-.0458
Mc-T	-5.893	168	.000	-.5346	.0907	-.7137	-.3555
	-5.903	165.545	.000	-.5346	.0906	-.7134	-.3558
Mc-P	-3.736	168	.000	-.4179	.1119	-.6387	-.1971
	-3.738	167.987	.000	-.4179	.11187	-.6386	-.1971
Mc-T	-6.994	168	.000	-.6135	.0877	-.7867	-.4403
	-7.002	166.886	.000	-.6135	.0876	-.7865	-.4405

Appendix 8

Comparison Between Online Survey and Paper Survey

	t-test for Equality of Means						
	t	df	Sig.	Δ Mean	Δ Std. Error	95% Confidence Interval of Δ	
						Lower	Upper
Age	-.196	19.466	.847	-.3157	1.6120	-3.6843	3.0528
Years in BI	.775	17.432	.449	.7265	.9377	-1.2481	2.7011
Years in Field	3.191	168.000	.002	2.9537	.9258	1.1261	4.7814
Project Novelty Rated 1	.214	18.055	.833	.04221	.1972	-.3719	.4563
Team Credibility Rated 1	-1.487	17.913	.154	-.2633	.1771	-.6354	.1089
CLJ	.256	17.361	.801	.0524	.2049	-.3792	.4839
Project Novelty Rated 2	-.801	18.965	.433	-.1477	.1844	-.53367	.2382
Team Credibility Rated 2	-1.628	18.725	.120	-.2619	.1609	-.5990	.0751
ELJ	-1.051	18.474	.307	-.1634	.1554	-.4894	.1626
Offer	-2.123	20.183	.046	-.4537	.2137	-.8993	-.0082
Follow-up	1.443	19.106	.165	.3393	.2352	-.1527	.8313
Entry Decision	-.275	20.204	.786	-.0540	.1966	-.4639	.3559
Financial Support	-1.864	18.099	.079	-.4537	.2434	-.9649	.0574

Comparison Between Male and Female
Independent Sample Test—T Test

t-test for Equality of Means							
	t	df	Sig.	Δ Mean	Δ Std. Error	95% Confidence Interval of Δ	
						Lower	Upper
Age	3.182	168	.002	3.3271	1.0455	1.2631	5.3911
Years in BI	.266	157.885	.791	.1304	.4905	-.8383	1.0991
Years in Field	3.291	168	.001	1.7973	.5461	.7192	2.8753
Project Novelty Rated 1	-.264	149.736	.792	-.0302	.1143	-.2560	.1956
Team Credibility Rated 1	-2.163	148.539	.032	-.2167	.1002	-.4148	-.0187
CLJ	-1.006	156.624	.316	-.1064	-.1057	-.3151	-.1024
Project Novelty Rated 2	-1.206	153.819	.230	-.1413	.1171	-.3727	.0901
Team Credibility Rated 2	-1.320	143.475	.189	-.1345	.1020	-.3361	.0670
ELJ	-.170	145.984	.865	-.01625	.0956	-.2052	.1727
Offer Decision	-1.098	154.580	.274	-.1664	.1515	-.4656	.1329
Follow-up	-.508	165.395	.612	-.0754	.1485	-.3685	.2177
Entry Decision	.048	161.453	.962	.0065	.1369	-.2637	.2768
Financial Support	-1.206	153.819	.230	-.1413	.1171	-.3727	.0901

Comparison Between Directors/Mentors and Managers/Employees

t-test for Equality of Means							
	t	df	Sig.	Δ Mean	Δ Std. Error	95% Confidence Interval of Δ	
						Lower	Upper
Age	-5.707	168	.000	-5.5628	.9748	-7.4872	-3.6384
Years in BI	-2.868	140.338	.005	-1.3935	.4859	-2.3541	-.4329
Years in Field	-6.191	168	.000	-3.1139	.5030	-4.1069	-2.1210
Project Novelty Rated 1	.398	162.707	.691	.04487	.1128	-.1779	.2676
Team Credibility Rated 1	1.454	163.984	.148	.14454	.0994	-.0518	.3408
CLJ	1.186	161.229	.237	.1253	.1057	-.08332	.3340
Project Novelty Rated 2	.748	159.011	.456	.0876	.1171	-.1437	.3189
Team Credibility Rated 2	1.280	167.200	.202	.1270	.0992	-.0688	.3228
ELJ	1.282	163.057	.202	.1197	.0934	-.0647	.3040
Offer Decision	.563	164.201	.574	.0850	.1511	-.2133	.3833
Follow-up	2.171	168	.031	.3238	.1491	.0294	.6181
Entry Decision	.713	160.893	.477	.0986	.1382	-.1744	.3716
Financial Support	.982	168	.327	.1381	.1406	-.1395	.4157

Comparison Between Bachelor or lower and Master or higher
Independent Sample Test—T Test

	t-test for Equality of Means				
	t	df	Sig.	Δ Mean	Δ Std. Error
Age	2.534	84.608	.013	2.8138	1.1102
Years in BI	-.355	116.524	.723	-.1605	.4518
Years in Field	1.000	65.840	.321	.6770	.6771
Project Novelty Rated 1	-.614	83.833	.541	-.0733	.1195
Team Credibility Rated 1	-1.655	69.553	.102	-.1928	.1164
CLJ	-1.120	70.230	.266	-.1379	.1231
Project Novelty Rated 2	-.666	71.662	.508	-.0896	.1346
Team Credibility Rated 2	-1.258	80.149	.212	-.1360	.1081
ELJ	-2.537	77.607	.013	-.2578	.1016
Offer Decision	-.193	68.239	.848	-.0346	.1796
Follow-up Decision	-.773	63.843	.443	-.1450	.1877
Entry Decision	-.997	63.164	.323	-.1715	.1720
Financial Support	-.860	63.292	.393	-.1513	.1760

Comparison Between College or lower and Bachelor or higher

	t-test for Equality of Means				
	t	df	Sig.	Δ Mean	Δ Std. Error
Age	-1.846	16.978	.082	-4.0308	2.1840
Years in BI	-.696	17.820	.495	-.6162	.8852
Years in Field	1.011	21.552	.323	.7374	.7296
Project Novelty Rated 1	-.366	17.610	.719	-.0767	.2097
Team Credibility Rated 1	-.972	19.143	.343	-.1507	.1551
CLJ	-1.963	18.864	.065	-.3283	.1673
Project Novelty Rated 2	.054	19.141	.958	.0097	.1816
Team Credibility Rated 2	.476	18.615	.640	.0779	.1638
ELJ	-2.323	168	.021	-.3655	.1573
Offer Decision	-.624	17.948	.541	-.1672	.2680
Follow-up Decision	-1.346	18.434	.195	-.3393	.2521
Entry Decision	-.703	18.974	.491	-.1530	.2177
Financial Support	-.528	21.430	.603	-.0982	.1861

Comparison Between Business Major and Other Majors
Independent Sample Test—T Test

	t-test for Equality of Means				
	t	df	Sig.	Δ Mean	Δ Std. Error
Age	-.305	107.491	.761	-.3499	1.1456
Years in BI	.383	148.662	.702	.1782	.4651
Years in Field	-.123	134.268	.902	-.0681	.5519
Project Novelty Rated 1	-1.026	108.011	.307	-.1235	.1203
Team Credibility Rated 1	-.946	113.359	.346	-.0993	.1049
CLJ	-1.763	106.187	.081	-.1992	.1130
Project Novelty Rated 2	-.420	107.055	.675	-.0527	.1255
Team Credibility Rated 2	-1.178	115.709	.241	-.1225	.1040
ELJ	-2.325	104.348	.022	-.2326	.1000
Offer Decision	-.280	101.691	.780	-.0464	.1657
Follow-up Decision	-2.185	116.375	.031	-.3403	.1558
Entry Decision	-.225	111.673	.822	-.0328	.1460
Financial Support	-1.214	105.048	.227	-.1850	.1523

Comparison Between Subjects with Business Attraction Job and Other Subjects
Independent Sample Test—T Test

	t-test for Equality of Means				
	t	df	Sig.	Δ Mean	Δ Std. Error
Age	-1.886	167.983	.061	-1.9510	1.0347
Years in BI	-1.950	166.187	.053	-.9186	.4710
Years in Field	-2.686	168	.008	-1.4728	.5483
Project Novelty Rated 1	2.471	165.622	.014	.2714	.1098
Team Credibility Rated 1	1.889	165.801	.061	.1854	.0981
CLJ	1.308	166.273	.193	.1363	.1043
Project Novelty Rated 2	2.482	166.899	.014	.2815	.1134
Team Credibility Rated 2	1.372	167.901	.172	.1341	.0977
ELJ	1.298	162.095	.196	.1209	.0932
Offer Decision	1.280	166.324	.202	.1906	.1490
Follow-up	.616	167.591	.539	.0918	.1491
Entry Decision	1.412	168	.160	.1941	.1375
Financial Support	1.869	168	.063	.2620	.1402

Comparison Between Subjects with Project Management Job and Other Subjects

	t-test for Equality of Means				
	t	df	Sig.	Δ Mean	Δ Std. Error
Age	-.336	137.497	.737	-.3689	1.0966
Years in BI	-1.558	162.512	.121	-.7356	.4720
Years in Field	-2.206	168	.029	-1.2388	.5616
Project Novelty Rated 1	.336	141.969	.738	.0385	.1146
Team Credibility Rated 1	-1.233	141.071	.220	-.1252	.1015
CLJ	-.124	142.262	.902	-.0133	.1076
Project Novelty Rated 2	-.019	153.501	.985	-.0022	.1159
Team Credibility Rated 2	-.509	150.806	.611	-.0508	.0998
ELJ	.724	136.411	.470	.06975	.09632
Offer Decision	.240	134.557	.811	.0375	.1562
Follow-up Decision	-.511	129.238	.610	-.0809	.1583
Entry Decision	-.886	151.792	.377	-.1215	.1372
Financial Support	-.301	150.114	.764	-.0425	.1413

Comparison Between Subjects with Financing Support Job and Other Subjects
Independent Sample Test—T Test

	t-test for Equality of Means				
	t	df	Sig.	Δ Mean	Δ Std. Error
Age	-2.082	145.496	.039	-2.210	1.0615
Years in BI	-1.110	157.952	.269	-.5300	.4777
Years in Field	-3.674	122.502	.000	-2.0860	.5678
Project Novelty Rated 1	1.366	126.986	.174	.1604	.1174
Team Credibility Rated 1	1.919	127.077	.057	.1989	.1036
CLJ	1.114	130.664	.267	.1222	.1096
Project Novelty Rated 2	.848	168	.397	.1011	.1192
Team Credibility Rated 2	1.919	129.296	.057	.1979	.1032
ELJ	2.055	133.217	.042	.1966	.0957
Offer Decision	2.062	136.681	.041	.3159	.1532
Follow-up Decision	1.878	125.157	.063	.2963	.1578
Entry Decision	1.586	128.605	.115	.2270	.1431
Financial Support	1.423	168	.157	.2044	.1436

Comparison Between Subjects with Resource Docking Job and Other Subjects
Independent Sample Test—T Test

	t-test for Equality of Means				
	t	df	Sig.	Δ Mean	Δ Std. Error
Age	-1.290	115.197	.200	-1.4251	1.1048
Years in BI	-1.915	162.931	.057	-.8346	.4357
Years in Field	-.450	112.350	.653	-.2639	.5861
Project Novelty Rated 1	.720	117.161	.473	.08365	.1162
Team Credibility Rated 1	.743	124.744	.459	.07487	.1007
CLJ	-.022	108.407	.982	-.0025	.1126
Project Novelty Rated 2	.109	168	.913	.0135	.1238
Team Credibility Rated 2	.012	110.711	.991	.0013	.1056
ELJ	-.244	95.863	.808	-.0255	.1046
Offer Decision	.739	106.792	.461	.1194	.1615
Follow-up Decision	.361	104.762	.719	.05890	.1633
Entry Decision	-.372	117.821	.710	-.0529	.1422
Financial Support	.277	124.340	.783	.0395	.1428

Appendix 9

	Model 1		Model 2		Model 3		Model 4	
	β	Std. t	β	Std. t	β	Std. t	β	Std. t
Intercept	3.218	6.289***	3.126	6.455***	2.744	5.382 ***	2.291	3.713***
Role Code	.028	.318	.043	.500	.038	.451	.057	.672
Gender	.088	1.057	.040	.496	.061	.750	.068	.834
Age	-.070	-.705	-.075	-.769	-.063	-.652	-.049	-.511
Education	-.114	-1.466	-.127	-1.669	-.121	-1.601	-.115	-1.517
Major	-.173	-2.098*	-.155	-1.921	-.156	-1.949	-.153	-1.911
Experience	.231	2.470*	.256	2.821**	.231	2.547*	.238	2.623*
BA job	-.076	-.918	-.104	-1.286	-.087	-1.084	-.083	-1.034
PM job	.057	.690	-.002	-.021	.009	.106	.005	.057
FS job	-.064	-.726	-.038	-.434	-.034	-.387	-.014	-.160
RD job	.016	.184	.037	.435	.019	.220	.016	.190
Project Novelty	.147	1.915 (p=.057)			.140	1.880 (p=.062)	.349	2.108*
Team Credibility			.245	3.269**	.242	3.241**	.349	3.284**
Pj*Tm							-.257	-1.413
ANOVA	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F
	0.070	2.162*	.109	2.879**	.123	2.976***	.129	2.918***
Model Summary	ΔR^2	ΔF	ΔR^2	ΔF	ΔR^2	ΔF	ΔR^2	ΔF
	0.020	3.665 (p=.057)			.055	10.506**	0.010	1.998
			0.056	10.687**	.018	3.535 (p=.062)		

Hierarchical Linear Regression of Venture Quality on CLJ

	Model 1		Model 2		Model 3		Model 4	
	β Std.	t						
Intercept	3.466	7.761***	3.508	8.232***	3.048	6.813***	2.901	5.387***
Role Code	.033	.390	.051	.605	.045	.539		.609
Gender	.022	.265	-.038	-.466	-.007	-.088	.051	-.059
Age	-.032	-.323	-.041	-.430	-.024	-.255	-.005	-.204
Education	-.173	-2.250*	-.189	-2.495*	-.180	-2.429*	-.019	-2.389*
Major	-.201	-2.474*	-.182	-2.263*	-.183	-2.332*	-.178	-2.310*
Experience	.054	.587	.091	1.005	.055	.613	-.182	.635
BA job	-.024	-.289	-.060	-.748	-.036	-.451	.057	-.431
PM job	-.003	-.034	-.070	-.853	-.055	-.678	-.034	-.693
FS job	-.156	-1.786	-.130	-1.494	-.123	-1.452	-.056	-1.352
RD job	.087	1.006	.117	1.378	.090	1.074	-.117	1.061
Project	.214	2.836**			.207	2.836**	.089	1.706
Novelty								(.090)
Team			.263	3.520**	.257	3.517**	.279	2.805**
Credibility								
Pj*Tm							.294	-.492
ANOVA	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F
	.097	2.652**	.120	3.098**	.158	3.637***	.154	3.360***
Model	ΔR^2	ΔF						
Summary	0.043	8.040**	0.064	12.388**	.062	12.366**	0.001	0.242
				*	.040	8.044**		

Hierarchical Linear Regression of Venture Quality on ELJ

	Model 1		Model 2		Model 3		Model 4	
	β Std.	t						
Intercept	1.542	2.249*	.640	.907	.335	.474	.113	.145
Role Code	.054	.652	.048	.599	-.056	.582	.050	.629
Gender	-.073	-.923	-.041	-.539	.047	-.744	-.049	-.652
Age	.045	.476	.035	.388	.019	.520	.045	.504
Education	-.025	-.327	.014	.198	.052	.259	.022	.300
Major	.013	.168	.040	.515	-.022	.690	.051	.664
Experience	-.041	-.452	.020	.239	-.088	-.260	-.023	-.265
BA job	-.087	-1.098	-.101	-1.340	.114	-1.173	-.083	-1.102
PM job	.098	1.235	.126	1.653	-.038	1.518	.115	1.526
FS job	-.085	-1.001	-.034	-.412	.013	-.471	-.032	-.397
RD job	.048	.579	.007	.085	.207	.159	.006	.077
CLJ	.412	5.490***			.373	2.427*	.223	2.523*
ELJ			.487	6.734***	.046	4.365***	.407	4.130***
CLJ*ELJ							-.066	-.704
ANOVA	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F
	.152	3.760***	.216	5.224***	.239	5.428***	.237	5.033***
Model Summary	ΔR^2	ΔF						
	0.151	30.145***	.210	45.347***	.086	19.053***	.002	0.495
					.027	5.891*		

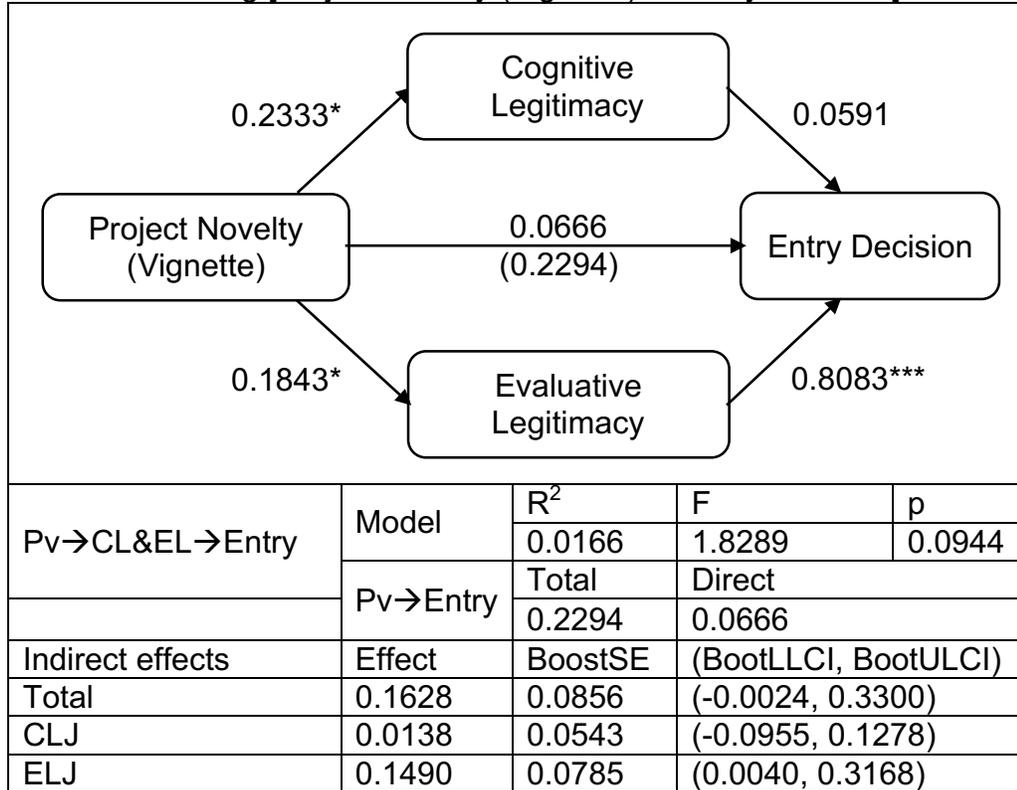
Hierarchical linear regression for Legitimacy Judgments on Entry Decisions

	Model 1		Model 2		Model 3		Model 4	
	β Std.	t						
Intercept	1.137	1.658	.387	.539	-.011	-.016	-.370	-.476
Role Code	.008	.098	.003	.036	.000	.003	.006	.083
Gender	.013	.176	.048	.643	.029	.401	.040	.535
Age	.027	.297	.015	.160	.029	.329	.027	.305
Education	-.015	-.211	.019	.266	.025	.349	.029	.415
Major	-.051	-.657	-.031	-.406	-.015	-.198	-.018	-.237
Experience	-.017	-.197	.054	.640	.000	-.002	-.001	-.012
BA job	-.098	-1.271	-.116	-1.546	-.099	-1.347	-.091	-1.239
PM job	.064	.825	.094	1.240	.079	1.069	.080	1.086
FS job	-.060	-.721	-.011	-.133	-.016	-.206	-.007	-.090
RD job	.013	.158	.028	-.345	-.020	-.260	-.030	-.388
CLJ	.455	6.200***			.264	3.151**	.289	3.339**
ELJ			.492	6.842***	.346	4.128***	.401	4.147***
CLJ*ELJ							-.104	-1.132
ANOVA	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F	$R_{Adj.}^2$	F
	.192	4.658***	.225	5.468***	.267	6.123***	.268	5.761***
Model	ΔR^2	ΔF						
Summary	0.184	38.439***	.215	46.810***	.074	17.043***	.006	1.282
					.027	5.891*		

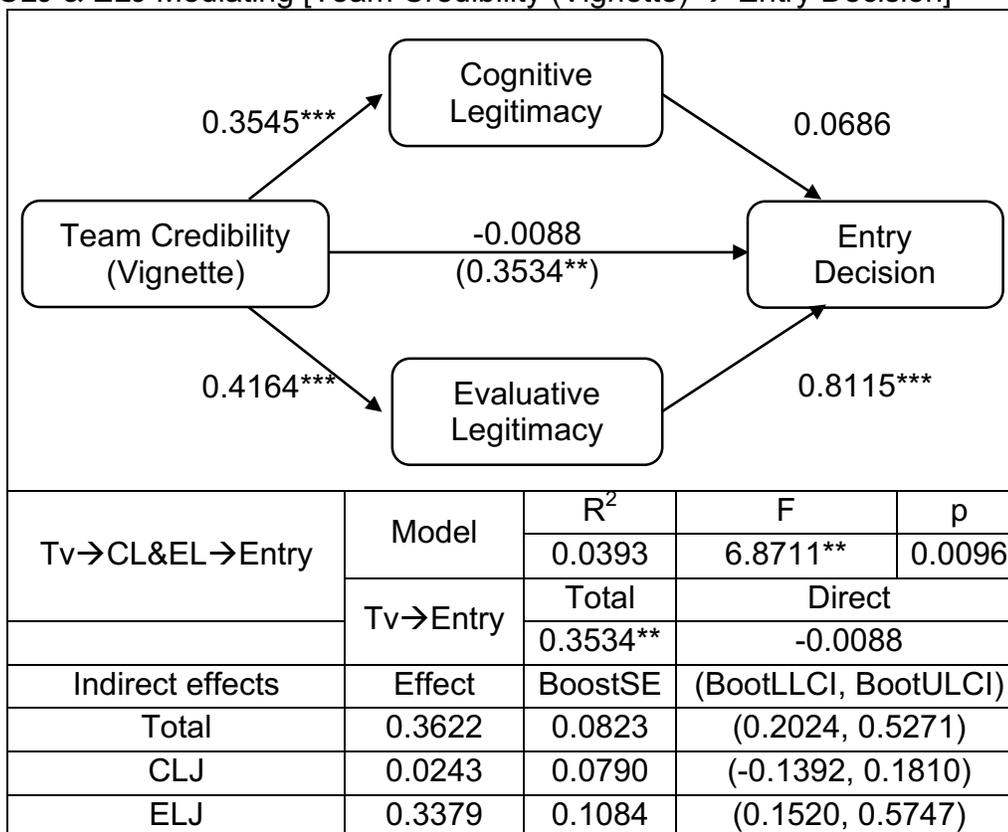
Hierarchical Linear Regression of Legitimacy Judgments on Financial Support Decisions

Appendix 10

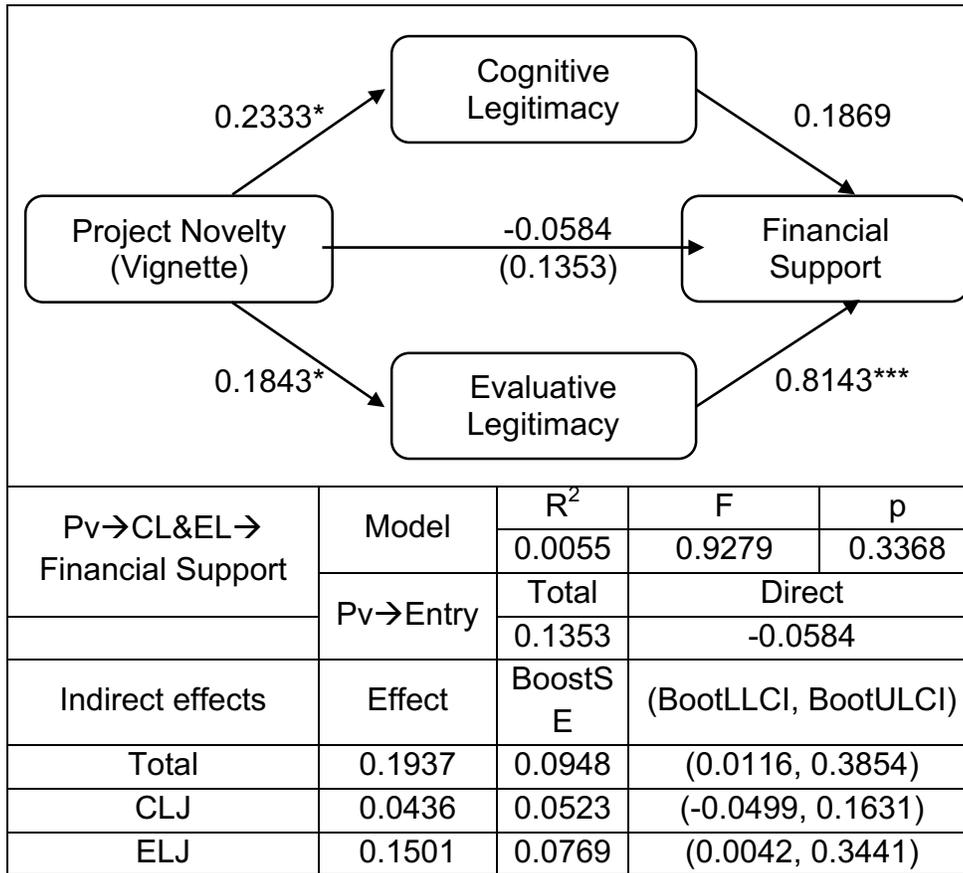
CLJ & ELJ Mediating [Project Novelty (Vignette) → Entry Decision]



CLJ & ELJ Mediating [Team Credibility (Vignette) → Entry Decision]



CLJ & ELJ Mediating [Project Novelty (Vignette) → Financial Support Decision]



CLJ & ELJ Mediating [Team Credibility (Vignette) → Financial Support Decision]

