

VU Research Portal

Firm Survival and Innovation in Emerging Markets

Yang, C.

2020

document version

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

citation for published version (APA)

Yang, C. (2020). *Firm Survival and Innovation in Emerging Markets: The Case of China*. [PhD-Thesis - Research and graduation internal, Vrije Universiteit Amsterdam].

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

E-mail address:

vuresearchportal.ub@vu.nl

Table of Contents

| | |
|---|------------|
| List of Tables..... | iii |
| List of Figures..... | v |
| Chapter 1 Introduction | 1 |
| 1.1 Contextualizing the study | 1 |
| 1.2 Main research topics | 8 |
| 1.3 Thesis research outline..... | 13 |
| Chapter 2 High-tech start-up firm survival originating from a combined use of internal resources | 20 |
| 2.1 Introduction..... | 21 |
| 2.2 Literature review and hypotheses | 23 |
| 2.3 Data, variables, and methods | 29 |
| 2.4 Results..... | 35 |
| 2.5 Discussion and conclusion..... | 49 |
| Chapter 3 The Value of Business–Government Ties for Manufacturing Firms’ Product Innovation during Institutional Transition in China | 52 |
| 3.1 Introduction..... | 53 |
| 3.2 Theory and Hypotheses Development | 55 |
| 3.3 Data and Methods | 64 |
| 3.4 Results..... | 68 |
| 3.5 Discussion and Conclusions | 78 |
| Chapter 4 The influence of government affiliations on firm product innovation in a dynamic institutional environment: Empirical evidence from China..... | 82 |
| 4.1 Introduction..... | 83 |
| 4.2 Literature review and hypotheses development..... | 85 |
| 4.3 Data and analytical methods | 93 |
| 4.4 Regression results | 96 |

| | |
|--|------------|
| 4.5 Discussion and conclusion | 105 |
| Chapter 5 Unraveling the impact of institutional transition on firms' exploratory and exploitative innovation | 110 |
| 5.1 Introduction..... | 111 |
| 5.2 Literature review and hypotheses development..... | 113 |
| 5.3 Data and methods..... | 120 |
| 5.4 Results..... | 127 |
| 5.5 Discussion and conclusion | 132 |
| Chapter 6 Discussion and Conclusion | 136 |
| 6.1 Main research findings for each study | 136 |
| 6.2 Theoretical implications..... | 138 |
| 6.3 Practical implications..... | 142 |
| 6.4 Limitations and avenues for future research | 144 |
| 6.5 Conclusions..... | 146 |
| References | 147 |
| Appendix A | 166 |
| Nederlandse Samenvatting (Dutch Summary)..... | 167 |
| English Summary..... | 169 |
| Acknowledgements | 171 |

List of Tables

| | |
|---|----|
| Table 1-1 Key measures in Chapter 2-5 | 16 |
| Table 1-2 Overview of the Research in Chapters 2-5..... | 18 |
| Table 2-1 Summary statistics for exit rates by year | 31 |
| Table 2-2 Description statistics, correlations, and multicollinearity test..... | 34 |
| Table 2-3 The description statistics for combination and survival groups..... | 34 |
| Table 2-4 Discrete-time estimate results of high-tech start-ups exit and internal resources | 35 |
| Table 2-5 Robustness: checking model stability by including the founding effect of resources | 41 |
| Table 2-6 Robustness: checking the effects of outliers by excluding the huge firms (more than 100 employees at the founding year)..... | 43 |
| Table 2-7 Robustness: logit estimation as the alternative method | 45 |
| Table 2-8 Robustness: checking for the unobserved heterogeneity of the discrete time duration model | 47 |
| Table 3-1 Descriptive statistics for firms' product innovation and B–G ties | 65 |
| Table 3-2 Descriptive statistics..... | 69 |
| Table 3-3 The Pearson correlations between the variables and variance inflation factors (VIFs)..... | 69 |
| Table 3-4 Results of multilevel regression analysis | 70 |
| Table 3-5 The results of hypothesis testing | 71 |
| Table 3-6 Robustness check: Including R&D intensity | 75 |
| Table 3-7 Robustness check: Controlling the squared term of B–G ties..... | 75 |
| Table 3-8 Robustness check: Clustered robust standard error model | 76 |
| Table 3-9 Robustness checks: Using group means of level-1 factors as the level-2 controls..... | 76 |
| Table 3-10 Robustness checks: Standardize the product innovation relative to the industry average | 77 |
| Table 3-11 Robustness checks: Heckman two-stage selection model..... | 77 |
| Table 3-12 Robustness checks: Propensity score matching method | 78 |
| Table 4-1 Descriptive statistics and correlations | 98 |

| | |
|---|-----|
| Table 4-2 The Tobit regression results | 99 |
| Table 4-3 Tobit regressions: Considering the influence of time and location | 103 |
| Table 4-4 Regressions with alternative measures of speed and synchronization | 105 |
| Table 5-1 Descriptive statistics and correlations | 125 |
| Table 5-2 Regression results (DV=Exploratory innovation)..... | 127 |
| Table 5-3 Regression results (DV=Exploitative innovation) | 128 |
| Table 5-4 The results of hypotheses testing | 132 |
| Table 6-1 Overview of the research questions and main findings of each topic | 136 |

List of Figures

| | |
|--|-----|
| Figure 2-1 The survival chance of firms with and without combining internal resources | 38 |
| Figure 2-2 Average marginal effects of scientifically skilled employees on high-tech start-ups' survival risk at lower and higher level of R&D resources | 39 |
| Figure 2-3 Average marginal effects of scientifically skilled employees on start-ups' survival risk at levels of with or without internal financial resources.... | 40 |
| Figure 3-1 Hypotheses' position. B–G: Business–government, H: Hypothesis .. | 64 |
| Figure 3-2 The contingent effects of legal institutions | 72 |
| Figure 3-3 The contingent effects of financial systems | 73 |
| Figure 3-4 The contingent effects of infrastructural supporting systems..... | 73 |
| Figure 3-5 The effects of B–G ties on firms' product innovation depend on institution components | 74 |
| Figure 4-1 The interaction effect of GA and speed on firms' product innovation | 100 |
| Figure 4-2 The interaction effect of GA and synchronization on firms' product innovation | 101 |
| Figure 5-1 The conceptual framework..... | 120 |
| Figure 5-2 Distribution of firm exploratory and exploitative innovation | 124 |
| Figure 5-3 Contingent value of PND on 'scope—exploratory innovation' links | 130 |
| Figure 5-4 Contingent value of PND on 'speed—exploratory innovation' links | 130 |
| Figure 5-5 Inverted U-shaped relationship between speed and exploitative innovation | 131 |
| Figure 5-6 Contingent value of PND on 'scope—exploitative innovation' links | 131 |