

# Study of Dynamic Capabilities, Start-Up Growth And Ecosystem in Indonesia

Alva Erwin<sup>1</sup>, Bahtiar Saleh Abbas<sup>2</sup>, Engkos Achmad Kuncoro<sup>3</sup>, Ngatindriatun<sup>4</sup>

<sup>1</sup>Bina Nusantara University, Doctor of Research in Management, Jl. K.H. Syahdan No. 9 Palmerah, Jakarta Barat 11480, Indonesia.

<sup>2</sup>Bina Nusantara University, Industrial Engineering Department, Jl. K.H. Syahdan No. 9 Palmerah, Jakarta Barat 11480, Indonesia.

<sup>3</sup>Bina Nusantara University, Management Department, Binus Business School, Jl. K.H. Syahdan No. 9 Palmerah, Jakarta Barat 11480, Indonesia

<sup>4</sup>Bina Nusantara University, Binus Online Learning, Jl. K.H. Syahdan No. 9 Palmerah, Jakarta Barat 11480, Indonesia  
Email: <sup>1</sup>alva\_erwin@yahoo.com, <sup>2</sup>bahtiars@binus.edu, <sup>3</sup>eak@binus.edu, <sup>4</sup>ngatindriatun@binus.ac.id

## ABSTRACT

This paper studies the influence of Dynamic Capabilities on Start-up Growth moderated by Ecosystem of Technology-based Start-up in Indonesia. The research have following objectives (1) To study the variable Dynamic Capabilities influencing Start-up growth and (2) To study Start-up Ecosystem as Moderating Variable. A company need to have ability to learn from the environment, integrate the knowledge gathered, perform reconfiguration and make changes. This capabilities, known as Dynamic Capabilities has been proven to be important capabilities in established company to sustain in harsh business environment. This research focus to inspect the Dynamic Capabilities in Technology-based Start-up Company in Indonesia. Quantitative methods are implemented for the study. Quantitative data are gathered using a questionnaire measuring these variables. The data are analysed using Structural Equation Modeling techniques with SmartPLS Software. The results show that the characteristics of Technology-based Start-up who enjoyed growth influenced by Dynamic Capabilities and moderated by Start-up Ecosystem.

## Keywords

Technology-based Start-up, Dynamic Capabilities, Start-up Ecosystem.

Article Received: 10 August 2020, Revised: 25 October 2020, Accepted: 18 November 2020

## Introduction

The development of Technology-based Start-up is currently trending and occurs almost all over the world, including in Indonesia. (Blank, 2013; C. L. Chen & Jaw, 2009; Hermann, Gauthier, Holtschke, Bermann, & Marmer, 2015; Olsen, Gergele, Chua, & Bartolucci, 2015; Outlook, 2013; Price Waterhouse Coopers, 2013). The Global B2C E-commerce Report 2016 conducted by the E-Commerce Foundation (Van Welie, Abraham, Willemsen, & Nagelvoort, 2015) shows the potential and growth of the Technology-based Start-up, E-Commerce and Digital Platform in Indonesia. Information Technology companies that build web-based platforms and smart-phones like AirBnB and Uber Taxi (Balck & Cracau, 2015; Byers, Proserpio, & Zervas, 2013; L. Chen, Mislove, & Wilson, 2015; Hall & Krueger, 2014), are entities built from the small company once and rapidly shows remarkable growth in a relatively short time.

The term Unicorn is awarded to Technology-based Start-up, which has grown to a value of more than USD 1 billion (Wiles & Technologies, 2015). Those Unicorn companies began with the innovative ideas of their founders to solve the problems experienced by many people at the time with relatively small initial resources. Even with the recent Technology-based Unicorns presence in Indonesia, there are still a lot of opportunities to develop the Start-up Industry in Indonesia.

During the beginning phase of establishing a start-up company, personal capitals are put in by the founder, along

with some coming from close friends and family, and angel investors (Festel & Kratzer, 2012; Gent, 2009; Politis, 2008). As soon as the potential for growth develops rapidly, the company gets a relatively large fund injection from venture capitalists who have a foresight of value enhancement and have the courage to fund the business, although the risk of failure is still relatively large. (X. Chen, Zou, & Wang, 2009; Davila, Foster, & Gupta, 2003; Kaplan & Lerner, 2009; Li & Miller, 2002).

The process of discovery of ideas, incubation, early-stage funding, to achieve fantastic growth, is a background phenomenon of this research. After reaching a certain phase of development, many of these Technology-based Start-ups, transformed into a company that has the ability to change the existing order, with its innovation often called Disruptive Innovation. (Christensen, Davidian, Kaiser, & Foust, 2011; Price Waterhouse Coopers, 2013; Turner, 2014).

Dynamic Capabilities is considered to be an essential aspect for the improvement of Start-up Based Technology. It is known to be the capabilities of companies in integration, learning process, reconfiguration, and improvements (Eisenhardt & Martin, 2000; Teece, 2014; Teece, Pisano, & Shuen, 1997; Winter, 2003).

Furthermore, we would like also to emphasize the important of Start-up Ecosystem in this study. This ecosystem is made up of a structure with the purpose of creating or further developing a start-up company. The structure includes a group of individuals, a set of start-up companies at different

phase of development, and different forms of on-site (physical or virtual) organizations (Auerswald, 2015; Bell-masterson, 2015; Simatupang, Schwab, & Schwab, 2015).

Growth is a very important factor for a Start-up Company (Davidsson, Achtenhagen, & Naldi, 2005; Gibcus, 2006; Sedláček & Sterk, 2014; Stam, Gibcus, & Garnsey, 2007; Zhou & Wit, 2009). How a Start-up can grow and eventually become an established company is a basic question of this research. (Li & Miller, 2002; Schnabel, 2008; Schwab & Columbia, 2014).

This analysis will explore the role of Dynamic Capabilities towards the growth within Technology-based Start-up moderated by the Start-up Ecosystem.

### Objectives of The Study

Specifically, the developed objectives for the study is as follow:

1. To investigate the Dynamic Capabilities affect the growth of a Technology-based Start-up Company
2. To investigate the Start-up Company Ecosystem influence as a variable affecting the relationship between Dynamic Capabilities and growth of a Technology-based Start-up Company?

## Literature Review

### Technology-based Start-up

The definition that can describe a Start-up Company is practically given by Steve Blank (Blank, 2013)

“A Startup is a temporary organization in search of a scalable, repeatable, profitable business model”.

Technology-based Start-up is a special form of Start-up where technological aspects are deeply rooted in the Start-up Company.

According to (Price Waterhouse Coopers, 2013) a Technology-based Start-up Company has the following characteristics: 1) Technology is a central thing of a given product or service. 2) There is a high leverage of inputs of human and capital resources versus the output of a product or service so that scalability can occur at high speed. 3) The created products and services result in a revolution that promote the development of a new business market or supply chain network that will modify the current market.

### Dynamic Capabilities

Dynamic Capabilities show the adeptness of a company in integrating and managing capitals (both internal and external), obtaining and internalizing new insights from other companies, along with altering and reconfiguring the capitals' base.

Research on Dynamic Capabilities in new companies to spur growth has been studied by scholars in this field (Ng, 2013; Protogerou, Caloghirou, & Lioukas, 2012; Shi, Xu, & Green, 2014; Stam et al., 2007; Telussa, Stam, & Gibcus, 2006; Wu, 2007).

### Startup-Ecosystem

The Concept of Start-up Ecosystems has been getting a lot of attention over the past decade. (Auerswald, 2015; Crossroads, 2015; Keng, Ng, & Entrepreneurship, 2015; Simatupang, Schwab, & Schwab, 2015; Van Weele, Steinvz, & Van Rijnsoever, 2014).

Stam (2014) mentions how the literature focusing in entrepreneurial ecosystem main objective is to facilitate or constrain the entrepreneurship, and its interdependency between involved parties within the societal context or the system. To achieve success within the ecosystem, constant contribution from the involved parties is essential. In regards to this, global surveys were made which emphasized the continuous interest in entrepreneurship causes leaders (private and public) to actively establish entrepreneurial pursuits as to accelerate the economic growth within their regional frameworks (Markham, Barker, Dalen, Kruger, & Cacioppe, 2015; Van Weele et al., 2014)

The course of movement of capitals are done through individuals and organizations within the Start-up Ecosystem. This movement is crucial as it has the ability in creating a new start-up company or improving an already existing start-up company. Therefore, affecting both the value and the number of the company as a whole.

### Start-up Growth

This research studies the growth that occurs in a Technology-based Start-up from the stage of ideas, incubation, development, up to reach a large scale and can change or significantly affect the existing business order. A company operating on a small scale will be difficult to increase profits and have a big impact on the market without growing. In this sense, growth appears to be an important output of Start-up Company behaviour (Barringer, Jones, & Neubaum, 2005; Davidsson et al., 2005; Garnsey, Stam, Heffernan, & Hugo, 2003).

Some research in the field of entrepreneurship have also shown how an effective effort is a more influential factor in growth, as compared to the performance. (Balboni, Bortoluzzi, & Tivan, 2014; Davidsson et al., 2005; Low & MacMillan, 1988; Telussa et al., 2006).

## Research Methodology

This section will describe the Research Methodology carried out consisting of three main aspects, 1) Variable Operationalization 2) Data Acquisition and 3) Data Analysis Procedure. The description focuses on resources obtained from the variables in the Variable Operationalization stage. Data Acquisition, will explain data collection methods as well as population and samples.

The Data Analysis which consists of data screening, and the testing through the measurement and structural model will be explained. The process of data screening displays the procedures that will be applied for managing missing data, along with normality and outlier testing. The Cronbach's Alpha, Composite Reliability, and Average Variance Extraction (AVE) will be used for ensuring the validity.

## Variables Explanation

In this section will be explained about the dimension of each variables in details.

### Dynamic Capabilities

Dynamic Capabilities (DC) show the adeptness of a company in integrating, creating and reconfiguring capabilities (both internal and external) in order to face the everchanging setting. In this research, the following dimensions will be used. 1) Sensing Capabilities is the organization's skill in recognizing beneficial possibilities. 2) Learning Capabilities refers to the ability to improve operating capabilities with newly acquired knowledge and 3) Integrating Capability is the capacity in combining new expertise into the operation to reach a common perception within the whole organization.

### Start-up Ecosystem

There are several models of the Start-up Ecosystem. One of the most popular models is the Entrepreneurial Ecosystem model proposed by Daniel Isenberg of Babson College. Isenberg proposed this model in the 'Entrepreneurship Ecosystem Strategy for Economic Development (Isenberg, 2011).

The dimensions of the Start-up Ecosystem used in this research are;

1) Policy. Government is an important component of a Start-up Ecosystem due to the essential position that it holds. The Government assists in the acceleration or obstruction of the development of the start-up company. Many aspects of the various government instruments will affect Start-up and early-stage companies. Government policies include the following aspects: i) The ease of launching a business, ii) Tax incentives, iii) Business support regulations, iv) Access to fundamental infrastructure and Broadband Internet, v) Access to transportation and other public infrastructure. (Claude-gaudillat, 2006; Collins, Swart, & Zhang, 2013; Etzkowitz, 2012; Jiao, Alon, & Cui, 2011; Keng et al., 2015; Kuah, 2002; Markham et al., 2015)

2) Financing is the finance sector's position in assisting the required funds for a start-up. Many Start-up Company require funding, either to develop proof-of-concept or to grow quickly. (Davila et al., 2003; Heughebaert & Manigart, 2012; Sampsa Samila & Olav Sorenson, 2009).. Funding for Start-up companies can be obtained from various sources; i) Founder's capital ii) Family and close friends iii) Angel Investors, iv) Venture Capital, v) Co-funding, vi) Banks and other financial institutions, vii) Capital Markets, viii) Large corporations. (Aramburu, Saenz, & Blanco, 2015; Cumming & Dai, 2010; Festel, Wuermseher, & Cattaneo, 2013; Gent, 2009; Heughebaert & Manigart, 2012; Kaplan & Lerner, 2009; Roach, 2010)

3) Culture – This encompasses the culture or culture that lives in the environment where the Start-up Company operates. Activities within the economy may be influenced by culture such as; behaviours towards employment and consumption; the formation and efficiency of institutes; and networking and gaining confidence in societal groups. Culture can influence economic activity in different ways:

attitudes towards work and consumption are considered to be influenced by culture. The organization of economic activities and the establishment and effectiveness of institutions are influenced by culture, and cultures also have an impact on social networks and build trust in social groups.

Cultural Aspects include i) Tolerance to risk and failure, ii) The desire to entrepreneurship, iii) Success stories, iv) Research culture, v) A good image of Entrepreneurship. (C. L. Chen & Jaw, 2009; ILO & Unesco, 2006; Kotzeva & Schmiemann, 2012; Netherlands, 2008; Studholme, 2014; Suddle, Beugelsdijk, & Wennekers, 2010)

4) Support (Supports - SU) is the resources that support the creation of a Start-up Company in Ecosystems.

5) Human Capital - Human Resources which is the main factor and driver of an Ecosystem. Entrepreneur, Skilled labour and other individual stakeholders must be well managed. In dynamically competitive markets where strategic knowledge is critical.

Attracting experienced managers and engineers from a large organization and well-secured position into a new starting organization is not an easy task, considering how fragile and highly uncertain the environment is. To truly attract, motivate, develop, and retain highly skilled managers and workers, an entrepreneurial enterprise must plan its human resources, and evaluate and reward individual performance.

The main components of this pillar are: i) Human Resources who master the business and management aspects - ii) Human Resources who master the technical aspects, iii) Experience of entrepreneurial company and iv) Availability of access to immigrant labour. This component recognizes the heterogeneity of human capital resources that can affect the speed and size of the company's growth. (Bakkali, Messeghem, & Sammut, 2014; Bulsara & Gandhi, n.d.; Sluis, 2007; Wright, McMahan, & McWilliams, 1993)

6) Markets - Markets where products or services produced by Start-ups may be sold. Accessible markets are divided into domestic and global market categories. This aspect is an important key pillar for many Start-ups' development.

Most technology-based start-ups focus on their domestic markets and are not looking for or at least delaying looking for revenue in overseas markets. However, in some cases born-global Start-up targeting overseas markets from scratch are things that are starting to become trendy. (Altshuler, 2012; Roudini, Hassan, & Osman, 2012; Schnabel, 2008; World Economic Forum, 2013)

### Start-up Growth

Entrepreneurship holds an essential position for creating new businesses. In order for developments and expansion to take place, strategic planning and activities are required. The resource base of the start-up is vital to be developed and tailored by entrepreneurs.

Start-up companies are frequently faced with capital challenges (Davidsson et al., 2005; Garnsey et al., 2003) and if not adequately handled, low efficiency will be the result. Research made on entrepreneurship determine that businesses are considered to be successful based on their development rather than their efficiency (Low & MacMillan, 1988). A community of scholars focused on the ideas on growth is asking the predecessor and the

repercussions it have towards the organisation. This section will provide a short summary on the elements of growth through strategic management and entrepreneurship literature. Philipsen and Kemp (2003) showed the previously mentioned elements through theoretical and empirical analyses. There are multiple resource categories that affect the development of start-ups, such as human capitals, entrepreneurial social resources, financial capitals and corporate structure (X. Chen et al., 2009; Weinzimmer, Nystrom, & Freeman, 1998).

A theory explaining the phases of start-up companies' development was established through multiple literatures. The majority uses the model that focuses on the human development life-cycle, whereby there are multiple phases

then when it reaches the mature state, it declines. (Audretsch, 2012; Strehle, 2006; Zhou & Wit, 2009).

The dimensions used in the Start-up Growth variable in this study are; 1) Number of users of the system. 2) Transaction (TR) Total number of transactions managed by the system. 3) Employee (EP) Employees working for the Company. 4) The Performance and Valuation (VL) Book Value of the Star-up Company usually known in the investment done by the investor. (Balboni et al., 2014; Sedláček & Sterk, 2014; Shi et al., 2014)

After the Variable Operationalization step is complete, it can be better described, how the research model will be able to works. Figure 1 shows the Research Model that has the dimensions of each variable shown.

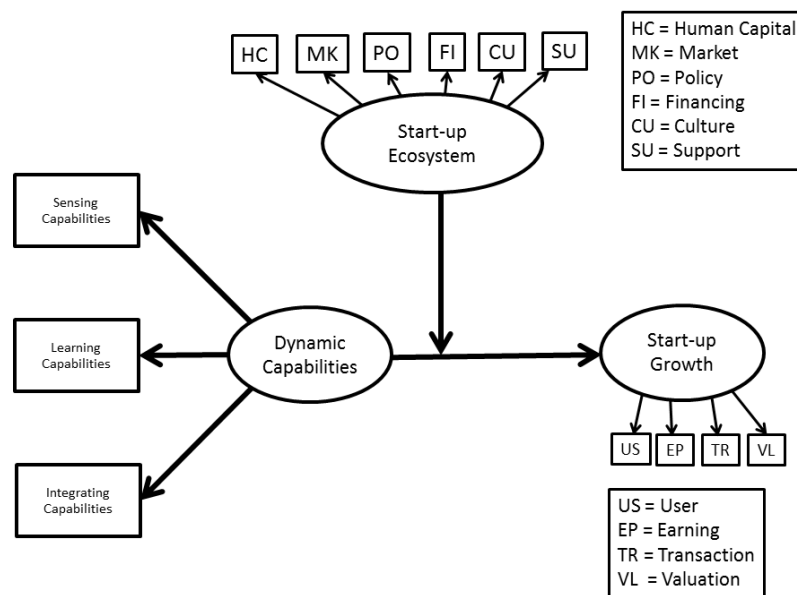


Figure 1. Research Model

The research Hypothesis based on this research model were:  
H1: Dynamic Capabilities affects significantly toward Start-up Growth

H2: Start-up Ecosystem moderate relationship between Dynamic Capabilities and Start-up Growth.

### Data Acquisition

Population refers to the overall entity units that will be studied in this research. The population to be researched is a Technology-based Start-up that has been at least one year old and has experienced growth from the time of establishment to the data collection. The company has also obtained funding from investors outside Angel Investor. All Start-up Companies analysed must have the legal entity in the jurisdiction of the Republic of Indonesia. The total population is taken from the 1) Technasia Website (<http://technasia.com>) is a blog that discusses the dynamics of Technology-based Start-up in Asia. The website also has databases of Technology-based Start-up and its funding phase, which provides data from Technology-based Start-up in Indonesia and other countries in Asia. 2) Database of Kementerian Riset dan Pendidikan Tinggi, (Ministry of

Research and Higher Education). And 3) Indonesian Technology Start-up community.

The data were collected by using questionnaires and observation. Questionnaires are distributed to Technology-based Start-up that is experiencing high growth through printed and in digital forms.

### Data Analysis

In measuring validity, Table 1 determined the value of Cronbach's Alpha, Average Variance Extracted (AVE) and Composite Reliability. The results suggested that they were valid for measuring their constructs. In measuring reliability, the software calculated an Average Variance Extracted (AVE) and Composite Reliability greater than 0.7 and Cronbach's Alpha greater than 0.5. Further analysis done with Structural Equation Model using SmartPLS software.

## Results And Discussions

This section analyses the results of research by using a predetermined approach. Discussing the results of hypothesis testing. It will also reveal results findings that refer to the objectives of the study with the associated theories and existing literature.

This confirmed that all variables met the reliability requirements. Once the measurement model met the



elements of validity and reliability, the model was executed using bootstrapping.

**Table 1.**Results of validity and reliability

Scales	Average Variance Extracted	Cronbach's Alpha	Composite Reliability
Dynamic Capabilities	0.811	0.814	0.888
Start-up Ecosystem	0.743	0.758	0.554
Start-up Growth	0.802	0.814	0.627

Table 2 showed the answer to the first question regarding the correlation between Dynamic Capabilities and Start-up Growth. It is shown that Dynamic Capabilities has significant and strong influence on Start-up growth.

Result in Table 2 also suggests that that even though not too strong, Start-up Ecosystem has a positively moderate relationship between Dynamic Capabilities and Start-up Growth in Indonesia.

**Table 2.**Results of measurement model

Scales	T-Statistics	P-Values
Dynamic Capabilities → Start-up Growth	5.725	0.000012
Start-up Ecosystem → Start-up Growth	3.827	0.000133
Moderating Effect1 → Start-up Growth	1.978	0.047978

### Implication of Research

There are two types of implication that arise from this research. The theoretical ramifications would lead to the theory advancement of Dynamic Capabilities for Technology-based Start-ups. The Practical implication will be useful as a reference in the dynamic of Technology-based Start-up. These implications can be summarized as follows:

### Theoretical Implications

: Learn the growth-related factors of a Technology-based Start-up Company and contribute the results of this research to the development of the concept and theories of Start-up Ecosystems and Dynamic Capabilities in Technology-based Start-up context, in emerging economy.

### Practical Implications:

This research is hoped to allow further knowledge development on the ecosystem and stakeholders of Indonesian start-up companies. In addition, to expand technology-based start-ups for further improvement in their efficiency, and to act as a value development catalyst. Specifically, the results of this study can be utilized by the founding entrepreneurs of Technology-based Start-up to be able to focus on the steps to be taken. Practical benefits could also be focused on as to gain a clearer perspective on the Technology-based Start-ups valuation, as well as a guide for all members involved in the development and enhancement of the value of a Technology-based Start-up. In order to obtain a clearer picture of the valuation of a technology-based start-up, as well as a reference for all participants interested in the creation and enhancement of the value of a technology-based start-up, realistic advantages for Venture Capital and Angel Investors

Initiating the Start-up Ecosystem Moderating study that focuses on relationship's impact on Dynamic Capabilities and Technology-based Start-up Growth in Indonesia is the key contribution. In addition, the functionality of Dynamic Capabilities within the growth of start-ups was also investigated.

Within this research, the limited sampling from the following sources is the limitation, which are Techinasia databases, Kemenristekdikti databases and Indostartup community. However, there are still Start-up not listed in those databases. Future research is to add more sample and further study to conduct Interview and Focus Group Discussion regarding the interpretation of the statistical results by the founders and top-level managements of the Start-up Companies.

### References

- [1] Altshuler, L. (2012). *Competitive Capabilities of a Technology Born Global. PhD Thesis*. Lund Institute of Economic Research.
- [2] Aramburu, N., Saenz, J., & Blanco, C. E. (2015). Structural capital, innovation capability, and company performance in technology-based colombian firms. *Cuadernos de Gestion*, 15(1), 39–60. <https://doi.org/10.5295/cdg.130427na>
- [3] Audretsch, D. B. (2012). Determinants of High-Growth Entrepreneurship. In *Workshop on High-growth firms: local policies and local determinants* (pp. 1–37).
- [4] Auerswald, P. (2015). *Enabling Entrepreneurial Ecosystems*. Kauffman Foundation.
- [5] Bakkali, C., Messeghem, K., & Sammut,

### Conclusions

- S. (2014). Toward a typology of incubators based on HRM. *Journal of Innovation and Entrepreneurship*, 3(1), 3. <https://doi.org/10.1186/2192-5372-3-3>
- [6] Balboni, B., Bortoluzzi, G., & Tivan, M. (2014). The Growth Drivers of Start-up Firms and Business Modelling: A First Step toward a Desirable Convergence. *Management*, 9(2), 131–154. Retrieved from <http://ideas.repec.org/a/mgt/yournmg/v9y2014i2p131-154.html>
- [7] Balck, B., & Cracau, D. (2015). Empirical analysis of customer motives in the shareconomy: a cross-sectoral comparison. *Working Paper Series. Otto von Guericke University Magdeburg*, (2).
- [8] Barringer, B. R., Jones, F. F., & Neubaum, D. O. (2005). A quantitative content analysis of the characteristics of rapid-growth firms and their founders. *Journal of Business Venturing*, 20(5), 663–687. <https://doi.org/10.1016/j.jbusvent.2004.03.004>
- [9] Bell-masterson, J. (2015). Measuring an Entrepreneurial Ecosystem, (March).
- [10] Blank, S. (2013). Why the Lean Start Up Changes Everything. *Harvard Business Review*, 91(5), 64.
- [11] Bulsara, H. P., & Gandhi, S. (n.d.). Techno-innovation to Techno-entrepreneurship through Technology Business Incubation in India: An Exploratory Study Resources Feasibility Analysis Manufacturing Techno – Entrepreneurship Networks Human Resource Management, 56–67.
- [12] Byers, J., Proserpio, D., & Zervas, G. (2013). The Rise of the Sharing Economy: Estimating the Impact of Airbnb on the Hotel Industry. *SSRN Electronic Journal*, 1–36. <https://doi.org/10.2139/ssrn.2366898>
- [13] Chen, C. L., & Jaw, Y. L. (2009). Building global dynamic capabilities through innovation: A case study of Taiwan's cultural organizations. *Journal of Engineering and Technology Management* - *JET-M*, 26(4), 247–263. <https://doi.org/10.1016/j.jengtecman.2009.10.002>
- [14] Chen, L., Mislove, A., & Wilson, C. (2015). Peeking Beneath the Hood of Uber. *Proceedings of the 2015 ACM Conference on Internet Measurement Conference*, 495–508. <https://doi.org/10.1145/2815675.2815681>
- [15] Chen, X., Zou, H., & Wang, D. T. (2009). How do new ventures grow? Firm capabilities, growth strategies and performance. *International Journal of Research in Marketing*, 26(4), 294–303. <https://doi.org/10.1016/j.ijresmar.2009.08.004>
- [16] Christensen, I. A., Davidian, K., Kaiser, D., & Foust, J. (2011). Applying Disruptive Innovation Theory in Emerging Markets for Crew On-Orbit Transportation, 1–12. <https://doi.org/10.2514/6.2011-7287>
- [17] Claude-gaudillat, V. (2006). Innovation , New Market and Governance Choices of Entry: The Internet Brokerage Market Case. *Journal Industry and Innovation*, 13(2), 173–187. <https://doi.org/10.1080/13662710600684324>
- [18] Collins, L., Swart, R., & Zhang, B. (2013). THE RISE OF FUTURE The UK Alternative Report, (December), 15.
- [19] *Crossroads 2015: An action plan to develop a vibrant tech startup ecosystem in Australia*. (2015).
- [20] Cumming, D. J., & Dai, N. (2010). *Fund Size, Limited Attention and Valuation of Venture Capital Backed Firms*. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1099465>
- [21] Davidsson, P., Achtenhagen, L., & Naldi, L. (2005). Research on small firm growth: A review. *European Institute of Small Business*, 1–27. [https://doi.org/10.1007/978-0-387-32313-8\\_13](https://doi.org/10.1007/978-0-387-32313-8_13)
- [22] Davila, A., Foster, G., & Gupta, M. (2003). Venture capital financing and the

- growth of startup firms. *Journal of Business Venturing*, 18(6), 689–708. [https://doi.org/10.1016/S0883-9026\(02\)00127-1](https://doi.org/10.1016/S0883-9026(02)00127-1)
- [23] Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic Capabilities: What Are They? *Strategic Management Journal*, 21, 1105–1121.
- [24] Etzkowitz, H. (2012). Silicon Valley: The Sustainability of an Innovative Region. *Social Science Information*, 52(3), 1–25. Retrieved from <http://www.triplehelixassociation.org/wp-content/uploads/2012/07/Silicon-Valley-The-Sustainability-of-an-Innovative-Region.pdf>
- [25] Festel, G., & Kratzer, J. (2012). (finns)The founding angels investment model - case studies from the field of nanotechnology. *Journal of Business Chemistry*, 9(1), 19–30. Retrieved from <http://ludwig.lub.lu.se/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=73802817&site=eds-live&scope=site>
- [26] Festel, G., Wuermseher, M., & Cattaneo, G. (2013). Valuation of early stage companies. *International Journal of Business*, 18(3), 216–231.
- [27] Garnsey, E., Stam, E., Heffernan, P., & Hugo, O. (2003). New Firm Growth: Exploring Processes and Paths. <https://doi.org/10.1080/13662710500513367>
- [28] Gent, B.-. (2009). Working Paper First - Round Valuation of Angel - Backed Companies: the Role of Investor Human Capital 1, 1–28.
- [29] Gibcus, P. (2006). *Determinants of Growth of Start-ups in the Netherlands*. <https://doi.org/papers://BA75DBD3-74D3-4A2D-AAAC-910414082C6C/Paper/p11623>
- [30] Hall, J., & Krueger, A. (2014). An Analysis of the Labor Market for Uber's Driver-Partners in the United States Authors An Analysis of the Labor Market for Uber's Driver-Partners in the United States, (November 2011).
- [31] Hermann, B. L., Gauthier, J., Holtschke, D., Bermann, R. D., & Marmer, M. (2015). The Global Startup Ecosystem Ranking 2015. *Startup Genome*, (August), 1–156.
- [32] Heughebaert, A., & Manigart, S. (2012). Firm Valuation in Venture Capital Financing Rounds: The Role of Investor Bargaining Power. *Journal of Business Finance and Accounting*, 39(3–4), 500–530. <https://doi.org/10.1111/j.1468-5957.2012.02284.x>
- [33] ILO, & Unesco. (2006). *Towards an Entrepreneurial Culture For The Twenty-First Century*.
- [34] Isemberg, D. (2011). *The Entrepreneurship Ecosystem Strategy as a New Paradigm for Economic Policy*.
- [35] Jiao, H., Alon, I., & Cui, Y. (2011). Environmental dynamism, innovation, and dynamic capabilities: the case of China. *Journal of Enterprising Communities: People and Places in the Global Economy*, 5(2), 131–144. <https://doi.org/10.1108/17506201111131550>
- [36] Kaplan, S. N., & Lerner, J. (2009). It Ain't Broke: The Past, Present, and Future of Venture Capital by, (December).
- [37] Keng, R., Ng, W., & Entrepreneurship, K. (2015). An Empirical Analysis of the Singapore Entrepreneurship Ecosystem: A Case Study For BRIC Economies to Ponder. In *Entrepreneurial Ecosystem: Perspectives from Emerging Economies* (pp. 57–89). <https://doi.org/10.1007/978-81-322-2086-2>
- [38] Kotzeva, M., & Schmiemann, M. (2012). *Entrepreneurship determinants: culture and capabilities*.
- [39] Kuah, A. T. H. (2002). Cluster Theory and Practice: Advantages for the Small Business Locating in a Vibrant Cluster. *Journal of Research in Marketing and Entrepreneurship*, 4(3), 206–228. <https://doi.org/10.1108/14715200280001472>

- [40] Li, H., & Miller, T. (2002). New Ventures in Emerging Markets: Comprehensive Review and Future Directions. *Growth of New Technology Ventures in China's Emerging Market*, 11–24.
- [41] Low, M. B., & MacMillan, I. C. (1988). Entrepreneurship: Past Research and Future Challenges. *Journal of Management*, 14(2).
- [42] Markham, N., Barker, T., Dalen, J. van, Kruger, M., & Cacioppe, J. (2015). *Western Australia 2015 Startup Ecosystem Preliminary Report. Government Western Australia*. Retrieved from [http://www.startupwa.org/docs/Western\\_Australia\\_Startup\\_Report\\_Dec\\_2015.pdf](http://www.startupwa.org/docs/Western_Australia_Startup_Report_Dec_2015.pdf)
- [43] Netherlands, T. (2008). Entrepreneurial Culture and Economic Growth. *Journal of Economics*, 67(5). <https://doi.org/10.1007/s00191-006-0048-y>
- [44] Ng, P. Y. (2013). *Characterising High-Growth Firms: Perspectives From The Asia-Pacific Region*. University of Canterbury.
- [45] Olsen, G., Gergele, O., Chua, S. G., & Bartolucci, F. (2015). *Lifting the Barriers to E-Commerce in ASEAN*. Retrieved from <http://tinyurl.com/nf7uhw2>
- [46] Outlook, S. (2013). *Startup Outlook 2013 Report*.
- [47] Politis, D. (2008). Business angels and value added: what do we know and where do we go? *Venture Capital*, 10(2), 127–147. <https://doi.org/10.1080/13691060801946147>
- [48] Price Waterhouse Coopers. (2013). *The Startup Economy: How to support tech startups and accelerate Australian innovation*.
- [49] Protogerou, A., Caloghirou, Y., & Lioukas, S. (2012). Dynamic capabilities and their indirect impact on firm performance. *Industrial and Corporate Change*, 21(3), 615–647. <https://doi.org/10.1093/icc/dtr049>
- [50] Roach, G. (2010). Is angel investing worth the effort? A study of Keiretsu Forum. *Venture Capital*, 12(2), 153–166. <https://doi.org/10.1080/13691061003643276>
- [51] Roudini, A., Hassan, M., & Osman, M. (2012). The Role of International Entrepreneurship Capability on International Performance in Born Global Firms. *iBusiness*, 4(June), 126–135.
- [52] Sampsa Samila, & Olav Sorenson. (2009). Venture capital, entrepreneurship and economic growth, 93(February), 338–349. Retrieved from <http://martinprosperity.org/media/agrawal/3SorensonSamila.pdf>
- [53] Schnabel, J. A. (2008). Entrepreneurial Start-ups: Emerging Markets Versus Developed Economies. *Strategy*, 5(5).
- [54] Schwab, K., & Columbia, X. S.-M. (2014). *The Global Competitiveness Report. World Economic Forum Reports 2014*. <https://doi.org/ISBN-13:978-92-95044-73-9>
- [55] Sedláček, P., & Sterk, V. (2014). The Growth Potential of Startups over the Business Cycle. *Working Paper*, 1–40. Retrieved from [http://www.psedlacek.com/Documents/Working/startups\\_20140106.pdf](http://www.psedlacek.com/Documents/Working/startups_20140106.pdf)
- [56] Shi, Y., Xu, D., & Green, P. (2014). Software Startup Growth: the Role of Dynamic Capabilities, It Innovation and Customer Involvement. *PACIS 2014 Proceedings*, 1–10. Retrieved from <http://www.pacis-net.org/file/2014/2026.pdf>
- [57] Simatupang, T. M., Schwab, A., & Schwab, A. (2015). Building Sustainable Entrepreneurship Ecosystems.
- [58] Sluis, van der J. (2007). Successful entrepreneurship and human capital. Retrieved from <http://www.narcis.nl/publication/RecordID/oai:uva.nl:220252>
- [59] Stam, E. (2014). *The Dutch Entrepreneurial Ecosystem*.



- [60] Stam, E., Gibcus, P., & Garnsey, E. (2007). Dynamic capabilities and the growth of new firms. *Draft*, (December). Retrieved from [http://cep.lse.ac.uk/conference\\_papers/07\\_12\\_2007/stam.pdf](http://cep.lse.ac.uk/conference_papers/07_12_2007/stam.pdf)
- [61] Strehle, F. (2006). Dynamic capabilities and the growth of technology-based new ventures. *Thesis*. Retrieved from <https://openaccess.leidenuniv.nl/handle/1887/5426>
- [62] Studholme, N. E. (2014). Silicon Valley Startup Companies: A Question of Culture.
- [63] Suddle, K., Beugelsdijk, S., & Wennekers, S. (2010). Entrepreneurial culture and its effect on the rate of nascent entrepreneurship. *Entrepreneurship and Culture*, (December), 227–244. [https://doi.org/10.1007/978-3-540-87910-7\\_11](https://doi.org/10.1007/978-3-540-87910-7_11)
- [64] Teece, D. J. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, 45(1), 8–37. <https://doi.org/10.1057/jibs.2013.54>
- [65] Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509–533.
- [66] Telussa, J., Stam, E., & Gibcus, P. (2006). Entrepreneurship, Dynamic Capabilities and New Firm Growth. *Scales Research Reports*, 1–28. Retrieved from <http://ideas.repec.org/p/eim/papers/h200623.html>
- [67] Turner, A. (2014). Crossroad: An action plan to develop a vibrant tech startup ecosystem in Australia, (April), 67. Retrieved from [www.startupaus.org!](http://www.startupaus.org!)
- [68] Van Weele, M. A., Steinz, H. J., & Van Rijnsoever, F. J. (2014). Start-ups down under: How start-up communities facilitate Australian entrepreneurship. *Druid Conference 2014*, 1–24.
- [69] Van Welie, R., Abraham, J., Willemsen, R., & Nagelvoort, B. (2015). *Global B2C E-commerce Report 2016*. [https://doi.org/https://www.ecommercewiki.org/wikis/www.ecommercewiki.org/images/5/56/Global\\_B2C\\_Ecommerce\\_Report\\_2016.pdf](https://doi.org/https://www.ecommercewiki.org/wikis/www.ecommercewiki.org/images/5/56/Global_B2C_Ecommerce_Report_2016.pdf)
- [70] Weinzimmer, L. G., Nystrom, P. C., & Freeman, S. J. (1998). Measuring Organizational Growth: Issues, Consequences and Guidelines. *Journal of Management*, 24(2), 235–262. <https://doi.org/10.1177/014920639802400205>
- [71] Wiles, K. W., & Technologies, U. (2015). In Search of Unicorns: Private IPOs and the Changing Markets for Private Equity Investments and Corporate Control, 27(3), 34–48.
- [72] Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10 SPEC ISS.), 991–995. <https://doi.org/10.1002/smj.318>
- [73] World Economic Forum. (2013). Entrepreneurial Ecosystems Around the Globe and Company Growth Dynamics. *Report Summary for the Annual Meeting of the New Champions 2013*, (September), 36. Retrieved from [http://www3.weforum.org/docs/WEF\\_EntrepreneurialEcosystems\\_Report\\_2013.pdf](http://www3.weforum.org/docs/WEF_EntrepreneurialEcosystems_Report_2013.pdf)
- [74] Wright, P. M., McMahan, G. C., & McWilliams, A. (1993). *Human Resources and Sustained Competitive Advantage: A Resource-Based Perspective*. <https://doi.org/10.1080/09585199400000020>
- [75] Wu, L.-Y. (2007). Entrepreneurial resources, dynamic capabilities and start-up performance of Taiwan's high-tech firms. *Journal of Business Research*, 60(5), 549–555. <https://doi.org/10.1016/j.jbusres.2007.01.007>
- [76] Zhou, H., & Wit, G. De. (2009). Determinants and dimensions of firm growth. *EIM, Zoetermeer*, (February). Retrieved from <http://www.entrepreneurship-sme.eu/pdf-ez/H200903.pdf>