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THE INNOVATION ECOSYSTEM IN JAPAN

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INTRODUCTION

Ever since the inception of the Internet, our transition to a globalized society has kicked into a higher gear. The ability to transmit large amounts of digital data to virtually any location on Earth in real time has opened up previously unimaginable opportunities for individuals and businesses alike. The business world has grown closer and closer together, even if its political counterpart seems to have lagged behind, if not taken a different path altogether. This is becoming increasingly true at an exponential rate in the 21st century – in the developed world, it has now become rare for an individual not to have a presence on online social media. According to Statista.com, the global leader in the social media industry, Facebook, had an astounding 1.59 billion active users in April 2016. A giant in mobile games, Finnish-founded and until very recently Japanese-owned (Osawa & Needleman, 2016) Supercell boasted 100 million monthly active users in March 2016, with revenues surpassing €2 billion out of an estimated total market revenue of €30 billion worldwide in 2015 (Needleman, 2016). Electric automobile producer Tesla Motors received a staggering 325,000 reservations for its upcoming new Model 3 in the first week alone, arguably making it the biggest product launch week in terms of implied sales of any product. All of these companies were founded after the year 2003¹. It is unfathomable to imagine such fast growth in the past. All of these companies, though they have now grown into large multinational companies, were actually founded as startups.

This thesis will examine the status quo of the startup world, innovation systems and venture capital in Japan. Historically, Japan has always been special, and that seems to be the case even today. Whereas many European countries are plagued by high unemployment, driving people to entrepreneurship, Japan is experiencing a labour force shortage (Martin, 2015). Moreover, what is known about Japanese companies is that they constantly invested in in-house R&D for continuous innovation and new products, thus keeping one step ahead of the competition. This does not seem to be the case anymore – many Japanese companies are having trouble competing with Korean and Chinese corporations (Wakabayashi, 2012; Cheng, 2012). So what drives entrepreneurial innovation in Japan today, what form does it take, in which fields? What is the role of venture capital, if any? These are some of the questions explored by this thesis.

Additionally, this thesis will attempt to explain the insights gained by industry data using the known characteristics and features of Japanese business culture. Many scholars from various fields of business sciences have stipulated that traditional Japanese values and character have influenced the development of its organisational behaviour and stakeholder relations (Wolf, 2013; Nishiyama, 2000; Haghirian, 2009). How are the concepts of risk aversion and group-oriented behaviour reflected in the image of contemporary entrepreneurship? What kind of problems have been spawned by this? Moreover, to turn the

¹ Facebook, Supercell and Tesla Motors were founded in 2004, 2010 and 2003 respectively (Facebook, n.d.; Supercell, n.d.; Tesla Motors, n.d.;).

tables - are there any practices specific to the entrepreneurial culture of Japan that may be worth looking into by the Western business culture?

Finally, the thesis will conclude with a critical reflection on the status quo, implications as to the future and potential for exchange and improvement.

Methodology. The research for this thesis was based on a combination of primary and secondary sources. Books and academic articles written on topics ranging from startups and venture capital to Japanese business, entrepreneurial culture, and economic history were used to form the theoretical foundation of the thesis. The questions and hypotheses touched upon in the previous paragraphs were explored using the results of established research institutions and statistical data from official sources. The empirical part of the research was conducted in the form of one on one interviews with two venture capital firm partners, one entrepreneur and one academic researcher. The author attended several industry events and was able to speak to several participants. The findings from interviews were also supplemented by industry media reports and podcasts featuring interviews with startup entrepreneurs and other stakeholders of the innovation ecosystem.

Structure and scope. Chapter 1 introduces key concepts and jargon of the startup industry. In Chapter 2, entrepreneurship in Japan is discussed in a historical and cultural frameset. Chapter 3 examines the characteristics of Japanese startups and what sets them apart from their counterparts elsewhere in the world. Chapter 4 deals with venture capital in Japan, while Chapter 5 discusses other institutions of the innovation ecosystem, including government policy. Chapter 6 takes a broader view and examines the foreign influence and involvement in the development of entrepreneurship in Japan. Finally, the key findings of the research are discussed in Chapter 7.

1 KEY CONCEPTS IN INNOVATION ECOSYSTEMS

An explanation of basic terminology is crucial to truly understand the language of startups. Like many other sectors and industries, the world of startups has developed a kind of jargon to refer to the new concepts, relationships and institutions it has introduced.

To start with, what is a startup? To be fair, the term ‘startup’ is hardly new; it has been used in the past to refer to any new business or company. However, the subject of this thesis is not the startup of a mom and pop ice cream shop around the corner. There is a stark difference between a startup and a small business, perhaps best explained by the purpose behind their business models – whereas the small business is looking to establish itself independently on the local market, the startup’s intent is to disrupt the market with a scalable model and fast growth and become a large company and market leader (Pope, 2014).

On the other hand, even startups in the contemporary sense of the word have a number of definitions which vary depending on the viewpoint of the user, and they are still widely debated (Robehmed, 2013). Even governments use different requirements in policies targeting startups. For example, in 2015, India unveiled its new *Startup India, Standup India*

policy, defining a startup in terms of age (up to 5 years), turnover, and technology sector (Bhushan Dwivedi, 2016); on the other hand, the government-sponsored *Start:up of the year*² competition in Slovenia defined a startup in terms of age (up to 3 years), ownership structure, investment to date, innovativeness and market potential (Start:up Slovenia, 2015). To be sure, the trendiness of the term itself attracts usage, diluting its meaning. It is therefore not easy to define a startup for the purposes of research. In the context of this thesis, a startup is best defined as a company under 5 years old with a revenue run rate³ under \$50 million for 12 months, less than 100 employees, and a valuation below \$500 million (Wilhelm, 2014).

A technology business incubator (TBI) is defined as an initiative providing its members (either existing or soon-to-be startups) support infrastructure, including business services, networking, access to professional services, university resources and capital (Mian, Lamine, & Fayolle, 2016). TBIs vary according to scope of function and location, and include institutions such as technology/business incubators, innovation centres, science/research/technology parks, co-working spaces and business accelerators.

The accelerator is a relatively recent incubation model aiming to speed up the growth of new businesses by providing incubation services to startups in intensive, cohort-based programs with a fixed duration (Pauwels, Clarysse, Wright, & Van Hove, 2016). Typically, accelerators will provide a small amount of seed capital in exchange for equity in the startup, office infrastructure, and a number of networking, educational and mentorship opportunities. The acceleration programs can last from 3 to 6 months, and often end in a large pitching event or “demo day” (Cohen & Hochberg, 2014, p. 4).

One of the key roles in the lifetime of a startup are played by venture capital (henceforth VC), a segment of private equity investing in high-risk early-stage businesses. VCs provide capital funding for innovative ideas with high business potential who cannot obtain financing from banks due to lack of credit (Tekler, Tekler, & Teraman, 2016). Funding is done through an equity investment, where VCs become stockholders in the startup. VC is also considered a high-risk investment because it is illiquid – until the company matures enough and is acquired or publicly listed, the shares are essentially worthless. To protect their investment, VCs tend to be more involved in management (what is referred to as the hands-on approach), providing additional benefits such as networking and experience. The primary goal of a VC are financial returns gained by exiting investments, either by selling their share to an acquiring company or new investor, or through an initial public offering (henceforth IPO) (Metrick & Yasuda, 2010, p. 3). VC investors typically make more than one investment as the startup grows, requiring more capital. Individual batches of investment are called *funding rounds* (Tekler et al., 2016), and more than one investor may participate in each round. The reason why funding occurs in rounds is that the negotiation of an investment is time-consuming and costly, so neither side wants to repeat the process too often.

² Translated from the original: ‘Start:up leta’.

³ The term ‘revenue run rate’ is used to forecast future revenue by extrapolating short term revenues over a longer period of time.

The funding rounds are differentiated according to the growth stage of the startup. In a simple classification, companies are divided into three stages: early stage, mid- or expansion stage, and late stage (Metrick & Yasuda, 2010, p. 6). The initial investment in the seed or startup stage known as the *seed round* providing funds for initial market research, employing a team and developing a business model (Metrick & Yasuda, 2010, pp. 15-16). Subsequent rounds are referred to as *Series A, Series B, C, D*, etc. Series A is often seen as a milestone, providing startups in the early stage with a proven concept with the financial means to achieve growth and develop the business in terms of sales. After Series A, the purpose of funding rounds can be expanding into new markets, expanding the product mix, or acquiring assets and resources in the expansion or mid stage. Late stage investment provides capital to companies that have reached a stable growth rate and positive cash flow, and are more likely to be profitable (Metrick & Yasuda, 2010, pp. 15-16).

Naturally, all of the listed entities do not operate in isolation of each other, but in mutual cooperation, complementation and support. Thus, a startup may be born in the mind of a university student, who will join the university incubator to find co-founders and receive pre-seed support while she develops her business idea. After the new product or service has largely been developed, the startup might join an acceleration program to grow faster, find clients and meet potential investors. Eventually, if the startup has potential, it could receive an investment in the form of venture capital. The various stakeholders form the innovation ecosystem, traditionally defined as “the complex relationships that are formed between actors or entities whose functional goal is to enable development and innovation” (Jackson, 2011). It includes both material and human resources that make up the entities who participate in the ecosystem, and comprises of the fundamentally research-driven research economy and the marketplace-driven commercial economy. Innovation ecosystems support and foster open innovation through the high social interconnectedness of the many innovation actors. Recently, digitalisation and public media interest have also been key features influencing the development of innovation ecosystems (Oh, Phillips, Park, & Lee, 2016).

2 ENTREPRENEURSHIP IN JAPAN

2.1 History of entrepreneurship in Japan

When we look at the state of economic development in Japan today, it is easy to forget how strikingly different life and trade here were just 150 years ago. The intangible cultural heritage has shaped the island nation's laws, policies, business and relations, enabling it to become the world's third-largest economy, and second-largest developed economy (as defined by OECD membership).

Like many other medieval societies, Japan had a feudal system of government. In 1603, after centuries of civil war, conflict and struggle for power among local and regional feudal lords (a period dubbed Sengoku after the Chinese Warring States period by Japanese historians), the Tokugawa period began with the appointment of Ieyasu Tokugawa as *shogun*. In the

following centuries, Japan enjoyed a peaceful, but isolated period as its borders were closed and foreign trade limited to partners from China, Korea and the Dutch East India Company. The port city of Nagasaki on the southern island of Kyushu was designated as the only area where merchants from overseas were allowed to enter. The shoguns enforced strict control of Japanese trade, both external and internal (Sansom, 1974, pp. 36-37).

The political system of feudal Japan was heavily influenced by and based on Confucian philosophy. Agriculture was perceived to be the most important and morally pure source of wealth and prosperity, while the moral responsibility and obligation of the ruler was to govern in a way that would ensure stability and security for the people of the domain (Sagers, 2006, p. 16). These values were reflected in the social classes of the time: the governing warrior elite was made up of the shogun, the daimyo lords, and samurai warriors, followed by the highly respected peasant class, which provided for the ruling class through taxed agricultural produce. Artisans producing non-essential products were ranked beneath the peasants, while merchants, who were thought to be motivated by self-interest and profiting off the labour of the production-based classes, made up the lowest class.

Under the Tokugawa peace, commerce eventually blossomed as peasants started producing a larger variety of crops to avoid the crushingly high tax on rice. Farmers engaged in additional activities with a higher added value, including the production of paper and writing materials, woven cloth, lacquerware etc. Merchants and artisans contributed to the urbanisation process of castle towns as they flocked there to service the needs of the garrisoned samurai and the lavish lifestyles of the daimyo. While wealth of the merchant class increased, the daimyo's strained budgets forced them to borrow from the former to supplement tax revenue. It was clear that the economic policy had not evolved with the times, and pressure began to build on the ruler to become more involved in trade and commerce on a regional and, later on, a national level (Sagers, 2006, pp. 19; 32-52).

To understand the role entrepreneurship played in Japan's impressive economic growth, we need to fast forward to the 19th century, to the time of the Meiji Restoration. In 1853, a chain of events was triggered which led to the dissolution of the shogunate. Although some Western technology and knowledge, particularly medical sciences, did enter Japan in the previous centuries, in general, Japan lagged far behind the wealthy European empires, which had vast colonial resources at their disposal, and the vast, resource-rich United States. When an expedition of technologically superior ships from the US demanded that Japan open up its borders and allow foreign trade to resume (the so-called Black Ships under the command of Commodore Matthew Perry), it became evident that Japan had no choice but to embrace Western influence or be completely eclipsed and overpowered in the future. This stark realisation, combined with the rising internal pressure discussed above, spurred a reformation process culminating in the restoration of power to the Emperor Meiji in 1868. Thus, Japan started opening its borders and adopting Western customs, kick-starting its modernisation.

One of the key measures implemented by the Meiji government to promote entrepreneurship and industrialisation is the establishment of private property rights (Sagers, 2006) and the

introduction of the joint stock company, or *kabushiki kaisha* (Fujimori & Nozawa, 1992, p. 3), in the 1870s. As the domestic accumulation of capital was quite low due to restrictions of the feudal system, the joint stock company represented an important means of gathering numerous sources of capital, enabling the high-risk ventures of importing industrial technology from the West. They also allowed the separate functions of ownership and management. For the first time in Japanese history, it became possible to found large-scale industrial enterprises such as the Osaka Bouseki Kaisha, a cotton spinning corporation founded by business pioneer Eiichi Shibusawa with funds he had collected from about 30 noblemen and former samurai. The company would go on to become a successful industry leader both domestically and abroad, while Shibusawa – the son of a farmer - continued to play a big role in Japanese economic reform. He participated in over 500 ventures, founded the First National Bank - the first modern bank with joint stock ownership in Japan – Japan’s first business association, the Takuzenkai, and helped set up the Commercial School, predecessor of the prestigious Hitotsubashi University (Clark, 1979, p. 24). The rise of joint stock companies soon created an active equities market, as indicated by the founding of the Tokyo Stock Exchange as early as 1878.

From the turbulent early decades of Meiji and all the way through to the mid-20th century, many forces drove both economic and political change in Japan. One of those forces took the form of the *zaibatsu*, an organisation not unlike a modern-day holding company, combining large numbers of industrial companies and private financial institutions under an umbrella organisation usually owned by a single family (Clark, 1979, pp. 42-45). In order to drive industrial development, the Meiji government offered subsidies and materials to start new enterprises as well as favourable tax exemptions. These policies enabled early entrepreneurs like Yasuda, Iwasaki of Mitsubishi and Minomura of Mitsui to found a number of companies in different industries, linked by ownership and supplied with money from the same bank. The *zaibatsu* enjoyed high growth and exponential capital accumulation due to the fact that its member companies had the advantage of preferential trade amongst each other as well as the privilege of access to capital channelled from public deposits in the *zaibatsu* banks (Clark, 1979, p. 42). As discussed previously, access to the high level of accumulated capital gave the *zaibatsu* a competitive edge as they took the lead in the development of capital-intensive industries, like engineering and chemicals.

The Japanese "post-war economic miracle" can be at least partially attributed to a number of capable entrepreneurs (Haghirian, 2009, p. 247). One of the measures taken by the Occupation Forces under General MacArthur with the goal of “the democratisation of the economy” was the dissolution of the *zaibatsu* groups (Clark, 1979, p. 43). This was done by the compulsory dispersion of the stocks and shares held by the corporate groups, effectively ending their monopolies on the enormous amounts of capital, promoting competition and lowering the barriers of entry for newcomer companies.

A well-known example of a post-war newcomer success story is global electronics giant Sony, founded in 1946 by Akio Morita and Masaru Ibuka. The story of Sony, as reported by Morita in his excellent autobiography, *Made in Japan* (1987), is a classic example of

entrepreneurship, and many parallels can be drawn between it and the startups of today. The fledgling Sony faced a number of issues in its early years, including a lack of adequate infrastructure (their first headquarters were in a wooden shack with a leaky roof in war-torn Tokyo (Morita, Reingold, & Shimomura, 1987, p. 50)), a lack of funding (they often relied on Morita's father to loan them money (Morita et al., 1987, p. 48)), and the unavailability of raw materials and components (there was no magnetic tape being produced in Japan or available from abroad, so they used paper and a chemical only available from one dealer to develop and produce it themselves, by hand (Morita et al., 1987, p. 56)). Their advantage was that both founders had an innovative spirit and ambition, and they as well as their employees were technology-oriented and highly educated. And yet, they made the same mistake with their first product that many startups in the 21st century still make: they made the product for themselves, without thinking of the customer. When they first developed their tape recorder, people saw it as an expensive toy and wouldn't buy it. It was only when they realised that there was a shortage of stenographers caused by the war did they find a product market fit, selling twenty machines to the Japanese Supreme Court at once (Morita et al., 1987, p. 59). Sony would go on to become a multinational corporation and create a number of disruptive new products, for example the Walkman portable music player, the Betamax video recording system, and the PlayStation video game and multimedia system.

The path to success was hardly clear cut for small companies like Sony, who faced government regulation and institutions favouring "large producers over smaller ones, limiting 'wasteful' competition and channelling key resources like capital and labour to chosen sectors" (Haghirian, 2009, p. 251). The purpose of such interventions was to promote industrial growth by nurturing the selected industries, thereby allowing domestic producers to develop the competencies needed to compete on an international level (Y.-I. Lee & Trim, 2008). In light of this, some of the long-term effectiveness of the anti-monopoly measures taken by the Occupation Forces was lost, and would eventually lead to the decline in new business activity (Century et al., 2009, p. 95).

The accumulation of capital from previous decades nevertheless ushered in a boom of venture companies in the period from 1970 to 1973, when economic growth slowed down. One of the trends from this period was the *datsu-sara*, or "corporate dropout", which was the slang term coined to counter the *sarariman*, or corporate employee. It was used to describe Japanese managers who decided to leave their companies, escape the *sarariman* life and go elsewhere (Solt, 2014, pp. 86-87). The flourish of venture companies was cut short by the oil crisis of 1973, and unfortunately, many venture businesses went bankrupt. The next boom took place from 1983 to 1986 as new companies were founded, inspired by the oil shock, to create new energy-saving solutions. Electronics R&D, new materials, and biotechnology were some of the fields that would be the focus of new business at the time. Due to the credit relaxation of November 1983, access to capital was greatly facilitated for venture companies, which led to excessive investment and lending. When the high-yen recession hit in 1985, even powerful venture companies were forced to close down. The continued monetary easing policy of the late 1980s drove the Japanese economy into an asset price bubble, which culminated in its collapse in 1991 and introduced a period of stagnation

known as the “Lost Decade”. A third boom of venture companies began in 1993, when it was thought that entrepreneurs could overcome the economic slump, and efforts to support entrepreneurship began from both the government and the private sector (Haghirian, 2009, p. 248).

2.2 Entrepreneurship in Japanese Culture

The attitude toward entrepreneurship in Japan is strongly influenced by the peculiarities of its culture, historical circumstances, and economic policies which have shaped business and labour practices. As discussed in this section, some of the main issues affecting the development of Japanese entrepreneurship include a general aversion to risk and fear of failure, the high importance of seniority and corporate loyalty, and the group-oriented nature of society.

Despite the success and renown of post-war entrepreneurs, entrepreneurship is still not seen as a good career choice. In 2014, the Global Entrepreneurship Monitor (GEM) report found that only 31% of the active population perceived entrepreneurship as a good career choice, slightly up from 28% in 2009. This is the lowest percentage in the region and less than half of the regional unweighted average, which is 63.4%. The reason is that the idea of going to a good school in order to get into a good university and secure a job at a good company is still prevalent among the Japanese (Haghirian, 2009). Corporations offer the highest salaries and perks that simply cannot be provided by small companies, let alone start-ups. Feedback from interviews conducted with entrepreneurs and VC representatives also shows that employment mobility is an issue, since a failed venture would be seen as disgraceful rather than a valuable learning experience, as it is in the West.

Perceptions of status and media attention for entrepreneurs are also below average: according to the GEM report, 55.8% felt that successful entrepreneurs enjoy high status compared to a regional average of 69.8%, while 58.7% felt that media coverage of successful business ventures contributes to the development of the entrepreneurial culture in Japan, as opposed to the regional average of 74.4%. The discrepancy in the perception of status between Japan and other Asian countries is not as great as in the perception of entrepreneurship as a career choice. More than half of the Japanese seem to understand the social and economic benefits of entrepreneurship. However, the aforementioned risk aversion and fear of failure traits kick in, showing once again that people are generally not willing to bear the cost of entrepreneurship. The best students prefer to choose the safer corporate career over joining a start-up, and are encouraged to do so by their parents. This phenomenon is described as “not in my backyard” entrepreneurship by Stanford University’s William Miller (Haghirian, 2009, p. 250).

Next, we will address the fear of failure that is so deeply ingrained in Japanese society. The overwhelming preference of the safer path is rather evident from GEM data – in 2014, 54.5% of Japanese aged between 18 and 64 with positive perceived opportunities (see previous paragraph) indicated that a fear of failure would prevent them from setting up a business. This figure is up from the 2009 rate of 50%, the highest among all of innovation-based

economies like Japan. In 2014, the fear of failure rate was greater only in Greece (61.8%), a country recently plagued by excessive government debt, austerity measures, political instability and a high unemployment rate. The average fear of failure rate for innovation-based economies like Japan was 37.8%, and even a quick glance at the data published in the GEM report hints at a narrow distribution of values, making Japan an outlier.

In the context of a risk averse and failure-fearing culture, it is not surprising that entrepreneurial intent is low in Japan. In 2014, only 2.5% of those surveyed by the GEM stated that they expected to start a business within the next three years, the lowest among all surveyed countries. The regional unweighted average was 20.5%, while the figure for innovation-driven economies was around 12%. The level of total early-stage entrepreneurial activity (TEA), which includes nascent entrepreneurship (where the business has been active for up to 3 months) and new business ownership (where the business has been active over 3 and up to 42 months) was measured at a rate of only 3.8%, less than half the average for innovation-driven economies, 8.54%, and far below the regional average of 13%. For comparison, the TEA rates of its neighbouring countries and competitors were 8.5% for Taiwan, 12% for Republic of Korea⁵, and 15.53% for China⁶.

3 STARTUPS IN JAPAN

3.1 Japanese unicorns

In Section 2.1, we explored the historic development and cultural peculiarities of Japanese entrepreneurship, but how do these topics translate into the actual status quo? What is the level and rate of success of Japanese startups? This chapter will attempt to answer these questions.

Startups are a statistically elusive species, as most official organisations dedicated to statistics do not cover them explicitly; it is very difficult to isolate them due to the different definitions and measures used to describe and categorise startups. Since startups are, as a rule, not public companies, they are not obliged to disclose financial data. It is not unreasonable to claim that the quality and quantity of data on a specific startup is directly related to its size, success, and media coverage. Often, specialised tech media like TechCrunch or Tech in Asia also run open public startup databases where the data on startups, their founders and funding is self-published (since data may be missing, obsolete or otherwise biased, they are not suitable as sources for academic research). Moreover, even when data is collected by private research and analytics providers, it is often not comparable to data from other countries because of variations in standards. Selecting a relevant measure

⁵ Figure for 2013.

⁶ Note that in terms of their levels of economic development, Japan, Taiwan and Korea are classified as innovation-driven economies (Stage 3) while China is considered to be an efficiency-driven economy (Stage 2).

which would enable international comparison, and for which reliable data is available, is clearly not an easy task.

Taking the above restrictions into consideration, perhaps the best measure available to us would be the rate of companies with a high valuation. In 2013, the term “unicorn” was introduced to distinguish startups valued at over \$1 billion by public or private market investors (A. Lee, 2013). Some well-known recent examples of unicorns are Uber, Xiaomi, Airbnb and Snapchat⁷. Many unicorns receive extensive media coverage and remain in the centre of public attention after achieving this impressive milestone. Despite this, it is worth mentioning that they are, in reality, very rare: it has been estimated that only 0.7% of all software and internet companies founded in the decade from 2003-2013 became unicorns (A. Lee, 2013). It might be argued that the existence of unicorn startups is a symptom of a bubble economy. However, they can also indicate a high level of activity in the venture industry, including a well-developed entrepreneurial ecosystem and the abundance and accessibility of private and/or venture capital.

Does Japan have unicorn startups? Compared to the boom of highly valued startups hailing from the US and, increasingly, China, Japanese startups have gotten off on a slow start. In Japan, venture capital is more conservative, as we explore in Chapter 2.2.3 and beyond. Only in March 2016 did the first Japanese startup, Mercari Inc., a C2C mobile e-commerce company, reach the landmark valuation. The company raised ¥8.4 billion in its latest funding round from a number of investors, including major corporate groups as well as independent venture capital (Alpeyev & Amano, 2016). More recently, Line Corporation, the company providing the popular messaging service, also joined the unicorn party after the year’s largest tech IPO on July 15th 2016. After listing on both the Tokyo and New York stock exchanges, Line’s valuation skyrocketed to \$8.6 billion in the same day (Reuters, 2016).

3.2 Industries

Variables like demand, opportunity, barrier to entry and availability of resources all have influence on which industries create the most startups in Japan. Of course, this is true everywhere in the world – trends drive the kinds of businesses that are developed.

Based on an annual survey performed by Venture Enterprise Center Japan, 53.9% of all VC investments in 2014 were captured by startups in IT-related industries. The biotech, health and medical care industries accounted for 16.2%, the industrial and energy sectors received 15.3%, and the remaining 14.6% of investments went into products or service industries (Venture Enterprise Center, 2015). According to data available on Entrepedia.jp, an online database platform connecting startups with investors, the largest number of listed startups were in the HealthTech industry, followed by FinTech, CleanTech and EdTech (see Figure 1). There is an underlying trend of traditional industries being disrupted by new technologies.

⁷ Fortune magazine keeps a list of unicorn startups ranked by valuation. As of November 1st, 2016, the list included 174 companies worldwide (Fortune.com, n.d.).

Other important industries include biotechnology, software and hardware development, video games, consumer goods and services, and the global trend, Internet of Things.

Figure 1: Tree map of startups listed on Entrepedia.jp by industry



Source: Entrepedia.jp, VentureMap, n.d.

3.3 Startup founder taxonomy

In terms of structure and formation, we can group Japanese startup companies into three distinct types. Of course, these types of startups are born throughout the world. However, due to the specifics of the Japanese business environment (including policy and legislation), the employment customs, and the cultural and social paradigms, the occurrence of the latter two types is either lower or greater than elsewhere, respectively.

The first type is what may come to most minds at the word ‘startup’: the classical idea of a business established by a small team of founders (or, less often, a single founder), physical persons who are also the company's first employees, although not necessarily all initial employees are also founders. The founding team usually invests the members' private resources into the new business in order to provide operating assets. The founders are also shareholders of the company.

A very good example of the independently-founded startup is the well-known trillion-yen (Russell, 2016) internet and e-commerce company, Rakuten Inc. In 1997, Rakuten was founded by present-day CEO and majority shareholder, Hiroshi Mikitani, along with a small team of 5 co-founders and \$250,000 of their own money (Olson & Geron, 2012). When the online shopping website launched in May 1997, it was far from the Rakuten we know today – it boasted only 13 shops, of which most were owned by Mikitani's friends. The company

was one of the pioneers in the internet business, which gave it a clear competitive advantage. Coupled with a strong sales strategy, it would go on to grow exponentially, reaching 320 customers by the end of its first year of operations and over 1,800 by the year 2000. In April of the same year, the company went public with an IPO; Rakuten's stock is currently traded at the Tokyo Stock Exchange. In the following years, Rakuten continued to grow and expand their business overseas. The company used acquisitions to enter the US, Canadian and European markets, a joint venture to penetrate China, and launched its own subsidiaries in other East Asian countries like Taiwan. In 2016, it can be said that Rakuten is an established household brand in Japan, having purchased a Japanese major baseball league team in 2004 and a J-league football team in 2015 (Rakuten, n.d.).

Rakuten is a classic example of a Japanese independently-founded startup. In many ways, it's paved the way for startups in Japan, showing that entrepreneurship can be a viable career choice. Like many successful global startups like Facebook or Tesla Motors, or even Sony 50 years ago, Rakuten is fortunate to have been led by a passionate, visionary leader. Hiroshi Mikitani understands what it takes to create a truly global company; in 2010, a company policy called "Englishnization" was introduced, announcing the designation of the English language as the official corporate language. The mostly Japanese employees were given two years to learn English to a sufficient level and in 2012, the company announced that the transition was completed successfully. This is in stark contrast to most other Japanese companies, whose official language is only Japanese, creating an additional barrier between the company and its overseas partners or subsidiaries.

The second type of startup company we examine is the university spin-off (USO). These can be businesses started by various university members including faculty, researchers and university students, independently or in collaboration with the private sector. As centres of research activity, universities can provide important resources to various industries, including advanced research, innovative concepts and ideas, and of course excellent human resources (Haghirian, 2009, pp. 254-257). Interactions between faculty and commercial organisations were rather limited by legislation and the government in the past, so most collaboration agreements were made informally while intellectual property rights were obtained exclusively by the companies, thus making it inaccessible to third parties. In 1998 and 1999, two laws enabling the formation of so-called Technology Licensing Offices (TLOs) within universities made it easier for faculty to retain intellectual property (IP) rights of government-funded research and take on active roles in a new or existing company. TLOs were founded as separate legal entities under university ownership, and are responsible for IP management and technology transfer – most importantly, licensing university-owned inventions to third parties. More structural reforms were introduced in the following years with the aim of creating an environment in which university-industry collaboration can prosper, perhaps most importantly the incorporation of Japanese national universities in 2004. By 2009, a total of 47 TLOs had been approved by the Ministry of Education, Culture, Sport, Science and Technology (MEXT) and the Ministry of Economy, Trade and Industry (METI). Some early studies showed that the government efforts of reform and financial support had been effective, with a rapid increase in the number of USOs in the first five

years after the introduction of TLOs (Haghirian, 2009, pp. 254-257). After peaking at 250 per year in 2005, however, the number of new spin-offs declined sharply in the following years until reaching 50 per year in 2010, at which level the rate has remained stable since. (Ito, Kaneta, & Sundstrom, 2016) While some studies predicted USOs would have an important impact on the economy both in terms of revenue and job creation, others have shown that in the first 10 years of university-industry collaboration reform, most USOs remained unprofitable (Haghirian, 2009, p. 257). USOs may have the competitive advantage of access to cutting-edge IP, but they face the same problems all Japanese start-ups do: the risk-averse nature of Japanese investors and bankers makes early-stage financing more challenging than elsewhere.

A recent example of a university spin-off is Photo Electron Soul, Inc., a company co-founded in July 2015 by Tomohiro Nishitani, a lecturer at Nagoya University serving as the startup's Chief Technology Officer, and Takayuki Suzuki, the university's former technology transfer manager, leading the company in the role of CEO (Chunichi Shimbun, 2015). Photo Electron Soul, or PeS for short, has developed a next-generation electron beam device in collaboration with a research team headed by Nobel Prize-winning physicist Hiroshi Amano, also of Nagoya University. Their revolutionary electron beam technology could be a game-changer for 3D printers and electron microscopes. After receiving permission for use of the technology from Nagoya University, the holder of the patent, PeS also secured a loan from the state-affiliated Japan Finance Corporation, as reported by the Chunichi Shimbun newspaper. The university affiliation was therefore very advantageous in the early stage of the company.

The third type of startups common to the Japanese environment is the corporate spin-off, sometimes also referred to as a spin-out. It is effectively a R&D or business project at least partially developed within a corporation, then separated from the core company and established as an independent company. The corporation normally retains at least partial ownership of the spin-out. The practice of spin-outs is strongly related to the concept of intrapreneurship, a term loosely defined as identifying new business opportunities and creating new ways of using the resources available to the company to serve a new or existing market; in short, entrepreneurship that takes place within the boundaries of an existing company (Menzel, Aaltio, & Ulijn, 2007). Many companies place high importance on their employees' ability to identify and develop such opportunities, and implement policies to actively incentivise such behaviour. The reasons for spinning out could be managerial autonomy, the need for a different ownership structure, or simply the lack of resources needed to support the project. An example of a spin-out which has received a lot of attention globally is Niantic Inc., a mobile game developer which partnered up with Japanese veteran Nintendo to create this year's smash hit app, Pokemon Go. Niantic began as a Google project and was spun out in 2015. It has been speculated that the spin-out was executed to include Nintendo as an investor and shareholder (Bergen, 2016).

Turning back to Japanese spin-outs – a very recent example is SB Drive, a new company focusing on autonomous vehicle technology that has been spun out of SoftBank, a major

Japanese telecommunications corporation. SoftBank runs a number of programs stimulating intrapreneurial activities, including contests where employees compete for the chance to pitch their idea to executives. In 2015, the idea for SB Drive was selected as the winner of one such contest. By spinning out, SoftBank retained a stake in the new company, while satisfying the owner of the idea by granting him stock options. The corporation was also instrumental in recruiting human resources for the new venture; talents were selected from various subsidiaries of the SoftBank Group. SB Drive will be able to take advantage of SoftBank's existing technology and infrastructure, giving it an undeniable competitive advantage (Saji, 2016).

4 VENTURE CAPITAL IN JAPAN

4.1 Private Equity Venture Capital

In terms of funding, banks have always had a very important role in the Japanese economy. Banks were at the heart of every *zaibatsu* conglomerate, pumping money into as well as exercising control over the interconnected companies in the so-called main bank system (Sheard, 1989). While the main source of capital funding for US companies is equity, in Japan, businesses have traditionally been financed through bank loans based on the close, long-term relationship with the bank. This is consistent with the aforementioned risk-averse culture of Japan, since loans are generally speaking less risky than equity investments. Despite this, the Japanese financial industry today boasts a growing **venture capital** (VC) sector driven both by private capital firms, dedicated VC organisations, and corporate VC funds.

In 2002, the Japan Venture Capital Association (JVCA) was established as the country's "first and only organisation" aiming to assist VC firms and to support venture businesses. JVCA focuses on three major initiatives, with three groups of stakeholders in mind: the development of the venture ecosystem to aid the creation and growth of venture businesses or start-ups, the development of the fund-raising and management ecosystem to help VC firms, and the promotion of open innovation, which benefits society as a whole. As part of these initiatives, JVCA conducts independent research and analysis of the VC industry, hosts lectures, symposiums and other events to foster knowledge and skills, conducts its own testing and awards qualification certificates, collaborates with government agencies and represents the interests of the venture industry by making policy recommendations, and cooperates with various other stakeholders of the venture industry. As of July 2016, JVCA was composed of 59 VC members and 19 corporate VC members (Japan Venture Capital Association, 2016). In comparison, the National Venture Capital Association, a similar organisation based in the United States, was founded as far back as 1973 and has nearly 400 members (National Venture Capital Association, 2016).

Japanese VCs typically focus on Japan and the local market, but some of them also create funds targeting other Asian markets and the US. Neighbouring markets are a natural choice for expansion because of their geographical proximity, as well as a good understanding of

business in those markets. The US market is attractive both for its size and its well-developed startup infrastructure. Some VCs, especially those operating outside of Tokyo, focus on local companies in an effort to improve the underdeveloped regional ecosystems.

In terms of the industries they invest in, not all VCs are explicit about their preferences, although they do usually focus on a specific area. Earlier, we mentioned that in 2014, VCs invested in IT-related industries, health and biotech, the industrial and energy sectors, and consumer products and services. An analysis of their portfolios shows that most VCs focus on Internet businesses and tech innovations of traditional industries, like ‘Health Tech’, ‘FinTech’, ‘Clean Tech’, etc. The recent ‘IoT’, or The Internet of Things⁸, trend has swept through Japan as well.

Large investment deals are uncommon for the venture industry in Japan. While it is true that each VC has a unique investment style, most VCs tend to invest in the seed or early stages, with individual deals, or *tickets*, spanning from ¥5 million to ¥30 million. Indeed, seed and early stage investments accounted for over one half of the total amount invested by VC in 2014, 13.9% and 43.3%, respectively (Venture Enterprise Center, 2015). Some investors are also involved in middle-stage Series A investment; for example, Globis Capital Partners & co. has an average initial investment size from ¥300 million to ¥500 million (Globis Capital Partners, 2016). Expansion-stage investments made up 27.8% of the total amount invested in 2014. The size of individual investments has increased in recent years: in 2015, the median funding per company was ¥105.4 million, an increase by a factor of 1.9 from ¥55.8 million in the previous year (Japan Venture Research, 2015).

Venture capital firms also act as catalysts for innovation ecosystem development. Many VCs are involved in seed-stage or early-stage support infrastructure, including coworking spaces, incubators, and accelerators. Their motivation for these activities lies in the need for VCs to protect their investments and to improve the likelihood of their success.

A good example of a typical Japanese VC is Dogan Inc., a private equity investment (PEI) firm based in Fukuoka City, on the South-West island of Kyushu. It is an independent PEI backed by four local financial institutions. Dogan operates a venture capital fund, the *Kyushu Entrepreneur Club Fund*, which is targeted at startups based in Kyushu. Although the fund is not officially limited in terms of industry sectors, their portfolio is made up mostly of IoT and health tech companies. Dogan operates a coworking and incubations space called onRamp, offering members office space, access to VC support, and networking events in exchange for a monthly fee. The firm is also involved in Startup Café⁹, a public-private partnership project initiated by Fukuoka City with the goal of fostering entrepreneurship and boosting the local economy.

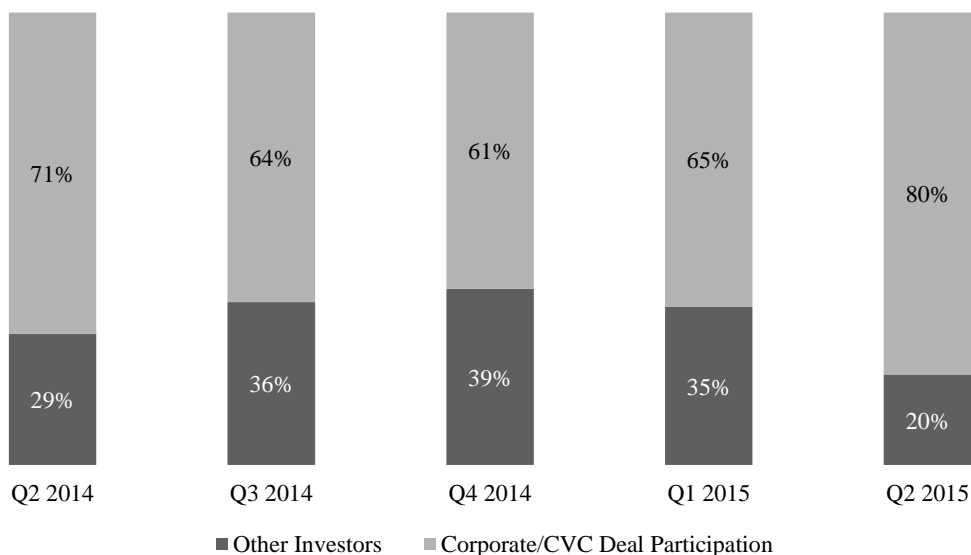
⁸ The Internet of Things is the network of physical objects that contain embedded technology to communicate and sense or interact with their internal states or the external environment (Gartner, n.d.).

⁹ More on the Fukuoka startup ecosystem in Chapter 5.3.

4.2 Corporate Venture Capital

As discussed in Chapter 2.2.3, corporations play a large role in the venture business. Besides providing in-house opportunities for innovation and new business development, many corporations also invest in external start-ups (Anokhin, Wincent, & Oghazi, 2016). While this is not unique to Japan, the impact of corporate investments on the venture ecosystem is substantial. A possible reason for this could be to the aforementioned risk-averse attitude of Japanese capital owners. Since the number of VCs as well as the amount of capital available from them is lower, the relative share of corporate-backed venture investments is higher than in other countries. For example, 80% of investment deals made in the second quarter (Q2) of the 2015 fiscal year in Japan were made with corporate VC participation (see Figure 2). In North America, their share in the same time period was only 23% (see Figure 3). It should be noted, of course, that the total volume of investment deals is much higher in the US than it is in Japan.

Figure 2: CVC participation in funding deals to VC-backed companies in Japan.

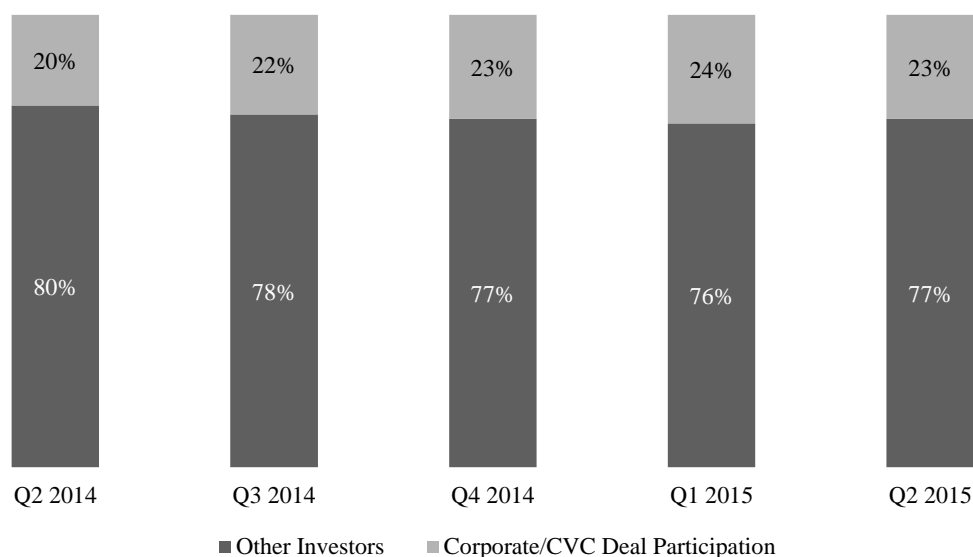


Source: J. Riney, *Corporate Venture Capital Is King In Japan*, TechCrunch.com, 2015.

The reasons for corporate investment in Japan are not unlike those elsewhere. The main purpose is not capital gain and financial returns, as is the case with investors from the financial industry; instead, the function of corporate venture capital is seen more in terms of R&D and corporate development (Riney, 2015). It is a means of gauging industry trends to protect and develop their own core businesses, as well as building business relationships with potential acquisition candidates or important long-term business partners. Seen from the perspective of traditional Japanese business values, where long-term stability and close relationships between business partners are favoured over short-term advantages and profits, the prevalence of corporate venture capital is even more understandable (Haghirian, 2009, p. 249). Securing funding from an established company can also be advantageous for startups,

which can benefit from the good reputation and stability of the corporation as well as the access to its business network distribution channels.

Figure 3: CVC participation in funding deals to VC-backed companies in North America.



Source: J. Riney, Corporate Venture Capital Is King In Japan, TechCrunch.com, 2015.

4.3 Exit Strategy

The relative strength of corporate VC discussed in the previous chapter might suggest that the most common exit scenarios are corporate acquisitions. However, this does not seem to be the case. According to James Riney, head of 500 Startups Japan venture fund: “Despite having a lot of cash on their balance sheets, Japanese companies historically have not been very active domestic acquirers. In most cases, they strongly prefer to build products and services in-house rather [than] buying.” (Riney, 2016a) Riney adds that Japanese startups tend to go public with an IPO at a much earlier stage and lower market capitalisation than US startups. Indeed, the median IPO offer amount of venture-backed Japanese companies in 2014 was ¥2,273 million (a little under \$19 million) (Japan Venture Research, 2015), while the average IPO offer amount for venture-backed companies in the US was \$133 million in the same year (Thomson Reuters, 2015).

Since Japanese startups go public at an earlier stage, it makes sense that relatively more venture-backed IPOs take place. There were 40 such IPOs in Japan in 2014, with 596 startups receiving a VC investment in the same year. By contrast, there were only 115 venture-backed IPOs in the US that year while a staggering 4471 startups were funded by venture capital.

This means that there was one IPO for every 15 VC-funded startups in Japan, but only one in 39 for startups in the US¹⁰.

While some of these figures are not directly comparable, they do offer some insight. They are consistent with the main paradigms of Japanese business culture described in earlier chapters: being risk-averse, the Japanese capital owner prefers to make smaller and diversified investments to lower the risk factor, as demonstrated in Chapter 4.1. VCs and other investors are not prepared to give large sums of money to young companies composed of teams and managers they have yet to establish a relationship with. When startups seek to raise a certain amount of funding, they have no choice but to opt for a public offering in order to secure a sufficient number of smaller investors.

5 INNOVATION ECOSYSTEM

5.1 Ecosystem institutions

In Chapter 2.1, we demonstrated the numerous outbursts of entrepreneurial activity in modern Japanese history. However, these periods of venture business boom were not the prime sources for the development of an innovation ecosystem. While some members of JVCA are private equity firms with decades of experience, a thorough review shows that it was only in the late 1990s that dedicated VC firms began to emerge (Japan Venture Capital Association, 2016). The true pioneers of the Japanese innovation ecosystem were science parks.

Science parks, also called technology parks, are defined as a property-based initiative that 1) enable tenant startups to engage in R&D by including R&D facilities, and 2) provide tenants with opportunities for knowledge transfer from local higher education institutions (Fukugawa, 2006). Sometimes, technology parks also provide incubation services. In Japan, science parks were introduced as an instrument of regional innovation policy aiming to reallocate higher value-added businesses from urban into rural areas, starting from the second half of the 1980s. By 1997, 158 science parks were operating throughout Japan. One example of a science park is Yokosuka Research Park (YRP), an R&D cluster focusing on radio and telecommunications technologies located in the suburbs of Yokosuka, Kanagawa prefecture. YRP provides R&D facilities and equipment as well as engages in R&D itself. It also promotes research exchange and collaboration among industry, academia and government by organising various events, and helps stakeholders by engaging in human resource development activities. The science park hosts facilities of industry leaders such as NTT Docomo, SoftBank, Fujitsu, and Panasonic, as well as providing laboratory space for

¹⁰ It should be noted that not only U.S.-founded startups get backed by US-based VCs, and such companies usually go public in the US as well. For example, Chinese e-commerce giant Alibaba.com had a record-breaking IPO raising over US\$51.2 billion in 2014. This is not usually the case in Japan; startups from all over the world flock to Silicon Valley because the venture industry is strongest there, but as we can see, conditions are nowhere near as favourable in Japan.

top Japanese universities including The University of Tokyo, Waseda University, and Kyoto University (Yokosuka Research Park, 2016).

Initially, incubation services were not within the scope of science park activities. Facing a rapidly increasing unemployment rate after the burst of the economic bubble in 1990, the Japanese government decided to emulate the successful model of business innovation activities from the US. This was the first government measure specifically targeting the development of entrepreneurship. In 1999, temporary regulation established the Japan Association of New Business Incubation Organization (JANBO), functioning as a central agency which would go on to create a network of 50 “one-stop service offices”, called industrial platforms, and 200 business incubators throughout Japan. In the following decade, JANBO gradually developed the industry of business incubation (BI) before expiring in 2009. A group of BI professionals it had cultivated joined to found JANBO’s successor in spirit, the private Japan Business Incubation Association (JBIA), before the former ceased to operate, in 2008. JBIA’s policies emphasise business incubation in rural areas and continued education of the public about entrepreneurship (Japan Business Incubation Association, 2016).

In 2005, the founding of Y Combinator, the first accelerator in the world (Barrehag et al., 2012), signalled a paradigm shift in startup incubation. By 2010, the acceleration model had popularised and spread to Europe and Japan. The first accelerator to open its doors to startups in Japan was Tokyo-based Samurai Incubate as early as 2008. Samurai Incubate offers an initial investment of ¥4.5 million in exchange for a 15% share of equity. It also provides mentorship, free lectures on various business-related topics, networking, co-working space, and other incubation services to its members. Samurai Incubate also has a subsidiary in Israel (Samurai Incubate, 2016). Open Network Lab (ONLab), an accelerator modelled after Y Combinator’s two-batch-per-year approach, was founded in 2010. ONLab offers a negotiable seed investment of up to ¥10 million (Open Network Lab, 2016), mentoring and networking services as well as perks from their partners. ONLab members are also granted one year of free office space in their Daikanyama, Kamakura or San Francisco co-working spaces. Corporate-backed accelerators, as a branch of corporate venture capital, are also common in Japan. In 2016, YJ Ventures (owned by Yahoo! Japan) and East Ventures launched Code Republic, a Tokyo-based three-month accelerator program investing ¥7 million for a 7% equity share: (Code Republic, 2016). While a relative latecomer to the Japanese accelerator scene, Code Republic draws on the experience of its VC parents as its competitive advantage. Both East Ventures and YJ Ventures already have commendable investment portfolios, including prominent companies like the unicorn, Mercari (Corbin, 2016). Other CVC accelerators include Docomo Innovation Village, which is backed by NTT Docomo, and KDDI Mugen Labo, owned by KDDI.

Government institutions can be an integral part of an innovation ecosystem, depending on the policy it chooses to pursue. Economies that can arguably be defined as followers in terms of the startup sector often become more involved in an attempt to catch up with industry leaders in Silicon Valley. This can also be said to be the case in Japan. Beside the

aforementioned JANBO, the Cabinet-founded Japan Productivity Center for Socio-Economic Development (today called JPC) also established the National Startup and Venture Forum, a non-profit and non-governmental organisation, in 1999. This institution created the Japan Venture Award honouring outstanding entrepreneurs and provided other services to attract and support entrepreneurs. In 2007, NSVF activities were taken over by the METI-controlled Organization for Small & Medium Enterprises and Regional Innovation, Japan (SMRJ) (Century et al., 2009, p. 97). Today, SMRJ is involved in incubation activities and services, including maintaining incubation facilities, management consulting, business matching, and SME development fund investments (Organization for Small & Medium Enterprises and Regional Innovation, 2016).

An important factor in any ecosystem is the circulation of information. The role of the media as a source of cultural and social influence, as well as an educator and distributor of information, both within the industry and towards customers, cannot be understated. The ability to access relevant and accurate data is crucial for any company, and even more so for one that has not yet established itself in the world. In Japan, two of the most prominent online media outlets focusing on startups are Tech in Asia and The Bridge (The Bridge, 2016). While the former covers the whole ASEAN region, the latter focuses on the Japanese local scene both in Japanese and in English. Tech in Asia also holds a yearly conference, Tech in Asia Tokyo (Tech in Asia, 2016), bringing together startup founders, investors, influential industry professionals and other stakeholders from Japan and abroad. Another big industry event is Slush in Asia, which is unique because of its Finnish origins, and also serves as a bridge between the innovation ecosystems in Japan and the Nordic countries. In terms of media, the relative ease of self-publishing that has been the result of the proliferation of the Internet has encouraged the creation of several podcasts that deal with the topic of startups, often publishing interviews with startup co-founders. Podcasts such as Disrupting Japan and The Japan Venture Show give international exposure to interviewees while offering an insight into the world of Japanese startups to those who cannot speak Japanese.

5.2 Government Policy

As discussed in Chapter 2.1, the entry rate of new businesses in Japan began to stagnate in 1970s. This did not cause great concern to the government at the time, as large Japanese corporations were still growing. It was not until the “White Paper on Small and Medium Enterprises in Japan” reported on the reversal of entry and exit rates in 1989 that the government became aware of the issue. The 1963 Small and Medium Enterprise Basic Law that was still in use at the time had the objective of supporting existing SMEs, not stimulating growth of SMEs (Century et al., 2009, p. 96). In addition, there was a strong view that encouraging the creation of new SMEs was not desirable if they could not match the performance of large companies. The clashing views prevented the reform of the Basic Law until 1999, when a new law of the same name was passed with the aim of promoting diversity and growth of independent SMEs. By this time, it had become evident that startup companies in England and the US had substantially stimulated the economy while Japan was still in the grasp of its decade-long recession.

The year 1999 was thus a pivoting point for Japanese SME and innovation policy. In addition to the SME Basic Law, the NSVF and JANBO were also established then. In 2001, the government introduced its “Startup-Doubling Plan”, which aimed to increase the number of startups to 360,000 by 2006. The plan included three primary policies: (1) the provision of education for entrepreneurs through the NSVF, which has been discussed in Chapter 5.1, (2) the introduction of a new startup loan program through the National Life Finance Corporation (NLFC), an institution providing business loans to small businesses, and (3) the removal of minimum capital requirement for the establishment of a limited liability company.

The “New Startup Loan Program”, implemented in December 2001, was based on the findings of an empirical study which showed that the firm size at the time of startup was determined by the amount of the initial investment, which was constrained by the amount of the entrepreneur’s assets (Century et al., 2009, p. 98). This is not surprising – the main source of initial investment are personal funds, since individuals are generally unable to obtain initial funding through loans. The study found that those who had succeeded in procuring a loan from the NLFC were able to increase the size of their startup companies, *ceteris paribus*. Under the new program, the NLFC would lend sums up to ¥10 million to startups under the age of two years without requiring collateral, guarantors or personal guarantees. In 2008, the NLFC was merged with three other policy-based finance institutions to form the Japan Finance Corporation. The Startup Loan Program is still active, with 8,483 businesses having received funding in the fiscal year 2013 (Japan Finance Corporation, 2014, p. 4).

In February 2004, the Law for Facilitating the Creation of New Business was amended to remove the minimum capital requirement for limited liability companies. The purpose of this measure was to lower the barrier of entry, since the previous capital requirement of ¥3 million for LLCs was deemed to be constraining would-be startups from incorporating. The policy was successful and in 2005, the Japanese government enacted the new Corporate Law, which removed the minimum capital requirement for joint-stock companies as well (previously set at ¥10 million) (Century et al., 2009, pp. 96-97).

5.3 Fukuoka Startup City

More recently, the Japanese government has undertaken additional measures to promote the creation and growth of startups. In March 2014, a government panel announced six National Strategic Special Zones (NZZS) for deregulation as part of Prime Minister Shinzo Abe’s *Abenomics* plan to curb deflation (Kameda, 2014). Fukuoka City was designated as the National Strategic Special Zone for Global Startups and Job Creation. To help pursue the goal of attracting domestic and international companies and entrepreneurs, the city is implementing a number of regulatory reforms in status of residence, employment, and taxes, as well as undertaking urban development projects to improve quality of life and international competitiveness.

As part of the Startup Support package, Fukuoka City enacted measures to reduce barriers for foreigners wishing to start a business in Japan. The city implemented a “startup visa”, which enables foreign applicants to receive a status of residence without fulfilling the

requirements at the time of application. To acquire the “Business Manager” status, the company must have an office and either (1) employ at least two full time employees, or (2) have a total investment or capital of at least ¥5 million. With the startup visa, the applicant has six months’ time to fulfil these requirements. Fukuoka City also offered a limited amount of financial aid for renting residential and office space, subsidising 50% of the monthly rent with an upper limit of ¥70,000 for residential apartments and ¥50,000 for office space. To facilitate the complicated and time-consuming process of setting up a company in Japan, the city is providing one-stop services for global entrepreneurs.

Startups established in Fukuoka City may also be eligible for a corporate tax rate reduction of 20% for the duration of five years after founding the company. Applying the reduction to the national tax rate in Japan would result in an effective tax rate of under 20%, which will enable Fukuoka City to compete with Asian rivals with lower national tax rates (Fukuoka City, 2016).

In October 2014, Fukuoka City opened the Startup Café, a public-private partnership project creating a meeting space at a Tsutaya bookstore in the Tenjin area of downtown Fukuoka. The staff making up Startup Café’s first national Employment Consultation Center is multilingual and always available for free advice. Professionals including lawyers, accountants and bankers as well as experienced entrepreneurs all make up the Startup Café team. To promote matching between startups and potential employees, the Startup Human Resource Matching Center was added to the spectrum of services in March 2016. The private partners running the city-funded project are Dogan Inc., a VC firm contributing the skills and professional expertise needed, while CCC, the company behind the Tsutaya bookstore chain, provides the space and infrastructure. As of May 2016, Startup Café had organised over 600 events, held over 2500 consultations and helped approximately 60 startups launch their businesses (Fukuoka NEXT, 2016).

Aside from direct policies aimed at promoting startups and entrepreneurship, Fukuoka City is also implementing a set of exemptions with the purpose of Environmental Improvement for Startups (Fukuoka NEXT, 2016). These include deregulation of medical treatment to increase the number of beds available for treatment of selected conditions, and enacting new regulation enabling foreign doctors to practice medicine in Japan without a Japanese medical licence. To promote women’s participation in the labour market, Fukuoka City will attempt to solve the shortage of childcare centres despite the lack of available land by establishing centres inside city parks. Also related to the shortage of space, Fukuoka has granted an exemption of height restriction in the central Tenjin area, expecting to rebuild 30 buildings within 10 years to increase floor area ratio. In short, although Fukuoka is already topping charts as one of the world’s most liveable cities, it is set to increase quality of life even further.

6 FOREIGN INFLUENCE

Throughout its history, Japan has allowed itself to absorb influence from other cultures. One need not look further than the Japanese writing system, which uses Chinese characters referred to as *kanji*; the Japanese language itself has adopted and modified, sometimes beyond recognition, words from Western languages. The Japanese culture accepted and internalised the concepts of Confucianism and Buddhism after they were introduced centuries ago. In Chapter 2.1, we discussed the sources of industrialisation in the Meiji period. One might argue that despite Japan's appearance of seclusion, it does accept foreign concepts and ideas.

As a current global trend, the culture of entrepreneurship and startups is also spreading to Japan through influence from abroad. Startup initiatives that have been successful in their countries of origin eye Japan as an attractive market for expansion. Slush Asia, the Tokyo tech industry event, was spun off the original Slush event, which was founded in Helsinki, Finland in 2008 and has grown to 15,000 attendees per year (Slush, 2016). Slush Asia CEO for Japan, Antti Sonninen, came to Japan working for Rovio, the Finnish mobile video game developer and creator of the Angry Birds franchise. He saw an opportunity to bring Slush to Japan when he noticed that entrepreneurial and investors events were mostly invitation only. After two successful conferences under their belt – 2015 was Slush Asia's maiden year - Sonninen says that the situation in Japan is beginning to change (Sonninen, 2016). Also in 2015, global VC seed fund and startup accelerator from Silicon Valley, 500 Startups, announced a \$30 million fund for Japanese startups (Russell, 2015), and also launched a pre-acceleration program in Kobe, Japan in 2016 (500 Startups, 2016). Managing partner and head of 500 Startups Japan, James Riney, lists two things 500 Startups wants to accomplish in Japan: to be part of a big cross-border merger or acquisition, and to build a truly big global startup out of Japan. The problem with foreign investment in Japanese startups is, as Riney sees it, not enough information published in English and the inability of Japanese companies to effectively market themselves outside of Japan. On the other hand, foreign companies have a hard time entering the Japanese market due to the high number of entry barriers, including language and consumer behaviour. A fund based directly in Japan and managed by a Japanese native and an American who has spent 15 years living in Japan might have the cultural insight necessary to be able to mediate deals successfully. Players like 500 Startups Japan and Slush Asia Tokyo act like a conductive wire, transmitting business practices and entrepreneurial culture into Japan (Riney, 2016b).

During his recent visit to the US, Japanese Prime Minister Shinzo Abe stopped in Silicon Valley, a move which may be a clue as to what direction he might attempt to steer the country. After meeting with legendary Silicon Valley entrepreneurs, leaders and local policymakers, and visiting major companies like Tesla and Facebook, he announced a new policy initiative during a speech Stanford University. The new policy, called "Bridge of Innovation between Silicon Valley and Japan" or "*Kakehashi*", includes four essential pillars: the goal to incubate, grow and globalise 200 selected Japanese startups in Silicon Valley; to bring together Japanese and American experts in diverse tech fields, such as FinTech or MedTech;

to promote collaboration with Stanford University's centers of research and technology; and to absorb the Silicon Valley culture of creativity, disruption, and risk-taking, including the acceptance of failure and second chances. A roundtable discussion of the *Kakehashi* initiative with feedback and advice given by leaders from Silicon Valley followed (Okamoto, 2016).

7 KEY FINDINGS

7.1 Key issues of Japanese startups

Throughout this thesis, consistent evidence has been presented to prove the effect that Japanese culture has on the state of entrepreneurship in Japan. It has been shown that it is risk-averse and that the Japanese are generally not inclined to start a company because they fear failure. This attitude reflects in all aspects that have been discussed, from the source of venture capital to the manner in which startups are founded. How do the characteristics of the Japanese innovation ecosystem shape the issues that are faced by startups?

Lack of experience: Japanese employees do not have the skills, knowledge or experience to start up and run a company. Often, they also do not know about the various support institutions available to them within the innovation ecosystem. They are too focused on the technical/technological aspects of the company, so they make mistakes in their business decisions. According to insights gained from interviewed VC representatives, many startup founders are former employees of banks and other financial institutions. The awareness of the lack of knowledge may also impact the fear of failure and reluctance to start up.

Lack of talent: Japanese startups have a hard time finding and hiring employees because their reimbursement offer can never compete with an offer from a corporation. Startups have very limited resources, so they often offer stock options in place of a higher salary. But the best talents would rather work for a large corporation, because the payoff is so much higher. Not only that, perspective entrepreneurs can be discouraged by their parents or life partners, who may desire a lifestyle with a secure income. This issue differentiates Japanese startups from startups based in other countries.

Lack of capital: Banks are still the primary source of capital for Japanese companies as a whole, and startups do not have the credit to obtain funding from banks. VC activity also focuses on tech hubs like Tokyo, Osaka, Nagoya and Fukuoka, so availability in smaller Japanese cities is low. While there are alternative funding options, for example the no-collateral Startup Loan Program, potential entrepreneurs might not know about it.

7.2 Future perspectives

In this thesis, we have demonstrated that Japan has fallen behind many of its competitors when it comes to entrepreneurship. The government has spent decades implementing government policy aimed at promoting entrepreneurship. Many large Japanese companies are in trouble because they have ceased to be competitive. In spite of the decade-long post-

bubble recession in Japan, a major paradigm shift in the Japanese attitude toward venture business has not occurred. Can Japan regain its former status as a high-tech manufacturing leader, or find a contemporary niche for global success?

The truth is that Japan faces issues on a structural level. Its demographic structure is headed for an unsustainable situation in the future, and problems with elderly caregiving are already emerging. The shortage of labour promises to lead into a decline in output levels, which will hinder the economy. And yet, an optimistic mind will take these issues and look for a technological solution. For the labour shortage, at least, Japan has reserves in women, foreign workers, and robots.

Above all, what Japan needs is a clear strategic policy. The questions of labour shortage and aging population need to be addressed, and who better to find a solution than entrepreneurs? Prime Minister Shinzo Abe might have objectionable qualities, but he does seem to understand that Japan will not survive as a leading country without improving its entrepreneurial culture. The past year has seen a number of newcomers and new developments in the Japanese innovation ecosystem. At this point, it is really hard to judge whether the recent trends are enough for a turnaround – certainly, many long-term residents in Japan have given up hope. All the more reason to pay attention to Japan in the coming years.

7.3 Suggestions for further research

There are many interesting aspects of the Japanese innovation ecosystem that may merit being the subject of further research. Some possible questions to explore in the future are:

- How does Japan compare to the culturally similar Republic of Korea, or Taiwan?
- How does Japan compare to European countries?
- What is the impact of Fukuoka Startup City policies on the city's economic growth? On the success of hosted startups?
- What is the real scope of incubator activities and their impact on rural entrepreneurial development?
- Is there evidence of a multiplier effect in founder post-exit investment activity?
- What is the difference between entrepreneurially inclined Japanese and those who are not interested in new business?

Due to the lack of resources in English, further research should be done in partnership with a member of a Japanese university or research institution. Some quantitative data may be obtained from official sources, or there may already exist some research in Japanese covering some of the topics mentioned. New insights could be gained by using well-planned questionnaires. However, due to the nature of the startup industry, it could be easier to gain data individually. Some of the topics mentioned are sensitive, for example founders' investment activity, and would therefore be best investigated through qualitative individual interviews.

CONCLUSION

Over a century has passed since Japan opened its borders to foreigners in the latter half of the 19th century. The years of isolation as an island nation have shaped Japan firmly, and even today, it remains a society with perhaps one of the most distinct sets of rules and cultural peculiarities. The same pattern is true for business culture, organisational behaviour, innovation and entrepreneurship in Japan, as this thesis has demonstrated.

The ideas of risk-aversion and fear of failure permeate the Japanese society. While the first could be understood by outsiders as a natural development of an island-bound and disaster-plagued nation, the fear of failure is more complex, perhaps drawing influence from the past times of Japan's wartime glory and the *bushido* philosophy of medieval samurai warriors. In practice, these ideas manifest into concrete phenomena. A young graduate decides on a corporate career rather than starting their own business, to the approval of their parents. An inspired individual with a great idea struggles to find like-minded as well as competent co-founders. A startup company with no track record faces problems when trying to find an investor to fund their growth.

In spite of these issues, empirical research has shown that although it is relatively smaller and less developed than its US counterpart, a fast-growing innovation ecosystem has nevertheless emerged. It is made up of varied stakeholders ranging from private equity, corporate R&D initiatives, foreign VC ventures, and specialised media outlets, to public universities, state-funded incubation and support programs, and campaigns on a local and national level. In combination with influence and inspiration from abroad, the ecosystem acts as the breeding ground for Japanese startups.

There is good reason to believe that the innovation ecosystem will continue to develop, and that we can expect a boom of Japanese startups in the coming years. Perhaps the most telling evidence for this is the fact that the Japanese government itself sees the need for a better-developed entrepreneurial environment and is actively implementing policies and actions to stimulate and support startup activity. If history is any indication, Japan will once again absorb the best practices from the global innovation ecosystem and cultivate a new generation of successful entrepreneurs.

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APPENDIX

Povzetek v slovenščini

Vse od zametkov Interneta se svet giblje vse hitreje in hitreje na poti v globalizirano družbo. Tehnološka zmogljivost digitalne komunikacije na takorekoč katerikoli lokaciji na Zemlji v realnem času je odprla doslej nepredstavljive priložnosti, tako za posameznike, kakor tudi za podjetja. Četudi se s političnega vidika morda med seboj oddaljujemo, postaja poslovni svet čedalje bolj povezan. Eksponentno rast pojava digitalne globalizacije še zlasti bolj opazamo in občutimo v 21. stoletju, ko postaja neprisotnost posameznika na spletnih družbenih omrežjih že prava redkost. Po poročanju statističnega agregata Statista.com je imelo vodilno svetovno družbeno omrežje, Facebook, aprila leta 2016 kar 1,59 milijard aktivnih uporabnikov. Velikan mobilnih iger, finsko-ustanovljeni Supercell je imel marca leta 2016 100 milijonov aktivnih uporabnikov na mesec, njegov letni prihodek za leto 2015 pa je presegel dve milijardi evrov v industriji z ocenjeno skupno tržno vrednostjo 30 milijard evrov. Proizvajalec električnih avtomobilov Tesla Motors je samo v prvem tednu prejel kar 325.000 naročil za svoj novi Model 3, kar predstavlja največji začetek prodaje doslej. Vsa našeta podjetja so bila ustanovljena po letu 2003 in le stežka bi si v preteklosti predstavljali tako vrtoglavo rast. Vsa tri podjetja so do danes zrasla v mednarodne korporacije, vendar so bila ustanovljena kot startupi.

Pričujoče diplomsko delo bo pod drobnogled postavilo trenutno stanje v svetu startupov, inovacijskega sistema in tveganega kapitala na Japonskem. Zgodovinsko gledano je bila Japonska od nekdanj nekoliko posebna in kaže, da to drži še danes. Če vemo, da se mnoge razvite evropske države v zadnjih letih soočajo z visoko stopnjo brezposelnosti, ki ljudi spodbuja k iskanju uspehov v podjetništvu, na Japonskem doživljajo pomanjkanje delovne sile. Poleg tega so japonska podjetja znana po svojem nenehnem vlaganju v interne raziskave in razvoj, ki je prinašalo nove in nove inovacije in produkte, s pomočjo katerih so ohranjala svojo konkurenčno prednost. Kaže, da slednje ne drži več – marsikatero japonsko podjetje danes le stežka konkurira korejskim in kitajskim tekmečem. Kaj torej poganja podjetniško inovativnost na Japonskem, v kakšni obliki ta poteka in v katerih panogah? Kakšna je vloga tveganega kapitala v tej zgodbi? To so nekatera od vprašanj, na katera si ta naloga prizadeva odgovoriti.

Obenem bo diplomsko delo skušalo razložiti zbrane podatke s pomočjo umestitve v kontekst znanih karakteristik in značilnosti japonske poslovne kulture. Mnogi strokovnjaki z različnih področij poslovnih ved se namreč strinjajo, da so tradicionalne japonske vrednote in kultura zaznamovale razvoj tamkajšnjega organizacijskega vedenja in odnosov med deležniki v poslovnem ekosistemu. Kako se kažejo kulturne posebnosti, kot sta nenaklonjenost tveganju in skupinska mentaliteta, v pojavu sodobnega podjetništva? S kakšnimi težavami se zaradi tega sooča japonsko podjetništvo? Ali morda po drugi strani obstajajo kakšne dobre poslovne prakse, ki so značilne za podjetniško kulturo na Japonskem, ki bi jih bilo smiselno prenesti v Zahodno poslovno kulturo?

Zaključek diplomskega dela bo namenjen kritičnemu razmisleku o dognanjih. Predstavila bo pričakovanja glede prihodnosti na področju japonskega inovacijskega sistema ter ponudila nekaj smernic za izboljšave in izmenjavo dobrih praks.

Metodologija. Narava izbrane raziskovalne teme je takšna, da rezultat smiselno združuje teoretična in empirična dognanja skozi celotno delo. Osnovo raziskovanja tvori kombinacija primarnih in sekundarnih virov. Teoretično podlago diplomskega dela sestavljajo monografije in članki na temo startupov in tveganega kapitala ter organizacijskega vedenja, poslovnih običajev, podjetniške kulture in ekonomske zgodovine na Japonskem. Vprašanja in domneve, opisane v uvodu povzetka, so bile proučene s pomočjo rezultatov, objavljenih s strani uveljavljenih raziskovalnih inštitucij in podjetij, ter uradnih statističnih podatkov. Empirični del raziskave je bil opravljen zlasti s pomočjo individualnih intervjujev s partnerjema v dveh različnih družbah tveganega kapitala, z enim podjetnikom in enim akademskim raziskovalcem. Avtorica dela se je udeležila več poslovnih dogodkov, povezanih s startupi, kjer je imela možnost v neformalnem okolju govoriti s številnimi udeleženci. Za dopolnitev ugotovitev iz intervjujev so bile uporabljene tudi objave v medijih, kot so blogovski zapisi vplivnih predstavnikov startup ekosistema na Japonskem in poddaje (ang. podcast) z intervjuji startup podjetnikov ter drugih deležnikov ekosistema.

Struktura in obseg. Diplomsko delo je sestavljeno iz uvoda, sedmih vsebinsko zaokroženih poglavij, zaključka in povzetka. Prvo poglavje služi kot uvod in definira ključne koncepte in žargon, ki se uporabljajo v startup industriji. Opredeljuje 'startup' v smislu tega diplomskega dela kot visokotehnološko zagonsko podjetje, ki ni starejše od petih let, ima manj kot 100 zaposlenih, je ovrednoteno pod 500 milijoni ameriških dolarjev in s predvidenimi prihodnimi prihodki, ki ne presegajo 50 milijonov dolarjev v 12 mesecih. Drugi opredeljeni termini tega poglavja vključujejo tehnološki poslovni inkubator (angl. technology business incubator, ali TBI), njegovo podvrsto podjetniški pospeševalnik ter tvegani kapital.

V drugem poglavju je predstavljeno zgodovinsko in kulturno ozadje podjetništva na Japonskem. Prvo podpoglavje opisuje faze ekonomskega razvoja Japonske od obdobja Edo (1600-1868) dalje vse do 21. stoletja. Opisuje tranzicijo japonskega gospodarstva iz fevdalne ureditve skozi obdobje intenzivne in načrtne industrializacije, ki je v obdobju Meiji (1868-1912) z reformami, ki so med drugim uvedle tudi osebno lastnino in pravno obliko delniške družbe, omogočila začetke akumulacije kapitala in s tem postavila temelje za razcvet modernega podjetništva. V nadaljevanju je opisan pojav t.i. »japonskega gospodarskega čudeža« v obdobju po drugi svetovni vojni, ko je Japonska presenetila z bliskovitim razvojem in okrevanjem gospodarstva ter do 70. let preteklega stoletja postala tretje največje svetovno gospodarstvo. V tem delu je kot zgodnji primer dobre prakse in še danes zgled za japonska podjetja opisano podjetje Sony. Zgodovinski pregled se dotakne še vzrokov ter posledic balona, ki je s svojim pokom v začetku 90. let Japonsko pahnil v večletno obdobje negativne inflacije in recesije. Drugo podpoglavje proučuje odnos do podjetništva v japonski kulturi. Močno prisotna pojava strahu pred neuspehom in nepripravljenost prevzeti tveganje, o katerih pišejo tudi strokovni viri, sta podprta s konkretnimi rezultati svetovne raziskave Global Entrepreneurship Monitor in empirično pojasnjena z izsledki intervjujev.

Tretje poglavje opisuje značilnosti japonskih startupov in kaj jih ločuje od podobnih podjetij drugod po svetu. V tem delu je opisan pojav samorogov (angl. *unicorn*), kjer gre za podjetje z valuacijo nad 1 milijardo dolarjev, in kako se ta kaže na Japonskem. Poglavje vključuje pregled gospodarskih panog, v katerih se najpogosteje pojavljajo startup podjetja. Posebna pozornost v zadnjem delu poglavja je namenjena pregledu vrste ustanoviteljev startupov, in sicer samostojnim podjetniški iniciativam, t.i. spin-out podjetjem ter univerzitetnim spin-off podjetjem. Vsaka od omenjenih vrst startupov glede na ustanovitelja vključuje tudi opis konkretnega primera podjetja.

Tema četrtega poglavja je tvegani kapital na Japonskem. Poglavje podrobno opisuje razvoj tveganega kapitala na Japonskem in trenutno stanje v panogi, ki jo povezuje združenje Japan Venture Capital Association. Proučuje različne preference japonskih vlagateljev tveganega kapitala, zlasti višino investicij, ciljne panoge, geografsko razpršitev investicij in razvojno stopnjo podjetij, ki prejmejo investicije. Drugi del poglavja je namenjen aktivnosti tveganega kapitala v velikih podjetjih, ki je na Japonskem močnejše prisotna in vplivnejša kot v drugih razvitih državah. Na koncu se poglavje dotakne še trendov na področju izhodnih strategij za prodajo startupov. Za japonske startupe je namreč bolj značilna umestitev delnic na borzo s pomočjo začetne javne ponudbe (angl. *initial public offering* ali *IPO*), kot pa korporativni prevzem (angl. *acquisition*).

Peto poglavje se ukvarja z ostalimi deležniki startup ekosistema, vključno z inkubatorji in pospeševalniki, specializiranimi mediji, ter vladnimi ukrepi za spodbudo podjetništva. Kot posebnost je opisan projekt Fukuoka Startup City, v okviru katerega želi japonska vlada s pomočjo davčnih olajšav, podpore tujim podjetnikom ter javno-zasebnih partnerskih pobud razviti lokalni ekosistem v metu Fukuoka.

Šesto poglavje proučuje vpliv tujih organizacij, kot sta finski organizator startup konference Slush in ameriški sklad tveganega kapitala 500startups, na razvoj japonskega ekosistema. Obenem pa poglavje omenja tudi iniciativo japonske vlade za tesnejše povezovanje, učenje in prevzem dobrih praks s strani podjetij in organizacij v kalifornijski Silicijevi dolini.

Sedmo poglavje povzema glavna dognanja o vprašanjih, s katerimi se soočajo japonski startupi, nakazuje smernice razvoja ekosistema v prihodnosti, in podaja napotke za nadaljnje raziskovanje. Največje težave startupov na Japonskem so namreč zakoreninjene v tamkajšnji kulturi in družbi, saj težje kot drugod najdejo kakovostne človeške vire in vire financiranja rasti podjetja.