

Private Equity

China's Venture Capital (VC): Bigger than Silicon Valley's?



By Ariel Lu, Jessie Chen and Frank Fu (INSEAD MBAs '18J)
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This report was prepared by Ariel Lu, Jessie Chen and Frank Fu (MBA Class of June 2018) under the supervision of Claudia Zeisberger, Academic Director of the Global Private Equity Initiative (GPEI) and Professor of Decision Sciences and Entrepreneurship and Family Enterprises at INSEAD.

Executive Summary

As of 2018, China is the second largest venture capital (VC) market in the world by aggregate deal value and number of unicorns, after the United States.

Fueled by the global aspirations of the government, entrepreneurs, and investors, **China's VC market is likely to overtake that of the US as world number one in aggregate deal value by 2019 or 2020**, which would be a significant milestone in VC history.

Behind this unprecedented growth are three main drivers:

The first driver is **the strong government** which is implementing favorable policies related to institutional mechanisms, pilot zones, equity markets, and a protective economy to facilitate mass entrepreneurship. Additionally, the Chinese government has injected a noticeable amount of capital into the VC market.

The second driver is **the flourishing private sector**. Increasing financing sources, rising private wealth, an abundant stream of talent, and rapid technological advancement are all pushing the VC market even further.

The third and last driver is the **immense market demand**. The fast-growing online market and the upgrading of manufacturing capabilities have generated a comprehensive start-up ecosystem across the country.

While the United States' VC market is primarily driven by technological advancement, China's VC market is predominantly driven by the government.

We expect **continuous expansion** of China's VC market. However, the pace of future growth will be subject to the **completeness of the VC ecosystem and the stability of the political environment**.

1. Venture Capital in China

1.1 Definitions of Terms

For the purposes of this report, we define venture capital (VC) investments/ deals according to Preqin's categorization as completed investments /deals made directly in private companies registered in China from "seed" round until an eventual exit event, such as the company selling shares to the public for the first time in an initial public offering (IPO) or it becoming part of a merger or acquisition exclusive of the company.

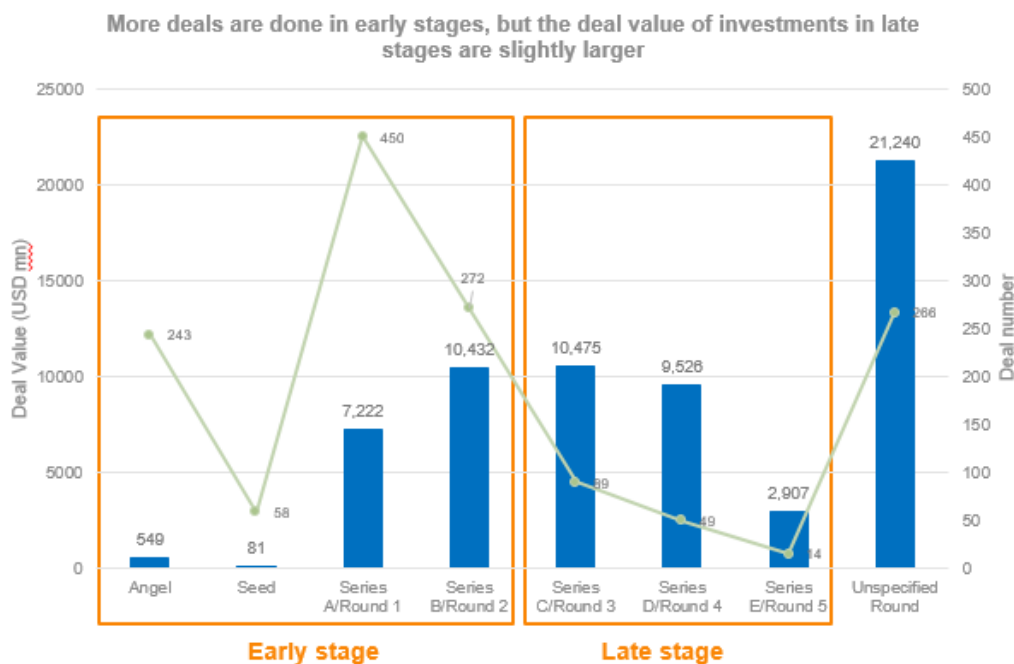
Other key definitions:

- **Investors:** The report only covers institutional investors, including family offices but excluding individuals.
- **Investment status:** The report only covers completed deals, excluding deals that were announced but not completed by the end of 2017.
- **Investment portfolio:** The report only covers deals made directly in private companies registered in mainland China.
- **Stages:** Our definition of VC investments stages include early stages (Seed, Angel, Series A and B) and late stages (Series C, D, and onwards), and stages that fit the above definition but have not yet been specified by public disclosure. We exclude add-on, grant, growth capital, expansion, merger and acquisition, private investment in public equity, secondary stock purchase and venture debt.

1.2 Characteristics of VC Investments in China in 2017

Using the above definitions and Preqin's database, we found that a total amount of US\$62 billion was invested in 1,441 venture deals in 2017. Setting aside VC investments whose stages were not disclosed, over 87% of these deals were completed in early stages (Seed, Angel, Series A or B), and only 13% in late stages (Series C, D or later).

The deal value of early-stage investments accounted for 44% of the total VC deal value while late-stage investment accounted for 56%.



Source: Preqin

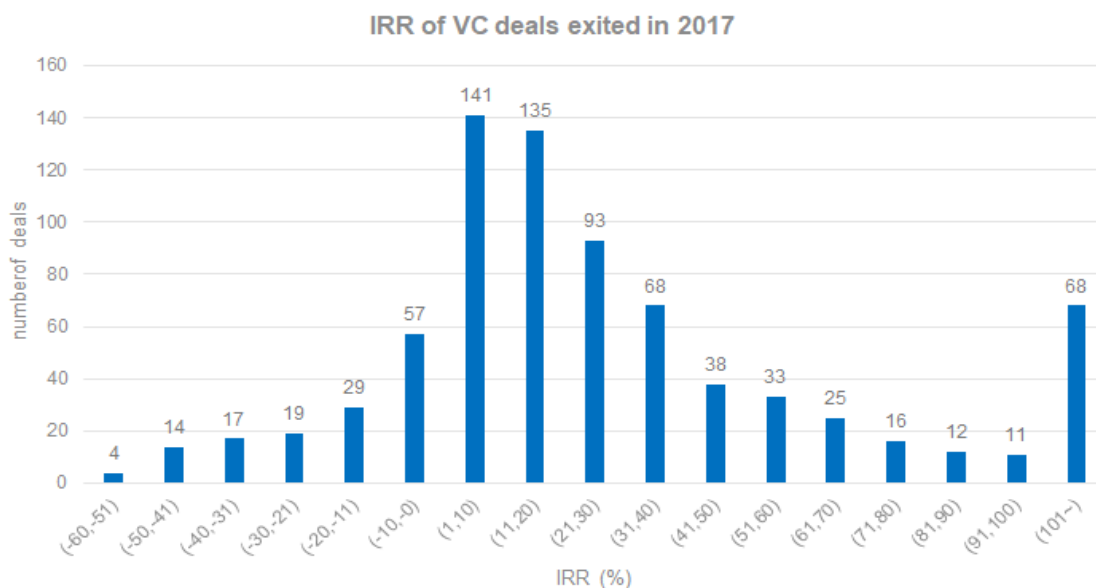
Among the top 10 largest deals completed in 2017, the US\$5.5 billion investment in Didi Chuxing ranked the largest¹. Others in the top 10 included Another round of investment in Didi Chuxing, Meituan-dianping, Toutiao², Ready-go, Koubei, Nio and Eleme. The smallest of the top 10 was the ~US\$800 million investment in Cainiao Network completed by Alibaba Group.

We could not find sufficient data in terms of the return on these 2017 investments. In order to take a further look at investment returns, we used the exited deals in

¹ The biggest and the second biggest investment were both investment in Didi Chuxing, one of which was conducted in April 2017, and the other was in December 2017.

² Two investments in Toutiao were also among the top 10 deals, one of which was in April 2017, and the other was in August 2017.

Zero2IPO's database. Based on this data, we found that 82% of the 780 VC deals exited in 2017 achieved a positive IRR (see figure below).

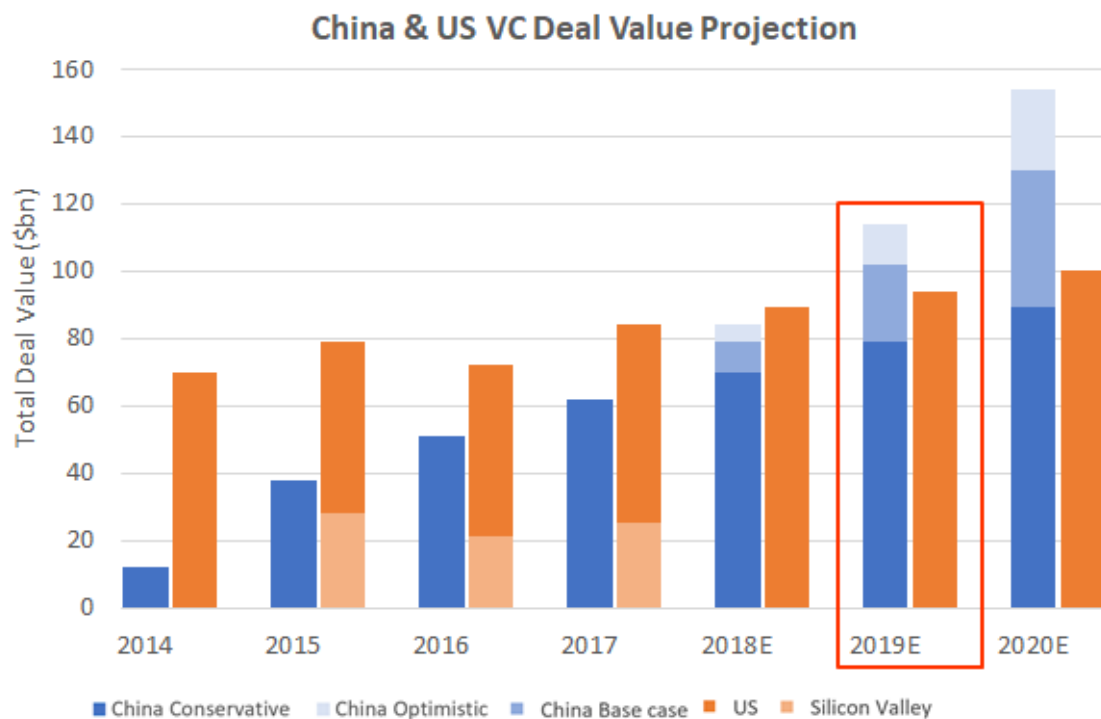


Source: Zero2IPO

1.3 Projection of VC Investments in China compared to the US

China's VC market is expected to grow at a rate faster than the US. In 2017, China's VC deals totaled US\$62 billion while US's was approximately US\$84 billion, i.e., the VC market in China was about 74% the size of that in the US. According to our projections using historical data³, we expect US's VC deal value to continue to grow at a compound annual growth rate (CAGR) of 6% and reach US\$100 billion in 2020, while China's will grow at a higher CAGR of 28%, overtaking the US as world number one in terms of aggregate deal value in 2019 and reaching US\$130 billion in 2020. The following figure shows the conservative scenario (14% CAGR) and optimistic scenario (35% CAGR) for China as a comparison.

³ Due to the constraint of data availability, we used data in Pitchbook to calculate the US's VC CAGR and data from Preqin to calculate China's CAGR.



Source: Preqin, Pitchbook, PricewaterhouseCoopers

To build the above projection, we assumed US’s VC deal value will grow at a steady rate of 6% annually, which is the most recent 3-year CAGR (2014–2017). We believe this is a good estimation as US’s VC is a mature market and a 3-year horizon provides a good indicator for the short-term (3 year) trend.

We assumed China’s VC deal value to grow at 28% annually, which is the CAGR of the last 2 years. The deal value in China has slowed down in the last 2 years because the initial aggressive investment behavior and government stimulation effect of 2014–2015 has cooled down. The most recent 2-year trend (2015–2017) excludes the low base in 2014, and we believe it is more organic and sustainable. In addition, considering that in

2017, VC investment growth globally was around 28%,⁴ with China's strong GDP growth as fundamental support, 28% can be considered as the base-case scenario for growth.

To compare the prediction under different scenarios, we also hypothesize that under a conservative scenario the CAGR is half that in the base case (i.e., 14%), and that under an optimistic scenario the CAGR will be 1.25 times that of the base case (i.e., 35%).

Under the conservative scenario, the US will still be the leader in terms of the deal size over the next few years. Under the optimistic scenario, China will exceed the US even more than under the base case.

There are a number of risks associated with the China's VC market projection, which will be discussed in the fourth part of the report. Any major policy change and economic shift could significantly impact the base case growth rate we have assumed. However, we believe the fundamental factors remain strong in the short term: increased supply of funding available from an upcoming wave of exits, limited alternative investment options available to Chinese investors, and large proportion of dry powder at government guidance funds will still be the key drivers behind the strong growth projection.

One result of the strong VC investment in the past few years is that the number of Chinese unicorns has boomed. As of September 2017, among the world's top 10 valued unicorns in 2017, 4 are in China and 6 are in the US.

⁴ Georgina Lee, "Chinese companies account for half of top 10 biggest venture capital financing deals in 2017," *South China Morning Post*, January 10, 2018, <http://www.scmp.com/business/article/2127624/chinese-companies-account-half-top-10-biggest-venture-capital-financing>

1.4 Unicorns: China is Catching Up with the US

Company Name	Valuation (\$bn)	Country
Uber	68	US
Didi Chuxing	50	China
Xiaomi	46	China
Meituan	30	China
AirBnB	30	US
SpaceX	22	US
Palantir	20	US
WeWork	20	US
LU.com	19	China
Pinterest	12	US

For further details into the unicorns in China, we referred to a *China Unicorn Business Development Report* issued by a Chinese government affiliate (Torch Center of the Ministry of Science and Technology) and the *Study Report on Unicorn Companies in the U.S. and China* by Deloitte and ChinaVenture⁵. The former indicates that China has 164 unicorn companies valued at a total of US\$628 billion, surpassing the US in terms of the number of unicorns. The latter report listed 98 unicorns valued at a total of US\$418 billion (see Appendix 1).

⁵ "Study Report on Unicorn Companies in the U.S. and China", September 6, 2017, jointly released by Deloitte and ChinaVenture, <https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/deloitte-private/deloitte-cn-cvinfo-china-us-vc-pe-companies-report-zh-170906.pdf>

2. What Is Driving the Momentum of China's VC Investments?

The remarkable growth of VC investments in the past few years has caught the eyes of global investors. What are the driving forces behind it? Is this growth just a short-term bubble or is it a sustainable trend? In this report, we take a deep dive and identify ten critical drivers behind China's VC growth.

2.1 Strong Government

The top-down approach adopted by China's credible and stable government has always played a critical role in its economy. The current wave of public entrepreneurship is no exception, and VC is the engine to propel the growth of entrepreneurship and innovation.

Since 2011, GDP growth in China has slowed and the youth unemployment rate has risen year after year. During the same period, the transition away from the critical manufacturing industry toward services has added to the complexity of economic recovery (see Appendix 2 for more on macroeconomic conditions). The Chinese government realized that a long-term plan of supporting innovation and entrepreneurship could be a one-stop solution to stimulate the economy, enhance structural reforms, and reduce unemployment.

On September 2014, Premier Li Keqiang addressed the opening ceremony of the eighth Summer Davos Forum. It was the first time that concepts like "innovation by all" and "grassroots entrepreneurship" were raised by the government. Since then, Premier Li Keqiang has stressed similar themes on several other occasions, including in the Government Work Report, strongly signaling that the government would direct the whole country to propel mass entrepreneurship and innovation.

On June 2015, to boost mass entrepreneurship and innovation, the State Council issued an opinion which was considered as a high-level government strategic guideline for the

country. The document proposed supportive measures such as revamping institutional mechanisms, intellectual property protection, attracting talent, revising financial policies, and optimizing financial markets. Following that, government departments of different functions and regions announced more detailed regulations and guidelines to push forward. (Appendix 3 lists a summary of policies supporting the development of mass entrepreneurship and innovation.)

On top of these new policies, others were enacted aimed at improving institutional mechanisms, providing funding in the form of government guidance funds, investing in infrastructure and facilities, regulating equity markets in favor of tech companies, and protecting domestic companies with a closed economy policy.

2.1.1 Institutional Mechanisms

Various indexes indicate that the push for improvement of institutional mechanisms in China has been effective. For example, removal of business registration barriers has brought about a boom in setting up new entities. Data released by the State Administration for Industry and Commerce of the People's Republic of China (SAIC) showed that in 2017, 19.25 million new entities were registered (including new companies and individually owned business), up 16.6% from the year before (see Appendix 4, which lists significant improvements in institutional mechanisms).

2.1.2 Funding: Government Guidance Funds

In what may be one of the most significant experiments ever attempted in using state capital to reshape a nation's economy, for 10 years the Chinese government has been injecting a notable amount of capital directly or indirectly into start-ups, using what it terms "guidance funds."

In 2008, the National Development and Reform Commission officially defined guidance funds as "a type of policy fund that is established by the government and managed in market-oriented fashion with the aim to...attract more capital investment in start-ups." Most important, government guidance funds were not designed to make direct investments in a company, but to serve as seed or anchor capital for the establishment of one or a group of funds-of-funds, which incubate a cluster of subsidiary funds with the participation of private capital to make direct investments in companies. The objective of government guidance funds is to stimulate growth in areas where China hopes to innovate, such as the Internet, big data, and clean energy.

At the end of 2016, there were more than 1,000 such government budget-seeded vehicles, which targeted a total leveraged social capital⁶ of RMB5.3 trillion (US\$798 billion) that year, up 30% and 144% year-over-year, respectively, according to a Bank of China report⁷. The combined number of vehicles and fundraising targets of funds launched in 2016 exceeded the combined number and fundraising targets of all funds established from 2013 to 2015. The 2016 fundraising target was equal to 32% of all assets managed by the global private equity and venture capital industry, 7.1% of China's GDP, or slightly more than the GDP of the Netherlands, the world's 18th-largest economy. (See Appendix 5 for the trend in Chinese government guidance funds and their attributes.)

In addition, there has been an emergence of massive policy funds established by the government with a mandate to make direct investments to support a single policy initiative or industry. Examples include the Silk Road Fund, a US\$40-billion state-owned investment fund to foster investment in countries associated with the "One Belt, One

⁶ The aggregate fundraising total of the subsidiary fund cluster, *total leveraged social capital* is usually around five to a dozen times that of the top-tier total fundraising amount.

⁷ "Macroeconomic Insights", September 26, 2017, Bank of China International Research, http://www.boc.cn/fimarkets/summarize/201709/t20170929_10366978.html

Road" strategy, and the National Integrated Circuits Industry Investment Fund that accumulated RMB139 billion (US\$21 billion) in its first phase.

However, the target size of government guidance funds is often exaggerated, with aims for total leveraged social capital so high they would be impossible to achieve. For example, the Yangtze River Industry Fund established by Hubei province, currently the largest government guidance fund, has set a target of RMB1 trillion in total leveraged social capital—around one-third of the entire province's 2016 GDP of RMB3.2 trillion.

2.1.3 Infrastructures and Facilities

National high-tech industrial development zones were very early examples of the government developing dedicated areas to support technology innovation. In 1988, the Chinese government launched the Torch Program, a national high-tech industry development plan, and built the first national high-tech industrial development zone, which aimed to nurture high-tech industries ranging from biomedicine to electronics. According to statistics from the Ministry of Science and Technology, by February 2017 China had developed 146 state-level high-tech zones, generating trillions of RMB in revenue each year.

The Chinese government also encourages the establishment of high-tech business incubators and makerspaces where entrepreneurs can get the funding, mentoring, sourcing, and other resources they may need to bring their start-ups up to speed. According to data released at a forum to mark the 30th anniversary of China's first high-tech business incubator, the country had 3,255 incubators and 4,298 makerspaces as of the end of 2016. These programs benefited about 223,000 small or medium-sized enterprises (SMEs), among which 1,871 companies were listed or debuted.

Another initiative is to appoint some areas or institutions, called “demonstration bases,” to serve as experiment fields to a group of national and provincial enterprise technology centers and research institutes. The entities within the bases enjoy preferential policies such as tax deductions and opportunities to expand to new markets, and are expected to set best practices for innovations. The first group of 28 bases is already in operation, with a second group of 92 bases already announced by the government, including 45 regional demonstration bases, 26 university and research institute demonstration bases, and 21 corporate demonstration bases.

2.1.4 Evolving Equity Markets

Until recently, it was difficult for technology companies to go IPO in mainland China because companies had to reach a certain threshold of profitability or growth before they could be listed, and the structure of dual-class shares or a variable interest entity (VIE) was banned in the equities market. Nevertheless, noticing a growing trend that some of the world’s most successful technology companies had been forced to list themselves overseas under such restrictions, the Chinese government launched a pilot program intended to bring these giants back. One aspect of the trial was to allow some qualified companies to issue Chinese Depositary Receipts (CDRs). Several media recently went through the above-mentioned list of China’s 164 unicorns, and concluded that about 30 of them are eligible for the trial.⁸

Meanwhile, the Stock Exchange of Hong Kong (SEHK) recently published a consultation paper⁹ seeking public feedback on its proposed new rules to extend the existing listing regime to facilitate listings of companies from innovative sectors. The new rules focus on

⁸ “Unicorns are allowed to return to A share market by using dual-right shares and VIE,” *Security Times*, March 30, 2018. Available at: https://news.caijingmobile.com/article/detail/357233?source_id=40

⁹ <https://www.hkex.com.hk/-/media/HKEX-Market/News/Market-Consultations/2016-Present/February-2018-Emerging-and-Innovative-Sectors/Consultation-Paper/cp201802.pdf?la=en>

biotech firms, companies with weighted voting right (WVR) structures, and the new concessionary secondary listing route.

SEHK's proposed new rules put more exit options for VC investors on the table. It is expected that Chinese retail investors, who are quite active in the stock market, will now also be able to participate in the prosperity of home-made Chinese tech giants.

2.1.5 A Protective Economy

Protective policies help China enterprises in two ways: they keep global competitors out of the country, and the capital in.

China's Great Firewall has been a blessing for some domestic tech giants such as Baidu and Tencent since it has kept global competitors like Google and Facebook outside. With this protection, Baidu and Tencent could grow their user base and capability.

At the same time, China has strict foreign exchange and capital controls. Although China has been moving towards a more flexible currency system, the Chinese currency, RMB, is still not a freely convertible currency. For individuals, there is a cap of US\$50,000 per year for foreign currency exchange. And companies, whether for inward or outward foreign currency transactions, are required to make a timely application to the bank to declare the nature of each business transaction.¹⁰ The currency exchange control traps the money within China, which adds to the investable capital for ventures.

2.2 A Flourishing Private Sector

The top-down initiatives are echoed by the inherent spirit of entrepreneurship in the private sector. Several clusters in metropolises such as Beijing, Shanghai, and

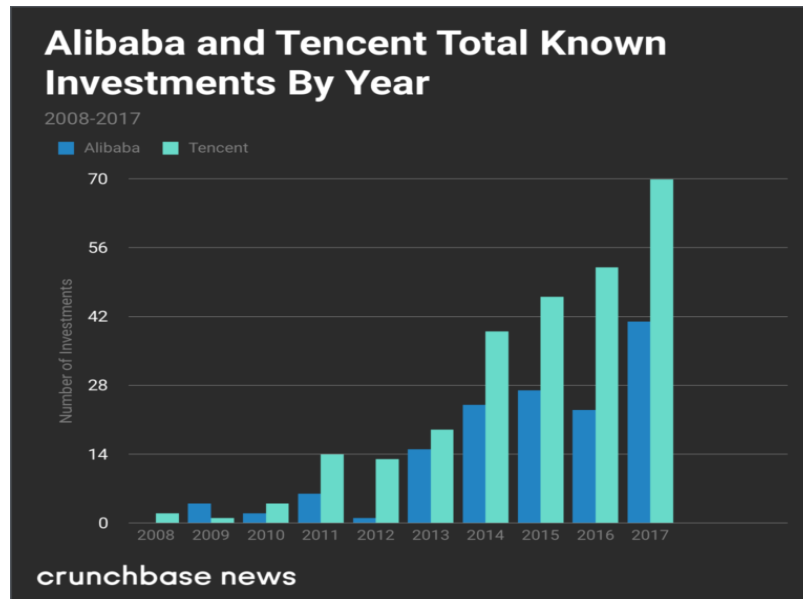
¹⁰ "Foreign exchange controls in China", September 21, 2017, The Canadian Trade Commissioner Service, <http://tradecommissioner.gc.ca/china-chine/market-facts-faits-sur-le-marche/50775.aspx?lang=eng>

Shenzhen, as well as in second-tier cities like Hangzhou, have gradually formed ecosystems embedded with active funds, large enterprises, and entrepreneurs. The increasing financing sources, flourishing private wealth, limited investment options, abundant stream of talent, and rapid technology advancement all combine on the supply side to push the volume of VC investment high.

2.2.1 Active Corporate VC Investors

Apart from the robust online financing and independent VC investors, tech giants such as Tencent, Alibaba, Baidu, Xiaomi, and JD have also become active players in building their investment portfolio in the past few years. A report by Crunchbase¹¹ suggested that in recent years Tencent and its subsidiaries have participated in 265 known investment rounds, 80% of them post-2013, while Alibaba and its subsidiaries have participated in 147 known investment rounds, 70% of them after its 2014 IPO. These investments are also aligned with the timing of the government's fostering of mass innovation and entrepreneurship. These titans cash out from successful exits and then re-invest their returns in new portfolios, forming a circulation that benefits both themselves and entrepreneurs.

¹¹ "Huge Rounds, Heated Competition: How Tencent & Alibaba Are Defining VC In China", January 21, 2018, Crunchbase news, <https://news.crunchbase.com/news/huge-rounds-heated-competition-tencent-alibaba-defining-vc-china/>



Source: Crunchbase

2.2.2 Private Wealth Growth with Limited Investment Options

China has become the second largest individual asset market after the US. According to Citi Research, the total size of China's individually held investable assets in 2018 is five times what it was a decade ago, reaching RMB 188 trillion (about USD\$30 billion). Citi also estimates that the total middle-class population in China will reach 803 million by 2025, making up 86% of the urban population.¹²

Despite the growing wealth of both corporations and individuals, Chinese investment instruments are limited. As the government restricts investment in real estate and capital outflow, most cash can only be pumped into the domestic financial market and venture investments.

¹² "Citi unveils new Citigold experience in China," Citigroup, March 20, 2018. Available at: <http://www.citigroup.com/citi/news/2018/180320a.htm>.

2.2.3 An Ample Supply of Talent

The number of college graduates in China has been steadily increasing over the last decade, with a CAGR of 4.63%, and the number of master's and Ph.D. graduates indicates an even higher CAGR of 6.07%. The growing number of graduates provide a stable supply for economic growth but also put pressure on the job market. In 2003, the General Office of the State Council issued a document that encouraged college graduates to start their own businesses and find flexible employment. In 2017, policies such as administrative or management fees exemption and the awarding of beneficial microloans and loan guarantees were implemented by local governments to support such initiatives.

Returnees who have studied abroad also add to the force of high-end talent. The number of people who decide to return to China after studying abroad has increased, with a CAGR of 25.67% over the last decade. This trend is attributed to China's fast economic growth and its favorable government policies. In 2008, the central government launched the Recruitment Program of Global Experts (known as "the Thousand Talents Program"), aiming to bring back high-end technology scholars and professionals who were born in China. Other policies such as tax exemption for car purchases, preferential residency, and more than 300 entrepreneurial industrial parks dedicated to overseas returnees have all attracted overseas Chinese to come back.¹³

China's increasing number of highly and internationally educated people (see Appendix 6) is making it possible for the country to raise its status in the high-technology sector.

¹³ "Why do they return to China?" News.163.com, October 20, 2017. Available at: <http://news.163.com/17/1020/05/D15SJ8EA0001875N.html>.

2.2.4 Booming Technology

China is experiencing a critical transition to catch up with advances in high-tech. Higher proportions of high-tech goods among total exports and of high-tech goods among total imports and the soaring number of Chinese patents reflect China's booming technology sector. By 2017, high-tech goods made up of about 51.95% of all manufactured goods exports, and import of high-tech goods rose to 54.73% of total imports (see Appendix 7). From 2011 to 2015, China's invention patent ownership increased to 6.3 per 10,000 people. The number of national registrations of copyright increased overall by 95.9%, and the number of computer software copyright registrations increased by 282.5%.

The structural upgrade is partially attributable to expanding R&D spending. Absolute R&D spending in China is ranked second after that in the United States. After steep R&D spending increases starting in 2000, the ratio of R&D to GDP has begun to level off, reaching 2.11% in 2016, an increase of 0.05% compared to 2015, as it has gradually converged to the level of an advanced economy (see Appendix 7).

In the wave of mass entrepreneurship and innovation, the technology boom has motivated more people to start their own businesses by integrating their intellectual assets. Furthermore, it has helped to solve bottlenecks in existing ecosystems and hence paves the way for creating new businesses.

2.3 Immense Market Demand

The fast-growing middle-class, smartphone adoption rate and online market expansion, and need for upgrades in traditional industries are stoking the appetite for new technologies and innovation.

The domestic market in China is massive, and people's increasing income and transition to online shopping has resulted in a rise in consumption, and especially online consumption (see Appendix 5). By the end of 2017, the number of internet users had reached 772 million, among whom 553 million were online shoppers (including mobile online shoppers) and 531 million used online payment (including mobile payment).

Chinese consumers have high willingness to try out new technologies in many areas. (See Appendix 8 for more on recent consumption trends in China.) Nevertheless, regulations set by the government and unfamiliarity with the Chinese market have both kept foreign providers outside the country.

Coinciding with the phenomenal demand in the private sector, the manufacturing industry in China is going through a revamp. The upgraded manufacturing industry has created a comprehensive supply chain which allows entrepreneurs to access almost any components and ingredients they may need for their business.

Given the favorable environment, Chinese start-ups have gradually developed their own ecosystem to satisfy the tremendous demand and have scaled up at an unparalleled speed. Although some of them initially launched products that were similar to existing models in other countries, they have now localized and shifted to unprecedented business models.

3. The Comparison Between Silicon Valley and China

As we witness China starting to catch up with the US in VC investment over the past few years, we want to figure out whether Chinese momentum is being achieved in a different way. As Silicon Valley is well known as the best representative of US innovation and

entrepreneurship, we will make a comparison between our discoveries described above and the drivers behind Silicon Valley. Our findings are a mix of both difference and similarity.

3.1 Different Key Drivers: US Technology Advancement and the Chinese Government

The development of the VC market in the Silicon Valley is mostly driven by technology advancements, while that in China is predominantly driven by the government.

The creation of Silicon Valley can be traced back to Nobel Physics Prize winner William Shockley's invention of the transistor in 1940. In 1956, he founded Shockley Semiconductors, the first silicon semiconductor devices business, which recruited top engineers from all over the country. Some of them, known as the “traitorous eight,” later founded Fairchild Semiconductor, Intel, AMD, Nvidia, and Kleiner Perkins, all pioneers of modern tech companies.

In the last few years in China, the government has striven to replicate the success of Silicon Valley. It has set holistic strategies to encourage technological advancement and proposed the concept of “mass entrepreneurship and innovation,” issuing a series of related policies and even providing funding to encourage the private equity market.

In the US, the role of the government was more that of catalyst and supporter. To react to the launch of the Soviet Sputnik satellite, the US Congress passed a law in 1958 which officially allowed the US Small Business Administration (SBA) to license private Small Business Investment Companies (SBICs) to aid in the financing and management of small entrepreneurial businesses in the United States. Some VC giants such as Sequoia Capital were established at that time.

Influenced by the different role played by their government, Chinese venture capitalists see themselves more as mediators between entrepreneurs and the government to remove barriers to growth than as enablers and financiers in the vein of US venture capitalists.

3.2 Similarity: Entrepreneurial Spirit and Ecosystem

Despite their distinct origins, venture capitalists in both the United States and China are supported by their countries' entrepreneurial spirit and a well-rounded ecosystem.

In Silicon Valley, the young talents from Stanford University became a stream of fresh blood to the promising technology business. During World War II, Fred Terman, a former faculty member at Stanford, joined in top-secret electronics research for the military.

After the war, he realized that the results of war-time research could be resources for the expansion of post-war industrial power, and encouraged his colleagues and students to commercialize their ideas. Since then, Stanford has built a firm connection with the tech industry and has implanted the entrepreneurial spirit into its students.

In China, entrepreneurship is a heritage legacy. Over the past several centuries, ethnic Chinese built up a thriving business environment not only in China but across Southeast Asia as well. Nowadays, home-grown giants like BAT (Baidu, Alibaba, and Tencent) and other ascending unicorns have become the idols inspiring younger generations to enter the entrepreneurial world.

Regarding the ecosystem, Silicon Valley provides a closed environment in which to exchange talents, ideas, and capital. In China, scattered incubators and high-tech parks are trying to replicate this kind of entrepreneurship environment. On a broader scale, quite a few positive signs indicate that this start-up ecosystem is moving into a

prosperous cycle. For example, as mentioned earlier, successful entrepreneurs act as role models and mentors; the developed tech giants also have their Corporate Venture Capital (“CVC”) investments and co-invest in other funds, which adds fuel to the fire. In addition, the upgrading of manufacturing capabilities has generated comprehensive industry value chains as well.

4. Challenges and Risks

At this stage, the question is whether all the efforts the Chinese government has made can build up a sustainable ecosystem like Silicon Valley’s. We talked with several people from different fields, and all of them were optimistic about what the next few years will bring. Meanwhile, when we drill down into those drivers, we need to stay on the alert for several risks.

4.1 Government Guidance Funds

The growth spurt of government guidance funds in 2015 and 2016 brought about a round of VC growth. However, in 2017, as the approval process of government guidance funds slowed down, it became more difficult for ventures to raise funds. It is impossible for the government to continue granting guidance funds on the same large scale as before, thus whether the VC market can maintain its fast growth pace is in question.

Another risk related to government guidance funds is the capability of the government to fulfill the committed capital. There is a massive amount of dry powder left to invest.

Although local governments have issued abundant government guidance funds, the need for fiscal balance will constrain the eventual commitment of the capital.

Another risk is lack of management capability. According to Yu Fengkun, an ex-partner at Zhongguancun Venture Capital Guidance Fund, government guidance funds face difficulty in attracting the best partners. These funds often impose geographic and industry restrictions, while top-performing private VC firms like Sequoia Capital can raise capital on their own without restrictions. As a result, many government funds have been allocated to inexperienced investment managers.

The last but not least risk is the exit return. Government capital primarily needs to consider safety and can invest with a long-term mentality, while Chinese private capital typically seeks quick and high yields. The worst-case scenario is that some ventures that government guidance funds have invested in may be liquidated if exits are hard to come by or the firms are involved in cases of corruption and malfeasance, which could lead to the direct loss of government capital and private investor money, potentially causing regional financial problems and social instability.

4.2 China's Opening Up

The restriction of currency outflow partially contributes to the amount of investable cash in China. It is possible that the government will lift capital restrictions in the future.

Whether capital will then stay in the country or go elsewhere is an open question.

Moreover, many tech giants and local unicorns has been favored by the Great Firewall policy, which keeps global players outside. However, some global competitors are considering getting back into the game in China. For instance, in December 2017, Google announced a return to China with its AI research center.¹⁴ Once the door is open, local companies will encounter a more complicated war field, involving foreign wolves.

¹⁴ ["Google announces the establishment of an AI Center in China: Return after 7 years, and what happened during the period," translated from the Chinese], QQ news, December 18, 2017. Available at: <http://new.qq.com/omn/20171218/20171218A0E70C.html>.

4.3 Investment Returns

Keeping returns high is not easy. At this stage, the robust ecosystem and current high firm valuations are built on confidence which will be hard to maintain once economic growth slows. As an ex-managing director in Bain Capital Ventures put it, “It’s a cyclical process. When certain sectors that have done well are attracting too much funding, it creates a highly competitive environment in which no start-up can build a big, profitable business, so there will be lower returns for investors. When LPs [limited partners] are disappointed, they’ll start pulling their money, and the environment will be less competitive, leading to better returns. Better returns will, in turn, attract more capital to venture funds, and the cycle continues.”¹⁵

So far, most unicorns in China haven’t been tested over a full economic cycle. Thus, observations on their sustainability are still pending.

4.4 Passion for Entrepreneurship

Although a lot of unicorns have sprung up in China, which sets a great example for latecomers, the failure rate of company start-ups is sky high. Unofficial data shows the success rate of creating a start-up is only 1%. The entrepreneurial journey is not suitable for everyone. If the government’s strong support and beneficiary policies are eliminated, the number of start-ups may decline.

4.5 Stricter Supervision of Financial Markets

Several new rules have been passed in relation to the asset management market in China, with the intention of reducing the systematic financial risks derived from

¹⁵ Interview with Jeffrey Glass, now the co-founder & CEO of Hometap, in *Globalizing Venture Capital: Global Venture Capital Insights and Trends Report, 2011*, Ernst & Young.

disordered transactions. Some previous lessons learned from bad investments, along with the tightening of regulations, have raised concerns for LPs. They have begun to spend their money more prudently and to slow down the pace of investment so as to observe the uncertainties. Although the dry powder in the market seems to be sufficient, the reductions in VC that come with this new caution may affect the pace of investment in the long run.

4.6 Other Political Risks

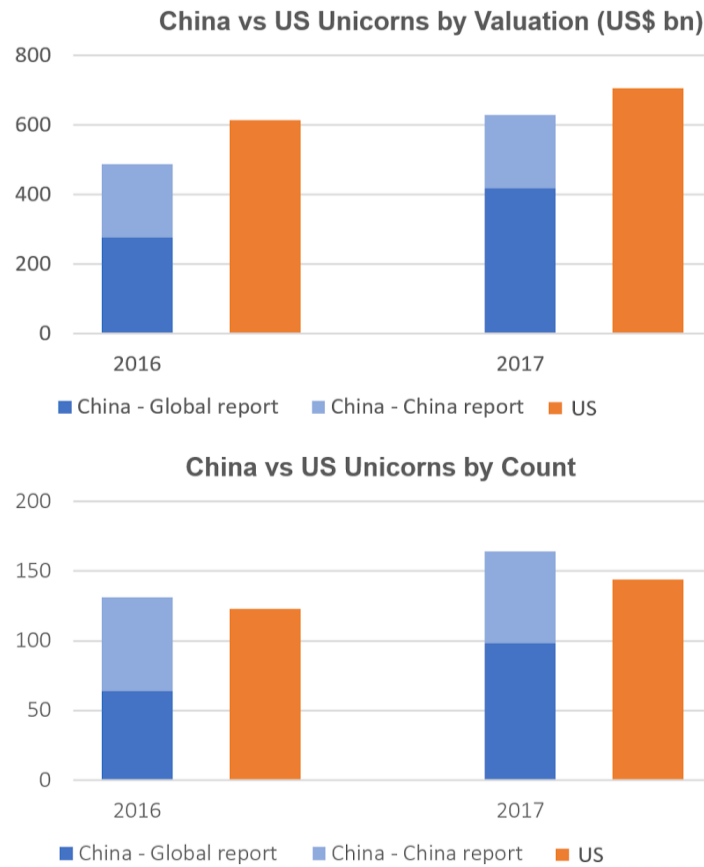
The United States recently slapped tariffs on about \$50 billion worth of Chinese goods, focusing mainly on technology-related products. Such events may hurt the growth of Chinese tech firms and VC investors.

5. Conclusions

With China's strong central government providing substantial funding and institutional support and the country's continuously growing private wealth, talent pool, and advancements in technology, the continuous expansion of China's VC is foreseeable. Based on our projections, it is likely that the VC market in China will surpass that of the US at around 2019 or 2020, to become the world's number one VC market, which would be a significant milestone in Chinese VC history.

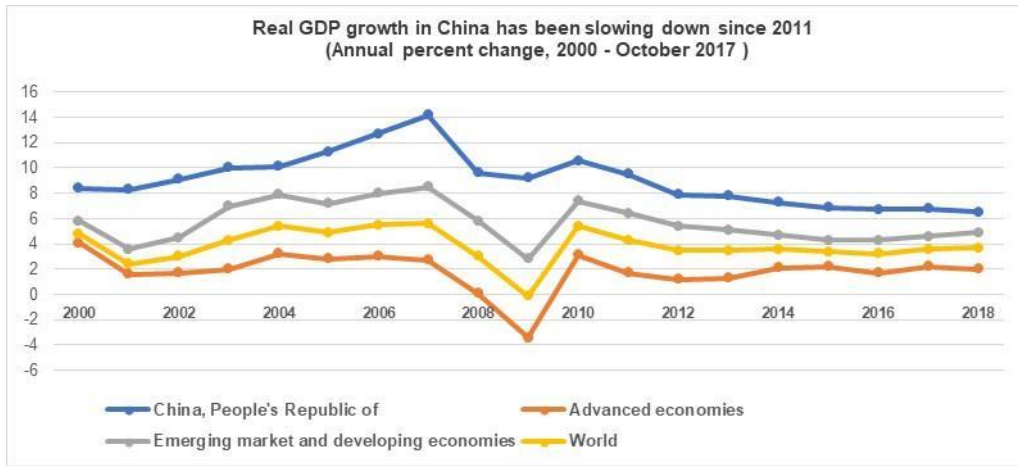
However, the pace of future growth will still be subject to the completeness of the VC ecosystem and the stability of the political environment.

Appendix 1. Comparison of China and US Unicorns

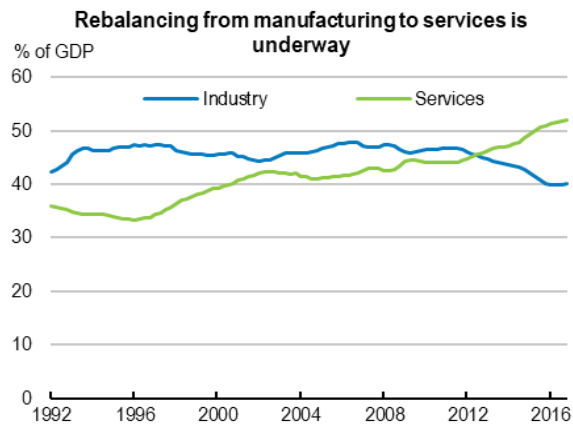


Source: Pitchbook, China Unicorn Business Development Report for 2017 released by Torch Center of the Ministry of Science and Technology ("China report"), "Study Report on Unicorn Companies in the U.S. and China", September 6, 2017, jointly released by Deloitte and ChinaVenture ("Global report")

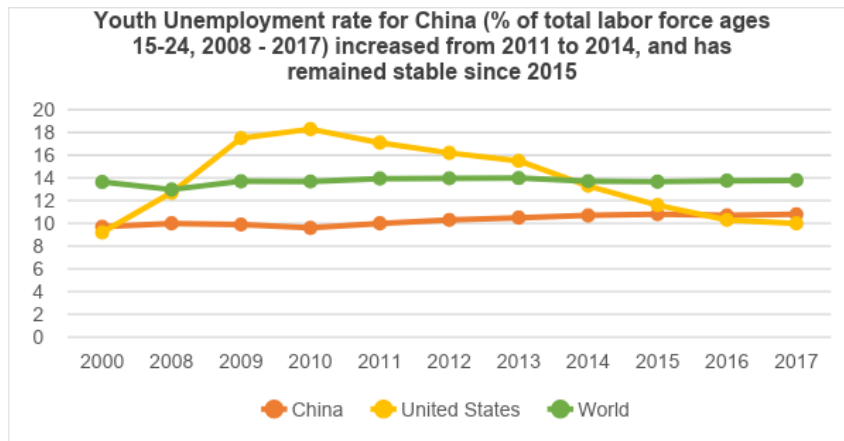
Appendix 2. Macroeconomic Conditions in China Since 2011



Source: IMF



Source: OECD



Source: World Bank

Appendix 3. Summary of Chinese Policies That Support Entrepreneurship and Innovation

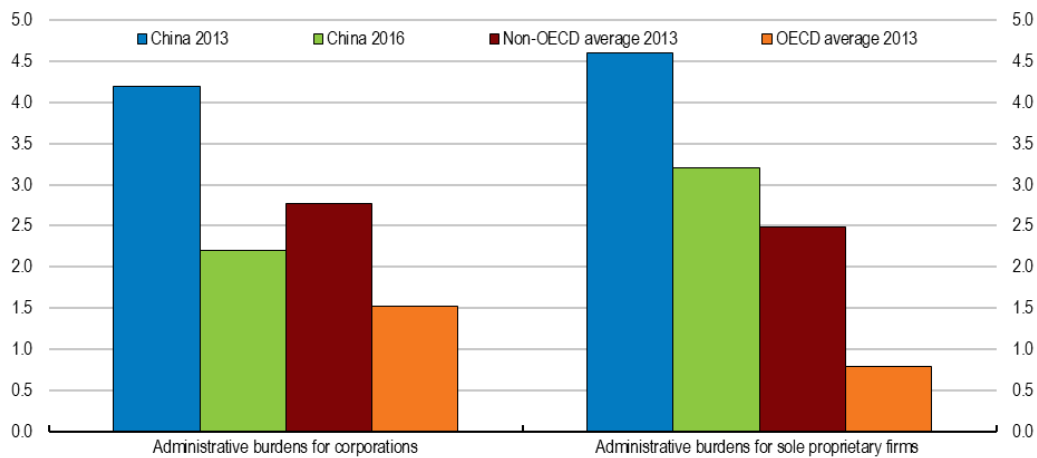
Elements	Goals	Past Practice	Current Initiatives and Action Plans
Institutional mechanisms	Simplify business registration system	Different departments required isolated procedures and repetitive documents for registration	<ul style="list-style-type: none"> Integrate all licenses for business registration, record filing, and other related affairs into one business license; Increase efficiency by advocating online government services
	Clarify what the government should do, and what is permissible	Items not legally authorized were commonly deemed impermissible	<ul style="list-style-type: none"> Transition to "Items not legally prohibited shall be deemed as permissible" and "Items legally obliged must be fulfilled"; Set a "negative list" for enterprises, specifying what they cannot do (such practices have been piloted in free trade zones); Sort out a "responsibility list" for authorities to safeguard the market environment of fair competition; cut down unnecessary licenses for doing business
Tax policies	Simplify compliance processes	Central taxation and local taxation were separate	<ul style="list-style-type: none"> Integrate central and local taxation
	Provide incentives for entrepreneurs and supporting service providers	Tax policies designed for start-ups and related parties were insufficient and unclear	<ul style="list-style-type: none"> More than 83 tax policies have been issued to support entrepreneurship, covering different stages of business and stakeholders, by providing tax exemptions or preferential treatment for individuals, investors, enterprises, financial institutions, high-tech zones, and incubators
Technology	Strengthen the protection of intellectual property	Low cost to download and copy intellectual property products	<ul style="list-style-type: none"> Enhance the awareness and knowledge of intellectual property rights; Punish activities involving fake and shoddy products
	Encourage research and development	Insufficient commercialization of intangible assets	<ul style="list-style-type: none"> Speed up efforts and provide proper guidance and incentive measures to turn scientific achievements into products and marketize intangible assets such as patents; Encourage sharing instruments and equipment for national defense and research
	Upgrade industry structure	Relied on heavy and traditional manufacturing	<ul style="list-style-type: none"> Long-term plans have been unveiled for high-tech areas such as Internet of things, big data, AI, and industrial robots
Talent	Enhance incentive mechanisms for the flow of talent	Cost of living was not affordable, and residential permits	<ul style="list-style-type: none"> Talent, including foreigners, international students, returning overseas students, sci-tech experts

		in cities like Beijing, Shanghai, and Shenzhen were difficult to get	and migrants returning to their hometowns, will be entitled to incentive measures, such as easier access to local residential or work permits
Financing	Expanding financing channels and exploring new financial service models	Low credit availability for Small Medium-sized Enterprises (SMEs)	<ul style="list-style-type: none"> • Bolster one-stop investment and financing information services for SMEs; • Regulate micro-loan market to prevent distrust between borrowers and debtholders; • Pledge for patent rights to be associated with loans; • Create insurance and risk compensation; • Permit related corporations and funds to issue bonds; • Improve accessibility to credit information by starting to report payment histories from utility companies and providing credit scores to financial institutions; • Make supervision of lending markets stricter to prevent systematic risks and mistrust. (The lending business offered by unlicensed organizations and individuals has been banned.)
	Government leads investment in targeted directions	Small amount of guidance funds	<ul style="list-style-type: none"> • Government has set aside a large amount of guidance funds to invest in subsidiary funds or portfolio companies
	Clarify PE/VC rules and educate investors	No clear rules directly related to PE/VC	<ul style="list-style-type: none"> • Standards and regulations will be established concerning the involvement of state assets in VC investments; • Regulations related to private equity will be clarified (a guide on valuation has been recently released);
	Regulate and improve equity markets	Illiquid market for SMEs, unfavorable rules for some high-tech companies to list in China	<ul style="list-style-type: none"> • Speed up IPO approval; • Further revise the rules of the National Equities Exchange and Quotations (NEEQ) to increase its attractiveness; • Revamp rules related to selling shares by management and board members; • Revamp listing requirement rules for Hong Kong Stock Exchange and China equity markets; • Merger and acquisition supervision remains strict, but the process has been shortened
Facilities	Advocate information sharing	Low transparency and accuracy of public information	<ul style="list-style-type: none"> • Promote development of the digital economy and advanced manufacturing industries to establish

			<p>reliable data sources;</p> <ul style="list-style-type: none"> • Improve data collection and analysis on emerging industries and new growth models
	<p>Create pilot clusters with one-stop services, leading to synergy and collaborative ecosystems</p>	<p>Services and enterprises were dispersed</p>	<ul style="list-style-type: none"> • Build product innovation centers and demonstration bases through utilizing available innovative resources and establishing platforms in large educational institutes and enterprises; • Support land use for start-ups; • Set national-level high-tech zones to concentrate high-tech industries in regional clusters where enterprises can benefit from special government incentives

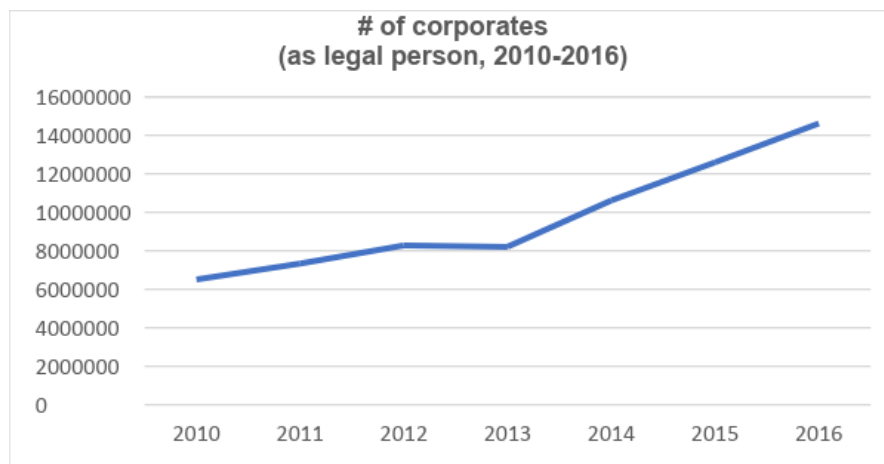
Appendix 4. Significant Improvements in Institutional Mechanisms in China

Reduced administrative burdens for corporations



Source: OECD

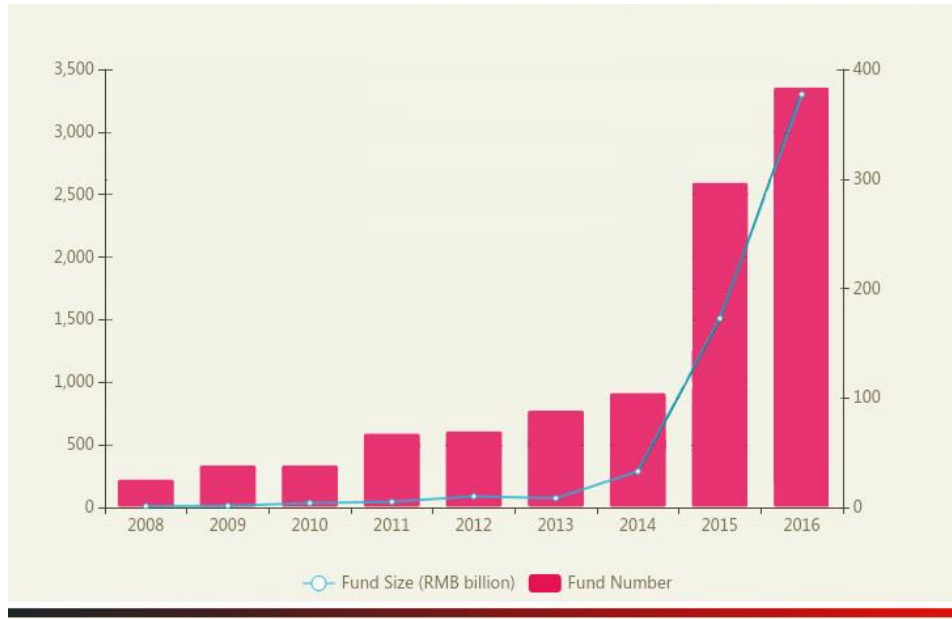
Rank of ease of doing business in China is gradually moving up



Source: National Bureau of Statistics of the People's Republic of China, 2018

Appendix 5. Chinese Government Guidance Funds

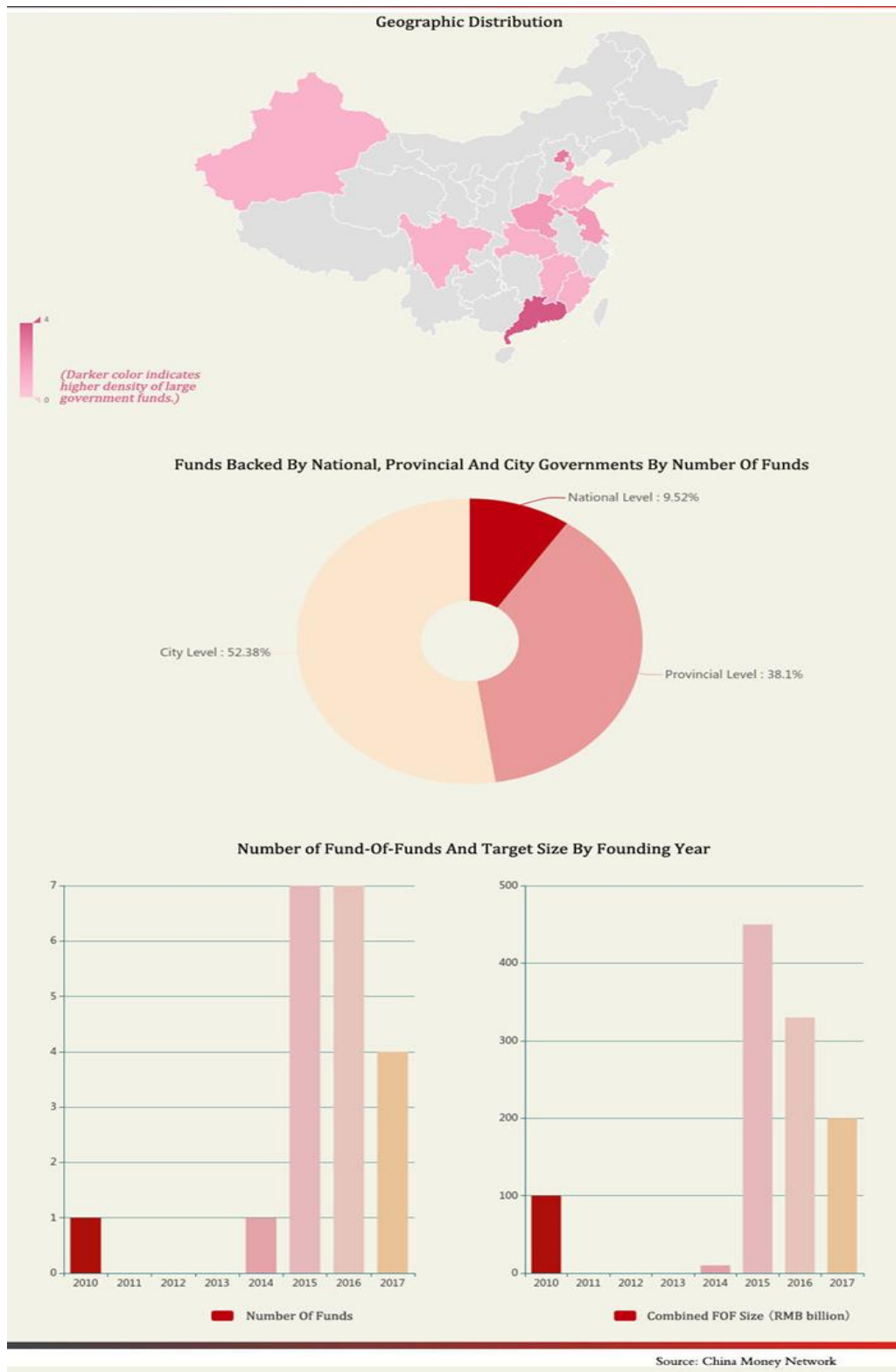
Newly Established Chinese Government Guidance Funds



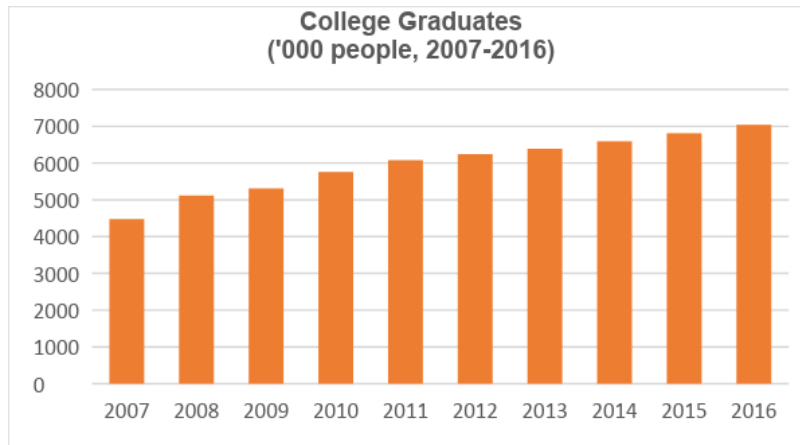
Source: Zero2IPO Research

Appendix 5. Chinese Government Guidance Funds (cont'd)

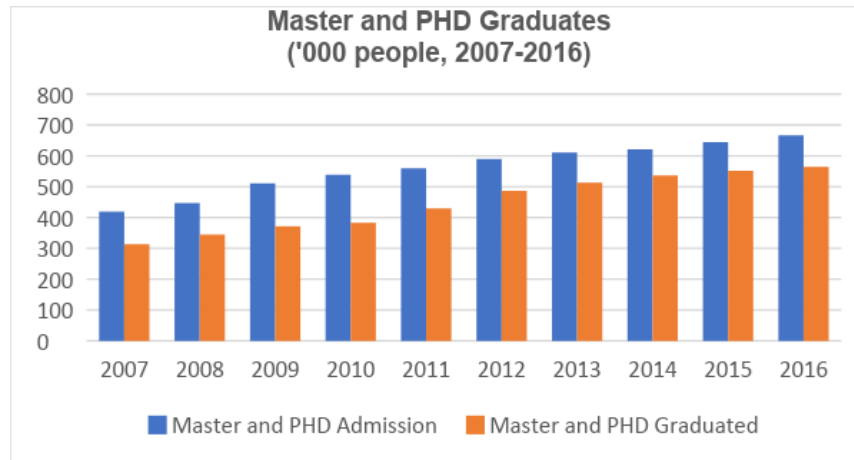
Characteristics of China's 20 Largest Guidance Funds



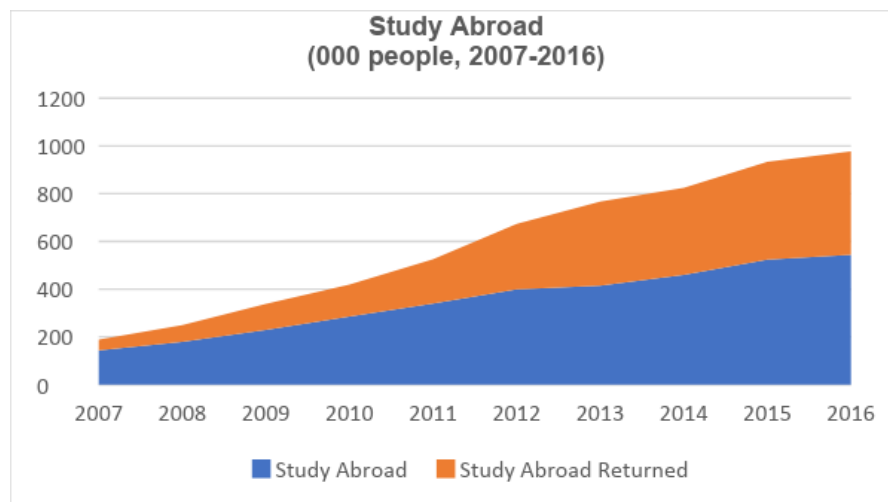
Appendix 6. Number of college and advanced-degree graduates and students studying abroad



Source: National Bureau of Statistics of the People’s Republic of China, 2018

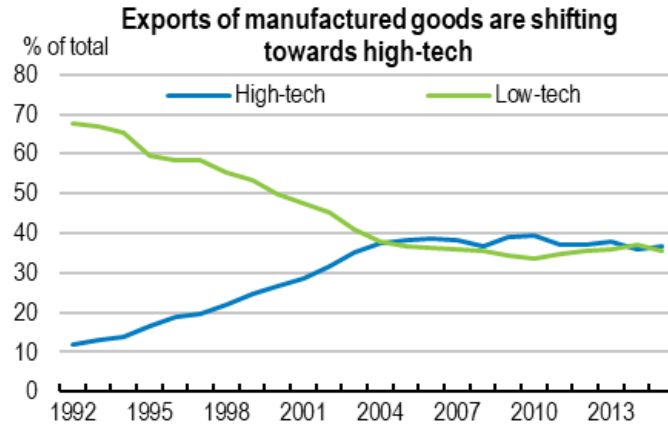


Source: National Bureau of Statistics of the People’s Republic of China, 2018

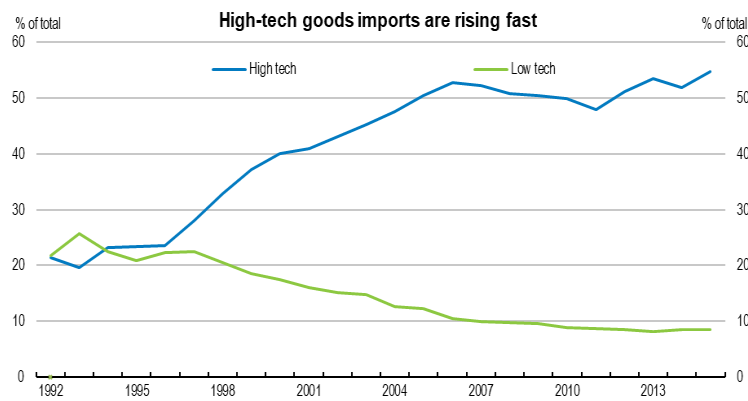


Source: National Bureau of Statistics of the People’s Republic of China, 2018

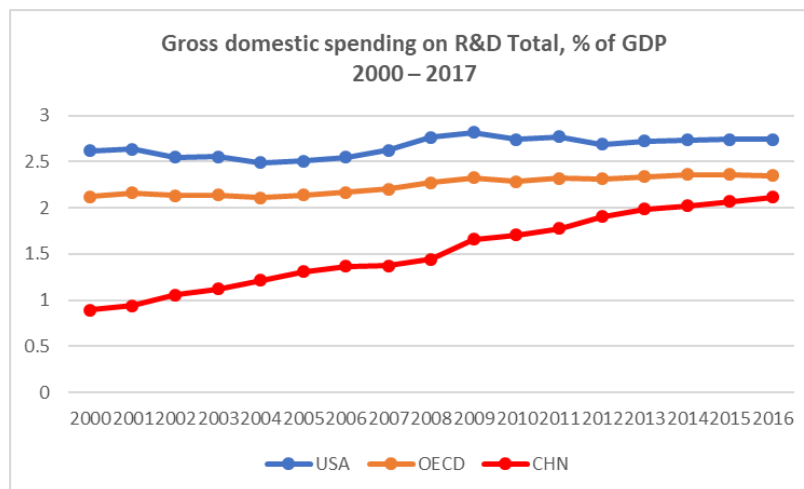
Appendix 7. Index of Technology Developments



Source: OECD

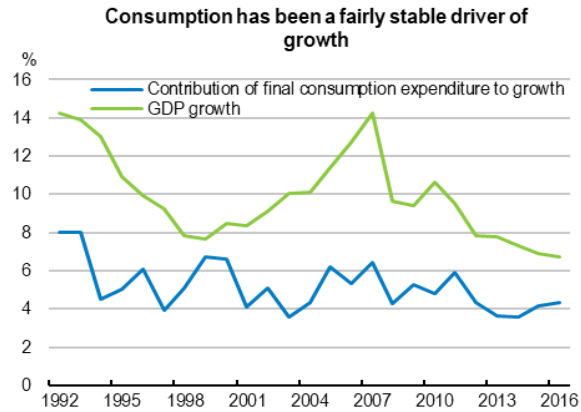


Source: OECD



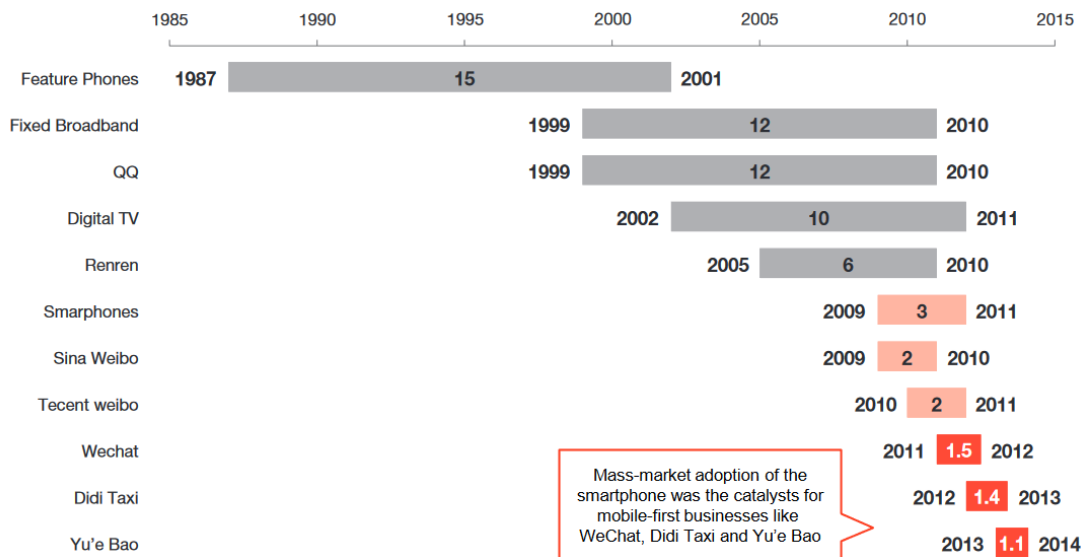
Source: OECD

Appendix 8. Recent Consumption Trends in China



Source: OECD

Time taken in years to reach 100 million users from product launch in China



Source: PwC analysis

Appendix 8. Recent Consumption Trends in China (cont'd)

The rapid growing online market in China

Application	Millions of users 2017	Percentage of total internet users	Millions of users 2016	Percentage of total internet users	Growth
Instant messaging	720.23	93.3%	666.28	91.1%	8.1%
News	646.89	83.8%	613.9	84.0%	5.4%
Search engine	639.56	82.8%	602.38	82.4%	6.2%
Video	578.92	75.0%	544.55	74.5%	6.3%
Music	548.09	71.0%	503.13	68.8%	8.9%
Online shopping	533.32	69.1%	466.7	63.8%	14.3%
Online payment	531.1	68.8%	474.5	64.9%	11.9%
Navigation	492.47	63.8%	461.66	63.1%	6.7%
Gaming	441.61	57.2%	417.04	57.0%	5.9%
Broadcasting	422.09	54.7%	344.31	47.1%	22.6%
Online banking	399.11	51.7%	365.52	50.0%	9.2%
Literature	377.74	48.9%	333.19	45.6%	13.4%
Travelling	375.78	48.7%	299.22	40.9%	25.6%
Food delivery	343.38	44.5%	208.56	28.5%	64.6%
Weibo	316.01	40.9%	271.43	37.1%	16.4%
Taxi reservation	286.51	37.1%	224.63	30.7%	27.5%
Email	284.22	36.8%	248.15	33.9%	14.5%
Ride-sharing	236.23	30.6%	167.99	23.0%	40.6%
Bike-sharing	220.78	28.6%	Not available		

Source: China Internet Network Information Center (CNNIC)

References

1. <https://www.forbes.com/sites/moiravetter/2017/08/22/will-chinese-venture-capitalists-overtake-the-americans/2/#1c90df1a63f9>
2. <https://medium.com/founder-playbook/the-history-of-silicon-valley-transistors-stanford-and-venture-capital-6a761f171e9d>
3. http://www.xinhuanet.com/fortune/2017-04/20/c_129557023.htm
4. http://www.cb.com.cn/chanyejingji/2016_1031/1171130.html
5. <https://www.forbes.com/sites/moiravetter/2017/08/22/will-chinese-venture-capitalists-overtake-the-americans/3/#70669b624506>
6. <http://money.163.com/17/0422/14/CIKOMJKA002580S6.html>
7. <http://www.ocn.com.cn/2012/1233fengxiantouzi.shtml>
8. <https://www.eastwestbank.com/ReachFurther/News/Article/China-s-Red-Hot-Venture-Capital-Tech-Scene>
9. <http://www.chinatax.gov.cn/>
10. <http://fortune.com/2017/12/04/chinese-innovation/>
11. <http://www.asiaone.com/business/chinese-innovation-is-taking-off-and-china-creation-ventures-was-founded-to-fuel-the-trend>
12. <https://www.bloomberg.com/news/articles/2017-06-26/former-tech-copycat-china-turns-tables-on-innovation>
13. <http://english.gov.cn/policies/>
14. <https://www.chinamoneynetwork.com/china-government-fund-ranking>