

Shenzhen's Rising Startup Companies

~What's happening in the Silicon Valley of China?

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Shenzhen is being dubbed the 'Silicon Valley of China'. Startup companies are springing into being at an average rate of 1,000 per day. DJI Technology Co., Ltd – a drone developer established in 2006 and a pioneer of Shenzhen's startups, which saw sales of USD 2.7 billion last year, has 12,000 people and commands 70 percent of the global commercial and consumer drone market, has transformed into a major business establishment in the world. Shenzhen is reported to have around 100 companies that are either in the so-called unicorn¹ club or on the reserve corps list. Why are there so many startup firms in Shenzhen? Why so many have succeeded in growing into unicorns within such a short space of time? This report takes a look at China's 'Silicon Valley' today and examines the throng of startup firms that have been drawn to Shenzhen.

1. Shenzhen's evolution into a hub for hardware startups

Shenzhen currently boasts 12 unicorn companies. In addition to the above-mentioned DJI, Shenzhen is also home to: Royole Corp., which develops and manufactures flexible displays based on research technology undertaken at Stanford University; UBTECH Robotics, which exhibited 500 dancing robots at China's largest year-end music show; and iCarbonX, which provides health management services based on the use of AI in data analysis.

Shenzhen is not only a magnet for unicorn companies, however. Around 500,000 startups aiming at growing into future unicorns have set up their office in Nanshan – the tech district of Shenzhen, where Chinese internet heavyweights Baidu, Alibaba and Tencent (BAT) are headquartered.

¹ A unicorn company is privately held startups valued at over USD 1 billion.

2. Reasons of why Shenzhen is dubbed the “Silicon Valley of China”

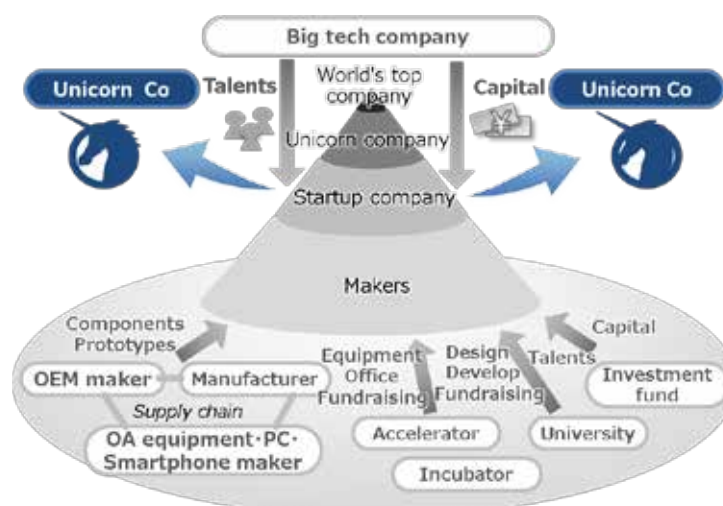
Why has Shenzhen come to serve as a breeding ground for so many startups and how have they succeeded in growing into unicorns? Shenzhen would not have evolved into the “Silicon Valley of China” without the existence of four factors: a unique startup ecosystem; comprehensive supply chains; a network of Chinese MNCs headquartered in the city and the support of the municipal government, which are analyzed in that order below.

(1) Shenzhen’s ecosystem

Shenzhen has formed an ecosystem that supports the growth of numerous startups. Startups are companies with ideas but need a wide range of supports in design, development, financing, human resource development, market expansion, materials procurement and production management etc., so as to turn ideas into business. For hardware startups in particular, such ecosystem is a key source of the manufacturing capabilities, without which these startups would struggle to get off the ground. The existence of the ecosystem is a main reason why Shenzhen attracts more hardware and robot-related startups than other cities in China.

Central of ecosystem are the so-called accelerators – organizations that play a role in supporting startups by organically linking the parts needed to support the startup process, among which Hax Accelerator and RocketSpace are two of the most established. Shenzhen’s accelerators study the ideas of startup companies then provide a wide range of support that covers everything from funding, product development, design and sales, right the way through to IPO and M&A. These accelerator programs also use trade shows and other similar events to broadcast their startups for them to link up with likeminded players to expand the networks. Connecting with friends of friends, these accelerators help startups to establish networks comprising tens, then hundreds of other players. Some say that one week in Shenzhen equates to one month in Silicon valley, this network building process is a key factor underpinning the sheer speed of Shenzhen (see Fig. 1).

Fig. 1: Shenzhen’s ecosystem



One startup that received supports of an accelerator is Makeblock, a born-global firm that develops STEM education² (programming) robots, and is already selling products in 140 countries worldwide, a mere five years on from its inception. “I want many kids to play with our products, to view robotics and coding as everyday activities,” says Jasen Wang (Wang Jianjun), CEO and founder of Makeblock. “My dream is to host events using Makeblock products worldwide, to turn our products into tools for enhancing parent-child communication and interactions among friends.” Many founders of startup firms share similar motivations; clearly, it’s not just about the money.

Moreover, accelerators speed up the growth of startup businesses by utilizing the supports of leading global companies. These global giants have been known to sink money into the startup firms they support, or to conduct M&As if the technologies or products the startups bear are attractive enough, hence both parties can benefit. The other aspect of the accelerator programs that is uniquely Chinese is the use of WeChat and they like to facilitate open communication. The accelerator network in Shenzhen comprises some 400 programs of varying sizes, freely bringing together startups and large corporations to meet their needs.

(2) Shenzhen’s supply chains

Shenzhen’s startup ecosystem is extremely well-accomplished, not least because the city boasts its own supply chain – one of the key components in this ecosystem. The existence of a supply chain means that a prototype can be taken from drawings to completion within a day, allowing technical improvements to be reflected in the product immediately. It also facilitates mass production at low cost and broadens the customer base.

This supply chain has been maturing for the thirty odd years since Shenzhen established as China’s first special economic zone in 1980, making it impossible to imitate. Once dubbed the “factory floor” of the world, Shenzhen has honed the technical capabilities to meet the rigorous production and quality control demands of foreign corporations. Today, 400 million mobile phones (some 30 percent of the global market) and 800 million LCDs (around 40 percent of the global market) were manufactured in Shenzhen, which also produces various electronic components from which these products are created.

Many of these electronic devices and components are produced at original equipment manufacturing (OEM) plants, such as those of Hon Hai Precision Industry, a Taiwanese company and the world’s largest electronics manufacturing services (EMS) provider. Some 500,000 components manufacturers of varying sizes have formed the supply chains. The Huaqiangbei area, which has been dubbed the “Akihabara” of Shenzhen, is 30 times the size of the Tokyo’s electric town and sells millions of parts. The existence of this supply chain means that startups can convert ideas to reality, build prototypes and achieve low-cost mass production. Put another way, the

² STEM stands for science, technology, engineering and mathematics.

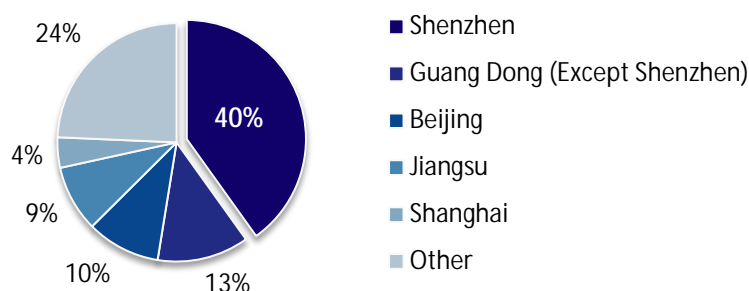
existence of a startup ecosystem that includes its own unique supply chain is the reason why Shenzhen is able to give so many hardware startups the boost they need to leap ahead.

(3) The Chinese MNCs headquartered in Shenzhen

Another key factor is that Shenzhen is home to several of China's largest MNCs, companies that startups aiming to become. Many of these MNCs have headquarters in Shenzhen, including Chinese telecommunications and IT giant HUAWEI, which ranks the world's third largest smartphone manufacturer by shipments; BYD Auto, which produces rechargeable batteries and lithium-ion batteries for smartphones and emerged as the world's largest electric vehicle manufacturer in 2016; and Tencent – developer of the internet messaging app WeChat and Asia's most valuable company as of 2018.

The development capabilities of these industry titans are growing every year. In 2017, China moved into second position as an international patent application source following the United States, and Shenzhen has become a major hub for China's technology companies with 40 percent of those applications being filed by Shenzhen firms (Fig. 2).

Fig. 2: The percentage share of Patent Cooperation Treaty (PCT) Applications by Area in China in 2017



(Source) State Intellectual Property office of the P.R.C

Startup companies are not unrelated to these industry powerhouses and are linked in terms of talent pools, products etc. . For starters, one in three of the founders of Shenzhen's unicorn companies and future unicorns have worked in one of Shenzhen's major tech corporations. These entrepreneurs used their time with the major industry players to accumulate experience, which they are now leveraging to develop new products for their startup companies. The founder of a fintech startup says: "My former employer was a big company, which meant that product development was both time consuming and expensive and horizontal expansion also proved difficult. When I started my own business, I began by providing my previous company with a system that slashed costs and went on to cut costs further by marketing the system to other players in the industry in regions that had no existing capacity for product development. One of China's strengths is the fact that it allows you to practice ideas that you believe to be right straight away."

China's big-name companies also have their own corporate venture capital (CVC) to play with. As watchtowers of the groups, they keep a discerning eye on moves of startups, share information on technologies and sales channels that are essential to groups' development, screen venture capital projects that are brought in by third parties and refer them to the appropriate division within. On a recent visit to a shopping mall that is being developed by a major Chinese company, we learned that it had introduced a marketing analysis system based on technology developed by a startup company the group's CVC had invested in the previous year. Such approach is obvious as strategy or policy of business expansion, but the efficiency this company to put such approach into practice is still very impressive.

Hackathons³ and startup events are also often hosted in Shenzhen. Many of China's biggest corporations participate in these events, which represent crucial opportunities for startup companies to grow, and offer industry leaders chances to discover promising technologies and business ahead of their rivals and in doing so speed up the pace of their own growth. Thus these events lead to win-win for all parties. Leading e-commerce company JD.com, for example, displays products developed by the startup companies it has invested in at the smart cafes it has opened in Shenzhen as a way to support these startups. In a bid to differentiate products it sells online, JD.com has commissioned a startup investee to create a line of JD.com exclusive products. These links of talent pools, materials and financial sources between major Chinese companies and Shenzhen startups are thus driving up the growth potential of Shenzhen as a whole.

(4) Municipal government support

The Chinese economy continues to grow at a steady pace, but the era of spectacular growth fueled by low-cost manufacturing is drawing to a close and China is scrambling to upgrade its industrial structure in order to achieve stable and sustainable growth over the medium-to-long term in what is being dubbed the 'new normal'. The government has unveiled various policies to address the matter, including the 'One Belt, One Road' initiative targeting overseas expansion of Chinese companies and 'Made in China 2025', and is championing launch of new businesses through its mass entrepreneurship and innovation campaign.

Shenzhen's government is at the forefront of national trends. The widespread use of Internet of Things (IoT), smartphones, open source software and hardware, and crowdfunding has brought the hurdles new entrepreneurs face down to lower levels ever, making it comparatively easy to kick-start a new business. Shenzhen would not be a magnet for startups though, without the mechanisms and supports to link startups to actual business. The municipal government has thus introduced various policies aimed at supporting startup companies which attract them to Shenzhen.

³ A sprint-like event at which teams of engineers, graphic designers, planners and others involved in software development bring technologies and ideas to bear on a given theme, and compete to develop practical services, systems and/or applications within a given timeframe (ranging from hours to days).

1) Support for startups offered by Shenzhen authorities

Shenzhen government offers a handsome subsidy of up to RMB 5 million to a wide range of applicants, including founders of startup companies, universities, research institutes and operators of rental office space for startups. It doesn't stop there: to attract graduates from overseas universities, the government also offers rent subsidies and support in applying for public housing, supports participation in training programs of foreign companies and universities, subsidizes R&D, and offers extensions of gap years to students starting own businesses. As one of China's metropolises,, Shenzhen has substantial financial resources to make providing all such supports possible.

2) Incentives to high-level talents

Many founders of Shenzhen's startup companies are so-called "sea turtles" – foreign-educated Chinese, who launch companies to turn knowledge acquired at foreign universities into business. Many join leading Chinese tech companies on their return, where they accumulate experiences before venturing forth on their own, just like mentioned above. Chinese with overseas experience are playing a key role as entrepreneurs. Shenzhen government has rolled out various policies and ordinances to offer financial subsidies in an attempt to attract high-level foreign talents. Such efforts have succeeded in attracting 80,000 foreign-educated to Shenzhen, and the number is increasing every year.

3) Shenzhen's expanding academic and research infrastructure

Shenzhen is a young city and, until recently, had just two universities: Shenzhen University established in 1983 and a science university. The number is far fewer than either Beijing, which is sixty, or Shanghai, which is thirty-five. Therefore Shenzhen government introduced a series of measures including free land lease and financial subsidies to attract top Chinese universities, beds of innovation. The measures proved highly successful. Today collaborations between business and academia are flourishing and some ten universities have set up campuses in the city, including Tsinghua University, Peking University, Chinese University of Hong Kong and Harbin Institute of Technology. These institutions are actively sowing the seeds of innovation.

Shenzhen University, meanwhile, has introduced a new curriculum aimed at promoting entrepreneurship and innovation, a practical program for budding entrepreneurs with guest lecturers from Tencent, Amazon and other industry giants. Collaborative industry-academia projects include joint research with real businesses, pitch contests with other universities, and direct financial supports to startups. The universities themselves are also taking steps to support startup companies, with Shenzhen University establishing an 'entrepreneur park' in 2007 and Shenzhen Tsinghua University setting-up a graduate school in 2009.

4) Venture Capital (VC)

Shenzhen Capital Group Co., Ltd. (“SCGC”) is a limited venture capital company that was established by Shenzhen government in 1999; and it is the largest investment fund in China with assets exceeding RMB 280 billion. SCGC is backed by private capital in addition to the public-sector support it receives from the municipal government. To date it has invested in approximately 900 projects. In addition to SCGC, several government-affiliated venture capital companies have been established, e.g. Shenzhen CDF-Capital Co., Ltd. Spurred on by these government moves, IDG Capital, Sequoia Capital and other leading foreign venture capital firms have established offices in Shenzhen, currently home to some 100 venture capital firms above designated size. If taking angel investors into account, investments in Shenzhen’s startups have reached a cumulative RMB 120 billion. To cover from newly-established startups to ones that require more funds to grow, Shenzhen government and affiliated organizations step in to share the risks the private sector unable to bear alone, which is a unique aspect of Shenzhen..

3. Shenzhen’s ongoing expansion and movement of foreign companies

A thousand new startups springing into being by the day; cumulative investment of RMB 120 billion by 100 renowned venture capital companies; 400 accelerators and a supply chain comprising 500,000 companies to support manufacturing; 80,000 sea turtles and government subsidies of up to RMB 5 million: these figures alone make a compelling case for Shenzhen’s status as the Silicon Valley of China.

What’s more, this momentum seems likely to speed up and continue expanding. One reason is China’s Great Bay Area Plan that sees the vision of Guangdong, Hong Kong and Macao developing into an integrated bay area. The closely connected three jurisdictions is planned to evolve into a ‘one-hour economy circle’ by 2020, and becomes a world-class bay area to rival that of New York and Tokyo.

We assume the acceleration of the development of Shenzhen’s startup companies, absorbing existing edges of municipalities in such economy circle. Collaboration of auto manufacturing base Guangzhou and tech hub Shenzhen would likely yield dramatic improvements in artificial intelligence-powered automatic driving technology, for example. Moreover, cooperating with Hong Kong, on the city advanced in terms of intellectual property rights protection, could stimulate overseas investments in Shenzhen’s startup companies with concerns over the issue. It could be only a matter of time before Shenzhen’s startups expand the range of activities through partnerships with other cities in the Bay Area.

Meanwhile, foreign companies are paying ever closer attention to Shenzhen. Some are visiting Shenzhen’s startup firms in search of potential cooperation opportunities, others are in regular contact with accelerators in an attempt to gather information on rising stars in Shenzhen’s startup scene. Companies

have their own take on how to associate and establish a win-win relationship with China's startups; and on how to turn the momentum of Shenzhen's startup industry to their advantage. Though many are likely still at the stage of coming up with an approach.

Nonetheless, names of foreign companies always come up in our communication with Chinese startup companies, accelerators and VC firms. Upon alliances between foreign companies and Shenzhen startups and cases of foreign VC investments, we have often been consulted with regard to potential investment projects and pairing outstanding Chinese startups up with foreign companies. We can see clear interests from the foreign side. Given the high speed of business dynamics in Shenzhen, at times it can be difficult to reach decisions. Yet we will continue to provide information with a view of helping foreign companies utilize the Silicon Valley of China, so as to generate new opportunities for business.

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