China’s start-up landscape (and how to engage with it)

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Table of contents

THE START-UP LANDSCAPE IN CHINA1 3
ABOUT THIS STUDY 13
ABOUT COVESTRO 13
ABOUT KAIROS FUTURE 13

1 This is an overview of a comprehensive study of the start-up landscape in China. The full study contains an in-depth analysis of certain fields as well as approaches for engagement suitable for Covestro. The full study will not be disclosed.
THE START-UP LANDSCAPE IN CHINA

Despite a tightening of venture capital in China in the last few years, China’s start-up scene is booming. The total assets under management by Chinese venture capital institutions has reached over CNY 5 trillion, up from almost nothing two decades ago when tech giants such as Baidu, Alibaba, and Tencent had just started to emerge. In 2017, over 100 Chinese start-ups were listed in stock markets around the world, and China added 34 new companies to its stock of unicorns (companies less than 10 years and valued at USD 1 billion or more), now standing at more than 270. Measured by amounts raised, invested, and exited, China is now second only to the U.S. in the field of global venture capital.

For a comprehensive picture of the what, where, who, and how of China’s start-up landscape, this study acquired, merged, cleaned, and structured data from Zero2IPO and Tianyancha, two databases with information about companies, start-ups, and investments. The resulting consolidated database covers more than 100,000 funding deals involving more than 30,000 start-ups and more than 10,000 funding institutions. The data were used to analyze geographical, sectoral, topical, and stakeholder aspects of the Chinese start-up landscape.

For an understanding of how and why Chinese and multinational corporates engage with start-ups in China, we interviewed 11 corporates, 45 facilitators (such as incubators and accelerators) and several entrepreneurs and scholars. We also sifted through news articles, reports, and policy documents for additional information.

Several factors have fuelled the Chinese start-up boom:

- After three decades of maturing, Chinese start-up and innovation ecosystems have gained a critical mass of knowhow and resources.
- The Chinese government views ‘mass entrepreneurship’ as the next stage of the country’s path towards becoming an innovation powerhouse, and has introduced a slew of policies to encourage and support start-ups.
- Entrepreneurs have become the new heroes in Chinese society, with the examples set by successful founders such as Jack Ma having created an aspirational ideal.
- An expanding consumer class is demanding, and willing to pay for, novel solutions catering to their needs.
- Capital requirements have fallen steadily in many industries, from sensors (fueling the IoT revolution) to 3D printing to industrial robots, making it easier for start-ups to enter.
- A backbone of technology giants, notably Tencent and Alibaba, is nurturing entire ecosystems of start-ups, viewing start-ups as vehicles for experimentation and rapid execution.
- New financing solutions have emerged for small companies in China, such as the New Third Board, the New Fourth Board, angel networks, and government seed and venture funds from the national to the district level.

Not all is rosy for the Chinese start-up ecosystem. Chinese start-ups have a peripheral position in global start-up networks and their businesses have a lower share of international users than their overseas counterparts. Access to talent is mentioned by Chinese entrepreneurs as a key challenge. Private venture capital has become more difficult to access since the venture capital peak in 2015 (though other sources have become available, as discussed further below).
Start-up ecosystems have consolidated around some key Chinese tech companies: Tencent, Alibaba, Lenovo, Baidu, JD, Xiaomi, Qihoo 360, and TCL are the Chinese corporates most active in start-up investment. A majority of Chinese unicorns are backed by these tech giants. The vision, infrastructure, and deep pockets of the Chinese tech giants are important forces shaping the evolution and accelerating the rate of change of the Chinese start-up landscape.

Figure 1. Investment network of the leading corporate stakeholders in the Chinese start-up landscape. The size of a bubble indicates the number of investments deals. Each link represents one or more investments. Note that the network does not show current ownership, since it does not take into account divestments or mergers. Analysis: Kairos Future
Various agencies and levels of the Chinese government and other key stakeholders in the Chinese start-up landscape. Policies that indirectly impact entrepreneurship in China can be divided into three clusters based on their objectives: (1) accelerating the rate of scientific and technological achievements; (2) promoting transformation and upgrading of industries; and (3) bridging academic research and real-world applications.

Likewise, policies that directly impact entrepreneurship can be categorized into three clusters based on their objectives: (1) improving the institutional mechanisms to facilitate entrepreneurship; (2) improving incentives and financing for entrepreneurs; and (3) fostering talent and inspiring entrepreneurship.

The government's toolbox for achieving these objectives include (1) direct funding and investment; (2) tax incentives; (3) financial policies; (4) educational guidelines; (5) entrepreneurship infrastructure development; (6) law-making; and (7) authority and power over appointments.

**Figure 2.** Overview of government policies with direct and indirect impact on the Chinese start-up and funding landscape. Analysis: Kairos Future
Through government guidance funds on national, provincial, city, and district levels, the government is a major force in Chinese venture capital funding. Currently, 358 of these funds are focused on venture funding, with capital raising targets of USD 665 billion. Some of these funds allocate capital to further specific policy plans, such as Made in China 2025, and to advance areas such as AI and robotics. Unlike private venture capital, the government guidance funds are well represented in inland regions.

**Figure 3.** Number of funds and amount invested by government guidance funds by investment focus and year. Analysis: Kairos Future
Figure 4. Geographical distribution of government guidance funds. Analysis: Kairos Future

**National level funds**
- Transformation Achievements Funds of China Academy of Inspection and Quarantine
- TusHoldings National Cultural Innovation Fund
- National Innovation Fund
- Mass Entrepreneurship and Innovation Fund of University
- National Small and Medium Enterprise Development Fund
- National Education Innovation and Development Fund
- National Rising Fund of Infotech

**Provincial level funds**
- Collaborative Innovation Investment Fund of Zhongguancun
- Small and Medium Enterprise Development Fund of Henan
- Intelligent Voice and Artificial Intelligence Fund of Anhui
- Entrepreneurship Guiding Fund of Guangdong
- Financing Guarantee Fund of Shandong

**City level funds**
- Government Guiding Fund of Funds of Shenzhen Municipal
- Technology Innovation Fund of Shanghai
- Mass Entrepreneurship and Innovation Fund of Foshan
- New Economic Development Fund of Chengdu
- Dalian Yulong Fund

**District level funds**
- Talent Fund of Chengdu Gaoxin District
- Urban And Rural Fund of China-Africa Investment Management
- Innovation and Entrepreneurship Fund of Funds of Shanghai
- Pudong Venture Capital Fund
- Shunde Venture Capital Fund of Funds

Colors represent total amount raised by national (green), provincial (yellow), city (red), and district (purple) government funds in each region. The size of the circle represents the total amount raised by each fund. The color intensity of the fund area indicates the total amount raised.
Despite several booms and busts in China’s short venture capital history (the ‘capital spring’ of 2014-2015 gave way to the ‘capital winter’ of 2016, which then turned into the ‘harvest year’ of 2017), the number of private venture capital institutions has grown from 10 in 1995 to 500 in 2005 and 5,000 in 2015. The composition of venture capital sources has changed over time. Angel investments became abundant in 2014-2015, as a large number of wealthy individuals joined the VC fray. With the tightening in 2016, more start-ups turned to the newly established Third New Board for financing.

![Figure 5. Funding stages and rounds in China by number of VC deals and over time. Analysis: Kairos Future](image-url)
The leading private VC institutions in China include Zhen Fund, K2VC and Sinovation Ventures in the initial funding stage, and IDG Capital, MatrixPartners, and Sequoia Capital China in the subsequent funding stages. While most of the top venture capital firms invest most heavily in internet services, Tianxing Capital invests in chemistry and new materials as well as on greentech and energy.

Focus industries of government funds

Figure 6. Leading funds in early stage investment (blue) and growth stage investment (orange). The heat map indicates which areas they invest in (dark red indicates high level of funding). The black bars indicate total number of deals and amount invested for each fund. Analysis: Kairos Future

The number of entrepreneurial spaces has expanded strongly in recent years, with such spaces having become an important element in the Chinese start-up landscape. They fall into the categories of creative spaces (standing at around 4,300 across China), incubators (around 3,300), and accelerators (around 400). Some provide resources and services to start-ups, others simply offer office space. The largest providers include UCommune, Sinovation Venture, Kr Space, Legend Star, NashWork, and Dark Horse. Government incentives have sped up the expansion, but led to a total occupancy rate as low as 40%. Nonetheless, China’s entrepreneurial spaces have helped 22,000 start-ups to attract funding. Some have close collaboration with industry partners and offer access to their start-ups through open demo days.

Geographically speaking, Beijing, Shanghai, and Shenzhen (in order of maturity) are the only truly global start-up ecosystems in China. The larger areas around these cities – the Bohai Rim, the Yangtze River Delta, and the Pearl River Delta – are dense mega city regions that offer diverse resources. Each has its distinct profile: Beijing has evolved into a stronghold of information technology, cultivating most of China’s unicorn start-ups; Shanghai, with its surrounding Yangtze River Delta, has been at the heart of the e-commerce boom and consumer-driven innovation; Shenzhen, as well as the wider Pearl River Delta region, has been the focal point for the maturation of the Chinese manufacturing sector. The strength of each region is clearly reflected in the types it nurtures: internet companies in Beijing; e-commerce and fintech in Shanghai; intelligent hardware in Shenzhen.
While start-ups in internet services, intelligent hardware, and B2B services attract most investments, smaller areas are experiencing rapid growth: automotive, logistics, AI, rental economy, and ‘new retail’ have been particularly hot in recent years. Fintech and insurance, logistics and transportation, and automotive are the areas that have attracted the highest investment amount per deal.

Figure 8. Number and average size of investment deals by industry. Analysis: Kairos Future
Among China’s 270-and-counting unicorn start-ups, the coffee brand Luckin Coffee become the fastest to achieve this status in June 2018, when it secured funding valuing it at USD 1 billion only 6 months after its founding. The previous record holder, AI chip maker Cambricon, reached its unicorn status in 17 months. Apart from AI, smart and electric cars is another fertile ground for start-ups, with unicorns including NIO, WM Motor, CHJ Automotive, and XPeng Motors, all eager to take on Tesla and other global incumbents.

Chinese start-ups tend to tap into one or more of a repertoire of models that have gradually emerged and proven successful in the Chinese business context: cost innovation; speed in execution, scale-up and cloning; opportunity facilitation rather than service provision; ecosystem-driven innovation; customer-centricity even at the cost of core competence focus; mechanisms for minimising the need for trust; riding global tech waves; analytics-driven models; external capacity exploitation; and ‘blue pond’ strategies.

Figure 9. Chinese unicorns by founding date. Analysis: Kairos Future
ABOUT THIS OVERVIEW

This is an overview of a comprehensive study of the Chinese start-up landscape. The full study is an in-depth analysis of certain fields and areas within this landscape and offers details on possible approaches for engagement for Covestro. The full study will not be disclosed. The overall study was conducted jointly by Covestro and Kairos Future’s China office, located in Shanghai.

ABOUT COVESTRO
With 2017 sales of EUR 14.1 billion, Covestro is among the world's largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. The main segments served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. Covestro has 30 production sites worldwide and employs approximately 16,200 people (calculated as full-time equivalents) at the end of 2017. For more information about the project, contact:

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ABOUT KAIROS FUTURE
Kairos Future is an international consulting and research company that helps companies and business leaders to understand and shape their futures. We provide market and industry research, trend analysis, scenario planning, innovation search, data mining and analytics, capability development, and strategy advice. The company was founded in 1993 and is headquartered in Stockholm. For more information, please visit our website, www.kairosfuture.com, or contact:

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