

Demary, Markus; Demary, Vera

Research Report

The Asian blockchain centers

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IW-Kurzbericht 10/2021

The Asian Blockchain Centers

Markus Demary / Vera Demary, 15. Februar 2021

Many Asian start-up companies have specialized in blockchain technology. In particular, Hong Kong, Israel and Singapore have the highest blockchain company density in Asia. The determinants for a flourishing blockchain ecosystem are a business-friendly environment for start-ups and the availability of venture capital, while the effects of agglomeration are less pronounced in Asia than in Europe.

The number of blockchain companies has increased over the past couple of years. Since we have analyzed the determinants behind the different number of blockchain companies across Europe (Demary/Demary, 2021a), we extended the analysis to Asia to check whether the results would be similar. Based on searches in the company database Crunchbase (see Demary/Demary, 2021b for the methodology), we sampled 2,024 companies in Asia which use the terms “blockchain”, “bitcoin”, “ethereum”, “ripple”, “virtual currencies” or “distributed ledger” to describe their business model. We refer to these as “blockchain companies”.

Blockchain companies per country

In Asia, India hosts the largest number of blockchain companies in absolute terms with 399, followed by Singapore with 392. Mainland China accounts for 269

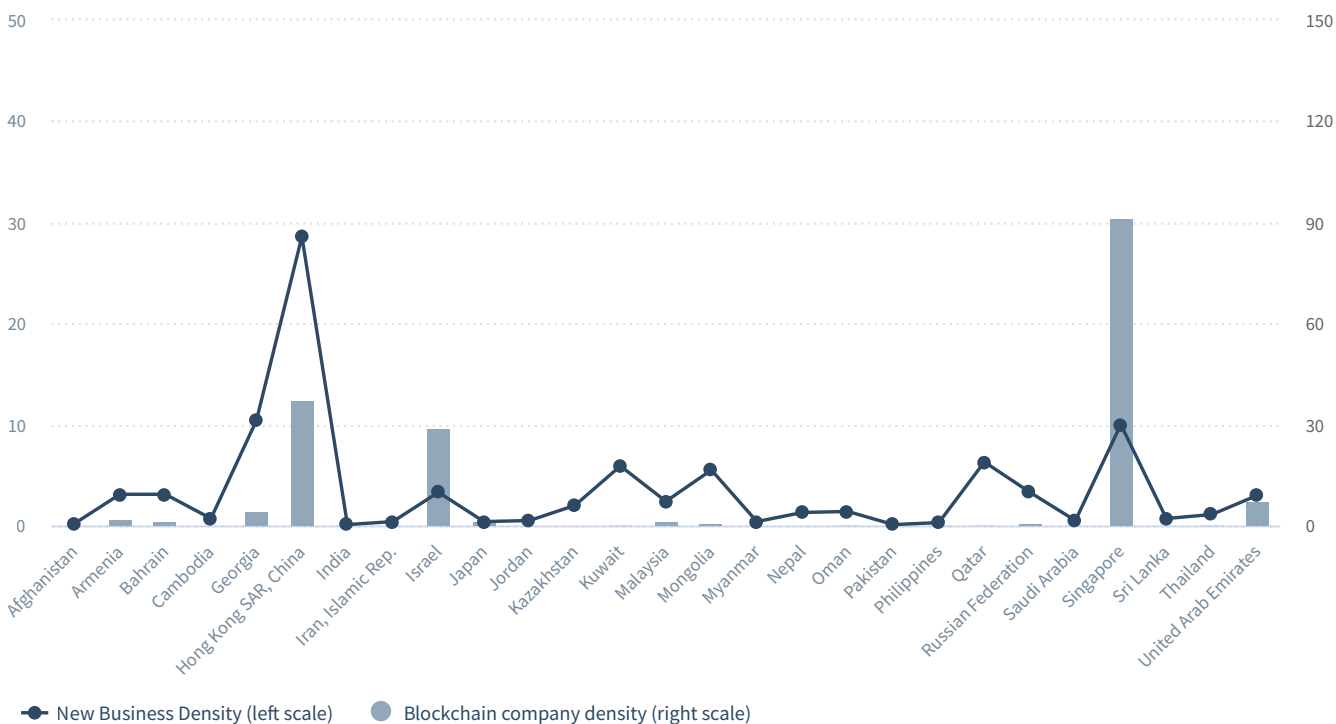
blockchain companies, Hong Kong for another 197. Other countries that headquarter a comparatively large number of blockchain companies are Israel with 159 companies, South Korea with 155 companies and Japan with 100 companies.

While the country size contributes to the large numbers in China and India, some much smaller countries also stick out. We use the labor force (population between 15 and 64 years of age) to account for such differences in country size and call this indicator “blockchain company density”. Singapore comes out ahead with a blockchain company density of 91.4 blockchain companies per million labor force, followed by Hong Kong with 37.4 and Israel with 29.3. South Korea with 8.5 blockchain companies per million labor force and the United Arab Emirates with 7.8 rank in the middle. While Armenia and Georgia rank in the middle, Afghanistan, Bangladesh and Cambodia have the lowest number of blockchain companies, while for some Asian countries we could not find blockchain companies in the database.

In China and India, metropolitan areas account for most of their blockchain companies. In China, the financial centers Shenzhen and Shanghai host 11 percent and 17 percent, respectively, of the nation’s blockchain companies, while 37 percent are headquartered in the capital

Blockchain companies prefer flourishing start-up environments

New business density: new registrations per 1,000 people ages 15-64
 Blockchain company density: blockchain companies per 1,000,000 people ages 15-64



Sources: Crunchbase, World Bank, own calculations

Beijing. Although India also exhibits some concentration of blockchain companies, the regional distribution is much more diverse. Bangalore hosts 16 percent followed by Delhi with 12 percent and Mumbai with 10 percent of the Indian blockchain companies. Other blockchain centers are Ahmedabad, Chennai, Gurgaon, Noida, Pune, Hyderabad, Indore and Jaipur.

China, the Russian Federation and India are the largest countries in Asia. In contrast to China and India, there are less Russian blockchain companies in the database. These companies focus on the capital Moscow and the city of Saint Petersburg. Moscow hosts close to three quarters of the nation's blockchain companies.

Smaller countries in Asia also exhibit a concentration of blockchain companies in metropolitan areas. In Japan, the blockchain activity focusses on Tokyo. South Korea has two blockchain centers with Seoul and Yeoksandon with more than half of the country's blockchain companies in Seoul. In Israel, blockchain companies are located most frequently in Tel Aviv with about half of the nation's blockchain companies.

The relation to start-up activity

The bulk of the Asian blockchain companies are younger companies. Around 58 percent are less than 5 years old; 29 percent were founded between 5 and 10 years ago. Only 13 percent of the companies are more than 10 years old. The older companies tend to be located in countries with a high number of blockchain companies like China, India, Japan and South Korea.

For 565 of the blockchain companies we could retrieve information about their funding status. The high share of younger Asian blockchain companies is reflected in the number of companies which are described as early-stage venture (20.4 percent) or being in the seed phase (70.4 percent) of the 565 companies in the database. Later stage companies are a minority: 4.6 percent of these blockchain companies were already acquired by another company or merged with another company, while 3.2 percent realized an initial public offering and 1.4 percent of the companies were purchased by a private equity firm.

We could retrieve information about the latest funding type from 533 companies. Around 14 percent of these companies are funded by angel investors, while 17 percent rely on initial coin offerings. Close to one fifth of the blockchain companies are already in a series A funding round and 4 percent in a series B funding round.

The relation to venture capital

The availability of venture capital could play a major role in explaining the number of blockchain companies, since these companies tend to be companies in the seed phase or the start-up phase. The World Bank supplies an index which measures the availability of venture capital on a country basis (World Bank, 2021). Of the Asian countries, companies have the best access to venture capital in Qatar, Malaysia, the United Arab Emirates, but also in Hong Kong, Singapore, Israel and China. Venture capital access, in contrast, is very limited in Iran, Myanmar or Mongolia.

The correlation between venture capital availability and the blockchain density in Asia is 0.39 and thereby a bit higher than in Europe, where it is 0.24 (Demary/Demary, 2021a). Similar as in Europe, the new business density is also correlated with the availability of venture capital with a correlation coefficient of 0.31 together with a correlation between blockchain density and new business density of 0.55. Thus, it is not the business environment or the availability of venture capital per se that leads to a high number of blockchain companies, but a mixture of both factors.

Are crypto-companies different?

Around 35 percent of the blockchain companies have a business model which is based on cryptocurrencies. Of these crypto-companies, 27 percent use bitcoin, while 15 percent use Ethereum. There are fewer of such companies in China and India, where only 26 percent and 28 percent of the blockchain companies use cryptocurrencies. They are, however, more common in Israel, Singapore and Hong Kong, where 45 percent, 36 percent and 44 percent of the blockchain companies in the dataset deal with cryptocurrencies.

The correlation of the crypto-companies with companies from the sectors financial services and payments are comparable to these correlations for European blockchain companies (Demary/Demary, 2020b). While there is a correlation coefficient of 0.73 between financial services and payments in Asia, the correlation coefficients between financial services and cryptocurrencies and payments and cryptocurrencies are 0.29 and 0.34, respectively. If we focus on the companies that only use bitcoin, we still find a positive correlation between financial services and payments. However, focusing on the companies that use Ethereum yields no significant correlations with financial services or payments. One reason for this result is that blockchain companies that focus on Ethereum are much more involved in the application of smart contracts and cyber security.

How will Asia's blockchain centers develop?

There are good chances that the next big blockchain breakthrough will be developed in Asia. Especially Singapore and Hong Kong are outstanding blockchain start-up hubs among many well-performing agglomeration areas, like Tel Aviv, Shenzhen, or Shanghai. In Asia, the combination of an entrepreneurial-friendly environment and the availability of venture capital leads to a flourishing blockchain ecosystems.

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