

Comparative Analysis of Cross-border M&A between China and Japan

Erdou Su¹

Jun Xue²

Yang Xu³

Abstract

Cross-border M&A is an important way for companies to enter the international market. Japan has experienced three waves of cross-border mergers and acquisitions since the 1970s. Similar to Japan, with the advancement of China's reform and opening up, a large number of Chinese companies with great strength have also started cross-border M&A activities, especially with the promotion of China's "going out" strategy, China's cross-border M&A has achieved rapid development. In the past 22 years (1997~2018), cross-border mergers and acquisitions of Japan and China have experienced different degrees of growth. This paper uses the BvD-Zephyr database to analyze and compare the cross-border mergers and acquisitions between the two countries from 1997 to 2018. The results showed that, first of all, China has outstripped Japan in terms of both the number of cross-border M&A and transactions. However,

1 Erdou Su, Ph. D Candidate, School of Economics, Nankai University, Tianjin 300071, China. E-mail: suerdounankai@outlook.com

2 Jun Xue, Professor, School of Economics, Nankai University, Tianjin 300071, China. E-mail: junxue@nankai.edu.cn

3 Yang Xu, Professor, School of Economics, Nagasaki University, 4-2-1, Katafuchi, Nagasaki 850-8506, Japan. E-mail: jxuyang@nagasaki-u.ac.jp

the number of Japanese large-scale cross border M&A is higher than that of China in terms of the size of a single transaction. Additionally, whether it is the M&A industry or the target industry, the manufacturing and financial insurance industries are the industries with the largest amount of M&A investment. Finally, from the perspective of the target country, the United States is the target country with the largest stock of M&A investment between the two countries.

Keywords : Cross-border M&A, Comparative Analysis, China and Japan

1. Introduction

Cross-border M&A refers to the purchase of some or all of the shares of an existing company in a foreign market (Barkema and Vermeulen, 1998), which is a significant way for companies to participate in the international division of labor and optimize the industrial structure (Ashraf, et al., 2016). In the context of the depth development of economic globalization, more and more enterprises have entered the international market through cross-border mergers and acquisitions. According to the BvD-Zephyr Global M&A Analysis Database (hereafter referred to as the BvD-Zephyr database), the announced global cross-border M&A flows increased from US\$1.8 trillion in 1997 to US\$2 trillion in 2018, with an average annual growth rate at \$80 billion. The declared stock of cross-border M&A transactions has reached \$44 trillion by the end of 2018.⁴ In the wave of global mergers and acquisitions, Japan, as a representative of the new industrial countries in Asia, has carried out

⁴ Data source: Calculated by the author based on the BvD-Zephyr database.

cross-border M&A activities overseas on a large scale since the 1970s and has cooperated with overseas companies in research and development, production and sales. As a result, it has realized the transfer of production chain and adjustment of domestic industrial structure (Yibing Ding and Ziwei Liu, 2019). Since entering the 21st century, similar to Japan, China regards “Going out” Strategies as an important national strategy and has started large-scale cross-border M&A activities (Guanhong Jiang, 2017). By the end of 2018, mainland Chinese companies have carried out cross-border M&A activities in 128 countries (regions), with a cumulative transaction volume of US\$7.8 trillion, which is 80% of Japan's cross-border M&A stocks. If the cross-border M&A activities in Hong Kong and China Macao are also included, the cumulative transaction volume will exceed Japan, which is 1.1 times that of Japan⁵. Japan and China play an important role in the international economy. So what is the current status of cross-border mergers and acquisitions between Japan, an old-brand world investment power, and China, which is speeding up to go global? What characteristics are presented separately? The answer to these questions not only helps us to discover the inherent laws of cross-border mergers and acquisitions in the two countries but also enables us to recognize, to some extent, the differences in cross-border M&A behaviors of enterprises at different stages (developed and developing countries). Based on a review of the cross-border M&A process of the two countries, this paper summarizes and compares the cross-border M&A characteristics of China and Japan in the past two decades by using the data of cross-border M&A transactions of various countries at

⁵ Data source: Calculated by the author based on the BvD-Zephyr database.

the enterprise level published by BvD-Zephyr database from 1997 to 2018.

The structure of this article: the second part is the data source and statistical principles, the third part is a review of the cross-border mergers and acquisitions between China and Japan, the fourth part is a comparative analysis of the cross-border mergers and acquisitions between China and Japan, and the last part is the conclusion.

2. Data sources and statistical principles

2.1 Data source

The cross-border M&A data used in this article comes from the BvD-Zephyr database⁶. The database contains data of domestic mergers and acquisitions which occurred in various parts of the world and cross-border M&A transactions since 1997. All published transactions have been verified by senior experts and confirmed by sending emails to relevant parties involved in the transaction. The quality of the data is reliable so it is one of the commonly used databases for studying cross-border mergers and acquisitions. The database publishes the name, location,

6 The BvD-Zephyr database is updated in hours. The data derived from different periods may vary with the progress of cross-border mergers and acquisitions because cross-border M&A is time-consuming. For example, when a cross-border merger and acquisition case was initially announced, its acquirer was Chinese enterprise A. However, because enterprise A may be acquired by an overseas company as time goes by, the acquirer is likely to change to a French company B when the transaction is eventually completed. Therefore, the case cannot belong to China's cross-border M&A case. In brief, there may be differences in the results of the statistics at different time points. The time point of the statistical data in this article is November 21, 2019.

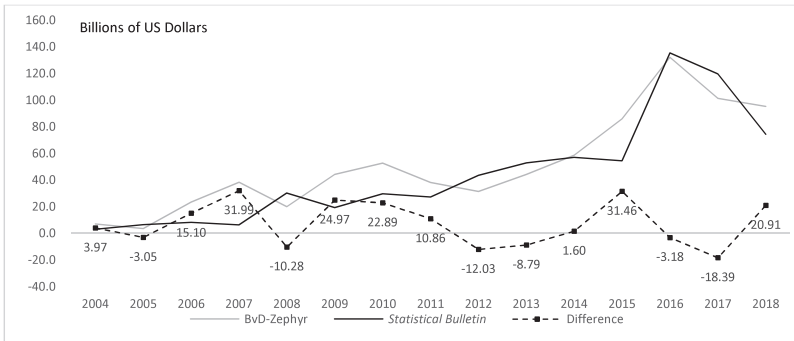
and industry of the acquirer and the acquire, as well as a series of sub-items such as the amount of the merger, the transaction date, and the target country. Therefore, we can directly obtain the amount of the M&A, the year of the merger, the target country and other important information through this database.

M&A investment data published by the BvD-Zephyr database differ greatly from data published by the national government. This article takes the "China Statistical Bulletin on China's Outward Direct Investment in 2018" (hereinafter referred to as the "Statistical Bulletin") jointly issued by the Ministry of Commerce, the National Bureau of Statistics of China, and the State Administration of Foreign Exchange of China as an example. And Figure 1 shows the comparison results by comparing the published cross-border M&A data of China with the statistics of the BVD zephyr database. The gray and black solid lines indicate the cross-border M&A transaction volume⁷ calculated by the BvD-Zephyr database and the M&A volume published by the Statistical Bulletin respectively. First of all, It can be seen that the overall trend of the annual changes in China's cross-border M&A amounts presented by the two is the same, both are fluctuating upward trends, but the amplitude of the fluctuations is significantly different; secondly, the absolute value of the difference between the two floated from \$1.6 billion to \$31.99

⁷ To facilitate comparison with the data published in the Statistical Bulletin, the samples selected here are cross-border mergers and acquisitions announced by mainland China in various years, and cross-border mergers and acquisitions conducted by mainland China to Hong Kong and Macau in China are also included in the statistics. In the following, we consider the three as a whole, and do not examine cross-border M&A transactions that occur within the three. Specific statistical principles are shown in section 2.2.

billion, which is quite different. The big difference between the two statistical results is mainly due to the different data collection sources and statistical principles. From the perspective of data collection sources, the data sources of the BvD-Zephyr database are mainly media reports, corporate website announcements, etc. The data sources are more scattered, so it is easy to exaggerate the transaction amount or easy to omit transactions⁸; with regard of statistical principles, when the cross-border M&A transactions are performed by a subsidiary registered in an offshore financial center and its financing is absolutely completed in an overseas market, the transaction is not within the statistical scope of China's domestic regulators, but the target country (region) still considers it to be from China.

Figure 1. Comparison of cross-border M&A transactions in China from different data sources, 2004-2018



Data source: Based on data from the BvD-Zephyr database and the Statistical Bulletin.

8 Wang Bijun and Lu Shijia: "China's overseas mergers and acquisitions surge," China buys out the world "theory prevails-China's Outward Direct Investment Report for the First Quarter of 2016," IIS China's Outward Investment Report", 2016, Issue 1.

2.2 Statistical principles

This paper selects 1997~2018 as the research period and compares the cross-border M&A transactions between China and Japan in these 20 years from the perspectives of the overall investment scale, target industry distribution, and merger industry distribution. In the statistical process, the following principles are followed:

The first one is the definition of cross-border M&A transaction activities. In this paper, the M&A transactions in which domestic enterprises participate and the target enterprises include foreign enterprises are regarded as cross border M&A transactions. The reason for this definition is that there may be multiple acquirers or multiple parties in a cross-border M&A transaction. For example, Chinese company A and Japanese company B jointly acquired US company C and Chinese company D. If only from the perspective of B's acquisition of C or A's acquisition of D, this transaction does not belong to the cross-border M&A transaction of Chinese enterprises, but from the perspective of A's acquisition of C, this transaction will be a cross-border M&A transaction of Chinese enterprises. Therefore, this article uniformly includes such transactions as cross-border M&A transactions into the scope of this investigation to avoid the situation that ambiguous definition leads to unclear statistics. The second point is the definition of the dates of cross-border M&A activities. This article uses the announced date of a cross-border M&A transaction as the date of the transaction. Cross-border mergers and acquisitions often need to go through multiple stages such as rumors, announcements, and completion, respectively corresponding to different dates. To prevent different transactions from being counted repeatedly

in multiple years⁹, this article considers the announcement date as the sole criterion for identifying the date of the transaction. Thirdly, the Chinese cross-border mergers and acquisitions included in this paper below contain mainland China, Hong Kong, and Macau, China. Cross-border M&A activities within the three (Mainland China and Hong Kong China, Hong Kong China and Macau China, Mainland China and Macau China) are considered domestic M&A, so they are not included in the scope of this article. Additionally, the industry division in the following paper is based on the 2007 British Standard Industrial Classification (UK SIC 2007).

3. Review of the process of cross-border M&A between China and Japan

3.1 The progress of cross-border M&A in Japan

After World War II, Japanese cross-border mergers and acquisitions experienced three waves.

The first wave of transnational mergers and acquisitions occurred in the 1960s and 1970s. After World War II, Japan made every effort to develop its economy and its economy recovered rapidly. To promote further economic growth, the Japanese government timely formulated an outward-looking economic development strategy. It joined the General

9 For example, HNA Group announced conduct the acquisition of Swiss International Airport in 2015 according to rumors, and successfully completed the acquisition in 2016. The transaction took two years to complete this M&A from it be announced. If there is no limit to the statistical date, the transaction will be counted both in 2015 and 2016 respectively. It caused repeated statistic, which will lead to statistical biases.

Agreement on Tariffs and Trade (GATT) in 1955 and the Economic Cooperation and Development Organization (Organization for Economic Cooperation and Development (OECD) in 1964 and actively integrated into the international market (Yang Yongming, 2002). Japan began capital liberalization in 1967. Then, it gradually realized 100% liberalization of domestic direct investment and full liberalization of foreign direct investment. Meanwhile, Japan has entered a period of rapid growth of foreign direct investment. Support from the government, willingness to participate in international competition and abundant resources in new overseas markets have prompted many Japanese companies to conduct cross-border M&A and ushered in the first wave of cross-border M&A in Japan.

The second wave of cross-border mergers and acquisitions occurred in the mid-1980s to the first half of the 1990s. After the mid-1980s, Western countries led by the United States signed the "Square Agreement" aimed at inducing an orderly depreciation of the US dollar against major currencies, which forced the yen to appreciate significantly, which in turn led to rising domestic labor prices and prices in Japan (Kenji Ito, 1998). Japan's foreign direct investment has grown even more rapidly and entered a period of rapid expansion (Mu Mei, 2006). During this period, the cross-border mergers and acquisitions of Japanese companies, especially the mergers and acquisitions of American companies, increased rapidly, ushering in the second wave of Japanese cross-border mergers and acquisitions. However, the cross-border M&A activities in this wave are mainly for speculation, that is, domestic companies' mergers and acquisitions of foreign companies are not based on strategic considerations of corporate development, but to profit by reselling the tar-

get enterprises, which is a "money game."

The third wave of cross-border mergers and acquisitions occurred after 2002. In the early 1990s, Japan's bubble economy burst, the economy fell into a long period of stagnation (Kiyohiko G. Nishimura, 2003), the scale of foreign direct investment declined, and cross-border M&A activity began to decrease. After 2002, with the improvement of the US economy and the "special needs of China", Japan's economy has recovered and corporate income has increased. Also, because of the long-term ultra-loose financial policy implemented by the Bank of Japan, Japan's foreign direct investment has started to rise again and ushered in the recovery period of Japan's foreign direct investment. During this period, Japan's cross-border M&A activity also began to increase, and it was mainly due to strategic considerations of acquiring new technologies or helping companies enter new markets.

3.2 The progress of cross-border M&A in China

China's cross-border mergers and acquisitions started late, mainly through three stages:

The first stage is the germination stage, which occurred from 1984 to 2001. In 1984, China's Reform and Opening-up had just begun. A small number of large state-owned enterprises began to carry out cross-border mergers and acquisitions. The scale of mergers and acquisitions was small and the target countries were limited to a few countries (regions) such as the United States and Canada. After Comrade Deng Xiaoping's "Southern Tour Speech" in 1992, which clarified the reform direction of the market economy, foreign direct investment has grown rapidly. However, it is mainly based on greenfield investments to establish new en-

terprises directly in the target country. Although cross-border mergers and acquisitions are also increasing, the growth is small (Jianwei Ma, 2011).

The second stage is the initial stage, which occurred from 2002 to 2006. China joined the WTO in 2001 and actively integrated into the international market (Brandt, et al., 2017; Lu and Yu, 2015). China's economy has achieved rapid development. Foreign direct investment has shown a sharp increase. Cross-border mergers and acquisitions have also gradually increased. Many large-scale cross-border mergers and acquisitions have also occurred. There are successful cases of achieving "strong alliances" and failure cases of serious losses, which can be called the staggering period of Chinese cross-border mergers and acquisitions. For example, Lenovo acquired IBM's PC division for \$ 1.75 billion and successfully became the world's third-largest PC manufacturing giant. In 2003, TCL acquired the color TV business of Thomson in France and the mobile phone division of Alcatel, but both failed in the end.

The third phase is the positive growth phase, which occurred after 2007. In 2007, the global financial crisis occurred, and international assets depreciated sharply. In order to restore the economy, foreign countries relaxed their M&A controls on domestic companies. This brought opportunities for cross-border mergers and acquisitions of Chinese companies. China's cross-border M&A has officially entered a stage of rapid growth. Cross-border mergers and acquisitions by enterprises at this stage are mainly to obtain resources such as brands, technologies, and markets.

4. Comparative analysis of cross border M&A between China and Japan

4.1 General characteristics of cross-border M&A

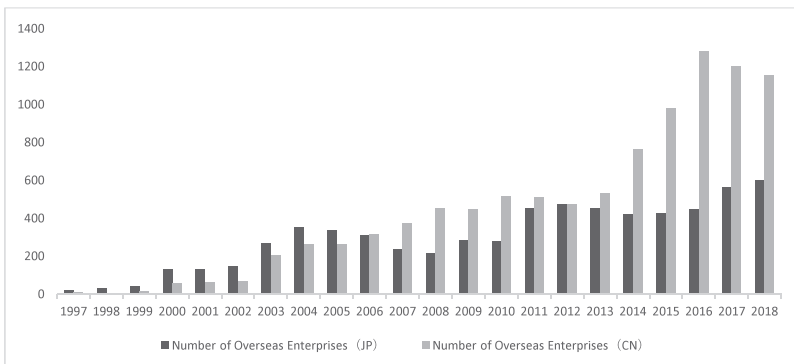
In this section, we will summarize and compare the overall characteristics of China and Japan's cross-border M&A from 1997 to 2018 in terms of the number of cross-border mergers and acquisitions, the number of case transactions, and the transaction amount.

A. The number of enterprises

Figure 2 shows the trend of the number of transnational mergers and acquisitions between Japan and China in the 22 years from 1997 to 2018. It can be seen that, first of all, from the perspective of the overall trend, the number of multinational mergers and acquisitions in Japan has shown a volatile upward trend. Although China has also experienced slight fluctuations during the sample period, it has mainly shown a relatively rapid growth trend. Especially from 2014 to 2016, the number of Chinese cross-border mergers and acquisitions increased rapidly and reached a peak in 2016. Secondly, from the relative size of the number of enterprises, the number of Chinese enterprises participating in cross-border mergers and acquisitions has changed from less than Japan to more than Japan, and this feature is particularly obvious in recent years. Concerning the characteristics of the change during this period, the number of Japanese multinational M&A was higher than that of China and the gap between the two was narrowing from 1997 to 2005. In 2006, China began to surpass Japan for the first time, and in the following years (2007-2010), it was much higher than that of Japan. From 2011 to 2013, the number of multinational mergers and acquisitions between

Japan and China was close again. From 2014 to 2018, the number of Chinese multinational mergers and acquisitions continued to be much higher than in Japan. In addition, from the point of view of growth rate, the growth rate of Chinese multinational mergers and acquisitions is also higher than that of Japan. In 1997, Japan's number of transnational mergers and acquisitions was only 18, increasing to 597 in 2018, with an average annual growth rate of about 26%, while China's increased from 8 in 1997 to 1,154 in 2018, with a growth rate of about 52% per year, 26 percentage points higher than that of Japan. Finally, from the peak point of view, China's figure is also higher than that of Japan. The year with the largest number of Japanese transnational mergers and acquisitions was 2018, with 597, and China was 2016, up to 1,279, which is 2.14 times that of Japan ($1279 / 597$).

Figure 2. Trends in the number of cross-border M&A companies in Japan and China (including Hong Kong and Macau) from 1997 to 2018



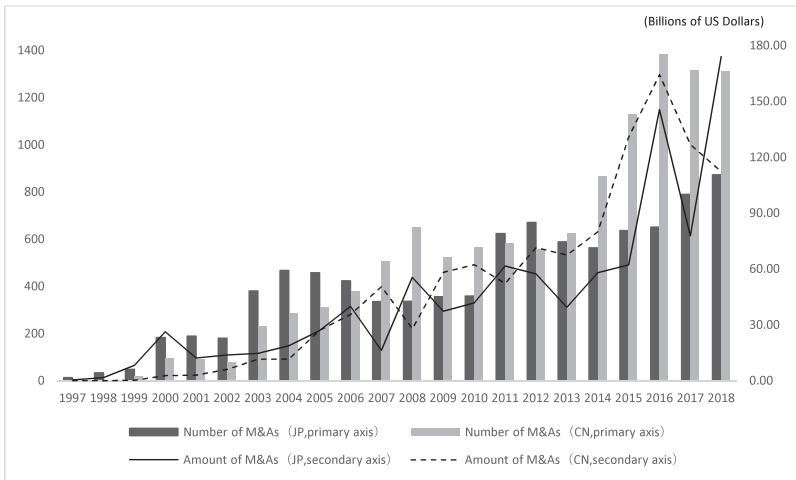
Data source: The author draws statistics from the data in the BvD-Zephyr database.

B. Number and amount of cross-border M&A transactions

Figure 3 shows the trends in the number and amount of cross-border M&A transactions between Japan and China from 1997 to 2018. It can be seen that both the number of transactions and the volume of transactions have roughly gone through several stages. At first, these statistics of Japan are higher than that of China. Then, the gap between these statistics has narrowed. Finally, China's statistics will surpass that of Japan. Specifically, the change in the number of case transactions is very similar to the change in the number of companies. In general, the number of cross-border M&A transactions in China and Japan has shown an increasing trend, but the growth in China is much higher than that in Japan, and before and after the financial crisis (2007~2010) and 2014~2018, the number of Chinese cross-border M&A transactions is much higher than Japan. Japan and China's cross-border M&A transaction volume also shows a volatile upward trend. Japan increased from \$410 million in 1997 to \$174.04 billion in 2018, and China increased from \$70 million in 1997 to \$112.09 billion in 2018, with an increase of more than 50%. In addition, China's cross-border M&A volume surpassed Japan's for the first time in 2005, and it has surpassed Japan in several years (2007, 2009, 2010), and has maintained a higher level than Japan for six consecutive years since 2012. It should be noted that China's cross-border M&A transaction volume continued to decline from 2016 to 2018, while Japan experienced a sharp rise in 2018 after experiencing a sharp decline in 2017, which is the first time that Japan has surpassed China since 2012. From the peak point of view, Japan is also higher than China. The year with the largest amount of Chinese cross-border M&A transactions was 2016, reaching US \$164.31 billion, while

that in Japan was US \$174.04 billion in 2018, 1.06 times that in China (174.04 / 164.31).

Figure 3. Trends in the number and amount of cross-border M&A transactions between Japan and China (including Hong Kong and Macau) from 1997 to 2018



Data source: The author draws statistics from the data in the BvD-Zephyr database.

C. Large cross-border M&A transactions

In addition to the number of cross-border mergers and acquisitions, the number of cases, and the transaction value, this paper also further compared the situation of large and mega-deals cross-border mergers and acquisitions carried out by Japan and China. We classify a single transaction with a value of more than 1 billion US dollars (including 1 billion US dollars) and less than 5 billion US dollars as a large transaction, and a transaction value of more than 5 billion US dollars (including 5 billion US dollars) as a mega-deal. We also further counted the largest

transaction value of single cross-border M&A cases in Japan and China each year. Table 1 shows the number of large-scale cross-border mergers and acquisitions carried out by Japan and China from 1997 to 2018 and the maximum transaction volume of the year. It can be seen that Japan has fewer large transactions than China, but more mega-deals than China. As of the end of 2018, there were 151 large-scale cross-border M&A transactions in Japan, 216 in China, and 65 fewer in Japan than in China. At the same time, Japan has 33 cases of mega-cross-border mergers and acquisitions, compared with 22 in China, 11 more in Japan than in China. Moreover, the largest transaction value of Japan's cross-border M&A is higher than that of China in most cases, especially in 2016 and 2018, the highest transaction volume of the two years is \$50 billion higher than China's respectively.

Table 1 . Large-scale and very large-scale cross-border mergers and acquisitions in Japan and China from 1997 to 2018

Years	Statistics of large-scale transactions in Japan			Statistics of China (including Hong Kong and Macao) large-scale transaction cases		
	Maximum transaction amount (Billions of US Dollars)	Number of oversized cases	Number of large cases	Maximum transaction amount	Number of oversized cases	Number of large cases
1997	0.20	0	0	0.03	0	0
1998	1.17	0	1	0.00	0	0
1999	7.29	1	0	0.10	0	0
2000	9.80	2	1	1.25	0	1
2001	4.14	0	2	0.49	0	0
2002	2.05	0	4	1.30	0	2
2003	2.50	0	1	2.42	0	1
2004	3.50	0	4	3.00	0	1
2005	5.40	1	5	18.21	1	0
2006	14.00	1	7	3.50	0	7
2007	2.57	0	3	10.36	2	8
2008	7.80	3	8	3.03	0	5

2009	4.47	0	9	6.93	1	11
2010	9.57	1	7	9.21	2	10
2011	12.85	2	10	4.80	0	12
2012	7.30	1	12	15.10	1	16
2013	5.31	1	9	7.10	2	14
2014	16.00	3	6	7.00	1	14
2015	7.50	3	13	6.54	2	30
2016	58.06	3	13	6.50	4	41
2017	7.75	3	16	9.34	3	23
2018	58.81	8	20	8.80	3	20
Total	—	33	151	—	22	216

Data source: The author draws statistics from the data in the BvD-Zephyr database.

4.2 Characteristics of cross-border M&A industry

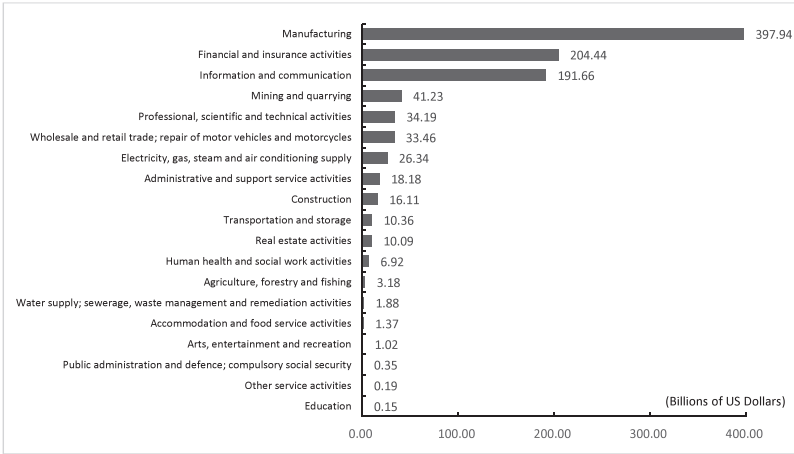
In this section, we will compare the distribution of target industries and acquirer industries in the process of cross-border mergers and acquisitions between China and Japan.¹⁰

A. Target industry distribution

Figure 4 and Figure 5 show the distribution of cross-border M&A target industries in Japan and China, respectively. In terms of Japan, there are three target industries with cumulative cross-border M&A transaction stocks of more than 100 billion US dollars between 1997 and 2018. Sorted by large to small inventory, they are manufacturing, fi-

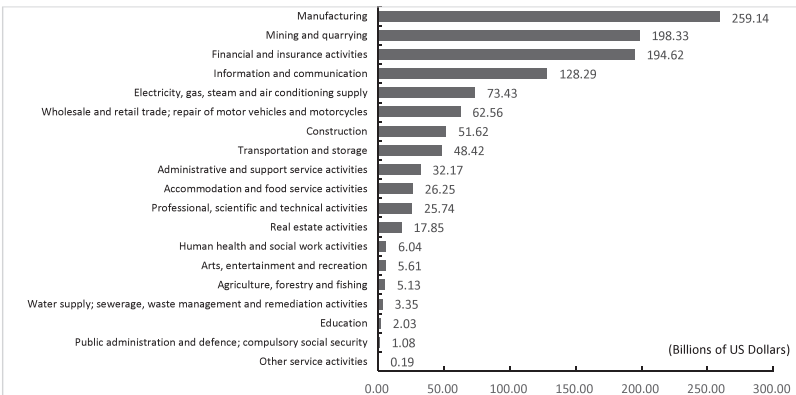
¹⁰ Because there may be multiple target companies in a cross-border M&A transaction, and different target companies may belong to different industries, in this case, this article will repeat statistics on this case. That is, suppose that company A merges with company B and company C in a cross-border merger and acquisition transaction, where the industry of company B is manufacturing and the industry of company C is construction. It will be counted again when calculating the construction industry. As a result, the total amount of mergers and acquisitions in all industries is higher than the actual total cross-border mergers and acquisitions in that year. The statistics of the M&A industry and the target country are the same in the following, and will not be repeated.

Figure 4. Distribution of Japanese M&A target industries



Data source: The author draws statistics from the data in the BvD-Zephyr database.

Figure 5. Distribution of target industries for cross-border M&A in China (including Hong Kong and Macau)



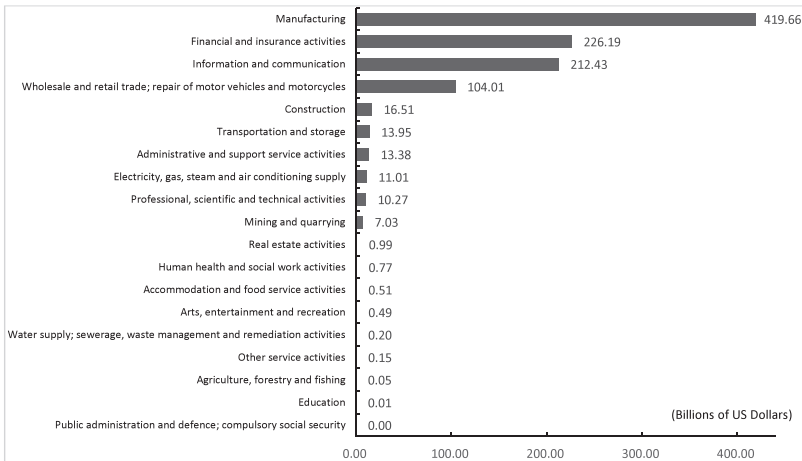
Data source: The author draws statistics from the data in the BvD-Zephyr database.

nance and insurance, and information and communications, accounting for 40%, 20%, and 19% of the total M&A respectively, together they account for 78% of the total M&A value. While there are four industries in China with a value of more than 100 billion U.S. dollars, followed by manufacturing, mining and quarrying, finance and insurance, and information and communication. They accounted for 23%, 17%, 17%, and 11% of China's total cross-border mergers and acquisitions, respectively, and accounted for 68% of the total mergers and acquisitions. In addition, there are 8 industries in Japan with cross-border M&A stocks of more than 10 billion but less than 100 billion U.S. dollars, with mergers and acquisitions ranging from 10 billion dollars to 41.3 billion dollars, accounting for 19% of the total cross-border mergers and acquisitions. There are also eight in China, with mergers and acquisitions between US \$ 17.8 billion and US \$ 73.5 billion, accounting for 30% of the total mergers and acquisitions. To sum up, there are both similarities and differences in the distribution of target industries of cross-border mergers and acquisitions in Japan and China. The similarity is, both have made overseas acquisitions worth hundreds of billions of dollars in manufacturing, finance and insurance, and information and communications industries. The difference is that, in comparison with Japan, China also attaches great importance to the acquisition of mining and quarrying. In addition, Japan's target industry share of more than 100 billion US dollars is 10 percentage points higher than China, but industry share of more than 10 billion US dollars (less than 100 billion) is about 11 percentage points lower than China.

B. M&A industry distribution

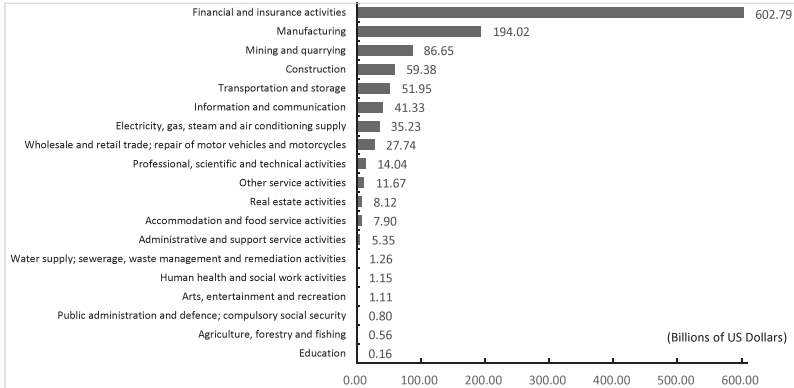
Figures 6 and 7 show the industry distribution of mergers and acquisitions in Japanese and Chinese cross-border mergers and acquisitions. It can be seen that, in the case of Japan, there are 4 mergers and acquisitions industries with a total stock scale of over 100 billion US dollars in cross-border M&A transactions between 1997 and 2018. The manufacturing, financial and insurance, information and communications, retail wholesale and vehicle repair industries are ranked by stock from large to small. They account for 40%, 22%, 20%, and 10% of the total M&A, and together account for 93% of the total M&A; There are only two industries with a transaction size of more than US \$ 100 billion in China. They are finance and insurance industry and manufacturing industry, accounting for 52% and 17% of China's total transnational mergers and

Figure 6. Distribution of mergers and acquisitions in Japanese cross-border mergers and acquisitions



Data source: The author draws statistics from the data in the BvD-Zephyr database.

Figure 7. Distribution of M&A industry in cross-border M&A in China (including Hong Kong and Macau)



Data source: The author draws statistics from the data in the BvD-Zephyr database.

acquisitions and made up for 69% of the total mergers and acquisitions. Furthermore, there are five industries in Japan with cross-border M&A stocks of more than 10 billion but less than 100 billion U.S. dollars. The M&A value ranges from 10.2 billion US dollars to 16.6 billion US dollars, with a span of 6.4 billion US dollars, accounting for 6% of the total cross-border M&A volume. China has 8 industries of the same M&A stocks range. The M&A value is between \$ 11.6 billion and \$ 86.7 billion, with a span of \$ 75.1 billion, accounting for 28% of the total M&A value. In summary, the industry distribution of M&A parties in Japan and China is similar to that of the target parties, both of which have similarities and differences. The similarities are that for the merger and acquisition sectors are all up to 100 billion US dollars. The difference is that the Japanese merger and acquisition industry has the largest share in the manufacturing industry, while China's is the financial and insurance in-

dustry. Additionally, the share of M&A industries with a scale of more than 100 billion US dollars in Japan is 24 percentage points higher than that in China (93%- 69%), but the share of M&A industries with a scale of more than 10 billion US dollars (less than 100 billion) is about 22 percentage points lower than that in China (6%-28%).

4.3 Characteristics of target countries in cross-border M&A

In this part, we will compare the distribution of targeted countries in the process of cross-border M&A between Japan and China. Table 2 and Table 3 respectively list the top 5 target countries for the stock of cross-border M&A between Japan and China during the sample period. Four of the top five countries in Japan and China's cross-border M&A stocks are the same: the United States, the Cayman Islands, Australia, and the United Kingdom. The United States, as a developed country with advanced technology and large market space, is the country with the largest amount of investment in cross-border M&A in Japan and China, with US \$328.02 billion and US \$151.96 billion, respectively. The amount

Table 2. Japan's top 5 target countries for cross-border M&A stocks at the end of 2018

Sort by amount	Country Name	Number of cases	Number of cases in which transaction amounts were disclosed	Transaction amount (Billions of US Dollars)
1	United States of America	1971	1420	328.02
2	United Kingdom	387	242	148.13
3	Cayman Islands	73	65	77.74
4	China	1377	949	67.53
5	Australia	242	178	45.14

Data source: The author draws statistics from the data in the BvD-Zephyr database.

Table 3. Top 5 target countries for China (including Hong Kong and Macau) cross-border M&A stocks at the end of 2018

Sort by amount	Country Name	Number of cases	Number of cases in which transaction amounts were disclosed	Transaction amount (Billions of US Dollars)
1	United States of America	1570	1327	151.96
2	Cayman Islands	1525	1380	148.13
3	Australia	718	656	84.26
4	Virgin Islands (British)	992	833	80.41
5	United Kingdom	455	344	66.16

Data source: The author draws statistics from the data in the BvD-Zephyr database.

of investment in Japan is higher than that in China, which is 2.2 higher (328.02/151.96). In addition to technology-based M&A, Japan and China also attach great importance to resource-based M&A. Australia, as a country rich in resources, ranks fifth and third in the ranking of Japan and China's cross-border M&A stocks, with transaction amount of US \$ 45.14 billion and US \$84.26 billion, respectively. Obviously, China's investment is higher than Japan's, which is 1.9 times than that of Japan (84.26/45.14). Moreover, the Cayman Islands, as a capital transfer location, is also an important destination for cross-border M&A in Japan and China. It ranks third and second in the stock ranking of cross-border M&A in Japan and China, with M&A transaction amount of 77.74 billion US dollars and 148.13 billion US dollars respectively, and the latter is 1.9 times of the former (148.13/77.74). For Japan, China is also an important place for cross-border mergers and acquisitions, ranking fourth in Japan's cross-border M&A amount, while Japan has not entered the top five of China's cross-border M&A amount.

5. Conclusion

This paper applies the BvD-Zephyr database to summarize the cross-border M&A data of Japan and China in the past 22 years, and compares the general characteristics, industry characteristics, and target country characteristics of the two countries' cross-border M&A. The research results are as follows:

Firstly, in the past 22 years (1997~2018), cross-border mergers and acquisitions in Japan and China have achieved volatile growth. Among them, China's cross-border mergers and acquisitions have grown rapidly, especially after the year of 2014. Both the number of companies involved in M&A and the number of transactions has far exceeded those of Japan. Although the number of China's cross-border M&A transactions has surpassed that of Japan, the number of Japanese large-scale cross-border M&A cases is higher than that of China from the perspective of the size of a single M&A case;

Secondly, from the perspective of the acquirer's industry, Japanese companies that conduct cross-border mergers and acquisitions are mainly concentrated in manufacturing while China is mainly concentrated in the financial and insurance industries. In term of the target industry, the industries with the largest overseas mergers and acquisitions by Japan and China have are manufacturing industry;

Finally, from the perspective of the target countries of cross-border mergers and acquisitions the largest cross-border M&A target country of Japan and China is the United States with advanced technology and markets. In addition, three of the top five countries in Japan and China's cross-border M&A stocks are the same: the United Kingdom,

the Cayman Islands, and Australia. For Japan, China is also a very important target country, however for China, Japan is not yet the top five country in its cross-border M&A stock.

References

- Ashraf, Ayesha, Herzer, Dierk and Nunnenkamp, Peter (2016) "The Effects of Greenfield FDI and Cross-Border M&As on Total Factor Productivity," *The World Economy*, Vol.39, Issue 11, pp. 1728-1755.
- Barkema, Harry G. and Vermeulen, Freek (1998) "International Expansion through Start Up Or Acquisition: A Learning Perspective," *The Academy of Management Journal*, Vol.41, Issue 1, pp. 7-26.
- Brandt, Loren, Van Biesebroeck, Johannes, Wang, Luhang and Zhang, Yifan (2017) "WTO Accession and Performance of Chinese Manufacturing Firms," *American Economic Review*, 2017, Vol.107, Issue 9, pp. 2784-2820.
- Lu, Yi and Yu, Linhui (2015) "Trade Liberalization and Markup Dispersion: Evidence From China's WTO Accession," *American Economic Journal: Applied Economics*, Vol.7, Issue 4, pp. 221-253.
- Yibing Ding, Ziwei Liu (2019) "Productivity Effects of Cross-border Mergers and Acquisitions by Japanese Enterprises," *Japan Studies*, Vol. 33, No. 1, pp. 32-43. (丁一兵, 刘紫薇 (2019) "日本企业跨国并购的生产率效应", 日本问题研究, 第33卷第1期, pp. 32-43.)
- Guanhong Jiang (2017) "Have Chinese enterprises really failed in cross-border M&A – Re-discussion Based on Enterprise Efficiency," *Financial Research*, Issue 4, pp. 46-60. (蒋冠宏 (2017) "我国企业跨国并购真的失败了吗? – 基于企业效率的再讨论", 金融研究, 第4期, pp.46-60.)
- Jianwei Ma (2011) "Study on the performance of Chinese enterprises' overseas mergers and acquisitions," Doctoral dissertation of Institute of Financial Science of the Ministry of Finance. (马建威 (2011) "中国企业海外并购绩效研究"财政部财政科学研究所博士论文)
- Mu Mei (2006) "A Comparative Analysis of China and Japan's Foreign Direct Investment," *Japanese Journal*, No. 2, pp. 97-105. (木每 (2006) "中日对外直接投资比较分析", 日本学刊, 第2期, pp. 97-105.)
- Kiyohiko G. Nishimura, Takanobu Nakajima, Kozo Kiyota (2003) "What happened to

the Japanese industry in the lost 1990s?—Corporate entry and exit and TFP—
『RIETI Discussion Paper Series』.(西村清彦・中島隆信・清田耕造 (2003) 「失われた1990年代, 日本産業に何が起こったのか?—企業の参入退出と全要素生産性—」
『RIETI Discussion Paper Series』)

Yang Yongming (2002) "Defense and Security Policy in Japan during the Cold War: 1945-1990," *Problems and Research*, Vol. 41, No. 5, pp. 13-40.(楊永明 (2002) 「冷戦時期日本之防衛與安全保障政策:一九四五～一九九〇」『問題與研究』第41卷第5号, pp. 13-40.)

Kenji Itou (1998) "The operation of Japanese enterprises in east Asia: operation globalization and the transfer of Japanese operation," Doctoral dissertation of The Graduate University for Advanced Studies.(伊藤賢次 (1998) 『東アジアにおける日本企業の経営: 経営のグローバル化と「日本的経営」の移転』総合研究大学院大学博士論文)

This paper is dedicated to Shigeru Aoyama Professor (青山繁先生) and Matumoto Mutuki Professor (松本睦樹先生), who are both our good teachers and helpful friends, to express our regret for their retirement.